

Final

**American River Common Features Project,  
Sacramento River Contract 2,  
Supplemental Environmental Assessment XI,  
Sacramento, CA**



December 2022

US Army Corps of Engineers – Sacramento District  
1325 J Street  
Sacramento CA 95814

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## List of Abbreviations and Acronyms

AALWSE	Average Annual Low Water Surface Elevation
APE	Area of Potential Effects
ARCF	American River Common Features
BMP's	Best Management Practices
BO	Biological Opinion
C#	Contract Number
CAA	Clean Air Act of 1963 as amended
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CVFPB	Central Valley Flood Protection Board
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act of 1972
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
ERO	Erosion
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act of 1958
GPS	Global Positioning System
GRR	General Reevaluation Report
HPMP	Historic Properties Management Plan
HPTP	Historic Property Treatment Plan
IWM	Instream Woody Material
LAR	Lower American River
NAVD	North American Vertical Datum

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NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NOA	Notice of Applicability
NOx	Nitrous Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OHWM	Ordinary High Water Mark
PA	Programmatic Agreement
PM	Particulate Mater
Proposed Action	Action Alternative
RHA	Rivers and Harbors Act of 1899 as amended
SAFCA	Sacramento Area Flood Control Agency
SCH	State Clearinghouse
SEA	Supplemental Environmental Assessment
SEIR	Supplemental Environmental Impact Report
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento and Yolo-Solano Air Quality Management Districts
SR	Sacramento River
SREL	Sacramento River East Levee
SWPPP	Stormwater pollution Prevention Plan
UAIC	United Auburn Indian Community
USACE	US Army Corps of Engineers
USC	United States Code
USFWS	US Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle
WQC	Water Quality Certification
WRDA	Water Resources Development Act
YBCU	Western Yellow-billed Cuckoo

# 1 Introduction

## 1.1 Summary

The Sacramento metropolitan area is one of the most at-risk regions for flooding in the United States. To reduce this risk, Congress first authorized the American River Common Features (ARCF) Project in the Water Resources Development Act (WRDA) of 1996. The project was conceived to provide a portfolio of flood risk reduction measures to address levee seepage and instability along the Lower American River and the Sacramento River north of its confluence with the American River (west of the Natomas basin and near the City of Sacramento, California). Storms in early 1997 stressed the flood risk management system and revealed significant additional problems with the system. The U.S. Army Corps of Engineers (USACE) completed a reevaluation, the ARCF General Reevaluation Report in December 2015. The associated Environmental Impact Statement/Environmental Impact Report (ARCF GRR FEIS/FEIR) was completed in May 2016. The ARCF GRR FEIS/FEIR evaluated alternative plans for additional flood risk reduction and recommended additional improvements to the system. The American River Common Features General Re-evaluation Report (ARCF GRR) determined that seepage, stability and overtopping protection measures were needed along the Sacramento River, the east bank of the Natomas East Main Drainage Canal, and Arcade Creek. Also, it determined that overtopping protection measures were needed along the Magpie Creek Diversion Channel and erosion protection measures were needed along the American River and Sacramento River. These improvements are collectively referred to as the ARCF 2016 Project. Congress authorized these additional improvements in the WRDA of 2016 (Public Law 114322). Currently, the ARCF project consists of North Area Streams Reach D, Magpie Creek, Lower American River erosion protection contracts 1, 2, 3A, 3B and 4. Sacramento River East Levee (SREL) seepage, stability and overtopping contracts 1, 2, 3 and 4, as well as Sacramento River erosion protection contracts 1, 2, 3 and 4. This Supplemental Environmental Assessment (SEA) is focused on Sacramento River Erosion Contract 2, to address the erosion risk along a 10-mile section of the Sacramento River East Levee.

This SEA tiers off the 2016 FEIS/EIR and the Contract 1 SEA mentioned above. The 2016 FEIS/EIR analyzed the basic erosion protection measures that comprise the No Action alternative of this SEA. The Action Alternative (Proposed Action) of this SEA consists of those elements of Contract 2 that were not fully designed when the 2016 FEIS/EIR was completed. The Proposed Action analyzes new staging areas, haul/access routes, utility replacement at SUMP 63, and design refinements for tiebacks and key-ins. Tiebacks are used to anchor the revetment to the ground and are used to prevent water from going around the bank protection. Additional information on all five elements is described in Section 2.2.

This SEA evaluates the expected environmental effects of the Proposed Action on the following seven resources: Air Quality, Water Quality, Vegetation and Wildlife, Federal Special Status Species, Fisheries, Cultural Resources, Socioeconomics, Population, & Environmental Justice and Transportation. The analysis in this document indicates that the Proposed Action would cause no adverse effects of greater magnitude or duration than those analyzed in the 2016 FEIS/EIR. As described in 40 Code of Federal Regulations (CFR) 1508.1(l), a Finding of No Significant Impact (FONSI) may be prepared when an action would not have a significant effect on the human environment and for which an environmental impact statement will not be



prepared. Based on this evaluation and the CFR definition, the Proposed Action is merits a FONSI.

## 1.2 Project Area

The project area is in the City of Sacramento, California, along the east bank of the Sacramento River between the confluence of the American River and the City of Freeport. The project area includes 2.8 miles of the 10 miles authorized in the 2016 FESI/EIS, as follows: levee segments 4, 9-11, 18, 19, 23-27, 29 and 30, as well as SUMP 63 erosion protection. The levee segment, approximate river miles and site number are shown in Table 1. Figure 1 below show the location of each segment and Overview Maps in Figure 2 show each segment and work area in detail.

**Table 1: Summary Table of River Segments and Approximate River Mile**

<b>Sites</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Segments	4	9, 10, 11	18, 19	23, 24	25, 26, 27	29, 30
River Miles	58.2-58.6	55.8-56.1	53.1-53.7	51.1-51.3	50.1-50.9	49.2-49.9

## 1.3 Background

The 2016 ARCF GRR broadly identified ways and locations to reduce flood risk to infrastructure and lives in the metropolitan Sacramento area. Unavoidably the preferred alternative analyzed in the 2016 FEIS/FEIR lacked refinements that had yet to be specified, including haul/access routes, mitigation sites, coffer dams and an accurate estimate of the number of barge trips needed to deliver quarry stone to project sites. As project designs have been refined, numerous supplemental EAs and EISs have been prepared to cover the differences between the somewhat conceptual project plan analyzed in the 2016 FEIS/FEIR and the updated construction designs. The analysis of the Sacramento River Contract 2 construction design (the Proposed Action) provided in this SEA closes one of these ‘gaps’ to ensure full project compliance with NEPA.

## 1.4 Authority

SR Contract 2 will address erosion risks to the SREL, identified in the ARCF GRR, which was authorized by WRDA 2016, Pub. L. No. 114-322 § 1322, also known as the Water Infrastructure Improvements for the Nation Act (WIIN Act). The project was fully funded through the Bipartisan Budget Act of 2018 (Public Law 115-123).

## 1.5 Contract 2 Purpose

The purpose of the 2016 FEIS/EIR GRR was to identify reasonable alternatives and their environmental effects in the effort to reduce flood risk within the Sacramento metropolitan area, as required by NEPA. The work encompassed by the Sacramento River Erosion Contract 2 portion of the overall ARCF project would contribute to flood risk reduction by applying erosion protection measures to make the Sacramento River’s east bank and levee more impervious to the effects of increased currents and water volumes, reinforcing levee segments at highest risk for erosion within this specific area.

## 1.6 Contract 2 Need

The Sacramento metropolitan area is one of the most at-risk areas for flooding in the United States. Stormwater flows in the American and Sacramento Rivers may stress the network of

levees protecting the study area to the point of possible levee failure. The consequences of levee failure would be catastrophic since the area of likely inundation is highly urbanized and it is estimated that floodwaters could reach 20 feet in depth.

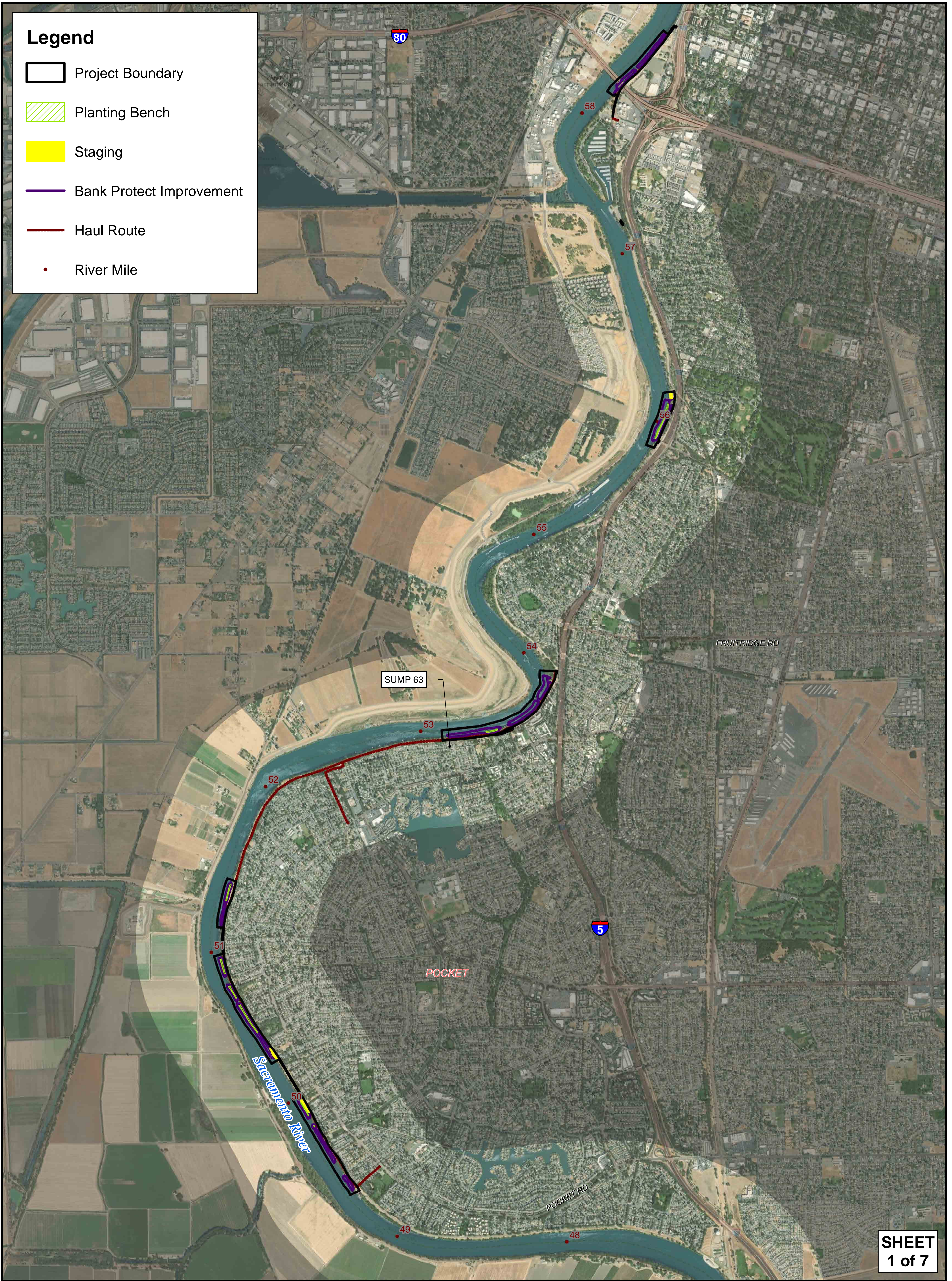
Bank protection measures would be applied to levee segments that were identified by evaluations and assessments of conditions as most vulnerable to failure, with a focus on preventing wave erosion from deteriorating the river's steep banks in order to protect the levee prism. In areas that the levee prism is exposed, revetment would be placed above the water line to prevent further levee degradation. Revetment thickness and construction measures are described in Sections 2.1 and 2.2, below.

## 1.7 Purpose of the Supplemental Environmental Assessment

This document evaluates the anticipated environmental effects of the Proposed Action and the No Action Alternative and identifies measures to avoid or reduce any adverse environmental effects of the Proposed Action to a less-than-significant level, where practicable. This SEA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1970. This SEA fully discloses to the public the reasonably foreseeable environmental effects of the Proposed Action.

**Legend**

- Project Boundary
- Planting Bench
- Staging
- Bank Protect Improvement
- Haul Route
- River Mile



SHEET  
1 of 7

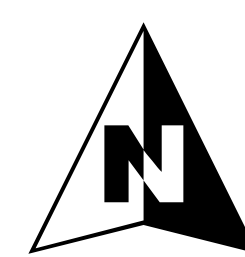


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# Figure 1: SR EROSION C2 OVERVIEW

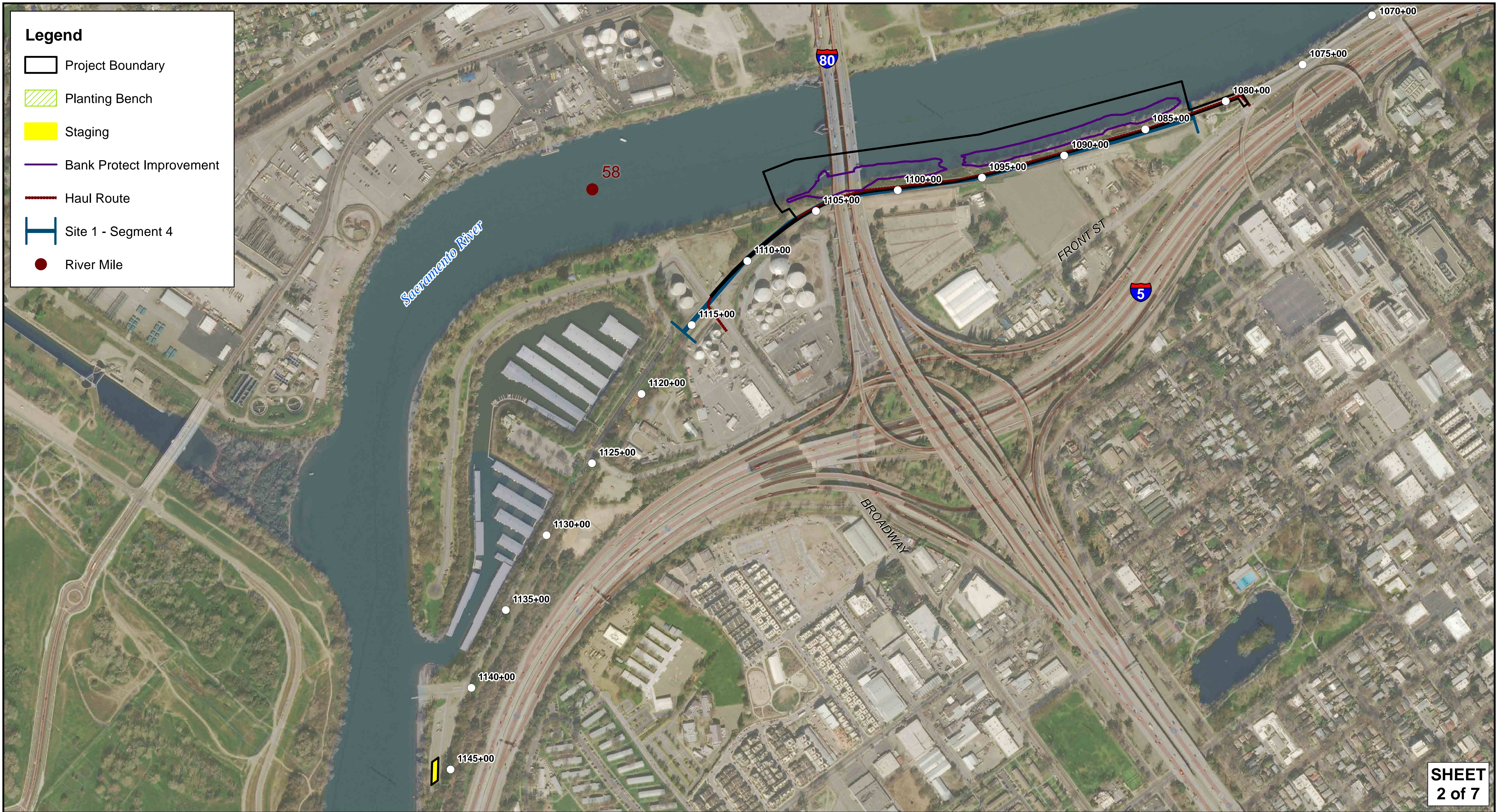
ARCF 2016



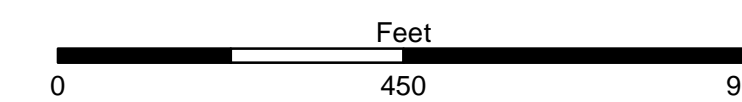
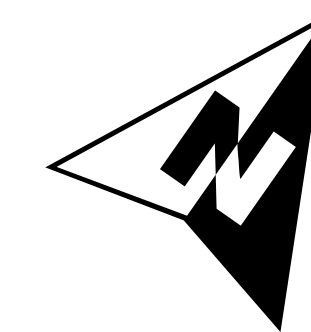
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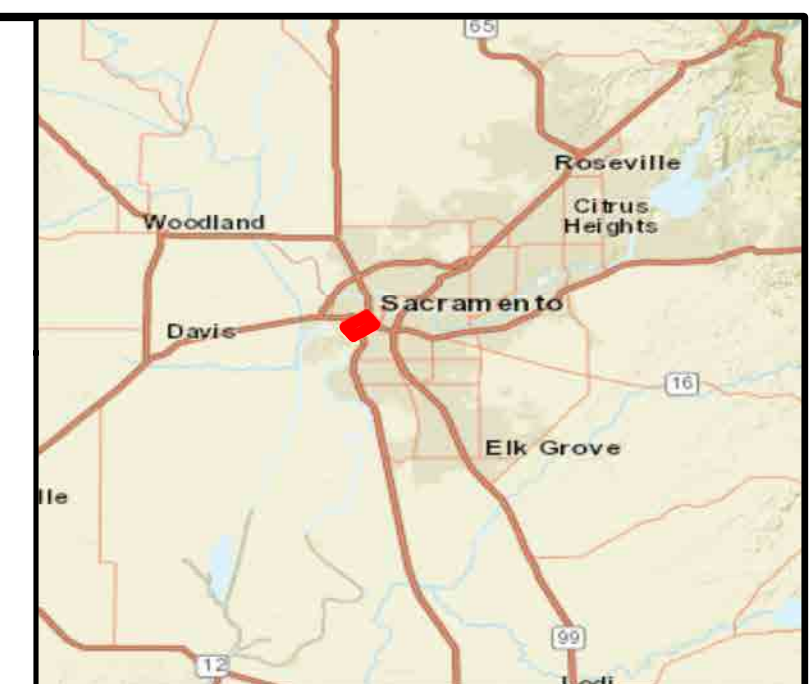


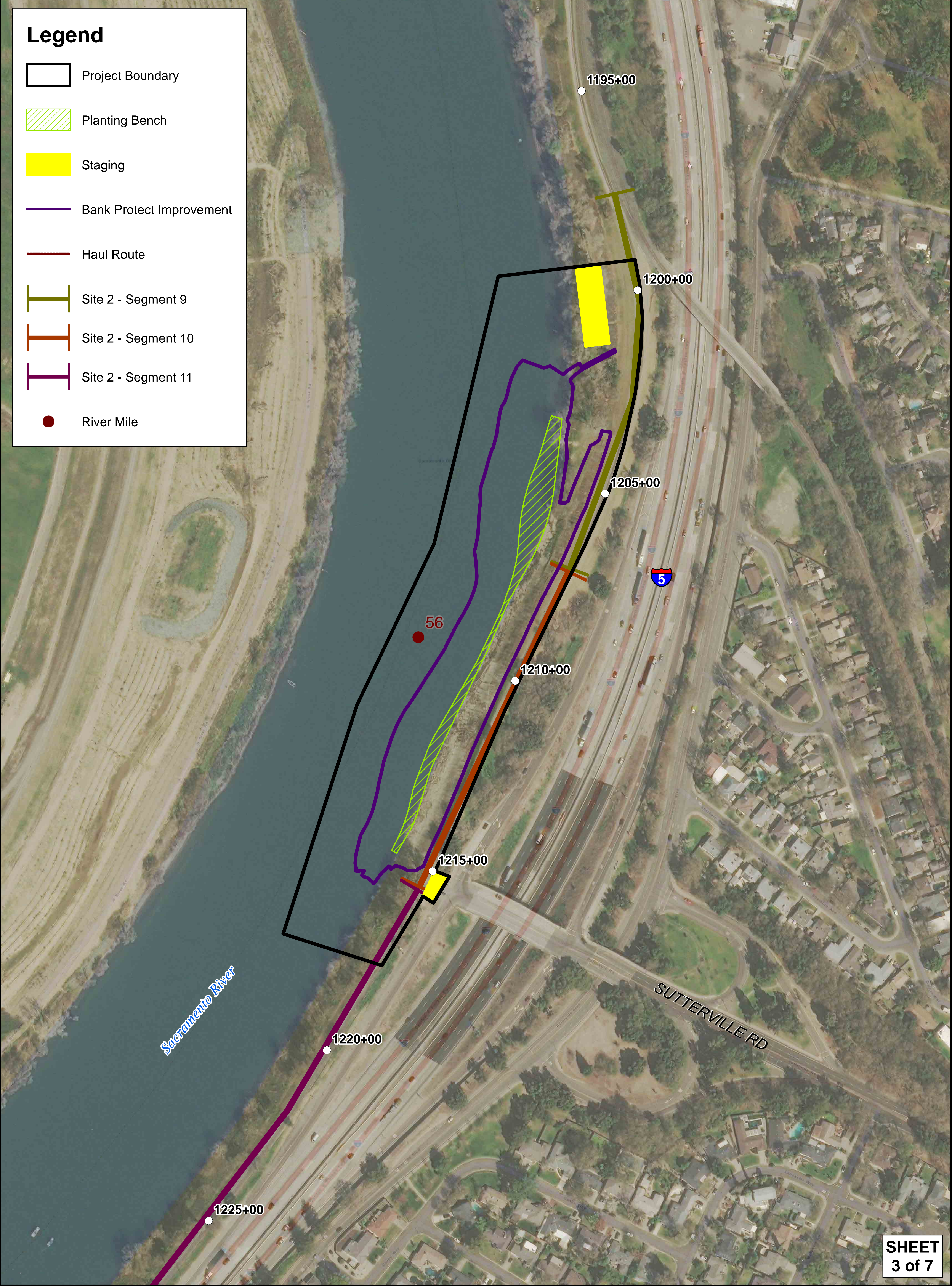


**Figure 1: SR EROSION C2  
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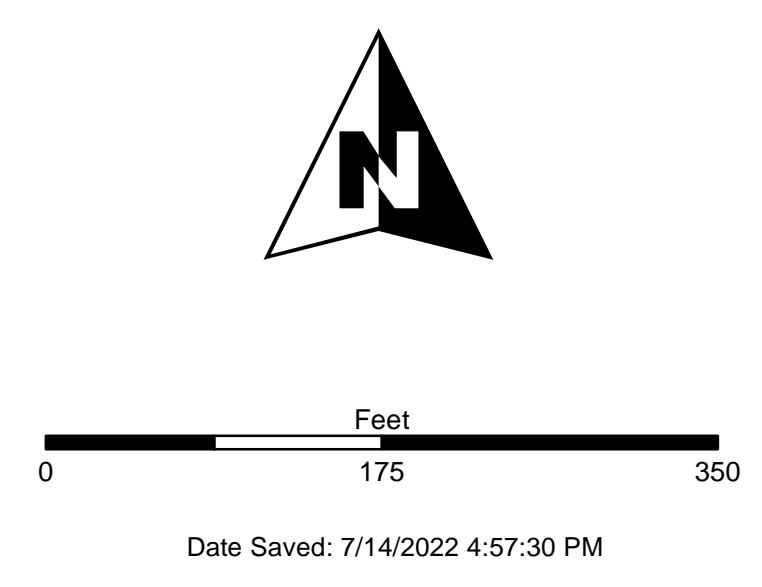


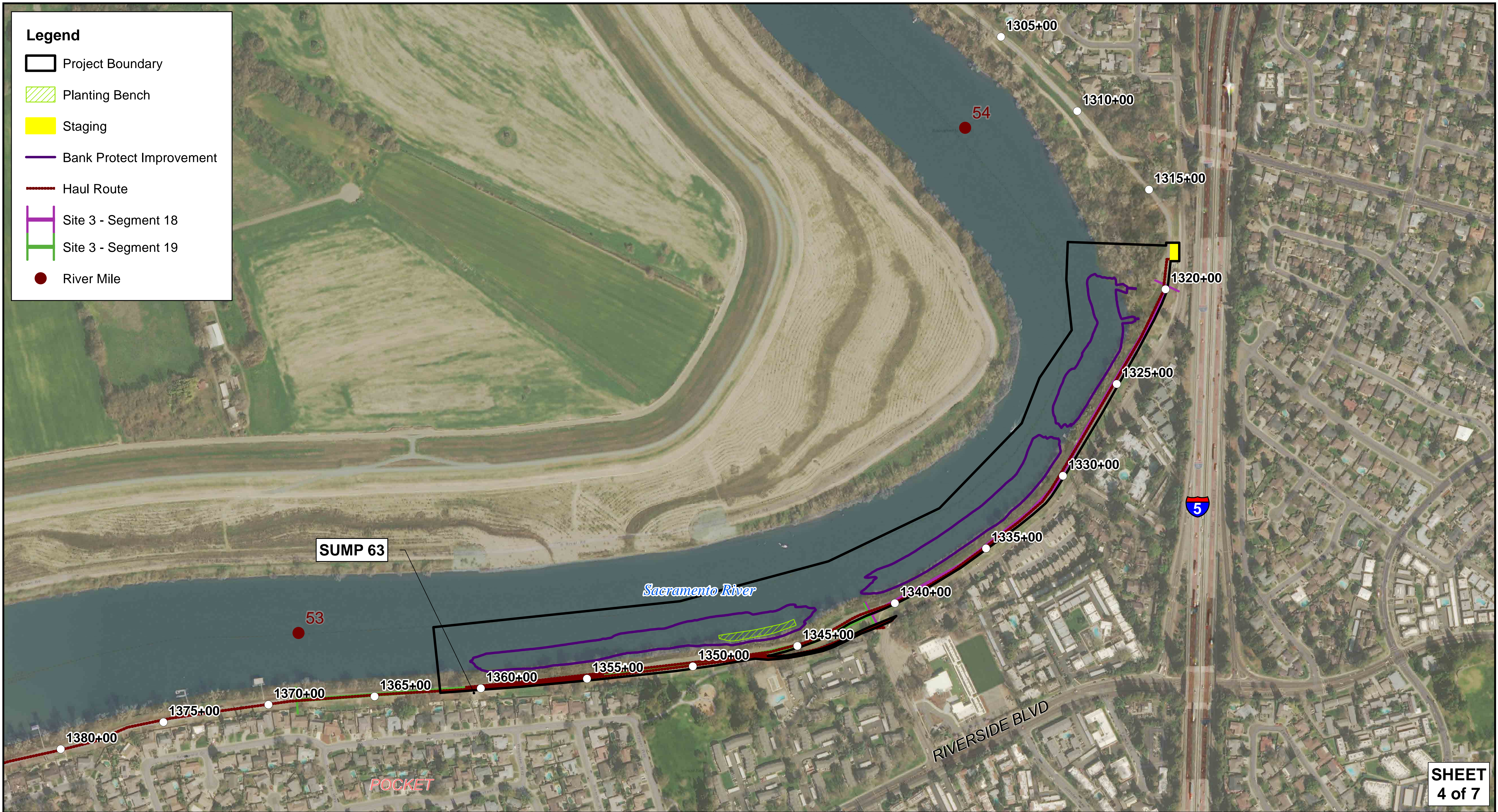
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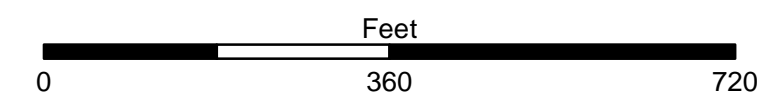
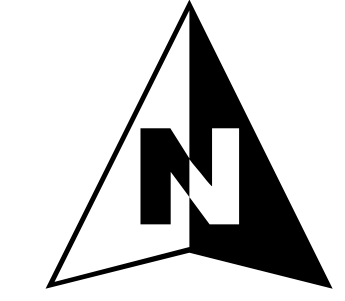




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4 of 7

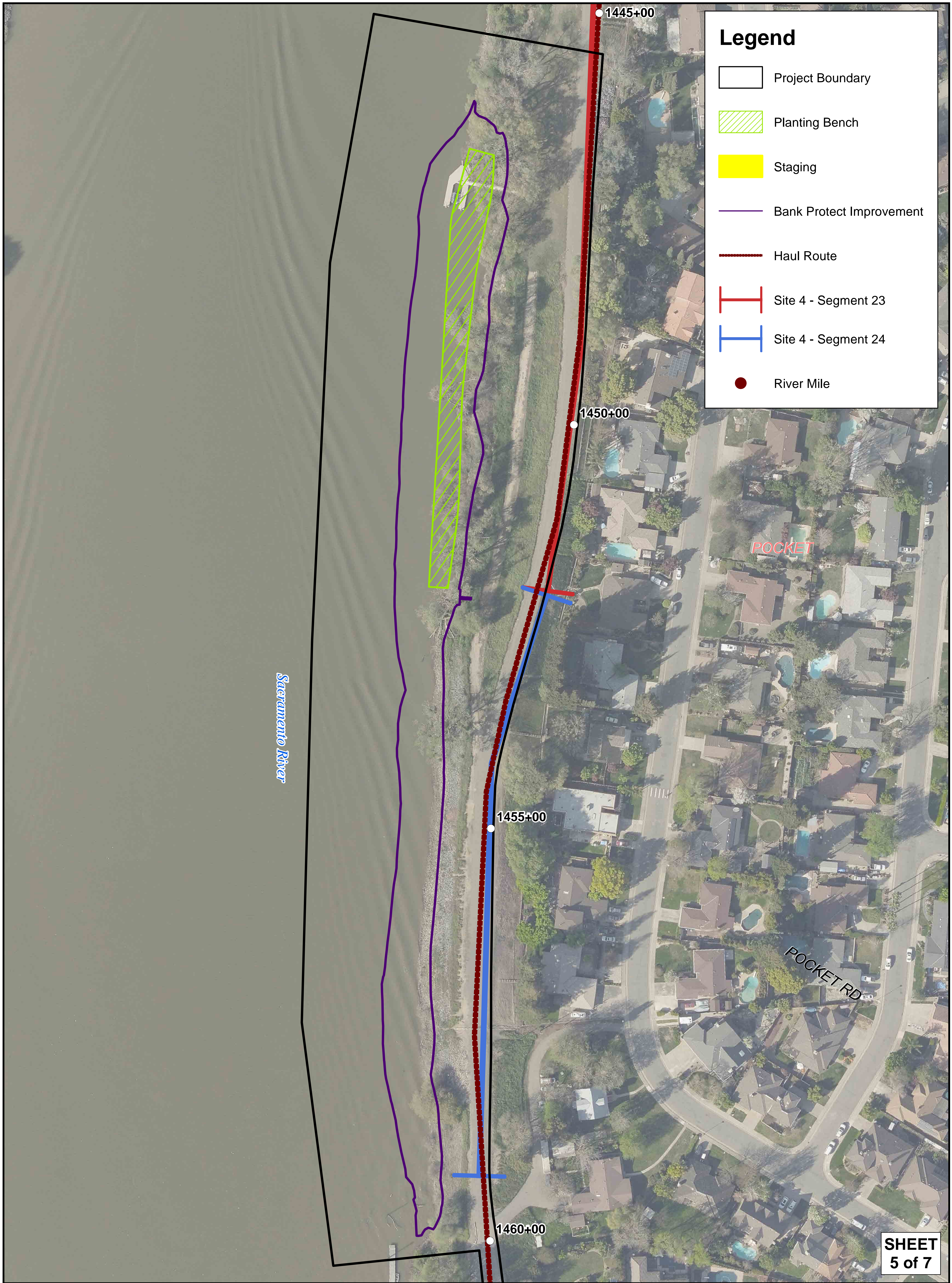


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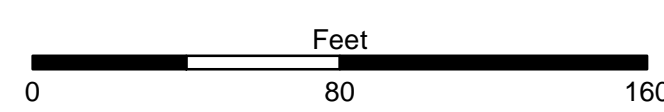
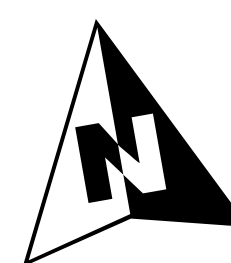




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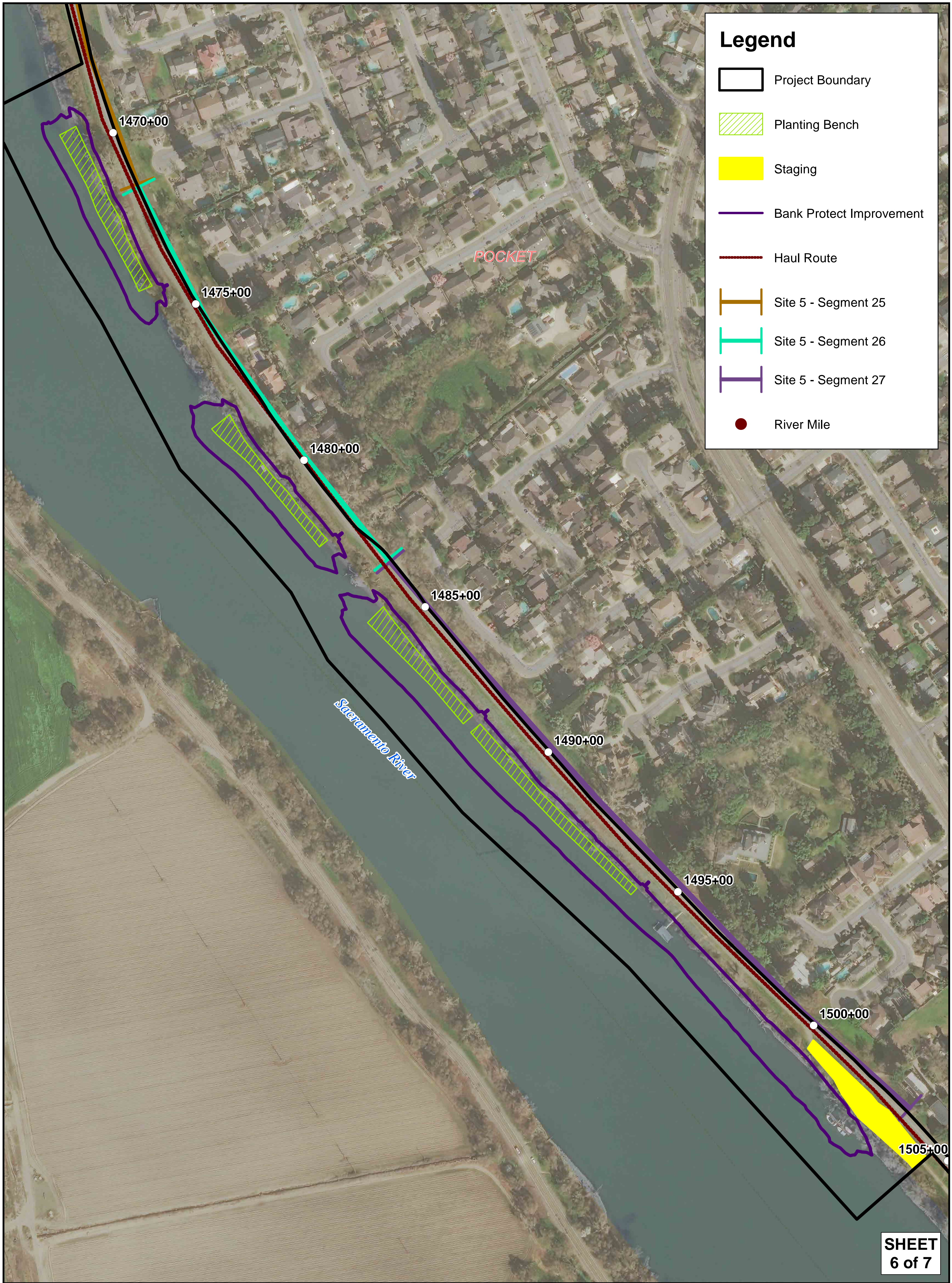
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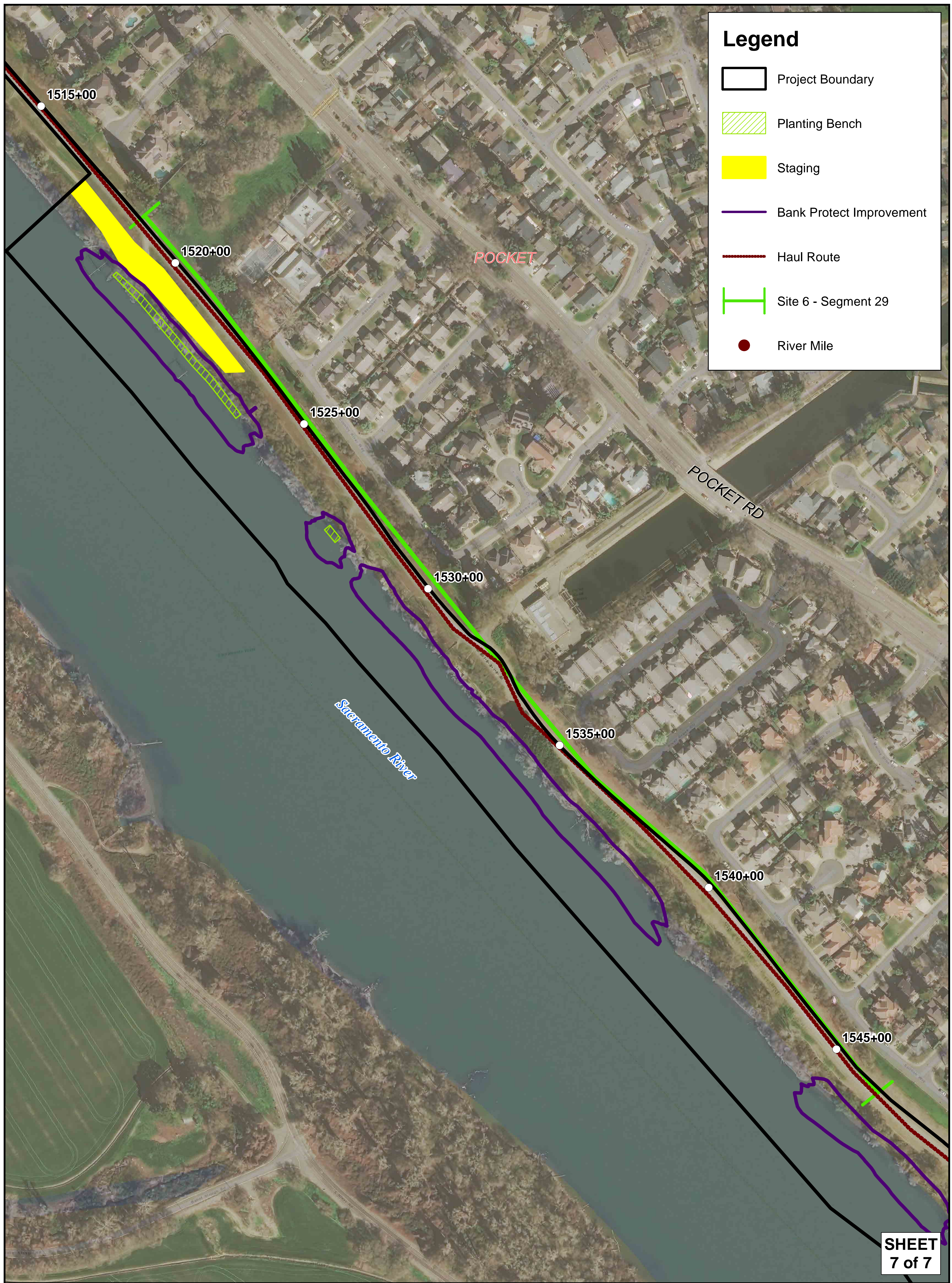


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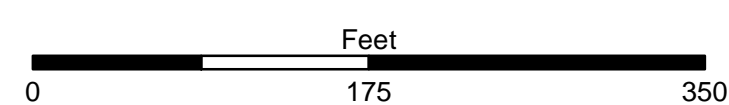
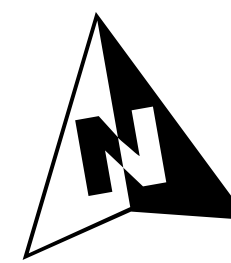




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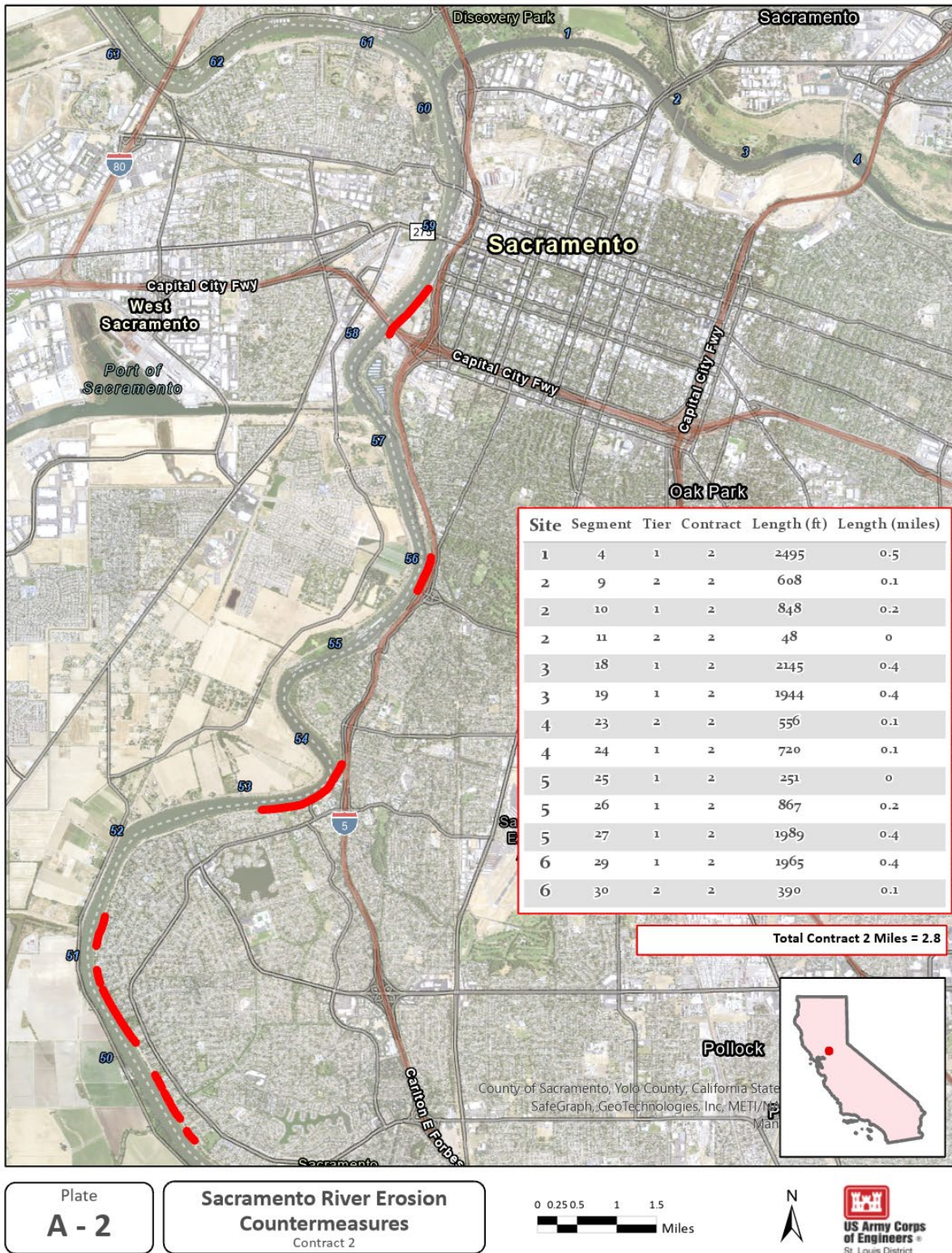


Figure 2: Sites for Sacramento River Erosion Contract 2

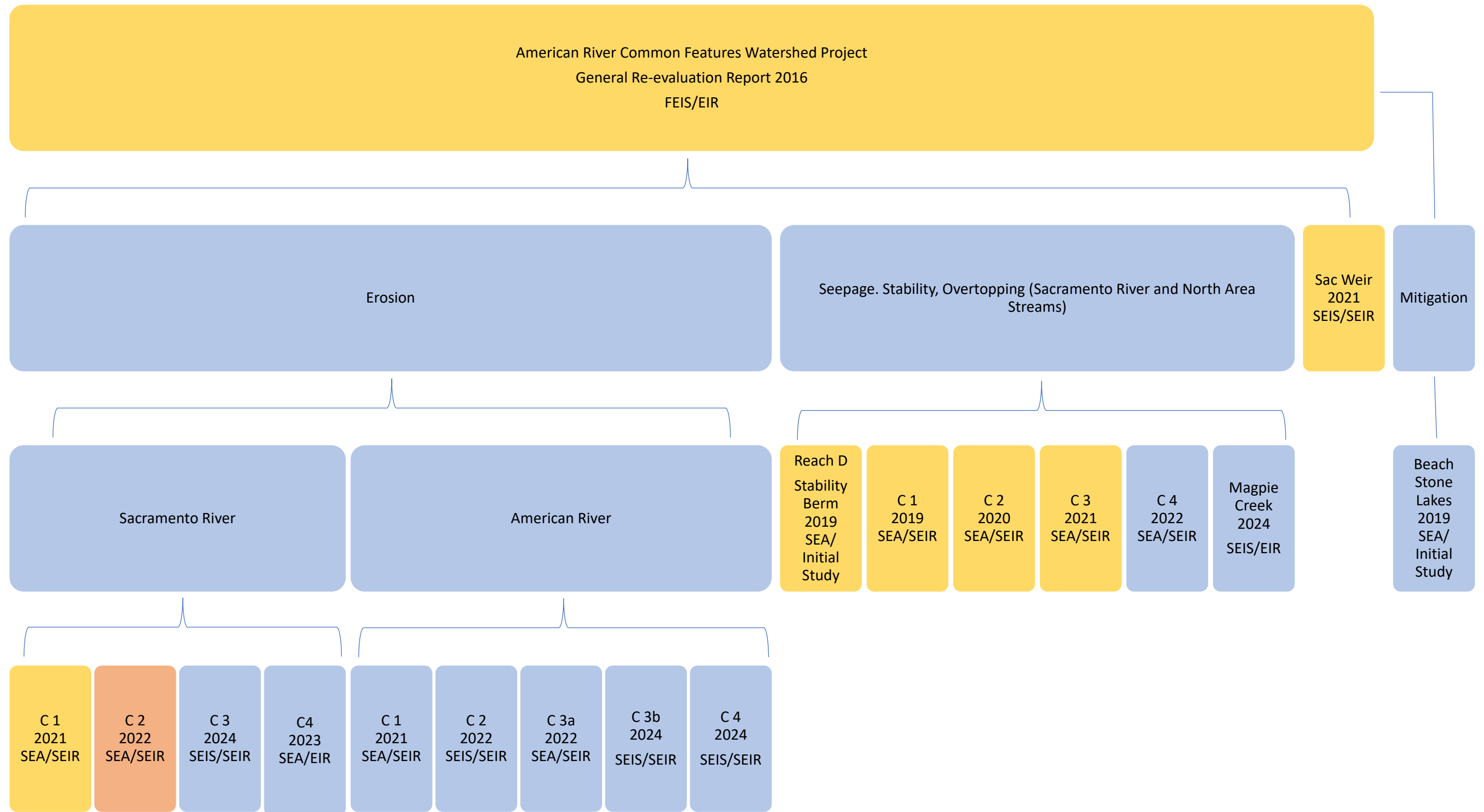
## 1.8 Related Documents

The ARCF project designed to reduce flood risk within the Sacramento metropolitan area. Figure 3, below, provides a schematic overview of the ARCF elements, contracts and their related NEPA documents, showing how the various parts fit together. Project-related NEPA studies focused on Sacramento River elements are listed below:

- December 2015 (revised May 2016), American River Watershed Common Features General Reevaluation Report, Final Environmental Impact Statement/Environmental Impact Report (2016 FEIS/EIR)
- July 2016, Final Environmental Impact Report, North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project. Prepared for SAFCA by GEI Consultants
- August 2016, Record of Decision on ARCF GRR 2015 FEIS/EIR signed by Assistant Secretary of the Army (Civil Works), Jo-Ellen Darcy.
- February 2019, Final Supplemental Environmental Assessment/Initial Study, ARCF Seepage Stability Berm, Reach D Contract 1
- June 2019, Final Supplemental Environmental Assessment/Initial Study, ARCF 2016 Project Beach Stone Lakes Mitigation Site.
- November 2019, Supplemental Environmental Assessment/Environmental Impact Report American River Watershed Common Features, Water Resources Development Act of 2016 Project, Sacramento River East Levee Contract 1 (SREL C1). Prepared by GEI Consultants.
- October 2020, Supplemental Environmental Assessment/Environmental Impact Report American River Watershed Common Features, Water Resources Development Act of 2016 Project, Sacramento River East Levee Contract 2 (SREL C2).
- May 2021, Final Supplemental Environmental Impact Statement/ Environmental Impact Report, American River Watershed Common Features, Water Resources Development Act of 2016 Project Sacramento Weir Widening. (State Clearinghouse Number 2020070575)
- June 2021, Final Supplemental Environmental Assessment/ Supplemental Environmental Impact Report, American River Watershed Common Features, Water Resources Development Act of 2016 Project, Sacramento River Erosion Contract 1.
- August 2021, Supplemental Environmental Assessment/Environmental Impact Report American River Watershed Common Features, Water Resources Development Act of 2016 Project, Sacramento River East Levee Contract 3 (SREL C3).

## 1.9 Decision Needed

The Commander of the Sacramento District, must decide whether the Proposed Action qualifies for a Finding of No Significant Impact (FONSI) under NEPA, or whether potentially significant effects that were not considered in the 2016 FEIS/EIR are anticipated and therefore a Supplemental EIS must be prepared.



**Figure 3:** Overview of all ARCF Elements, Contracts and Related NEPA/CEQA Documents. This Supplemental EA is orange; related documents are shown in yellow

## 2 Alternatives

### 2.1 No Action Alternative

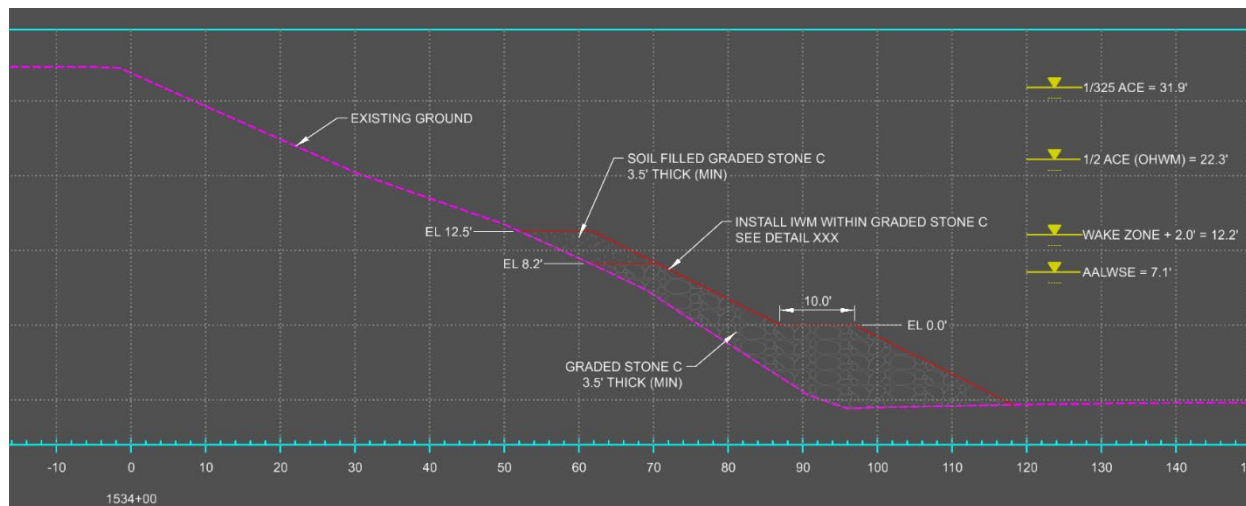
The No Action alternative assumes that the erosion work identified as Alternative 2 in the 2016 FEIS/EIR, along with the Proposed Actions planned for Sacramento River Seepage, Stability and Overtopping Contracts 1-3, the Sacramento Weir Widening, and Sacramento River Erosion Contract 1 have been constructed.

The No Action Alternative has two primary design objectives: to prevent bank erosion, and to provide riverbank resistance to wave wash. Designs include a launchable rock toe to provide resilience against river-bed scour. Generally, the top of bank protection design was chosen to be the top of the Wake Zone +2'. This elevation was chosen because flows above this level are exceeded only 15% of days throughout any given year, and the duration of those events are short and unlikely to cause significant scour. Velocities, even during the design event are low and continuous rock protection up the slope is unnecessary. A secondary objective is to reduce impacts to habitat, as well as provide habitat mitigation wherever possible.

**Table 2: Included Levee Improvement Summary Table**

Site	Segment	Begin Station	End Station	Length (ft)	Length (miles)
1	4	1082+00	1107+00	2,500	0.47
2	9, 10, 11	1201+00	1216+00	1,500	0.28
3	18, 19,	1319+00	1360+50	4,150	0.79
4	23, 24	1446+50	1460+00	1,350	0.26
5	25, 26, 27	1469+00	1503+50	3,100	0.59
6	29, 30	1518+00	1550+50	2,350	0.45

- Rock Bank Protection details – Some surface material, including vegetation, soil, and old bank protection features will be removed below the ordinary high water mark (OHWM) of the Sacramento River. Then a 3.5-foot-thick lens of launchable Grade C quarry stone with a one and a half foot tolerance will be placed below the water surface to protect the bank from scour and erosion. A 3.5-foot-thick lens of soil-rock mix will be placed above the water surface to protect the bank from wave wash generated by boat wakes and wind waves. Rock and soil above the wetted channel will be moved from the barge to the bank with an excavator, once on land it will be placed by either a bulldozer or an excavator. Rock below the wetted channel will be placed by an excavator that is either on the barge or on the riverbank. Equipment must be brought in by barge with the exception of Sites 1 and 3. Transitions to existing grade will be constructed at the upstream and downstream ends of each site for both soil-rock mix and quarry stone measures. Figure 4 shows a generic bank stabilization design.
- Barging material – Rock within the channel, both below and above the water line, would be placed by an excavator located on a barge. Construction of each site would require one operational barge, with an excavator, and one stockpile barge to hold the rocks.

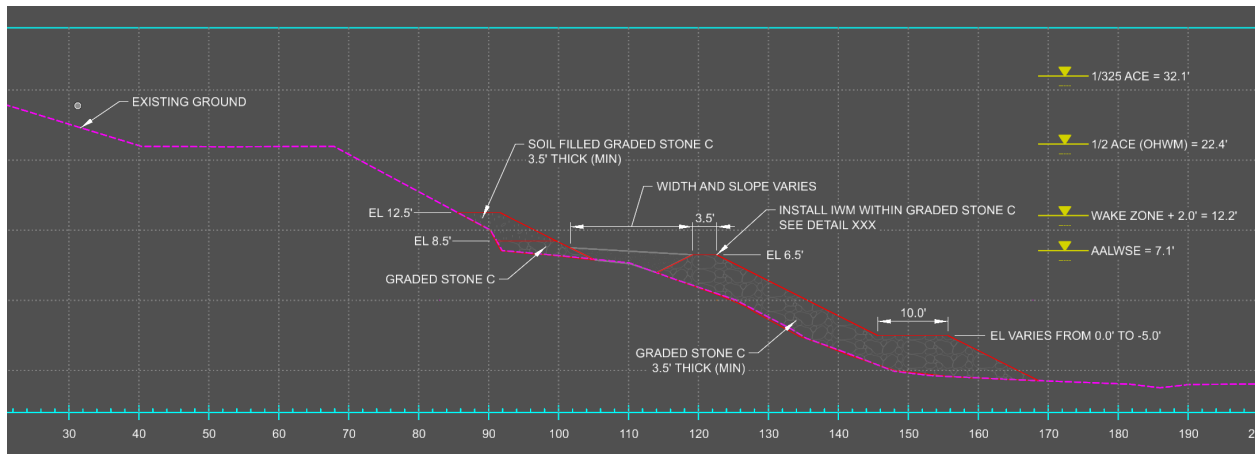


**Figure 4:** A generic bank stabilization design.

- Tree Clearing would be done using small equipment, during the appropriate work window before construction begins. Ground clearing/preparation would be completed as necessary at the beginning of construction, by equipment stationed on the operational barge. Replanting would be done once construction is completed, from the levee. None of these actions would require the use of staging areas, nor the closure of the top of levee. The haul route would be along the levee crown and would not be utilized by heavy equipment, flaggers would be present to ensure safety for both the pedestrians and the vegetation crews. During design refinement, tree removal was avoided to the maximum extent possible to reduce habitat and visual effects impacts.
- Planting Bench – Planting benches vary in width and elevation to allow for planting of native riparian species. The soil filled benches can be located at various elevations to provide suitable habitat for the targeted native riparian species. Table 3 shows the segments, and area of each bench included in C2. Figure 5 shows a generic planting bench configuration that has been used to inform the site-specific designs.

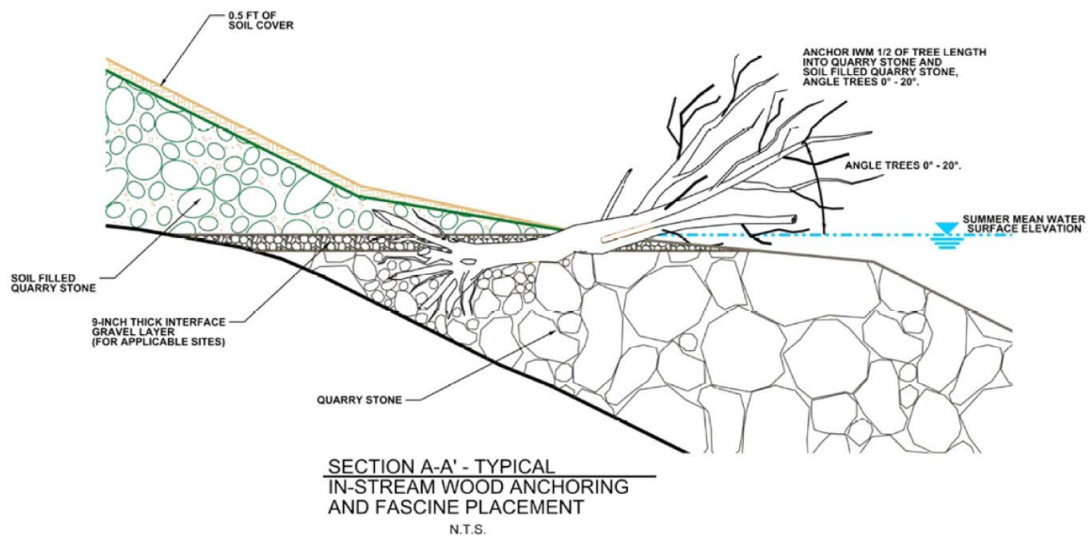
**Table 3:** Planting Bench Summary

Site	Segment	Surface Area, ft <sup>2</sup>	Surface Area, acre
2	9, 10	31,957.2	0.7
3	19	11,654.7	0.3
4	23	16,734.3	0.4
5	25	18,662.4	0.4
5	26	13,203.0	0.3
5	27	32,473.3	0.7
6	29	7,611.0	0.2
6	29	673.6	0.0
<b>Total</b>		<b>132,969.4</b>	<b>2.8</b>



**Figure 5:** A generic planting bench design.

- In-stream Woody Material (IWM) – In-stream Woody Material would be placed below the planting bench and along the rock revetment, where practical, to create in-stream cover for fisheries year-round. The designs include IWM at a rate between 40-80% of the impacted length in accordance with the GRR and the 2021 National Marine Fisheries Service (NMFS; WCRO-2020-03082; dated May 12, 2021) Biological Opinion (BO). Figure 6 shows generic IWM placement designs.



Source: Ayres Associates

**Figure 6:** Instream Woody Material Design Example (SAFCA, 2010)

- Utility Replacement of Sump 63 – A City of Sacramento drainage pump station, Sump 63, is located adjacent to the levee between Stations 1360+00 and 1361+00, in Segment 19, site 3. The pump station discharges through four 24-inch diameter steel buried pipelines, which run up and over the levee and have the outlets at the riverbank at about El. 5.5' NAVD 88 datum, (approximately 30 vertical feet below the levee crown). A 25'x25' sloping concrete slab revetment provides erosion protection for the riverbank at the pipe outlets. On the waterside edge of the levee crown there is a buried concrete

vault that houses a siphon breaker valve for each of the pipelines. SREL C2 SEA covers the degrade of the levee, the removal of the four discharge pipes from the land side to just above the waterside toe of the levee at about Elevation 22 feet, valve vault (which are located within the levee degrade prism), and subsequent reconstruction of the pipelines and vault once the cutoff wall has been installed.

## 2.2 Proposed Action

Contract 2 features to be installed would total 2.8 miles of the 10 miles authorized for erosion protection along the Sacramento River the Proposed Action encompasses five ARCF project elements within the Contract 2 footprint that are different or new since the 2016 FEIS/EIR was finalized: the location of haul/access routes and staging areas, two revised methods for placement of rock revetment, removing and replacing municipal drainage systems at Sump 63, and a refined estimate of project-related barge traffic on the Sacramento River and through the Delta. Each element is summarized below:

- **Access/Haul Routes and Staging Areas-** The 2016 FEIS/EIR did not identify access routes or haul routes. It indicated that haul routes would consist of existing roads, and along the levee maintenance roads. The construction work at SUMP 63 would need to be completed from the land side of the levee, and construction crews would need access, haul routes and staging areas for this activity. Access, haul routes, and staging areas for the SUMP 63 replacement work would require the closure of the Sacramento River Bike Trail from approximately River mile 49.5 to 54, a detour will be provided. The construction work at the Pioneer (I-80) bridge, Site 1, would need to be accessed and completed from the land side of the levee. Four potential ingress and egress sites have been identified: Garcia Bend Park; at the corner of Grangers Dairy Drive and North Point Way; Riverside Boulevard near Brookfield Private School; and where the bike trail meets Riverside Boulevard just before 35th Avenue. Contractors may need access to the parking lot and boat launch at Miller Park; however, Miller Park will not be closed to public use. The staging area at Miller Parks may be used for the contractor office, vehicle, and boat parking. Other potential staging areas may be used for offloading and changing equipment and maneuvering materials between the barge and its final location. Figure1 shows the potential staging areas, haul, and access routes.
- **Launchable Toe -** The method of launchable rock chosen for the Sacramento River Contract 2 work is different than the design analyzed in the 2016 FEIS/FEIR. A launchable rock toe is placed at the waterside edge of a constructed planting bench, lower on the levee/riverbank than a launchable rock trench, to allow riparian vegetation to grow next to the water's edge. A launchable rock toe could also be placed at the bottom of standard erosion protection. If erosion and scour occur below the launchable toe, the rock placed in the launchable toe would launch and cover the eroded area, preventing further erosion and providing bank slope stability.
- **Tiebacks and Key-ins –** This method of bank protection is in addition to the methods analyzed in the 2016 FEIS/EIR. Where native bank materials are highly erodible, tiebacks and key-ins can be used to prevent erosion from occurring upslope of the revetment. Rock keys are installed perpendicular to high-flow and are used to connect a rock tieback or the upstream and downstream ends of the revetment into the bank. For



use on Contract 2, tiebacks could be placed between 325 and 1,300 feet apart, allowing for a flexible design to avoid greater habitat impacts. Tieback features are included in sites 2, 3, 4 and 5. The tieback rock thickness should be the same as the surrounding rock revetment.

- Cofferd Dam and Dewatering at SUMP 63 – The 2016 FEIS/EIR analyzed the effects of utility replacement and SREL Contract 2 analyzed the effects specific to the Sump 63 replacement and associated pipes that are above the OHWM, see description in Section 2.1 above. This SEA analyzes the effects of replacing the four pipes on the water side of the levee, replacing the headwall, and utilizing a cofferdam to dewater the immediate pipe replacement area. Temporary access below the OHWM of the river would be required to replace the four pipes, closure devices, headwall, and revetment. Temporary access would be gained by dewatering the area with the use of a sandbag cofferdam or equivalent, approximately five feet high (1.75 feet above the typical water level) and approximately 120 feet in length. Placement of the cofferdam, pipe replacement and cofferdam removal are anticipated to take up to 15 days and would be completed between July 1 and October 31, which is outside of sensitive fish species migration windows. A portion of the existing revetment would be sawcut and removed.
- Additional Barge Trips - The 2016 FEIS/EIR evaluated the use of two barges to construct the erosion protection sites. However, the work's expedited schedule is now expected to require use of up to four barges per site. One would hold the necessary equipment and the others would hold materials. The barges would be pushed by two tugs from a Bay Area quarry to Rio Vista. From there, one barge at a time would be pushed to each work site by one tug. Up to four sites possibly under construction simultaneously.

### 3 Affected Environment and Environmental Effects

#### 3.1 Approach to Analysis

The environmental effects of the No Action Alternative are fully discussed as Alternative 2 in the 2016 FEIS/EIR as well as the Action Alternatives in SREL C1, C2 & C3 SEA/SEIR, Sacramento Weir SEIS/SEIR and SR ERO C1 SEA/SEIR. The No Action Alternative assumes all work proposed in these documents has been completed. The Existing Conditions, Regulatory Setting, Regulatory Framework, and avoidance, minimization and mitigation measures are also described in detail in the SREL C1, C2 & C3 SEA/SEIR and SR ERO C1 SEA/SEIR, which evaluate ARCF contracts that are similarly situated to the SR ERO Contract 2 (which encompasses the Proposed Action). The mitigation measures from the previous NEPA documents listed above are incorporated in the No Action Alternative considered in this SEA and each of these documents is incorporated by reference. Table 4 shows the specific sections within each of these previous NEPA reports where commitments regarding the Affected Environment are made. The following discussion supplements these prior documents, focusing on the effects of the Proposed Action on the seven resources likely to be affected (and identified in Section 1.1, above): air quality, water quality, vegetation and wildlife, federal special status species, fisheries, cultural resources, socioeconomics, population & environmental justice. A summary of the Contract 2 affected environments is included in Table 8. Table 9, at the end of Chapter 3, is a summary of the cumulative effects of the Proposed Action.

### **3.2 Regulatory Setting**

The Affected Environment and Environmental Consequences Sections of the 2016 FEIS/EIR and SREL Contract 1 and 2 SEA/EIRs and SR ERO C1 sufficiently characterize the regulatory setting for the Proposed Action.

### **3.3 Resource Not Discussed in Detail**

The following resources were eliminated from further discussion in this SEA because the effects of the Proposed Action on these resources would be negligible or would not cause additional impacts beyond those analyzed in the 2016 FEIS/EIR, SREL C1-3 SEA's and SR ERO C1 SEA: Climate Change, Geological Resources, Hazardous Wastes & Materials, Hydrology & Hydraulics, Land Use, Mineral Resources, Noise, Public Utilities & Service Systems, Recreation, Ground Water, Visual Resources. Additional information about these resources is available in previous documents, as shown in Table 4.

**Table 4:** Summary of Related Documents and Affected Environmental Resources

Resource	Section of 2016 GRR EIS/EIR	Section of 2019 Reach D Contract 1 SEA/SIS	Section of 2019 SREL Contract 1 SEA/EIR	Section of 2020 SREL Contract 2 SEA/EIR	Section of 2020 SREL Contract 3 SEA/EIR	Section of 2021 SR Erosion Contract 1 SEA/SEIR
Air Quality	<b>3.11</b>	<b>3.2.1</b>	<b>3.3</b>	<b>3.3</b>	3.3	<b>3.2.3</b>
Climate Change	<b>3.12</b>	<b>3.2.2</b>	<b>3.6</b>	<b>3.6</b>	3.3	<b>3.2.4</b>
Cultural Resources	<b>3.9</b>	<b>3.2.3</b>	<b>3.7</b>	<b>3.7</b>	3.3	<b>3.2.5</b>
Fisheries	<b>3.7</b>	3.1.1			<b>3.8</b>	<b>3.2.1</b>
Geological Resources	<b>3.2</b>		<b>3.8</b>	<b>3.8</b>	3.3	<b>3.2.11</b>
Hazardous Wastes & Materials	<b>3.17</b>	<b>3.2.4</b>	<b>3.9</b>	<b>3.9</b>	3.3	3.1.3
Hydrology & Hydraulics	<b>3.4</b>		3.1.2	3.1.2	3.3	3.1.6
Land Use	<b>3.3</b>	<b>3.2.8</b>	3.1.2	3.1.2	3.3	3.1.4
Mineral Resources	<b>3.2</b>		<b>3.8</b>	<b>3.8</b>	3.3	
Noise	<b>3.13</b>	<b>3.2.9</b>	3.11	3.11	3.3	<b>3.2.8</b>
Public Utilities & Service Systems	<b>3.16</b>	3.1.3	<b>3.14</b>	<b>3.14</b>	3.3	3.1.1
Recreation	<b>3.14</b>	<b>3.2.5</b>	<b>3.12</b>	<b>3.12</b>	<b>3.9</b>	<b>3.2.6</b>
Socioeconomics, Population, & Environmental Justice	<b>3.18</b>	<b>3.1.4</b>		3.1.2	3.3	3.1.2
Special Status Species	<b>3.8</b>	3.1.2	<b>3.5</b>	<b>3.5</b>	<b>3.7</b>	<b>3.2.2</b>
Transportation & Circulation	<b>3.10</b>	<b>3.2.6</b>	<b>3.13</b>	<b>3.13</b>	<b>3.1</b>	3.1.5
Vegetation & Wildlife	<b>3.6</b>	<b>3.2.10</b>	<b>3.4</b>	<b>3.4</b>	<b>3.6</b>	<b>3.2.9</b>
Visual Resources	<b>3.15</b>	<b>3.2.7</b>	<b>3.10</b>	<b>3.2</b>	<b>3.4</b>	<b>3.2.7</b>
Water Quality & Ground Water	<b>3.5</b>	<b>3.2.11</b>	<b>3.10</b>	<b>3.10</b>	<b>3.5</b>	<b>3.2.10</b>

**Bold** = Considered in Detail

## 3.4 Air Quality

### 3.4.1 Existing Conditions

The Contract 2 study area is located in the Sacramento Valley Air Basin (SVAB) and is under the jurisdiction of the Sacramento Metropolitan Air Quality Manage District (SMAQMD). The environmental and regulatory framework described in Section 3.11 of the 2016 FEIS/EIR and the existing conditions in section 3.2.3 of the Sac River Erosion Contract 1 SEA/SEIR is applicable to the analysis in this Supplemental EA/EIR and is incorporated by reference. Some updated and additional information is provided below.

The volume of air emissions estimated in Appendix D to the 2016 FEIS/EIR has since been determined to be inaccurate. It was assumed that construction would take up to 14 years to complete, but the supplemental funding provided by Congress has condensed the construction window to 5 years. An updated emissions analysis is documented in *The Final General Conformity Determination, American River Watershed Common Features 2016 Project*, authored by USACE, dated March 19, 2021. Emission sources analyzed included a wide range of construction equipment and activities, on-road mobile sources; construction material delivery trucks and motor vehicles driven by contractor employees, as well as barge emissions during the delivery of quarry rock and aggregate. Each of the Proposed Action's sites will require a clam shell bucket on a barge to unload rock, a dozer to place material, and an excavator to mix rock/soil. Multiple constructions sites may operate simultaneously.

### 3.4.2 Environmental Effects

#### **No Action Alternative**

Under the No Action Alternative, the project work described in Alternative 2 of the 2016 FEIS/EIR, SREL C1-3 SEAs and SR ERO C1 SEA is considered completed. This includes the use of construction equipment to degrade and rebuild the levee, transport material, install jet grouting and place bank protection measures. The 2016 FEIS/EIR determined Air Quality Environmental Effects to be temporary, short term and less than significant with mitigation measures, as outlined in Section 3.11.6 of the FEIS.

#### **Proposed Action**

##### Construction Emissions

Air quality emissions will be generated by heavy equipment, hauling material from the borrow source to the project area (including both truck and barge transportation), construction worker trips, and other construction-related vehicle use. No change in O&M emissions associated with the Proposed Action is anticipated. Air emissions were modeled using SMAQMD's Road Construction Emissions Model version 8.1.0, and the Harborcraft, Dredge and Barge Emission Factor Calculator. The total estimated air emissions for all Sacramento River Erosion Contract 2 work, including the Proposed Action, is presented in Tables 5 and 6. As shown in Tables 5 and 6, the estimated emissions will potentially exceed the local air district thresholds for NOx, if this occurs, mitigation credits will be purchased.

**Table 5: Emissions Estimates for the Proposed Project and Refinements – Sacramento Valley Air Basin**

Pollutant	Unmitigated/Mitigated (pounds per day)	Unmitigated/Mitigated (tons per year)	Significance Threshold
<b>2023</b>			
ROG	16.55 / 10.0	1.14 / 0.82	N/A
NOx	<b>182.82</b> / 82.80	14.97 / 10.52	85 pounds/day
PM <sub>10</sub>	53.47 / 52.77	1.75 / 1.52	80 pounds/day and 14.6 tons/year
PM <sub>2.5</sub>	13.43 / 12.76	0.84 / 0.64	82 pounds/day and 15 tons/year
<b>2024</b>			
ROG	15.35 / 9.86	1.09 / 0.85	N/A
NOx	<b>166.62</b> / 81.51	14.24 / 10.45	85 pounds/day
PM <sub>10</sub>	53.31 / 52.77	1.72 / 1.52	80 pounds/day and 14.6 tons/year
PM <sub>2.5</sub>	13.27 / 12.76	0.81 / 0.64	82 pounds/day and 15 tons/year

**Notes:** Bold numbers indicate concentrations above thresholds.

NOx = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases.

Sacramento Metropolitan Air Quality Management District (SMAQMD) considers construction activities unlikely to generate substantial quantities of carbon monoxide (SMAQMD 2019).

CEQA significance thresholds for PM assume that fugitive dust Best Available Control Technology/Best Management Practices are implemented in accordance with SMAQMD guidance

**Table 6: Emissions Estimates for the Proposed Project and Refinements - San Francisco Bay Area Air Basin**

Pollutant	Barge Emissions (pounds per day)	Significance Threshold (pounds per day)
<b>2023 and 2024</b>		
ROG	19.81	54
NOx	<b>321.39</b>	54
PM <sub>10</sub>	14.49	82
PM <sub>2.5</sub>	12.96	84

**Notes:** Bold numbers indicate concentrations above thresholds.

NOx = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases.

### Analysis

Access and haul routes will only be used to complete work around the I80 / Pioneer Bridge and at Sump 63, construction material will be brought in by barge or by truck. The emission sources analyzed in the general conformity report covered a wide range of construction equipment and activities with sufficient breadth to include the construction material delivery trucks and motor vehicles now expected to be used during performance of Contract 2. Emissions from barges were estimated using the SMAQMD *Harbor craft, Dredge and Barge Emissions Factor Calculator* in 2020. Accordingly, no additional impacts to air quality are expected from usage of access and haul routes by project vehicles in performance of the Proposed Action.

Launchable toe revetments, tiebacks and key-ins are design refinements planned for the Proposed Action that will not require increased use of equipment above the level anticipated for the No Action Plan; consequently, no additional impact to air quality is expected.

Installation and removal of a temporary cofferdam is anticipated to impact a 50 foot by 30-foot area at the end of the Sump 63 outfall pipes and will not cause additional impacts to air quality because the barges and equipment that are already accounted for in the analysis. The coffer dam itself will not release air pollutants.

#### 3.4.3 Avoidance, Minimization and Mitigation Measures

Mitigation measures outlined in Section 3.11.6 of the 2016 FSEIS/EIR and the Contract 2 SEIR, section 3.9.3 will reduce criteria pollutant emissions, diesel particulate emissions, and fugitive dust associated with construction activities. Additionally, the purchase of emission credits from SMAQMD described in the Final General Conformity Report, dated June 2021, will result in no new significant effects to air quality or greenhouse gas emissions. Accordingly, this SEA determines that the air quality environmental effects of the Proposed Action would be short term, temporary and less than significant with mitigation.

### 3.5 Water Quality

#### 3.5.1 Existing Conditions

The environmental and regulatory framework and existing conditions described in Section 3.5, 'Water Quality and Groundwater Resources,' of the 2016 FEIS/EIR are generally applicable to the analysis in this Supplemental EA and therefore are not repeated here.

#### 3.5.2 Environmental Effects

##### **No Action Alternative**

The 2016 ARCF GRR EIS/EIR evaluated the effects of an accidental spill or inadvertent discharge from project equipment that could directly affect the water quality of the river or water body in the Project Area, or groundwater, and indirectly affect regional water quality. Implementation of mitigation measures to compensate for potential adverse effects of Alternative 2 of the 2016 FEIS/EIR Section 3.11.6 will reduce significant temporary, short-term construction-related sediment and contaminant discharges to receiving waters during construction to less than significant.

##### **Proposed Action**

Access, haul routes and staging areas will only be used to complete work around the I80 / Pioneer Bridge. All routes are over existing roads at Sump 63 and would not impact water quality or ground water. Barging in materials and equipment on the remaining sites would increase water turbidity, temporarily. However, this is not a new or significant impact.

The 2016 FEIS/EIR analyzed the effect of placing rock on the riverbank, below the OHWM to prevent erosion. That analysis included the same site preparation, and equipment that is required to construct launchable toe and tieback and key-in features. Therefore, the two new construction methods to be employed as part of the Proposed Action will not change or increase project effects to water quality, which will remain less than significant with mitigation.

Placement and removal of cofferdams is considered temporary work and the temporary placement of fill in a navigable waterbody. Dewatering activities could temporarily increase turbidity downstream; however, mitigation measures outlined in the 2016 FEIS/EIR and best management practices (BMP's) would be followed to ensure the activity meets water quality objectives. USACE obtained a programmatic Water Quality Certification from the Central Valley Regional Water Quality Control Board (CVRWQCB) on July 13, 2021. Prior to construction, USACE will request authorization from the CVRWQCB to start construction under the Programmatic General Permit, Report Type 3 Commencement of Construction, for the Proposed Action. The contractor will be required to obtain a Construction General Permit for potential effects on stormwater discharge, including preparation of a Storm Water Pollution Prevention Plan. These measures, in addition to the measures listed below, would ensure the effects of the Proposed Action on water quality would be less than significant with mitigation.

The short-term impact to stream turbidity caused by the movement and anchoring of supply barges was analyzed in the 2016 FEIS/EIR and determined to be significant but the long term impact is now estimated to be lower than forecast in the 2016 FEIS/EIR because of the project's more concentrated construction schedule, requiring 5 years instead of 14 years. On balance, the anticipated increase in the number of barges used in performance of the Proposed Action is not expected to cause additional significant impacts to water quality beyond the level forecast in the 2016 FEIS/EIR.

### 3.5.3 Avoidance, Minimization and Mitigation Measures

Mitigation measures applicable to water quality are located within the ARCF GRR FEIS/FEIR.

- Conduct water quality tests specifically for increases in turbidity and sedimentation caused by construction activities. If turbidity exceeds allowable limits, a turbidity curtain or other minimization measure will be utilized.
- The contractors must comply with the Stormwater Pollutant Prevention Plan.
- The contractors must comply with the Spill Prevention Control and Countermeasures Plan.
- The conditions listed in the ARCF Programmatic CWA Section 401 Water Quality Certification and Order will be followed. These conditions supersede any associated mitigation measures listed in the ARCF GRR FEIS/FEIR.

The measures below would be undertaken to reduce impacts to water quality in circumstances requiring cofferdams.

- All work performed in-water would be completed in a manner consistent with applicable water quality standards to ensure the protection of beneficial uses specified in The Sacramento River Basin.
- All dewatering and diversion activities would be undertaken such that natural flow is maintained upstream and downstream of the Project Area.

- The temporary cofferdam would be installed in a manner designed to prevent or minimize temporary sedimentation, siltation, or erosion upstream or downstream of the Project Area.
- Cofferdams would remain in place and functional around project construction sites until all work is complete, protecting river flows from the risk of contractor spills of fluids or materials.

## 3.6 Vegetation and Wildlife

### 3.6.1 Existing Conditions

The environmental and regulatory framework described in Section 3.6 'Vegetation and Wildlife' of the 2016 FEIS/EIR is generally applicable to the analysis in this Supplemental EA and therefore is not repeated here. Section 3.2.9 of the SR ERO C1 2020 SEIS/EIR also describes the vegetation and wildlife found throughout the project area. Recent work on SREL C2 has identified active non-native, red fox dens that fall within the footprint of our project.

Detailed habitat maps are included in Appendix B.

The Fish and Wildlife Coordination Act of 1958 (16 USC 661 *et seq.*), as amended, allows the USFWS to assess impacts of proposed projects on covered species and habitats, and make recommendations to reduce those impacts. The Coordination Act Report (CAR; USFWS # 08ESMF00-2013-CPA-0020) was included in the 2016 FEIS/EIR as Appendix A and recommended that USACE compensate for the loss of oak woodland, riparian forest, riparian scrub-shrub, and emergent wetland at a ratio of 2:1. The ARCF project has been designed to comply with the recommendations contained in the Coordination Act Report.

### 3.6.2 Environmental Effects

#### **No Action Alternative**

Under the No Action Alternative, the project work described in Alternative 2 of the 2016 FEIS/EIR, SREL C1-3 SEA's and SR ERO C1 SEA is considered completed. This includes the use of construction equipment to degrade and rebuild the levee, transport material, install jet grouting and place bank protection measures. The 2016 FEIS/EIR determined that project impacts to vegetation and wildlife would be significant short term but less than significant for the long term, with mitigation.

#### **Proposed Action**

Mitigation for the approximately 1.83 acres of tree canopy to be removed by the Proposed Action would be undertaken both on and offsite, as outlined in the Fish and Wildlife Coordination Act Report cited in Paragraph 3.6.1, above. Woody vegetation would be trimmed or removed over the winter to avoid encounters with nesting migratory birds protected under the Migratory Bird Treaty Act of 1918, as amended, prior to construction commencing in spring 2023. The tree canopy habitat also overlaps with western yellow-billed cuckoo (YBCU) habitat that is discussed in the U.S. Fish and Wildlife Service (USFWS; 08ESMF00-2014-F-0518-R003; dated March 31, 2021) BO.

The 2016 FEIS/EIR analyzed the effect of placing rock on the riverbank, below the OHWM to prevent erosion. That analysis included the same site preparation, equipment and vegetation



removal that is required to construct the launchable toe, tieback, and key-in features of the Proposed Action. Tiebacks and key-ins would expand bank protection up the levee slope, but flexibility of design will allow maximum preservation of existing vegetation so that no net increase in the effects of the Proposed Action is anticipated when compared to the impacts previously analyzed in the 2016 FEIS/EIR. Consequently, the two new construction methods incorporated into the Proposed Action will not change or increase the effects to vegetation and wildlife.

The 2016 FEIS/EIR analyzed the effects to vegetation and wildlife of doing work below the OHWM of the Sacramento River. The work is scheduled to occur during the time of year with the lowest flows. The effects of incorporating a coffer dam at Sump 63 would not be greater than those previously analyzed to vegetation and wildlife because rock protection work is occurring in the same area, and adequate BMP's and mitigation measures would already be in place. Short term and temporary effects of the Proposed Action to underwater habitat would not create a new, significant impact.

The increased turbidity from barges being moved into place was determined to be a short-term significant impact in the 2016 FEIS/EIR. This increased turbidity could temporarily affect local fish, causing them to move away from the area. The short-term impact would be significant due to the increased number of sites scheduled for constructed at one time; however, the long-term impact would be less than anticipated in the 2016 FEIS/EIR due to the narrowed construction schedule. On balance, the anticipated increase in the number of barges to be used in performance of the Proposed Action is not expected to cause additional significant impacts to vegetation and wildlife above the level forecast in the 2016 FEIS/EIR.

The Proposed Action has undergone design refinements to reduce the linear feet of required improvements. This reduction in length directly reduced impacts to vegetation and wildlife from the estimate provided in the 2016 FEIS/EIR. With implementation of avoidance, minimization measures and mitigation the effect of the Proposed Action on this resource would be less than significant.

### 3.6.3 Avoidance, Minimization and Mitigation Measures

In addition to the avoidance and minimization measures outlined in Section 3.3.3 of the 2016 FEIS/EIR and mitigation measures outlined in Section of 3.6 of the 2020 SREL FSEA/SEIR, the Proposed Action has undergone design refinements to reduce the linear feet of required improvements. This reduction in length would directly reduce impacts to vegetation and wildlife from the estimate provided in the 2016 FEIS/EIR. With implementation of these avoidance, minimization measures and mitigation the effect of the Proposed Action on this resource would be less than significant.

## 3.7 Federal Special-Status Species

### 3.7.1 Existing Conditions

The environmental and regulatory framework described in Section 3.8 of the 2016 FEIS/EIR is applicable to the analysis in this SEA and is not repeated here. The USFWS is the administering agency for this authority regarding non-marine species and NMFS is the administering agency for fish species. Species regulated by NMFS are Chinook Salmon (*Oncorhynchus tshawytscha*), winter, spring and fall runs, Steelhead (*Oncorhynchus mykiss*), Distinct Population Segment (DPS) North American green sturgeon (*Acipenser medirostris*). Species regulated by USFWS

are valley elderberry longhorn beetle (VELB; *Desmocerus californicus dimorphus*), Delta smelt (*Hypomesus transpacificus*) and Western yellow-billed cuckoo (YBCU; *Coccyzus americanus occidentalis*)

### 3.7.2 Environmental Effects

#### **No Action Alternative**

Under the No Action Alternative, the project work described in Alternative 2 of the 2016 FEIS/EIR, SREL C1-3 SEAs and SR ERO C1 SEA is considered completed. This includes the estimated temporary and permanent, direct, and indirect impacts to federally listed species resulting from the use of construction equipment, coffer dam and the placement of rock placement. The 2016 FEIS/EIR determined the project's effects on Federal Special Status Species Environmental would be less than significant with mitigation measures outlined in Section 3.5.6 of the 2016 FEIS/EIR and the project's USFWS and NMFS BOs.

#### **Proposed Action**

Access routes, haul routes, and staging areas would utilize existing roadways and parking lots, causing no new impacts to federally listed species.

The 2016 FEIS/EIR considered impacts to federally listed species from construction and operation of launchable rock trenches as the project's erosion protection method, not the launchable rock toe; but the effects of an actual launch of rock during an extreme flood would be very similar risking injury to nearby fish in the channel that might fail to move away quickly. The launchable toe is not anticipated to have impacts greater or different to VELB or YBCU than the construction method described in the 2016 FEIS/EIR.

Tiebacks and key-ins would expand the construction footprint up slope, but design flexibility will minimize impact to existing vegetation. The effects to federal special status species from inclusion of this construction methodology is not expected to differ from the effects previously analyzed in the 2016 FEIS/EIR.

Removal or replacement of the municipal drainage system, including installation of a cofferdam and dewatering at the installation site, could result in fish injury, mortality, and/or stranding within the cofferdam if protected fish species are present in the immediate work area during construction activities. However, the small size of the proposed temporary cofferdam and implementation of minimization and mitigation measures will ensure that the impacts of this element of the Proposed Action to federally protected species would be less than significant with mitigation.

Barge Traffic was analyzed in the 2016 FEIS/EIR. Use of barges may scare fish from the area, disrupt normal habits by creating temporary shaded areas, cause stress from increased noise, and cause insignificant temporary changes to surface water chemistry from the discharge of exhaust associated with boats. However, the work will be completed within the fish work window shown in Table 7, when listed species are least likely to be present in the river, limiting impacts to listed fish species to a less than significant level.

### 3.7.3 Avoidance, Minimization and Mitigation Measures

The project includes measures to avoid and minimize adverse effects, including in-water work windows, worker awareness training, and development and implementation of a fish rescue plan

as well as other conservation measures discussed above and in the 2016 FEIS/EIR. Additional information about compliance with the BOs is in Sections 4.1 and 4.3 below. The BOs can be found on the project website: [sacleveeupgrades.com](http://sacleveeupgrades.com).

Screened pumps to dewater the area inside the cofferdam would be used in accordance with California Department of Fish and Wildlife (CDFW)'s fish screening criteria and in accordance with the NMFS Fish Screening Criteria for Anadromous Salmonids and the Addendum for Juvenile Fish Screen Criteria for Pump Intakes.

**Table 7: Wildlife Work Windows**

	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
<b>VELB</b>		14th									1st	
<b>Bird</b>		14th							1st			
<b>Fish</b>							1st			31st		

In compliance with the BOs, USACE would mitigate for impacts to listed species at different ratios. Estimated impacts to listed species habitat for the entirety of Contract 2 are as follows: YBCU - 1.83 acres of canopy to be removed; Delta Smelt - 10.94 acres affected between the mean low water and 3 meters below the mean low low; Green Sturgeon and salmonids - 31.71 acres between the OHWM and the perimeter of the construction footprint. No impacts to VELB are anticipated because project designs would avoid all elderberry shrubs in the area. Planting benches are providing approximately 3.05 acres of Salmonid, Green Sturgeon and YBCU habitat, and 2.79 acres of Delta Smelt habitat for onsite mitigation. Remaining impacts would be offset by construction of a dedicated mitigation site, or purchase of an adequate number of appropriate credits at a conservation bank. Accordingly, the Proposed Action would not cause additional significant adverse effects to vegetation and wildlife.

### 3.8 Fisheries (Non-listed Species)

#### 3.8.1 Existing Conditions

The environmental and regulatory framework described in Section 3.7 of the 2016 FEIS/EIR is applicable to the analysis in this Supplemental EA/EIR and is not repeated here.

#### 3.8.2 Environmental Effects

##### **No Action Alternative**

Under the No Action Alternative, the work described in Alternative 2 of the 2016 FEIS/EIR, SREL C1-3 SEA's and SR ERO C1 SEA is considered completed. This includes the project's estimated direct and indirect impacts to non-federally protected species. The 2016 FEIS/EIR determined the project's environmental effects on Fisheries would be less than significant with mitigation measures outlined in Section 3.5.6 of the FEIS/EIR.

##### **Proposed Action**

Project access routes, haul routes, and staging areas will only utilize existing roadways or previously disturbed areas and will not be located below the OHWM of the Sacramento River. Consequently, this element of the Proposed Action will have no effect on fisheries.

The 2016 FEIS/EIR considered impacts to fish from construction and operation of launchable rock trenches as the project's erosion protection method, not the launch of the rock toe but the effects of an actual launch of rock during an extreme flood would be very similar, risking injury fish in the channel that might fail to move away in time. The launchable toe provides structure to hold a larger planting bench and expanded room for habitat such as shaded riverine aquatic habitat than standard bank protection would provide. Overall, construction and operation of the launchable toe construction method would cause no additional adverse effects to fisheries over the launchable trench method.

Tiebacks and key-ins, which were not considered in the 2016 FEIS/EIR, are now a part of the Contract 2 design and will be installed below the OHWM of the Sacramento River. They will be located in the same vicinity and placed at the same time as other bank protection measures. Since these new design features will be placed within the project footprint, and do not appreciably change the profile and contour of the bank, they are not anticipated to cause any different or additional direct or indirect, effects to fish.

Construction of the cofferdam and dewatering could disrupt fish by temporarily increasing noise and turbidity, causing fish to move away from the area. If juvenile species move towards open water, they could experience higher risks of predation. This risk would only be present during instillation and removal of sandbags used to form the cofferdam. With appropriate BMPs and minimization measures, these effects would be less than significant.

The effects of barge traffic on non-listed fish were analyzed in the 2016 FEIS/EIR. The use of barges may scare fish from the area, disrupt normal habits by creating temporary shaded areas, cause stress from increased noise and cause insignificant temporary changes to surface water chemistry. The Sacramento River is frequently used by barges and other commercial and recreational vessels year-round. The presence of construction barges in the river is anticipated to have only minor effects on fish, very similar to that of regular river traffic, persisting only during the four month period of construction, after which effects on fisheries from river traffic would return to normal patterns.

### 3.8.3 Avoidance, Minimization and Mitigation Measures

Minimization and mitigation measures that will be used during construction, dewatering and operation of the cofferdam is outlined above in Section 3.6, Federally Listed Species. See the Mitigation Measure FISH 1 in the Sac River Erosion C2 SEA.

## 3.9 Cultural Resources

### 3.9.1 Existing Conditions

The cultural resources setting, and regulatory framework described in Section 3.9 of the 2016 FEIS/EIR is applicable to the analysis in this SEA and is not repeated here.

### 3.9.2 Environmental Effect

#### **No Action Alternative**

Under the No Action/No Project Alternative, the work described in Alternative 2 of the 2016 FEIS/EIR, SREL C1-3 SEA's and SR ERO C1 SEA is considered completed. The 2016 FEIS/EIR concluded that mitigation measures contained in the ARCF Section 106 Programmatic Agreement (PA) would reduce potential impacts of the project to cultural

resources under NEPA and Section 106 of the National Historic Preservation Act (NHPA) to a less-than-significant level as any adverse effects would be resolved by implementing requirements contained in the ARCF Section 106 Programmatic Agreement (PA).

### **Proposed Action**

Erosion protection measures, including construction of launchable toes, planting benches and placement of rock, would involve minimal ground disturbance. Any earthmoving activities could damage or destroy unknown subsurface historic or prehistoric-artifacts and archaeological sites, and properties with significance to Native American tribes. If offsite stockpiling is needed, that location will be inventoried for cultural resources and assessed for effects to historic properties under the PA and ARCF GRR Historic Properties Management Plan (HPMP).

Four potential historic properties were identified within the Proposed Action's area of potential effects (APE) that were not discussed in the 2016 FEIS/EIR: P-34-005225, the Sacramento River Traditional Cultural Landscape; P-34-005379, remnants of a prehistoric mound; P-34-001497, the Walnut Grove Branch Line of Southern Pacific Railroad; and P-34-002143, Levee Unit 115. In accordance with the ARCF PA, confirmation of National Register of Historic Places (NHRP) eligibility for these cultural resources, findings of effect for the Proposed Action, and appropriate mitigation would be made through consultation between USACE, the California State Historic Preservation Officer (SHPO), and ARCF PA Parties, as appropriate, prior to initiating construction of the Proposed Action. USACE has initiated consultation with the SHPO and Tribes regarding the APE for the Proposed Action, determinations of eligibility for inclusion of these four potential historic properties to the National Register of Historic Places, and a finding of no adverse effect of the Proposed Action. Consultation with the SHPO and Tribes regarding these efforts will be ongoing in the coming months in accordance with the ARCF PA requirements. The PA and copies of coordination letters can be found in Attachment 1.

### **3.9.3 Avoidance, Minimization, and Mitigation Measures**

The following mitigation measures augment the mitigation identified in the 2016 FEIS/EIR, including actions to address adverse effects to historic properties and discovery of archaeological resources. If the project, including the Proposed Action, is implemented, USACE and the project's non-federal sponsors would implement the measures described below:

- Resolve Adverse Effects through a Programmatic Agreement and Historic Properties Treatment Plan.
  - A Programmatic Agreement has been executed for the ARCF Project. A Historic Properties Treatment Plan (HPTP) would be developed if the proposed action is found to result in adverse effects to historic properties.
- Prepare an Archaeological Discovery Plan and an Archaeological Monitoring Plan.
  - In accordance with the procedures described in Section 9.2 of the ARCF HPMP, an archaeological discovery plan would be developed for the Proposed Action. The discovery plan would specify what actions must be taken by the contractor in the event of an archaeological discovery and describe what actions USACE may take in the event of a discovery.

- In accordance with the procedures described in Section 9.3.9 of the ARCF HPMP, an archaeological monitoring plan would be developed for the Proposed Action. This plan would identify the locations of known Historic Properties as well as sensitive areas designated for archaeological monitoring and would include methods and procedures for monitoring and the procedures to be followed in the event of a discovery of archaeological materials.
- Conduct Cultural Resources Awareness Training.
  - In accordance with the procedures described in Section 9.1 of the ARCF HPMP, USACE would require the contractor to provide a cultural resource sensitivity and awareness training program for all personnel involved in project construction, including field consultants and construction workers. The training would be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American tribes. USACE may invite Native American representatives from interested culturally affiliated Native American tribes to participate.
- Implement Procedures for Discovery of Cultural Material.
  - If the discovery of cultural materials (e.g., unusual amounts of shell, animal bone, any human remains, bottle glass, ceramics, building remains), sacred sites, or landscapes is made at any time during project-related construction activities, USACE in consultation with the CVFPB and other interested parties would develop appropriate protection and avoidance measures where feasible. These procedures would be developed in accordance with the ARCF PA and ARCF HPMP, which specifies procedures for post-review discoveries. Additional measures, such as development of HPTPs prepared in accordance with the PA and HPMP, may be necessary if avoidance or protection is not possible.

### 3.10 Socioeconomic, Population, and Environmental Justice

#### 3.10.1 Existing Conditions

According to the 2020 census, Sacramento County had a population of approximately 1.6 million. The population projection for Sacramento County is 1.7 million persons by 2025. Although the county as a whole is expected to increase in population, the project area is built out and, therefore, expected population growth would occur outside the project area, where vacant land could be available for development.

According to the 2020 Census data, of the 1.6 million people in Sacramento County, 46.35% are white, 23.6 % Hispanic, 18.88% are Asian, 13.18% are African American, and the remaining 11.69% are of other ethnic backgrounds. The median household income is \$70,684, slightly less than the State average of \$77,358. 12.5% of the population is below the poverty level, which is slightly less than the statewide average of 16.4%. In 2022, the median value of homes is \$540,000, lower than the forecasted State average of \$834,400.

According to the Climate and Economic Justice Screening Tool, the project area falls within six census tracts; of those six only one is considered disadvantaged, see figure 7. Of the 2.8 miles of levee improvements, approximately 1000 feet fall within the disadvantaged tract and the work is separated from the neighborhood by I5 and the levee. A census tract is considered

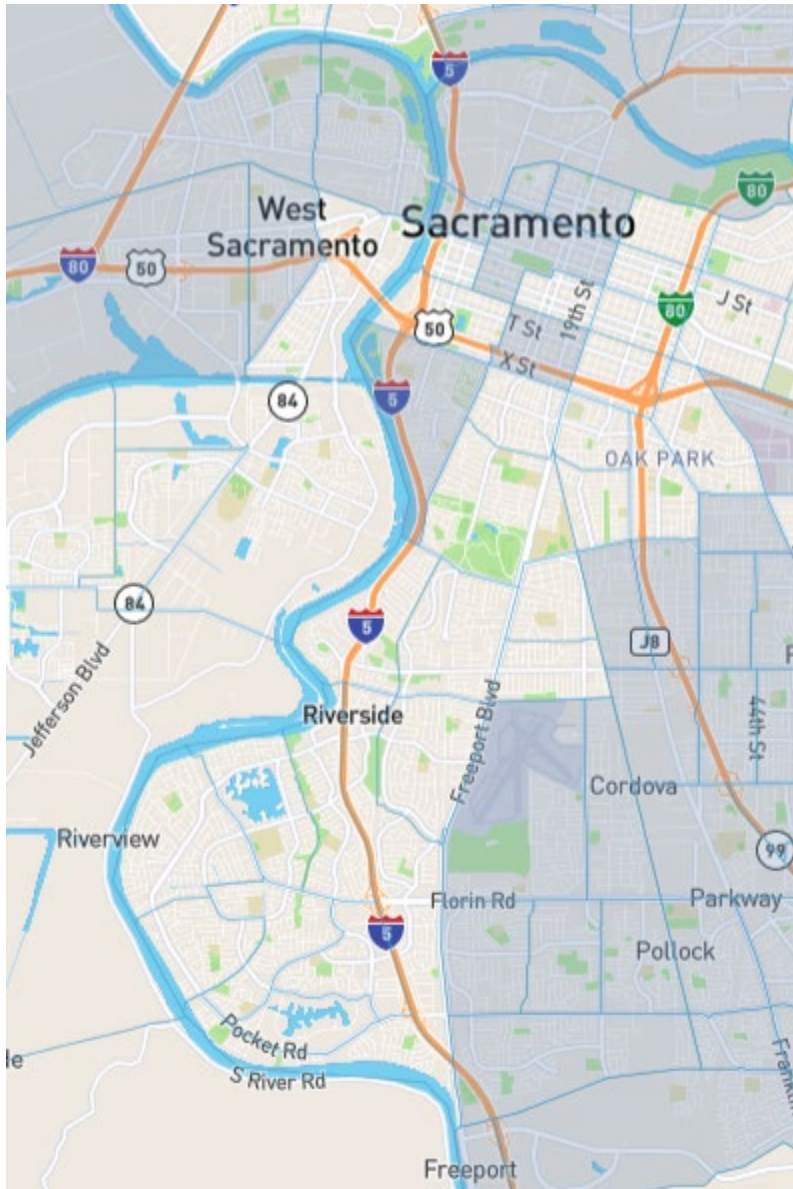
disadvantaged if it is above the threshold for one or more environmental or climate indicators and above the threshold for socioeconomic indicators, shown in Table 8. Census Tract 06067002200 is considered disadvantaged in six of the eight categories, shown in Table 8.

**Table 8:** Socioeconomic Indicators for Disadvantaged Census Tract

<b>Category</b>	<b>Criteria</b>	<b>Population %</b>	<b>Threshold %</b>
<b>Climate Change</b>	None	NA	NA
<b>Clean Energy and Energy Efficiency</b>	Fine inhalable particles, 2.5 micrometers or smaller.	92	65
	Low income, household income is less than or equal to twice the federal poverty level.	83	80
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80
<b>Clean Transit</b>	Traffic proximity and volume - county of vehicles at major roads within 500 meters.	95	90
	Low income, household income is less than or equal to twice the federal poverty level.	83	65
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80
<b>Sustainable Housing</b>	Lead Paint - percentile of number of homes built before 1960 that are not among the most expensive.	95	90
	Low income, household income is less than or equal to twice the federal poverty level.	83	65
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80
<b>Legacy Pollution</b>	Proximity to Risk Management Plan facilities. RMP facilities within 5 kilometers.	93	90
	Low income, household income is less than or equal to twice the federal poverty level.	83	65
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80



<b>Category</b>	<b>Criteria</b>	<b>Population %</b>	<b>Threshold %</b>
<b>Clean Water and Wastewater Infrastructure</b>	None	NA	NA
<b>Health Burdens</b>	Asthma - Weighted percent of people who have been told they have asthma.	91	90
	Low income, household income is less than or equal to twice the federal poverty level.	83	65
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80
<b>Workforce Development</b>	Poverty - Percent of a census tracts population in households where the household income is at or below 100% of the deferral poverty level.	95	90
	High school degree non-attainment - Percent of people ages 25 years or older whose educational level is less than a high school diploma.	10	10
	Higher education non-enrollment. Percent of the census tracts population 15 or older are not enrolled in college, university, or grad school.	91	80
Data Source: <a href="https://screeningtool.geoplatform.gov/en/#12.64/38.55711/-121.50973">https://screeningtool.geoplatform.gov/en/#12.64/38.55711/-121.50973</a>			



**Figure 7:** Disadvantaged Census Tracts

The disadvantaged census tracts in Sacramento and Yolo Counties are shaded. The only disadvantaged census tract that could be directly affected by Contract 2 construction includes Miller Park (hereafter the 'Miller Park Census Tract'). The other five tracts are not considered to be disadvantaged per the Climate and Economic Justice Screening Tool. See <https://screeningtool.geoplatform.gov/en/#11.09/38.5559/-121.5106>

In recent years the number of homeless residents in Sacramento County has grown significantly. The 2022 Point in Time count, conducted in February 2022, identified approximately 9,300 individuals experiencing homelessness in Sacramento County. Seventy two percent are unsheltered, and 28 percent are sheltered.

### 3.10.2 Environmental Effects

#### **No Action Alternative**

The No Action alternative assumes that the erosion work identified as Alternative 2 in the 2016 FEIS/EIR, along with the Proposed Actions planned for Sacramento River Seepage, Stability and Overtopping Contracts 1-3, the Sacramento Weir Widening, and Sacramento River Erosion Contract 1 have been constructed. The 2016 FEIS/EIR determined the project's environmental effects on Environmental Justice would be less than significant.

#### **Proposed Action**

Contract 2 construction, including the Proposed Action, would cause some degree of temporary disruption to nearby neighborhoods. Work in close proximity to residential properties adjacent to the levee sections requiring repair would occur only during the dry season (summer months) and would unavoidably disrupt the tranquility of some residents. While significant, the impact to these residents would be short term, no more than 4 months in either 2023 or 2024.

Levee repair work within the Miller Park Census Tract would be separated from the neighborhood by Interstate-5 and the levee. Work at this location would be conducted both by land and barge. Construction equipment and vehicles would not go through residential areas. Air quality effects and sound impacts would be greatly attenuated by the presence of the interstate highway buffering construction sites from residential neighborhoods. Consequently, the Proposed Action would not cause any disproportionate effect to disadvantaged communities.

The Sacramento River corridor is home to many unhoused individuals. Contract 2 construction would require temporary displacement of individuals living within the construction footprint in the interest of public safety and the security of the job site. Once construction is complete no project-related physical measures would prevent homeless individuals from re-inhabiting the repaired levee reaches.

The benefits of the Common Features project, and the Proposed Action in particular, would extend to all neighborhoods of metropolitan Sacramento at risk of flooding in the event of a significant breach of the Sacramento River levee. Contract 2 repair work would not cause disproportionate adverse effects, or provide disproportionate benefits, to any minority or low income population and the overall effect of the Proposed Action as to Socioeconomic, Population, and Environmental Justice considerations would be less than significant.

#### **3.10.3 Avoidance, Minimization and Mitigation Measures**

While addressing and relocating members of the unhoused community is the responsibility of Sacramento City, local law enforcement, other authorized agencies, and services, to ensure the safety of all those involved, USACE, CVFPB, and the construction contractor would work with the City and County of Sacramento and the City of Sacramento's Police Department to notify and safely relocate people living in the construction area. The contractor is required to submit and comply with a Transient Population Safety Plan and is responsible for the safety of the public and their staff within the limits of construction.

Services for those displaced from the project construction area are offered by both Sacramento City and Sacramento County. The City of Sacramento operates "safe ground" and "safe

parking” locations where people may safely camp or park vehicles and RVs. These sites are staffed 24 hours a day and offer services including portable toilets and cleaning stations. Case managers at these sites provide support for mental health needs, substance use disorders, and assist with housing coordination. Individuals using these sites are connected to additional service providers through a centralized information system. Several of these locations are in the immediate vicinity of the Sacramento River Erosion Contract 2 project site, including South Front Street, Miller Park, and along the U.S. Highway 50 Viaduct at 6th Street between W and X Streets. The city is also implementing a Comprehensive Siting Plan which includes congregate shelters, safe ground/safe parking sites, emergency shelters, and rooms available through motel vouchers.

### 3.11 Transportation

#### 3.11.1 Existing Conditions

The project area is adjacent to the Little and Big Pocket neighborhoods, which consist of residential, and commercial areas, including schools and parks. Generally, the roads are not used for large trucks or construction equipment.

#### 3.11.2 Environmental Effects

##### **No Action**

Section 3.10 of the ARCF GRR EIS/EIR states that the project will result in a substantial increase in traffic on local roadways associated with truck haul trips during construction activities. The Sacramento River levees would be accessed primarily from U.S. 50 and I-5. In addition, the major arterial roadways which would be used to access the project areas include Richards Boulevard, Meadowview Road/Pocket Road, 43rd Avenue, Riverside Boulevard, and Freeport Boulevard. These major roadways would be used to connect to local, minor arterials, and connectors to access the study areas. In addition, traffic controls will cause or contribute to temporary substantial increases in traffic levels on roadways as traffic is detoured or slowed. Traffic controls could cause delays during the morning and evening peak commute hours. Pedestrian and bicycle trails will require detours and/or temporary closures. These effects were determined to be significant. Mitigation measures, such as a Traffic Control and Road Maintenance Plan and notifications regarding roadway lane and pedestrian/bicycle path closures and detours were identified. It was determined that the temporary increase in construction traffic on public roadways will be a significant and unavoidable effect in the 2016 FEIS/EIR and no additional impact is anticipated.

##### **Proposed Action**

To the maximum extent practical, site access and construction will be done by barge. Land side access may be necessary at the Interstate 80, Site 1 and at Sump 63, Site 3, where construction traffic will travel along highways, major streets, and the levee crown. Highways and major streets identified for Project access include I-5, I-80, Highway 160 (Freeport Boulevard), Broadway, Front Street, Sutterville Road, Pocket Road, 43rd Avenue, Riverside Boulevard, North point Way, Grangers Dairy Drive, and Garcia Park levee access. Site 1 and Site 3 will be accessed by both land and water side of the levee. Site 1 is anticipated to take a total of two months to construct. If all the degraded material and new bank protection is brought in by semi-trucks pulling two trailers with capacity to hold 20 cubic yards each, then a total 550 truck trips

would be required. If all the degraded material and new bank protection is brought in by tandem dump trucks, with a capacity to hold 8.6 cubic yards of material each, then 2,467 truck trips would be required. Additionally, Site 1 would require two excavators and a bulldozer to be delivered, as well as approximately 10 vehicles for construction staff. Site 3 is anticipated to take a total of two months to construct. If all the degraded material, pipes and new bank protection is brought in by semi-trucks pulling two trailers with capacity to hold 20 cubic yards each, then 19 truck trips would be required. If all the degraded material and new bank protection is brought in by tandem dump trucks, with a capacity to hold 8.6 cubic yards of material each, then 95 truck trips would be required. Additionally, Site 3 would require four, 30-inch pipes and four flap gates to be removed and delivered, two excavators and a bulldozer to be delivered as well as approximately 10 vehicles for construction staff.

Staging area opportunities are limited along of the Sacramento River east levee, due to adjacent urban development and can only be used for can be used by the Contractor for offices, boat, and vehicle parking, offloading, and changing equipment and maneuvering materials between the barge and its final location. Some staging areas will be accessed by roads mentioned above and others will only be accessible from the barge. Waterside staging areas will be subject to strict containment and spill prevention BMPs. Final selection of staging areas will be based on environmental and land use constraints. Staging areas would be returned to pre-project conditions. Vegetation removal is not anticipated at any of the locations because they are existing roads and maintenance areas. Haul Routes and Staging Areas are included in Figure 1. Potential staging areas include the following:

- Miller Park Parking lot (only location available for equipment storage)
- Levee maintenance road in Site 2, Station 1200+00
- Gravel Lot at the end of Sutterville Road, Site 2, Station 1215+00
- Gravel lot between Sacramento Bike Trail and Riverside Blvd, Site 3, upstream of Station 1320+00
- Levee maintenance road in Site 5, between Station 1500+00 and 1505+00
- Levee maintenance road in Site 6, Station 1520+00

Construction-generated traffic will temporarily increase the daily and peak-hour traffic and could also delay or temporarily obstruct the movement of emergency vehicles. USACE and CVFPB will provide public notice in advance of closures and detours/routes and will require the provision of detour signs indicating the location of alternate routes that could be used by bicyclists or pedestrians. Implementation of the Proposed Action would generate additional traffic on the local roadways and highways. Mitigation measures identified in the 2016 FEIS/EIR, incorporated here into Contract 2, and the required adherence to local traffic laws and speed limits will help reduce the associated impacts. Short term and temporary effects to transportation, of the Proposed Action, would not create a new, significant impact.

### 3.11.1 Avoidance, Minimization and Mitigation Measures

The ARCF GRR Final EIS/EIR includes several measures to reduce the effects of construction activities on traffic and circulation. These measures have been consolidated into Mitigation Measure TR-1.

### Mitigation Measure TR-1: Prepare and Implement a Traffic Control and Road Maintenance Plan

Before the start of project-related construction activities, Project Partners would require the contractor to prepare a Traffic Control and Road Maintenance Plan. This plan would describe the methods of traffic control to be used during construction. All on-street construction traffic would be required to comply with the local jurisdiction's standard construction specifications. The items listed below would be included in the plan and as terms of the construction contracts:

- Follow the standard construction specifications of affected jurisdictions and obtain the appropriate encroachment permits, if required. Incorporate the conditions of the encroachment permit into the construction contract. Encroachment permit conditions would be enforced by the agency that issues the encroachment permit.
- Provide adequate parking for construction trucks, equipment, and construction workers within the designated staging areas throughout the construction period. If inadequate space for parking is available at a given work site, the construction contractor would provide an off-site staging area and as needed, coordinate the daily transport of construction vehicles, equipment, and personnel to and from the work site.
- Proposed lane closures would be coordinated with the appropriate jurisdiction and be minimized to the extent possible during the morning and evening peak traffic periods. Construction specifications would limit lane closures during commuting hours where feasible, and lane closures would be kept as short as possible. If a road must be closed, detour routes and/or temporary roads would be made to accommodate traffic flows. Signs would be provided to direct traffic through detours.
- Post signs providing advance notice of upcoming construction activities at least 1 week in advance so that motorists are able to avoid traveling through affected areas during these times.
- Provide bicycle detours to allow for continued use by bicycle commuters. Maintain safe pedestrian and bicyclist access around the construction areas at all times. Construction areas would be secured as required by the applicable jurisdiction to prevent pedestrians and bicyclists from entering the work site, and all stationary equipment should be located as far away as possible from areas where bicyclists and pedestrians are present.
- Notify (by means such as physical signage, internet postings, letters, or telephone calls) and consult with emergency service providers to inform them of construction activities, maintain emergency access, and facilitate the passage of emergency vehicles on city streets during construction activities. Emergency vehicle access would be made available at all times.
- The construction contractor would document pre- and post- construction conditions on roadways used during construction. This information would be used to assess damage to roadways used during construction. The contractor would repair all potholes, fractures, or other damages.
- Comply with Caltrans requirements by submitting this Traffic Control and Road Maintenance Plan to Caltrans for review to cover points of access from the State highway system (I-5) for haul trucks and other construction equipment

**Table 9: Chapter 3 Effect Summary**

Resource	No Action (2016 FEIS/EIR)	Proposed Action	Numerical Impact (if any)	Mitigation (2016 FEIS/EIR)	Mitigation (Proposed Action)
Air Quality	Less than Significant with Mitigation	No New Significant Effect	NOx Unmitigated tons/day - 13.69 PM2.5 Unmitigated tons/day - 0.85	Implementation of SMAQMD's Basic Construction Emission Control Practices and other BMPs, as listed in Section 3.11.6.	Section 3.8.3 of the ARCF SR Erosion C2 SEIR
Climate Change	Less than Significant with Mitigation	No New Significant Effect		Best management practices to reduce waste and green house gasses, as listed in Section 3.12.6.	Section 3.9.3 of the ARCF SR Erosion C2 SEIR
Cultural Resources	Significant	No New Significant Effect		Preparation and implementation of a Programmatic Agreement, Historic Properties Management Plan, and Historic Properties Treatment Plans.	Section 3.7.3 of the ARCF SR Erosion C2 SEIR
Fisheries	Less than Significant with Mitigation	No New Significant Effect		Vegetation variance would allow waterside vegetation to remain on the Sacramento River. Bank protection sites and launchable rock trenches would be revegetated following construction. BMPs would be implemented to address turbidity and are discussed in Section 3.5.6.	Section 3.5.3 of the ARCF SR Erosion C2 SEIR
Hazardous Wastes and Materials	Less than Significant with Mitigation	No New Significant Effect		Borrow material would be tested prior to use to ensure that no contaminated soils are used for this project.	Section 3.13.3 of the ARCF SR Erosion C2 SEIR
Hydrology and Hydraulics	Less than Significant	No New Significant Effect		None Required	NA
Land Use	Less than Significant with Mitigation	No New Significant Effect		Complete	NA
Noise	Less than Significant with Mitigation	No New Significant Effect		Coordination with local residents, compliance with noise ordinances, and other BMPs, as listed in Section 3.13.6.	Section 3.10.3 of the ARCF SR Erosion C2 SEIR
Public Utilities and Service Systems	Less than Significant	No New Significant Effect		Notification of potential interruptions would be provided to the appropriate agencies and to landowners.	NA
Recreation	Significant	No New Significant Effect		Notification and coordination with recreation users and bike groups. Flaggers, signage, detours, and fencing to notify and control recreation access and traffic around construction sites.	Section 3.11.3 of the ARCF SR Erosion C2 SEIR
Socioeconomics, Population, and Environmental Justice	Less than Significant	No New Significant Effect		Federal Relocation Act compliance.	Listed in Section 3.10.3.
Special Status Species	Less than Significant with Mitigation	No New Significant Effect	VELB - 0 acres YBCU – 1.83 acres Delta Smelt – 10.94 acres Salmon/Green Sturgeon – 31.71 acres	Mitigation per the terms of the USFWS and NMFS BOs (Appendix J). Replace habitat for species either on-site or in close proximity to lost habitat. Implement BMPs discussed in Section 3.5.6 and conservation measures in the BOs during construction to prevent mortality. Implement green sturgeon modeling and monitoring to improve effects assessment, minimize construction impacts, and mitigate for lost benthic habitat per the terms of the BOs. Implement fish passage at the Sacramento Bypass and grade the widened Sacramento Bypass to reduce stranding potential.	Create or purchase mitigation credits at an appropriate ratio per the FWCAR and ESA BO's. Section 3.6.3 of the ARCF SR Erosion C2 SEIR
Transportation and Circulation	Significant	No New Significant Effect		Preparation of a Traffic Control and Road Management Plan and other BMPs listed in Section 3.10.6.	Listed in Section 3.10.3.
Vegetation and Wildlife	Significant Short-term / Less than Significant with Mitigation long-term	No New Significant Effect	Riparian / YBCU – 1.83 acres	When possible, in-kind compensation would be planted on planting berms, on top of launchable rock trenches, or on other lands within the Parkway. A hydraulic evaluation will be conducted to determine whether mitigation could occur in the Sacramento Bypass. Additional mitigation sites are identified in Section 3.6.6.	Create or purchase mitigation credits at a 2:1 ratio per the FWCAR and ESA BO's. Section 3.4.3 of the ARCF SR Erosion C2 SEIR
Visual Resources	Significant	No New Significant Effect		Trees would be planted after construction is completed on planting berms and on top of launchable rock trenches, however there would still be a temporal loss of vegetation. Disturbed areas would be reseeded with native grasses.	Section 3.12.3 of the ARCF SR Erosion C2 SEIR
Water Quality and Ground Water	Less than Significant with Mitigation	No New Significant Effect		Preparation of a Stormwater Pollution. Protection Plan, Spill Prevention Control and Countermeasures Plan, and a Bentonite Slurry Spill Contingency Plan. Implementation of BMPs listed in Section 3.5.6.	Section 3.3.3 of the ARCF SR Erosion C2 SEIR

Notes:

- No Action - GRR
- Proposed Action - This SEA
- Numerical Impact of Proposed Action
- Mitigation - GRR and SEIR sections included

## 4 Cumulative Effects, Impacts, Growth Inducing Impacts

### 4.1 Cumulative Effects

#### 4.1.1 Methodology and Geographic Scope of Analysis

CEQ defines effects to include cumulative effects, which are the impact on the environment resulting from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions (40 C.F.R. § 1508.1). The 2016 FEIS/EIR summarizes many nearby projects and the cumulative impacts expected from this collection of activities. The following summary adds projects that were not included in the 2016 FEIS/EIR and updates to projects that were included in the 2016 FEIS/EIR.

#### 4.1.2 Past, Present and Reasonably Foreseeable Future Projects

This section briefly describes other similar or related projects, focusing on development, flood-risk reduction, and habitat restoration projects that have similar effect mechanisms and affect similar resources as will the Sacramento River Erosion Contract 2, with project refinements. Although the ARCF GRR Final EIS/EIR identified several of these projects in the cumulative scenario, the descriptions in this section include additional projects and updated timing and schedule information.

#### 4.1.3 Other Elements of the American River Common Features 2016 (ARCF 2016) Project

The ARCF 2016 project is scheduled for construction from 2019 through 2025, potentially extending into 2026. In addition to the Proposed Action, the project involves construction of levee improvements along numerous levee reaches of the American River and additional levee reaches of the Sacramento River as well as proposed improvements to the Natomas East Main Drainage Canal (NEMDC) east levee and Magpie Creek (SAFCA previously completed improvements as an early implementation action in 2018). The levee improvements scheduled for implementation at these other project sites include construction of cutoff walls, erosion protection, seepage and stability berms, relief wells, levee raises, and a small stretch of new levee. In addition, USACE intends to widen the Sacramento Weir. The project will also involve construction of a number of mitigation sites in the area.

In addition to the improvements that are part of the proposed project, the ARCF GRR Final EIS/EIR includes:

- Construction of a seepage and stability berm along Front Street (completed in 2019)
- Seepage and stability improvements to the Sacramento River east levee between downtown Sacramento and Freeport (planned for 2020-2023)
- Erosion protection on the American River (planned for 2021-2025)
- Additional erosion protection improvements on the Sacramento River (planned between 2021 and 2025)
- Improvements to the “East Side Tributaries, including the Magpie Creek Diversion Channel, the east bank of the Natomas East Main Drainage Canal (NEMDC)/Steelhead Creek, Pleasant Grove Creek Canal, and Dry, Robla, and Arcade Creeks (planned for 2023)



- Widening the Sacramento Weir and Bypass, located along the north edge of the City of West Sacramento in Yolo County (planned for 2021 to 2024)

#### 4.1.4 Dredging at Miller Park

The City of Sacramento performs annual maintenance dredging, between July and October, at the Sacramento Marina and Miller Park Boat Ramp. This activity requires the localized use of a barge and clam shell excavator just downstream of Site 1, Segment 4. The work results in increased air emissions in the area, additional boat traffic, and pedestrian /bike detours.

#### 4.1.5 Sacramento River Bank (Sac Bank) Protection Project

The Sacramento River Bank Protection Project (SRBPP) was authorized to protect the existing levees and flood control facilities of the Sacramento River Flood Control Project. The SRBPP directs the Corps to provide bank protection along the Sacramento River and its tributaries, including the portion of the lower American River bordered by Federal flood control project levees. The SRBPP was authorized in 1960 to be constructed in phases. Bank protection has generally been constructed on an annual basis and work has occurred on both the Sacramento and American Rivers. WRDA 2007 authorized an additional 80,000 linear feet of bank protection. This additional work will be implemented under the SRBPP Post Authorization Change Report, which received approval in June 2020. This project is ongoing as of the date of this SEA. The specific location of the 80,000 linear feet of levee protection work is unknown at this time, but there is a chance that work will occur upstream or downstream from the Proposed Action.

#### 4.1.6 West Sacramento Projects

The West Sacramento GRR addresses the flooding risk in Yolo County, City of West Sacramento. Proposed levee improvements would address seepage, stability levee height and erosion concerns. The first contract is anticipated to begin construction in the Fall of 2022, with more to follow. Mitigation associated with this GRR includes a levee setback on the opposite bank from the Proposed Action.

#### 4.1.7 Sacramento River Parkway

The Sacramento River Parkway project is sponsored by the City of Sacramento and will provide a paved bike trail along the big pocket from Zacharias Parked to Garcia Bend Park. The project schedule is to reach a 10% design by Fall of 2022, and to complete environmental review by Fall of 2023.

## 4.2 Cumulative Impact Analysis

### 4.2.1 Air Quality

Air quality is inherently a cumulative effect because existing air quality is a result of past and present projects. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards (SMAQMD 2014). Several other construction projects are expected to occur simultaneously in the Sacramento Valley Air Basin during the planned construction period for the Proposed Action. The related projects have the potential to generate construction-related emissions that individually exceed SMAQMD's threshold of significance. Emissions from projects within the same air district risk causing impacts to air quality in the region. USACE has released a conformity determination for public notice in March 2020, and

the Final General Conformity Determination for the American River Watershed Common Features 2016 Project was posted in June 2021. The General Conformity Report looked at the entirety of the ARCF 2016 Project and the possible associated emissions. The total NOx emissions of the overall ARCF 2016 Project are expected to exceed the EPA's General Conformity *de minimis* thresholds during several of the ARCF 2016 Project's construction years, including 2024, when the SR Erosion Contract 2 Proposed Action is anticipated to be constructed. USACE expects to purchase offsets for NOx emissions from SMAQMD, which is a mitigation measure already implemented by the 2016 FEIS/EIR. The ARCF 2016 Projects and other projects in the same region could result in cumulative impacts. USACE is coordinating with SMAQMD and SMAQMD works to ensure that the air emissions from all other projects in the SMAQMD's air basin would not cumulatively cause significant impacts on air quality. Because of this coordination the cumulative impact on air quality could be adverse but would not be significant.

Tables 10 and 11 present combined emissions for the Proposed Action refinements and the other components of the ARCF 2016 Project that are anticipated to be constructed during calendar year 2023 and 2024, for comparison to General Conformity *de minimis* standards. For purposes of General Conformity, the entire ARCF 2016 Project is considered a single action. As shown in Tables 10 and 11, implementing avoidance and minimization measures described in Mitigation Measures AIR-1, AIR-2, and AIR-3 will reduce emissions, but not below the *de minimis* standards for NOx. Mitigation Measure AIR-4 requires payment of fees to offset NOx emissions, resulting in less-than-significant impacts.

**Table 10** Annual Emissions Estimates for the ARCF 2016 Project with Refinements – Sacramento Valley Air Basin

Project Component	ROG Unmitigated	NOx Unmitigated	PM <sub>10</sub> Unmitigated	PM <sub>2.5</sub> Unmitigated	ROG Mitigated	NOx Mitigated
<b>2023</b>						
Sacramento River Erosion Contract 2	1.21	13.69	1.76	0.85	0.92	9.24
Sacramento River Erosion Levee C4	0.83	7.94	3.70	1.05	0.47	2.06
Lower American River Erosion Contract 3	1.24	21.82	1.85	0.75	0.75	7.93
Lower American River Erosion Contract 4	1.24	21.82	1.85	0.75	0.75	7.93
Sacramento Weir	1.31	17.01	39.44	8.62	0.85	6.01
Total ARCF 16 Project Emissions	5.83	<b>82.28</b>	48.6	12.02	3.74	<b>33.17</b>
<b>General Conformity de minimis Thresholds</b>	25	25	100	100	25	25
<b>2024</b>						
Sacramento River Erosion Contract 2	1.16	12.96	1.72	0.82	0.91	9.17
Sacramento River Erosion Contract 3	0.99	10.83	1.60	0.72	0.74	7.04
Sacramento River Erosion Contract 4	0.99	10.83	1.60	0.72	0.74	7.04
Sacramento Weir	1.51	14.16	44.71	9.78	1.10	6.28
Total ARCF 16 Project Emissions	4.65	<b>48.78</b>	49.63	12.04	3.49	<b>29.53</b>
<b>General Conformity de minimis Thresholds</b>	25	25	100	100	25	25

**Notes:** Bold numbers indicate concentrations above thresholds.

CO = carbon monoxide; NOx = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases.

Unmitigated and Mitigated data is presented in tons per year.

**Table 11 Emissions Estimates for the ARCF 2016 Project with Refinements – San Francisco Bay Area Air Basin**

Project	ROG Unmitigated	NOx Unmitigated	PM <sub>10</sub> Unmitigated	PM <sub>2.5</sub> Unmitigated	ROG Mitigated	NOx Mitigated
<b>2023</b>						
Sacramento River Erosion Contract 2	0.53	9.02	0.41	0.36	0.53	9.02
Lower American River Erosion Contract 3	N/A	N/A	N/A	N/A	N/A	N/A
Lower American River Erosion Contract 4	N/A	N/A	N/A	N/A	N/A	N/A
Sac Weir	0.08	1.43	0.06	0.06	0.08	1.43
Total ARCF 16 Project Emissions	0.61	10.45	0.47	0.42	0.61	10.45
<b>General Conformity de minimis Thresholds</b>	25	25	100	100	25	25
<b>2024</b>						
Sacramento River Erosion Contract 2	0.53	9.02	0.41	0.36	0.53	9.02
Sacramento River Erosion Contract 3	0.39	6.58	0.30	0.26	0.39	6.58
Sacramento River Erosion Contract 4	0.39	6.58	0.30	0.26	0.39	6.58
Sacramento Weir	0.21	3.64	0.16	0.15	0.21	3.64
Total ARCF 16 Project Emissions	1.52	<b>25.82</b>	1.17	1.03	1.52	<b>25.82</b>
<b>General Conformity de minimis Thresholds</b>	25	25	100	100	25	25

**Notes:** Bold numbers indicate concentrations above thresholds.

CO = carbon monoxide; NOx = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases.

Unmitigated and Mitigated data is presented in tons per year.

#### 4.2.2 Water Quality and Groundwater Resources

Water quality could be affected at the project footprint as well as upstream and downstream of the work area. Construction activities associated with the Proposed Action, West Sacramento Projects and Dredging have the potential to temporarily degrade water quality. All projects occurring simultaneously would be required to coordinate with the Regional Water Quality Control Board and comply with their 401 permits. Although dredging at Miller Boat Launch could occur at the same time as work in Segment 4, there are no anticipated long-term waterway effects and no significant cumulative, water quality effects.

#### 4.2.3 Vegetation and Wildlife

The 2016 FEIS/EIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would create a significant cumulative effect to Vegetation and Wildlife. Sacramento River Erosion Contract 1 and the Seepage Stability and Overtopping Contracts 1-4 and the West Sacramento Projects all required the removal of vegetation at the project sites. Sac Bank will not be operating within the ARCF footprint in the foreseeable future. The dredging activities and the Sacramento River Bike Trail will not require the removal of vegetation. The 2016 FEIS/EIR determined that potential cumulative adverse effects on biological resources would be significant due to the amount of habitat being removed to construct the project and the time lapse before the new plantings would mature to the level of those removed. Once the plantings have matured to provide sufficient habitat, the cumulative effects to biological resources would be less than significant. Furthermore, any projects on the levees need to comply with USACE's vegetation policy and could result in additional removal of vegetation. The available information does not indicate a significant change to cumulative effects when compared to the cumulative effects identified in the 2016 FEIS/EIR.

#### 4.2.4 Federal Special Status Species

##### **Valley Elderberry Longhorn Beetle**

The 2016 FEIS/FEIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would not create a significant cumulative effect to VELB. All proposed projects are occurring within appropriate work windows to reduce the possibility of direct take of the species; however, impact to their host plant, elderberry (*Sambucus* spp.), and surrounding vegetation could negatively affect the species. The Proposed Action, the Sacramento Parkway Trail and dredging at Miller Park will not directly impact the species or Elderberry shrubs. The available information does not indicate a significant change to cumulative effects when compared to the cumulative effects identified in the 2016 FEIS/EIR.

##### **Western Yellow Billed Cuckoo**

The 2016 FEIS/FEIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would not create a significant cumulative effect to YBCU. The federally listed YBCU is a special status migratory bird. The removal of riparian habitat to construct project along the Sacramento River will affect its migratory corridor. All ARCF bank protection projects are required to plan native habitat onsite, after construction. The 2016 FEIS/EIR determined in its cumulative impacts analysis (Section 4.2.4) that planting seedlings and native trees in the Project Area would provide some habitat connectivity, filling in gaps in the riparian canopy, so there would be short term significant impacts while the

vegetation grows but long-term beneficial impacts after the vegetation matures. With all the projects that are scheduled to occur at the same time, many require vegetation removal, cumulatively there will be a significant impact to the migratory habitat of YBCU; however, this is not a new significant impact.

### **Federally Listed Fish Species**

The 2016 FEIS/FEIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would create a significant cumulative effect to federally listed fish species. The 2016 FEIS/EIR determined in its cumulative impacts analysis (Section 4.2.4) that implementation of the ARCF 2016 Project would have the potential to contribute to the loss or degradation of sensitive habitats and to adversely affect salmonids, especially because finding waterside riparian habitat for offsite mitigation would be difficult. West Sacramento Projects, Sacramento Bank Projects, and Dredging at Miller Park all have the potential to cumulatively affect the listed species. The projects are doing onsite mitigation and research such as benthic sampling and fish monitoring to determine how the listed species utilize this section of the Sacramento River and the information will further our understanding of how listed species utilize the area and how to better protect them in the future. The available information does not indicate a significant change to cumulative effects when compared to the cumulative effects identified in the 2016 FEIS/EIR.

#### **4.2.5 Fisheries**

The 2016 FEIS/FEIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would not create a significant cumulative effect to fisheries with implementation of mitigation. West Sacramento Projects, Dredging at Miller Park, Sacramento Bank Projects would contribute to the loss of fisheries habitat in the Sacramento River. Dredging at Miller Park would temporarily scare fish out of the work area but would not permanently impact habitat. The bank protection projects are required to provide onsite mitigation were possible, however the amount of created habitat is minimal compared to impacts. The available information does not indicate a significant change to cumulative effects when compared to the cumulative effects identified in the 2016 FEIS/EIR.

#### **4.2.6 Recreation**

The 2016 FEIS/FEIR determined in its cumulative impacts analysis (Section 4.2) that the combined ARCF features, and other projects would not create a significant cumulative effect to recreation. The combined impact from West Sacramento Projects, the proposed action, other ARCF Sacramento River contracts and the dredging at Miller Park could create a nuisance to boaters and other river recreators. Zacharias, Garcia Bend and Miller Park will all be closed continuously for multiple construction seasons. However, these closures are being mitigated for by those other projects. Also, Site 1, Segment 4 will require temporary pedestrian and bike detours potentially at the same time as the dredging work. The available information does not result in greater cumulative effects than what was identified in the 2016 FEIS/EIR.

#### **4.2.7 Cultural Resources**

Cumulative impacts to cultural resources could result from multiple construction projects in the vicinity of the Sacramento River East Levee and the surrounding area if they cause adverse effects on important cultural resources. The Sacramento River East Levee area continues to experience growth, with new residential, commercial, and recreation-related construction, and

there have been other recent Federal projects associated with the Sacramento River East Levee. Future Sacramento River construction projects could result in significant adverse impacts to cultural resources; however, the Proposed Action, which will result in No Adverse Effects to cultural resources, after implementation of promised avoidance and mitigation measures, is unlikely to add measurably to cumulative impacts to the region's cultural resources.

#### 4.2.8 Socioeconomic, Population, and Environmental Justice

The 2016 FEIS/EIR did not evaluate cumulative impacts to Socioeconomic, population and environmental justice, however the overall purpose of ARCF will have substantial benefits to the Sacramento area due to the reduction of flood risk. There are five projects that overlap with the Proposed Action area, three of which are in the Miller Park census tract, however they are separated from the neighborhood by interstate 5, two of these are constrained by the July – October, in water work window and will only take one construction season to complete. All five have the potential to disturb and relocate unhoused communities living along the Sacramento River. It is the responsibility of the contractor to ensure the safety of the general public and the crew within their area of responsibility, which will result in the need to relocate any people living in the construction footprint, the staging areas and along the haul/access routes. Sacramento County provides a variety of resources including food and shelter, information on available resources will be distributed. The available information does not result in a new, significant cumulative effect.

#### 4.2.9 Transportation

The 2016 FEIS/EIR did not evaluate cumulative impacts to Transportation. The Contract 2 work and landside access has the potential to overlap with vehicle traffic the Miller Park Marina Dredging, and the ARCF Seepage, Stability and Overtopping improvements. At Site 1, the overlapping impact would be on the entrance and exit to Miller Park, Broadway, Front Street, Interstate 80, and Interstate 5. At Site 3, the overlapping impact would occur in the Pocket neighborhood, along Riverside Boulevard and Interstate 5. Both sites are anticipated to take less than four months to construct. Future work in the same location will be ARCF Sacramento River Erosion Contract 4, and the Miller Park Marina Dredging operations. Sites 1 and 3 have minimal traffic impacts when compared to the whole ARCF project, they will be temporary and short term effects but combined they will be potentially significant. However, they will not result in a new significant effect and will be reduced to less than significant with mitigation and BMP's.

### 4.3 Growth Inducing Impacts

The downtown Sacramento Area, the Pocket and surrounding neighborhoods is already a built environment. The project purpose is to protect existing structures and lives that exist behind the Sacramento East Levee from risk of flooding.

## 5 Compliance with Federal Laws and Regulations

Certain Federal laws and regulations require issuance of permits before project implementation; other laws and regulations require agency consultation but may not require issuance of any authorization or entitlements before project implementation. For each of the laws and regulations addressed in this section, the description indicates either full or partial compliance; if partial compliance is indicated, full compliance will be achieved prior to issuance of a NEPA

decision document. Each of the federal laws and regulations listed in Table 12 was discussed in the 2016 FEIS/EIR and other supplemental documents. Table 9 also references the document and section in which additional information may be found.

**Table 12: Summary of Federal Laws and Regulations Discussed in Previous Documents**

<b>Act or Order</b>	<b>Section</b>	<b>Compliance</b>
Endangered Species Act of 1973, as amended, 16 USC 1531, et seq	Section 4.2 of SREL C3 Section 3.7 and 5.1 of this SEA	Full Compliance
Fish and Wildlife Coordination Act of 1958, as amended, 16 USC 661, et seq	Section 5.0 of the 2016 FEIS/EIR Section 3.6 and 5.2 of this SEA	Full Compliance
Magnuson-Stevens Fishery Conservation and Management Act	Section 4.10 of SREL C3 Section 3.7 and 5.3 of this SEA	Full Compliance
Migratory Bird Treaty Act of 1936, as amended, 16 USC 703 et seq	Section 4.11 of SREL C3 Section 5.3 of this SEA	Full Compliance
Executive Order 13112, Invasive Species	Section 5.0 of the 2016 FEIS/EIR	Full Compliance
Executive Order 11988, Floodplain Management	Section 5.0 of the 2016 FEIS/EIR	Full Compliance
Clean Water Act of 1972, as amended (33 USC 1251 et seq.)	Section 5.0 of the 2016 FEIS/EIR Section 3.5 and 5.6 of this SEA	Full Compliance
Clean Air Act of 1963 as amended, 42 USC 7401, et seq	Section 5.0 of the 2016 FEIS/EIR Section 3.4 and 5.9 of this SEA	Partial Compliance
National Historic Preservation Act of 1966, as amended	Section 5.0 of the 2016 FEIS/EIR Section 5.11 of this SEA	Partial Compliance
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	Section 5.0 of the 2016 FEIS/EIR Section 3.9 and 5.10 of this SEA	Full Compliance
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 USC 4601 et seq	Section 5.0 of the 2016 FEIS/EIR	Full Compliance



### 5.1 Endangered Species Act of 1973, as amended, 16 USC 1531, et seq

The USFWS Biological Opinion for the ARCF 16 project (issued May 2021) and NMFS Biological Opinion (issued March 2021) concur in the finding that completion of all phases of the ARCF 2016 projects is unlikely to jeopardize the continued existence of VELB, YBCU, Delta Smelt, GGS, Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, DPS North American green sturgeon, and California Central Valley steelhead or destroy or adversely modify their designated critical habitat. The minimization recommendations and terms and conditions in both BO's will be adhered to throughout the project. The BOs can be found on the project website: [sacleveeupgrades.com](http://sacleveeupgrades.com).

### 5.2 Fish and Wildlife Coordination Act of 1958, as amended, 16 USC 661, et seq

Project partners coordinated with USFWS in 2015 during the preparation of the 2016 FEIS/EIR. The final Coordination Act Report was provided to USACE on October 5, 2015, and its recommendations were considered and included as Appendix A of the 2016 FEIS/EIR. USACE continues to coordinate with NMFS and USFWS as project designs are refined, impacts to species are reduced and mitigation is pursued.

The Fish and Wildlife Coordination Act of 1958 (16 USC 661 *et seq.*), as amended, allows the USFWS to assess impacts of proposed projects on covered species and habitats, and make recommendations to reduce those impacts. The Coordination Act Report (CAR; USFWS # 08ESMF00-2013-CPA-0020) recommended that USACE compensate for the loss of oak woodland, riparian forest, riparian scrub-shrub, and emergent wetland at a ratio of 2:1. The SR ERO C2 would have no effects to wetlands, nor oak woodlands. The impact to scrub-shrub riparian habitat is being included with forested riparian and is also being accounted for as impacts to yellow-billed cuckoo (YBCU) (*Coccyzus americanus*) discussed in the Federal Special Status Species section above. Trees were counted by field crews, which documented each tree over 6" and collected a GPS point. The Project Footprint was overlapped with this data to determine which trees would be impacted by the project. Of 445 trees within the Contract 2 footprint only 80 are being removed as a part of the Proposed Action. The ARCF project has been designed to comply with the recommendations contained in the CAR. The CAR can be found on the project website: [sacleveeupgrades.com](http://sacleveeupgrades.com).

### 5.3 Magnuson-Stevens Fishery Conservation and Management Act

The Sacramento River is designated as essential fish habitat (EFH) for salmon (winter, fall/late fall, and spring-run), steelhead (*Oncorhynchus mykiss*), green sturgeon DPS, and delta smelt. The potential effects of the ARCF Project on EFH are being coordinated with the NFMS under the Magnuson-Stevens Act, and the USACE received EFH conservation recommendations from NMFS on September 9, 2015. On September 24, 2015, USACE transmitted a letter to NMFS responding to the recommendations from NMFS. As a result, the ARCF GRR project is in full compliance with the Magnuson-Stevens Act. Consultation was completed with NMFS on May 12, 2021, and the project, including the Proposed Action, is in full compliance.

### 5.4 Migratory Bird Treaty Act of 1918, as amended, 16 USC 703 et seq

If nesting migratory birds are found to be occupying the project area, USACE, CVFPB, and SAFCA will coordinate with the USFWS to determine necessary avoidance and minimization

measures to reduce these effects. Preconstruction nesting surveys are required if work is occurring outside of the nesting bird window by a qualified biologist.

## 5.5 Executive Order 13112, Invasive Species

The Proposed Action includes hydroseeding of temporarily disturbed areas with a native seed mixture. Once bank protection measures are in place, sites will be planted with native vegetation and managed to prevent the establishment of non-native species for three years, then monitored for the next five years. If native species fail to meet success criteria laid out in Appendix I of the 2016 FEIS/EIR then adaptive management actions will occur.

## 5.6 Clean Water Act of 1972, as amended (33 USC 1251 et seq.)

The Proposed Action would place fill material within a traditionally navigable water of the United States. Accordingly, a 404(b)(1) evaluation was completed and is included in Appendix E of the 2016 FEIS/EIR. A sufficiency review of the 404(b)(1) has been prepared and included in this Final SEA (Appendix D) to demonstrate compliance with Section 404 of the Clean Water Act<sup>1</sup> and Section 10 of the Rivers and Harbors Act<sup>2</sup>. Prior to construction, the contractor would be required to obtain a Construction General Permit (CWA Section 402; National Pollutant Discharge Elimination System (NPDES) permit) for potential effects to storm water discharge, including preparation of a Stormwater Pollution Prevention Plan (SWPPP). USACE is also required to obtain a 401 Water Quality Certification from the State. A programmatic Water Quality Certification (WQC) was issued on July 13, 2021, to USACE. A Report 3 would be submitted in compliance with the programmatic WQC and USACE would begin work when the State issues a Notice of Applicability (NOA). With the implementation of these permits, the Proposed Action would be in full compliance with the Clean Water Act.

## 5.7 Executive Order 11988, Floodplain Management

The Proposed Action will not induce the development of the floodplain. The work is intended to protect the existing life and property that are already present on the land side of the levee.

## 5.8 Executive Order 1990, Protection of Wetlands

The project area does not contain wetlands.

## 5.9 Clean Air Act of 1963 as amended, 42 USC 7401, et seq

The cumulative NOx emissions of ARCF 2016 project elements being built in 2022 and 2023 are estimated to be 35.3 and 30.3 tons respectively, which exceeds the *de minimis* threshold in Sacramento and Yolo-Solano Air Quality Management Districts (SMAQMD). Therefore, the project partners are purchasing Nitrous Oxides (NOx) emission reduction credits for NOx exceedances from the air districts. With the purchase of these credits, and ongoing coordination with the local air resources boards, the Proposed Action will be in full compliance with General Conformity Rule and the Clean Air Act. The contractor selected to construct Contract 2 will be responsible for monitoring and reporting emissions to SMAQMD. For more information on local air district reporting requirements, see the 2016 FEIS/EIR Section 3.11.

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<sup>1</sup> The Clean Water Act regulates the discharge of dredged or fill material in waters of the United States, including wetlands.

<sup>2</sup> The Rivers and Harbors Acts regulates the placement of structures and fill within navigable waters and other work done above or below navigable waters.

## 5.10 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The Proposed Action is an element of the ARCF 2016 project to reduce the flood risk to the Sacramento Area. The project area protects many neighborhoods on the East side of the river, none of these are considered to be low income or minority communities. The benefits of the ARCF project would extend to all the Sacramento metropolitan area and would not provide disproportionate benefits, or cause disproportionate adverse effects, to any neighborhood or group, including minority or low income populations and is in compliance with EO 12898.

## 5.11 National Historic Preservation Act of 1966, as amended

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, USACE has consulted with the California State Historic Preservation Officer (SHPO) and other parties and, as a result, has executed the *Programmatic Agreement among USACE and the California SHPO regarding the American River Common Features Project, Sacramento and Yolo Counties, California* (PA). The PA establishes the process USACE will follow for compliance with Section 106 of the NHPA, taking into consideration the views of the signatory and concurring parties and interested Native American Tribes. All terms and conditions resulting from the agreement shall be implemented in order to minimize adverse impacts to historic properties.

In accordance with the PA and the HPMP for the ARCF 2016 Project, USACE initiated ongoing consultation with Native Americans who attach religious or cultural significance to potential historic properties that may be affected by the proposed undertaking on November 8, 2021. A response was received from United Auburn Indian community (UAIC) regarding the culturally sensitive nature of the area. No further responses from Native American tribes were received regarding potential resources within the APE.

In accordance with the PA, USACE consulted with the California SHPO, requesting comments on the delineation of the APE on November 8, 2021. In a letter dated December 6, 2021, USACE received a response stating SHPO had no comment on the project's APE.

On June 23, 2022, USACE provided the California SHPO and Native American tribes with a draft Identification, Evaluation, and Finding of Effect Cultural Report requesting comments on these efforts. Consultation is ongoing regarding identification and evaluation of historic properties and finding of effect for this Project phase and would be completed prior to award of SRE Contract 2. Accordingly, the Proposed Action would comply with Section 106 of the NHPA.

## 5.12 Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 USC 4601 et seq

All or portions of some parcels within the footprint of the Proposed Action will need to be acquired for project construction and ongoing operations and maintenance. Non-federal partner Sacramento Area Flood Control Agency (SAFCA) is responsible for the LERRDS process for all ARCF 2016 and will ensure that all property acquisitions comply with the Act.

## 6 Coordination of the Supplemental EA

This Draft Supplemental EA was circulated for 46 days (April 15 to May 31, 2022) and links to the documents were sent to agencies, organizations, and individuals known to have a special interest in the ARCF Project and Contract 2 specifically. The Draft SEA was published along with the Draft Supplemental Environmental Impact Report (DSEIR) prepared by GEI Consultants, Inc. Copies of the Draft Supplemental EA were posted on the USACE and the Central Valley Flood Protection Board (CVFPB) websites, [sacleveeupgrades.com](http://sacleveeupgrades.com) and <http://cvfpb.ca.gov/public-notice>, at the Sacramento Central Library and were made available by mail upon request due to COVID-19 restrictions. A public notice was posted in the Sacramento Bee and a virtual public meeting was held on April 26, 2022. We received ten letters for a total of 27 comments from: U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California State Lands Commission, Central Valley Regional Water Quality Control Board, Sacramento Metropolitan Air Quality Management District, and several private citizens. Comments will result in minor revisions to the document and additions to the vegetation, wildlife, noise and vibration, and socioeconomic, population and environmental justice sections. No significant changes to impact declarations or mitigation measures were necessary. The response to those comments is included in Appendix C. The SEA was coordinated with all appropriate Federal, State, and local governmental agencies including USFWS, SHPO, CDFW, the Sacramento Area Flood Control Agency, and the California Department of Water Resources (DWR) prior to the finalization of this document.

## 7 Findings

This SEA evaluated the environmental effects of the Proposed Action on six resource areas in detail, in compliance with the requirements of NEPA. Its findings indicate that, after the commitment of additional avoidance, minimization and mitigation measures detailed above, the Proposed Action is not anticipated to cause any new, significant short-term or long-term adverse environmental effects not already considered in the 2016 FEIS/EIR and in SREL C1, C2 & C3 SEA/SEIR, Sacramento Weir SEIS/SEIR and SR ERO C1 SEA/SEIR. Accordingly, a FONSI has been prepared and is being circulated with this SEA.

## 8 Report Preparers and Reviewers

This SEA was prepared by USACE, Planning Division, Sacramento District.

The following individuals contributed to the preparation by providing additional background material, engineering support and cultural resources expertise:

**Table 13:** *Summary of Preparers and Contributors*

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## Attachment 1 : Cultural Resources



**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**WHEREAS**, the U.S. Army Corps of Engineers, Sacramento District (Corps), is proceeding to implement aspects of the American River Common Features Project (Project) as authorized in the Water Resources Development Act (WRDA) of 1996, Pub L. No. 104-303, §101(a)(1), 110 STAT. 3658, 3662-3663 (1996), as amended by the WRDA 1999, Pub. L. No. 106-53, Section 366, 113 STAT. 269, 319-320 (1999) and the Energy and Water Development and Related Agencies Appropriations Act of 2008, Pub. L. No. 110-161, Section 130, 121 STAT. 1844, 1947 (2008), and as authorized by Section 7002 of the Water Resources Reform and Development Act (WRRDA) of 2014 (Pub. L. No. 113-121, § 7002, 128 Stat. 1193, 1366); and

**WHEREAS**, the Project is being developed to provide flood risk management to the City of Sacramento, including areas along the Sacramento and American Rivers, and around and within the Natomas Basin, including the Natomas Cross Canal, the Sacramento Bypass, the Pleasant Grove Creek Canal, the Natomas East Main Drain Canal, Arcade Creek, Dry Creek, Robla Creek, and Magpie Creek located in Sacramento and Yolo Counties, California. The authorized project is a single purpose flood risk management project shown in **Attachment 1** and further described in **Attachment 2**; and

**WHEREAS**, the Corps proposes to construct levee improvements including, but not limited to: seepage cutoff walls, seepage berms, levee slope flattening, relief wells, adjacent levees, stability berms, drained stability berms, levee raising, floodwalls, bypass widening, riverbank erosion protection, and launchable rock erosion protection; and

**WHEREAS** the State of California Central Valley Flood Protection Board (CVFPB) is the non-Federal sponsor for the Project and the CVFPB has been invited to be a Concurring Party to this Programmatic Agreement (Agreement); and

**WHEREAS**, the Corps has determined that the Project activities constitute an Undertaking, as defined in 36 C.F.R. § 800.16(y), and therefore is subject to Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. § 306108 (NHPA); and

**WHEREAS**, the Corps has determined that the Project may have an effect on properties that are either listed or eligible for listing in the National Register of Historic Places (NRHP) and has consulted with the California State Historic Preservation Officer (SHPO) pursuant to the NHPA; and

**WHEREAS**, pursuant to 36 C.F.R. § 800.4(b)(2), the Corps may implement the Project in phases as funding is available and construction authority is provided and, as a result, efforts to identify and evaluate Historic Properties and the determination of effects to those properties may be deferred until more specific project information for each phase is known; and

**WHEREAS**, this Agreement shall establish the process the Corps shall follow for compliance with 54 U.S.C. § 306108 (formerly 16 U.S.C. § 470f, referred to hereinafter as “Section 106”), taking into consideration the views of the Signatory and Concurring Parties; and

**WHEREAS**, a total of 69 cultural resources are known to be present within the Area of Potential Effects (APE) and although extensive archaeological inventory has been completed within the APE under other projects, portions of the APE have not been inventoried; and

**WHEREAS**, the presence of levees, alluvial deposition, and other built environment features have obscured the presence of cultural resources and a full assessment of archaeological sites cannot be made in advance of construction; and

**WHEREAS**, the levees of the Sacramento and American Rivers are the one known potential Historic Property within the APE that will be affected by the Project; and

**WHEREAS**, the Corps is aware that there is a high probability for buried cultural resources that may not be identified prior to construction and that also may be eligible for inclusion in the NRHP, and therefore this Agreement documents a framework for managing post-review discoveries per 36 C.F.R. § 800.13; and

**WHEREAS**, the Corps, with the concurrence of SHPO, has decided to comply with Section 106 of the NHPA for the Undertaking through the execution and implementation of this Programmatic Agreement (Agreement) because the Corps cannot fully determine the effects of the Undertaking on Historic Properties [36 C.F.R. § 800.14(b)(1)(ii)], for all phases and segments of the Project at this time; and

**WHEREAS**, in accordance with 36 C.F.R. §§ 800.2(c)(2)(ii)(A), 800.3(f)(2), and 800.14(b)(2)(i), the Corps has contacted federal and state recognized Native American Tribes, via letter(s), phone call(s), and meetings, to invite them to consult on the Project and this Agreement, including the Buena Vista Rancheria of the Me-Wuk Indians of California, the Cachil DeHe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria, the Colfax-Todds Valley Consolidated Tribe, the Cortina Wintun Environmental Protection Agency, the El Dorado Miwok Tribe, the Enterprise Rancheria of

Maidu Indians of California, the Lone Band of Miwok Indians of California, the Mechoopda Indian Tribe of Chico Rancheria, the Mooretown Rancheria of Maidu Indians, the Nashville-El Dorado Miwok, the Shingle Springs Band of Miwok Indians, the Strawberry Valley Rancheria, the T'si-Akim Maidu, the United Auburn Indian Community of the Auburn Rancheria, the Wilton Rancheria, the Yocha Dehe Wintun Nation, and interested Native American individuals; the Corps has invited them (and others who may be identified in the future as appropriate Concurring Parties) to participate as Concurring Parties to this Agreement; and the Corps will continue consultation throughout the duration of this agreement; and

**WHEREAS**, the Corps shall make the terms and conditions of this Agreement part of the conditions of any contracts issued by the Corps for this Project; and

**WHEREAS**, the definitions set forth in 36 C.F.R. § 800.16 are incorporated herein by reference and apply throughout this Agreement; and

**WHEREAS**, the definitions for Signatory Parties set forth in 36 C.F.R. § 800.6(c)(1), and the definitions for Concurring Parties set forth in 36 C.F.R. § 800.6(c)(3), are incorporated herein by reference and apply throughout this Agreement; and

**WHEREAS**, in accordance with 36 C.F.R. § 800.14(b)(3), the Corps notified and invited the Advisory Council on Historic Preservation (ACHP) per 36 C.F.R. § 800.6(a)(1)(C) to participate in consultation to resolve potential adverse effects of the Project, including development of this Agreement, and the ACHP has declined to participate pursuant to 36 C.F.R. § 800.6(a)(1)(iii) in a letter dated August 7, 2012; and

**WHEREAS**, in accordance with 36 C.F.R. § 800.6(a)(4) and 36 C.F.R. § 800.14(b)(2)(ii), the Corps has notified the public of the Project and provided an opportunity for members of the public to comment on the Project and the Section 106 process as outlined in this Agreement; and

**NOW, THEREFORE**, the signatories agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on Historic Properties and to satisfy the Corps' Section 106 responsibilities for all individual aspects of the undertaking.

The Corps shall ensure that the following measures are carried out:

## STIPULATIONS

### I. TIME FRAMES AND REVIEW PROCEDURES

For all documents and deliverables produced in accordance with the stipulations of this Agreement, the Corps shall provide a draft document to the SHPO, Concurring Parties, and Native American interested parties and Tribes for review. Any written comments provided by the SHPO, Concurring Parties, and Native American interested parties and Tribes, within thirty (30) calendar days from the date of receipt, shall be considered in the revision of the document or deliverable. The Corps shall document and report the written comments received for the document or deliverable and how comments were addressed. The Corps shall provide a revised final document or deliverable to the SHPO for concurrence. The SHPO shall have thirty (30) calendar days to respond. Failure of the SHPO, Concurring Parties, and Native American interested parties and Tribes to respond within thirty (30) calendar days of any submittal shall not preclude Corps from moving to the next step in this Agreement.

Should the SHPO object to the final document or deliverable submitted for concurrence, the Corps and SHPO shall consult for a period not to exceed fifteen (15) calendar days following the receipt of the SHPO's written objection in an effort to come to agreement on the issues to which the SHPO has objected. Should the SHPO and the Corps be unable to agree on the issues to which the SHPO has objected, the SHPO and the Corps shall proceed in accordance with **Stipulation XV (Dispute Resolution)**, below. The timeframe to consult to resolve a disagreement or objection may be extended by mutual consent of the Corps and the SHPO.

### II. AREA OF POTENTIAL EFFECTS

The APE for Project activities shall include the construction footprint of the activity and a reasonable buffer determined through consultation between SHPO and the Corps, and shall take into account the likelihood of direct and indirect effects to Historic Properties resulting from the Project. **Attachment 1** includes an overall APE map for the Project. Because the Project will occur in phases, it may be necessary to further define the APE for each phase as phases are authorized and funded for design and construction. Prior to activities under **Stipulation IV (Identification and Evaluation)**, the Corps shall submit to the SHPO, Concurring Parties, and Native American interested parties and Tribes a map of the APE for the current phase and a description of the Project activities occurring for that phase, in accordance with **Stipulation I (Timeframes and Review Procedures)**. Revisions to the APE will not necessitate modifications to this Agreement.

- A.** For purposes of this Agreement, the APE for each phase shall be defined to meet, at a minimum, the following criteria:

The APE for any segment of the levees that are being improved as part of the phase of the Project shall include the levee segment and a corridor extending not less than 150 meters from the landside toe of the levee segment.

**B.** The APE also shall include:

- (1) The extent of all Project construction and excavation activity required to construct flood control facilities and to modify irrigation and drainage infrastructure; and
- (2) The additional right-of-way/easements obtained by the Corps as part of the Project's features; and
- (3) All areas used for excavation of borrow material and habitat creation; and
- (4) All construction staging areas, access routes, spoil areas, and stockpiling areas.

**C.** After the APE has been defined and consulted on in accordance with **Stipulation II (Area of Potential Effects)** above, construction or other Project activities may require revisions to the APE. If the APE is revised, the Corps shall consult on that revision in accordance with **Stipulation I (Timeframes and Review Procedures)**, and the Corps shall determine the potential for Project activities in a revised APE to affect potential Historic Properties, in accordance with **Stipulation IV (Identification and Evaluation)**.

### **III. HISTORIC PROPERTIES MANAGEMENT PLAN**

The Corps, in consultation with the SHPO, Concurring Parties, and Native American interested parties and Tribes, shall develop a Historic Property Management Plan (HPMP), which provides the framework by which remaining identification, evaluation of eligibility, findings of effect, and resolution of adverse effect efforts to Historic Properties will occur. The HPMP shall include consideration of property types, treatment of property types, expected methodology for identification and evaluation of potential historic properties, potential templates for work plans, provisions for avoidance or protection of historic properties, and consideration for identification and treatment of human remains. The HPMP shall be appended to this Agreement (**Attachment 3**) and will form the basis for any Historic Property Treatment Plans (HPTPs) that may be required for one or more phases of the Project. The HPMP shall be developed after execution of the Agreement, but before construction commences. For the overall Project and individual phases, the HPMP shall be the means for the Corps to comply with 36 C.F.R. § 800.6 and provide standardized methods for dealing with unanticipated discoveries in accordance with 36 C.F.R. § 800.13(a).

The HPMP may be amended and appended to this Agreement without amending the Agreement.

- A. Review:** The Corps shall submit the Draft HPMP to the SHPO, Concurring Parties, and Native American interested parties and Tribes for review and comment pursuant to **Stipulation I (Timeframes and Review Procedures)**.
- B. Historic Property Treatment Plans:** The Corps shall consult the SHPO, pursuant to 36 C.F.R. § 800.5, when the Corps has determined that a Project activity will result in adverse effects to a Historic Property. An HPTP specific to the phase of the Project or the Historic Property will be drafted to describe how the Corps intends to resolve adverse effects and that HPTP may be appended to the HPMP. HPTPs shall be consistent with the HPMP and may incorporate by reference historic contexts, methods, procedures, and research designs, as appropriate. When incorporating portions of the HPMP by reference, the HPTP shall at a minimum include the date of the HPMP and where the HPMP is available to be viewed.
- (1) An HPTP may address individual or multiple Historic Properties or Historic Property types. An HPTP shall stipulate those actions the Corps shall take to resolve the adverse effects of the Project on Historic Properties within the project phase or specific action specified by the HPTP. For properties eligible under criteria specified in 36 C.F.R. § 60.4 (A) through (D), mitigation other than data recovery may be considered in the treatment plan (e.g., HABS/HAER, oral history, historic markers, exhibits, interpretive brochures or publications, or other means as deemed appropriate by the signatories). In addition to the SHPO, Concurring Parties, and Native American interested parties and Tribes the Corps may invite the interested public, in accordance with **Stipulation XIII (Public Consultation and Public Notice)**, to comment on the means of mitigation, as appropriate. HPTPs shall include specifications (including content and number of copies) for publication of brochures, pamphlets or synthesis reports for distribution to the general public. The Corps shall ensure that all provisions of an HPTP are carried out as stipulated in the HPTP.
- (2) **Historic Context, Recordation, and Treatment of Levees:** The Sacramento and American River levees are a known potential Historic Property within the APE that may be affected by the Project. Sections of the levees have been recorded and evaluated for their individual eligibility for listing in the NRHP but no overall historic context or evaluation of the levee system has been developed. Because the specific project design that may alter the levees will not be developed until after the Project has been approved for design, a determination of effect and, if necessary, an HPTP, cannot be developed until after approval and execution of this Agreement. In order to document the levees for evaluation, the Corps will

develop a historic context and HPTP for recordation of the Sacramento and American River levees as historic structures within the APE in order to evaluate the effects of the Project on the levees. If a historic context and/or HPTP for the levees within the APE has already been developed, the Corps may incorporate it as deemed appropriate by the Corps. The HPTP shall consider the levees in the context of the entire Sacramento and American River levee systems. Additionally, the HPTP shall require the development of clear and specific criteria for determining: (1) recordation guidelines for the levees within the APE, (2) contributing and non-contributing elements of the levee system, (3) thresholds of adverse effect, and (4) treatment of adverse effects. The HPTP shall be developed after execution of the Agreement and before construction commences. The Corps shall submit the HPTP for review, in accordance with **Stipulation I (Timeframes and Review Procedures)**.

(3) HPTPs will be submitted and reviewed in accordance with **Stipulation I (Timeframes and Review Procedures)**, except for those HPTPs developed for Historic Properties discovered during construction activities, which shall follow the review timeframes identified in **Stipulation IX (Discovery of Unknown Historic Properties)**. Circulation of an HPTP shall not include a recirculation of the HPMP.

**D. Reporting:** Reports and other data pertaining to the inventory of Historic Properties and the treatment of effects to Historic Properties will be distributed to Concurring Parties to this Agreement, Native American Tribes, and other members of the public, consistent with **Stipulation XIV (Confidentiality)** of this Agreement, unless parties have indicated through consultation that they do not want to receive a report or data.

**E. Amendments/Addendums/Revisions:** If an Historic Property type that is not covered by an existing HPTP is discovered within the APE subsequent to an initial inventory effort for a phase, or if there are previously unexpected effects to an Historic Property, and the Corps and SHPO agree that the Project may adversely affect the Historic Property, the Corps shall submit an addendum to the HPTP or a new HPTP to the SHPO and Concurring Parties for review and comment, and shall follow the provisions of **Stipulation IX (Discovery of Unknown Historic Properties)**. The HPTP may cover multiple discoveries for the same property type.

**F. Data Recovery:** When data recovery is proposed, the Corps, in consultation with the SHPO, shall ensure that HPTPs are developed consistent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* and the ACHP's "Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites" (ACHP, May 18, 1999).

**G. Final Phase Report Documenting Implementation of the Historic Properties Treatment Plan(s):** Within one year after the completion of all work for each phase of the Project, the Corps shall submit to the SHPO, Signatory Parties, Concurring Parties, and Native American interested parties and Tribes, a Final Phase Report documenting the results of all work prepared for that phase under the HPTPs, and the information learned from each of the Historic Properties. The submittal of the Final Phase Report shall be in accordance with **Stipulation I (Timeframes and Review Procedures)**.

#### **IV. IDENTIFICATION AND EVALUATION**

Should the HPMP not be finalized at the time that a phase of the Project may be proceeding to design and construction, the Corps shall consult with the Signatory Parties before issuing a notice to proceed on any phase of the Project. Should the Signatory Parties agree that the work may proceed, the Corps shall comply with **Stipulation IV A., B., and C. (Identification and Evaluation)** and, as necessary, **Stipulation VI (Determination of Effects)**. The Corps shall complete any identification and evaluation, and as necessary, any evaluation of effects to Historic Properties prior to proceeding with construction. If the Signatory Parties do not agree to proceed with the phase of the Project the Corps shall follow **Stipulation XV (Dispute Resolution)**.

**A. Identification of Potential Historic Properties:** An inventory of Historic Properties within the APE, consistent with the *Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716–44740) will be initiated for the Project, or for individual phases of the Project, as construction details become available.

Survey recordation shall include features, isolates, and re-recordation of previously recorded sites, as necessary. The survey shall ensure that potential Historic Properties such as historical structures and buildings, historical engineering features, landscapes, viewsheds, and traditional cultural properties (TCPs) with significance to Native American communities, are recorded in addition to archeological sites. Recordation of historic structures, buildings, objects, and sites shall be prepared using the California Department of Parks and Recreation (DPR) 523 Site Record forms.

**B. Property Types Exempt from Evaluation:** Attachment 4 to this Agreement lists the property types that the Signatories agree shall be exempt from evaluation as determined by the Corps in consultation with the SHPO. The Corps shall evaluate all other identified properties in accordance with **Stipulation IV.C (Evaluation of Potential Historic Properties)**.

**C. Evaluation of Potential Historic Properties:** After recordation on DPR 523 Site Record forms, potential Historic Properties shall be evaluated by a qualified professional for their eligibility for listing in the NRHP consistent with



the *Secretary of Interior's Standards for Evaluation*, 36 C.F.R. § 60.4. In accordance with **Stipulation I (Timeframes and Review Procedures)**, the Corps shall submit a completed inventory and evaluation for each phase of Project work.

## V. GEOTECHNICAL INVESTIGATIONS

For the purposes of gathering engineering data and for project planning, it may be necessary for the Corps to conduct limited geotechnical investigations at areas within the APE.

A. The Corps may conduct geotechnical investigations (e.g., borings, potholing, or trenches) for planning and exploratory efforts. The Corps shall follow Stipulation V.A(1) and (2), or may follow Stipulation V.A(3) if unable to follow Stipulation V.A(1) and (2):

(1) A records and literature search and consultation with Native Americans has been conducted and it has been determined there are no known existing potential Historic Properties located within 50 feet of the areas identified for geotechnical investigations, and an archeological field survey of the areas identified for geotechnical investigations has been conducted and it has been determined there are no known potential Historic Properties present;

(2) A potential Historic Property is identified during the records and literature search or field survey and consultation process as being within an area where geotechnical investigation will occur, and the geotechnical investigation is relocated at least 50 feet outside the site boundaries; or

(3) Provisions for an archeological monitor meeting the qualifications described in **Stipulation VII.C. (Archeological Monitor Standards)** are included in the contract specifications for the geotechnical investigations. As appropriate, or when geotechnical activities may occur in sensitive areas, an archeological monitor will be present for all ground disturbing activities.

B. If potential Historic Properties are discovered during geotechnical investigations, **Stipulation IX (Discovery of Unknown Historic Properties)** shall be followed;

C. A Memorandum for Record shall be written documenting the results of the records and literature search, the archeological field survey, any decisions to relocate geotechnical investigation areas, the determination for inclusion of an archeological monitor for ground disturbing activities, and a record of communication with Native American interested parties and Tribes, as appropriate.

## VI. DETERMINATION OF EFFECTS

Avoidance of adverse effects to Historic Properties is the preferred treatment approach. The Corps will consider redesign of Project elements in order to avoid Historic Properties and Project effects that may be adverse. However, it may not be possible to redesign the Project in order to avoid adverse effects to Historic Properties.

The Corps will apply the criteria of adverse effect, pursuant to 36 C.F.R. § 800.5(a)(1), to all Historic Properties within the APE that will be affected by the Project. The Corps shall submit determinations of effects in accordance with **Stipulation I (Timeframes and Review Procedures)**.

If effects to Historic Properties are determined to be adverse, **Stipulation III (Historic Properties Management Plan)**, above, will be followed.

## VII. QUALIFICATIONS

- A. Professional Qualifications:** All technical work required for historic preservation activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for archeology or history, as appropriate (48 FR 44739). "Technical work" here means all efforts to inventory, evaluate, and perform subsequent treatment such as data recovery excavation or recordation of potential Historic Properties that is required under this Agreement. This stipulation shall not be construed to limit peer review, guidance, or editing of documents by SHPO and associated Project consultants.
- B. Historic Preservation Standards:** Historic preservation activities carried out pursuant to this Agreement shall meet the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), as well as standards and guidelines for historic preservation activities established by the SHPO. The Corps shall ensure that all reports prepared pursuant to this Agreement will be provided to the Signatories, Concurring Parties, and Native American interested parties and Tribes and are distributed in accordance with **Stipulation XIV (Confidentiality)**, and meet published standards of the California Office of Historic Preservation, specifically, *Preservation Planning Bulletin* Number 4(a), "Archaeological Resources Management Reports (ARMR): Recommended Contents and Format" (December 1989).
- C. Archeological Monitor Standards:** Archeological monitoring activities required for exploratory, construction, or construction related ground disturbing activities implemented pursuant to this Agreement shall be carried

out by a person meeting, at a minimum, the *Secretary of Interior's Professional Qualifications Standards* for prehistoric or historic archaeology, as appropriate (48 FR 44739). "Archeological monitoring" here includes monitoring ground disturbing activities that have been determined by the Corps to be occurring in areas potentially sensitive for Historic Properties or buried resources.

## VIII. NOTICES TO PROCEED WITH CONSTRUCTION

Notices to Proceed may be issued by the Corps for individual construction segments, defined by the Corps in its construction specifications, after a Historic Properties inventory has been completed [per **Stipulation III (Historic Properties Management Plan)** or **Stipulation IV (Identification and Evaluation)**], and prior to treatment of adverse effects on Historic Properties within the APE provided that:

- A. A plan to respond to inadvertent archeological discoveries is prepared by the Corps, and approved by SHPO, prior to the commencement of Project activities anywhere in the APE for that phase of the Project; and
- B. Project development activities do not encroach within 30 meters (100 feet) of the known boundaries of any Historic Property as determined from archeological site record forms, other documentation, or as otherwise defined in consultation with the SHPO and other parties, as appropriate; and
- C. An archeological monitor meeting the professional qualifications as described in **Stipulation VII (Qualifications)**, is present during any Project activities that are anticipated to extend either vertically or horizontally into any areas designated to be archeologically sensitive by the Corps, in consultation with SHPO, except in phases of construction for slurry walls where visual inspection of the construction area cannot be safely or feasibly accomplished.

## IX. DISCOVERY OF UNKNOWN HISTORIC PROPERTIES

The Corps is responsible for complying with 36 C.F.R. § 800.13(a) in the event of inadvertent discoveries of Historic Properties during implementation of the Project. The HPMP will provide procedures for complying with post review and inadvertent discoveries of Historic Properties. If the Corps authorizes work before the HPMP is finalized and there is a discovery of an unknown Historic Property, the Corps shall follow 36 C.F.R. § 800.13(b). Additionally, the following procedures shall be followed:

- A. **Workforce Training:** During implementation of Project activities, the Corps, or archeologists meeting the professional qualifications as described in **Stipulation VII (Qualifications)**, will provide training to all construction

personnel, before they begin work, regarding proper procedures and conduct in the event that archeological materials are encountered during construction.

**B. Human Remains:** Treatment of human remains is governed by **Stipulation XII (Tribal Consultation and Treatment of Human Remains)**.

**X. CURATION**

To the extent that curation is determined to be appropriate mitigation to resolve adverse effects to Historic Properties, curation shall be conducted in accordance with 36 C.F.R. § 79, except those materials identified as Native American human remains and items associated with Native American burials. Archeological items and materials from State or privately owned lands shall be maintained in accordance with 36 C.F.R. § 79 until any specified analyses are complete. Although the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. § 3001 et seq.) does not apply to this Project, as there is no federally owned or administered property within the APE and the Corps will not be curating cultural materials subject to NAGPRA, this Agreement incorporates by reference the definitions for “human remains” and “funerary objects” set forth in 43 C.F.R § 10.2(d) and those definitions shall apply to actions under this Agreement. Further treatment of human remains is addressed in **Stipulation XII (Tribal Consultation and Treatment of Human Remains)**.

**XI. TRIBAL INVOLVEMENT**

- A.** In consultation with Native American interested parties and Tribes, the Corps will make a reasonable and good-faith effort to identify Historic Properties of traditional religious and cultural importance. The Corps shall ensure that consultation with Native American Tribes is initiated early with respect to the Project and continues throughout the Section 106 process.
- B.** In accordance with the guidance provided in National Register Bulletin 38 and Preservation Brief 36, the Corps will seek comments from all potentially interested Native American interested parties and Tribes in making determinations of NRHP eligibility for any Traditional Cultural Properties (TCPs) and Cultural Landscapes (as defined in Bulletin 38 and Preservation Brief 36). Review of documentation shall be consistent with **Stipulation I (Timeframes and Review Procedures)**.
- C.** Pursuant to 36 C.F.R. § 800.6(c)(2)-(3), the Corps shall consider requests by Native American Tribes to become Concurring Parties to this Agreement. In accordance with **Stipulation XIV (Confidentiality)**, Concurring Parties to this Agreement will receive documents produced under this Agreement, as appropriate.

- D.** Native American Tribes may choose not to sign this Agreement as a Concurring Party. Native American Tribes and individuals not acting as Concurring Parties to the Agreement will be contacted when the Corps identifies potential interest in a specific phase or action of the project. The Corps will make a good faith effort to identify any Native American organizations and individuals with interest in the proposed treatment of Historic Properties. The identification effort may include contacting the Native American Heritage Commission (NAHC), using online databases, and using personal and professional knowledge. The Corps will then contact each identified organization and individual by mail, inviting them to consult about the specific treatment of Historic Properties. If interest from the contacted parties is received by the Corps, the Corps will proceed to consult in accordance with **Stipulation XI.A. (Tribal Involvement)**. Further consultation may also be carried out through either letters of notification, public meetings, environmental assessments/environmental impact statements, site visits, and/or other method requested by a Native American interested party and Tribe. Failure of any contacted group to comment within thirty (30) calendar days shall not preclude the Corps from proceeding with the Project.
- E.** The Corps shall make a reasonable and good-faith effort to ensure that Native American Tribes, acting as either Concurring Parties or those expressing interest in the project, will be invited to participate in the development and implementation of the terms of this Agreement, including, but not limited to, the identification of the APE, identification of potential Historic Properties, determinations of eligibility, findings of effect, and the resolution of adverse effect for those Historic Properties. Review periods shall be consistent with **Stipulation I (Timeframes and Review Procedures)** except in situations involving unanticipated discoveries and treatment, which shall follow the review schedules of **Stipulation IX (Discovery of Unknown Historic Properties)**. The Corps shall ensure that all interested Native American reviewers shall receive copies of all final survey and evaluation reports.

## **XII. TRIBAL CONSULTATION AND TREATMENT OF HUMAN REMAINS**

There is no federally owned property within the designated APE, therefore NAGPRA would not apply. The CVFPB and landowner shall ensure that Native American human remains and grave goods encountered during the Undertaking that are located on state or private land are treated in accordance with the requirements in California State Health and Safety Code, Section 7050.5 and Public Resources Code 5097.98. If Native American human remains are encountered within the context of a National Register eligible archaeological site, a clear means of identifying those remains and grave goods will be described in the HPMP. Any procedures described in the HPTP regarding the handling or treatment of human remains will be coordinated with the landowner to ensure

that they are consistent with Public Resources Code 5097.98. In the event that any Native American human remains or associated funerary items are identified, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission, shall be invited to advise the CVFPB and landowner in the treatment of any Native American human remains and items associated with Native American burials.

### **XIII. PUBLIC CONSULTATION AND PUBLIC NOTICE**

- A.** Pursuant to 36 C.F.R. § 800.6(c)(2)-(3), the Corps will consider requests by interested parties to become Concurring Parties to this Agreement. Within thirty (30) calendar days of the effective date of this Agreement, the Corps shall consult with the SHPO to compile a list of members of the interested public who shall be provided notice of this Agreement.
- B.** The interested public will be invited to provide input on the identification, evaluation, and proposed treatment of Historic Properties. This may be carried out through either letters of notification, public meetings, environmental assessment/environmental impact statements, and/or site visits. The Corps shall ensure that any comments received from members of the public are taken under consideration and incorporated where appropriate. Review periods shall be consistent with **Stipulation I (Timeframes and Review Procedures)**. In seeking input from the interested public, locations of Historic Properties will be handled in accordance with **Stipulation XIV (Confidentiality)**. In cases where the release of location information may cause harm to the Historic Property, this information will be withheld from the public in accordance with Section 304 of the NHPA (54 U.S.C. § 307103).

### **XIV. CONFIDENTIALITY**

Confidentiality regarding the nature and location of the archaeological sites and any other cultural resources discussed in this Agreement shall be limited to appropriate Corps personnel, Corps contractors, Native American tribes, the SHPO, and those parties involved in planning, reviewing and implementing this Agreement in accordance with Section 304 of the NHPA (54 U.S.C. § 307103).

### **XV. DISPUTE RESOLUTION**

- A.** Should any Signatory Party to this Agreement object in writing to any action proposed or carried out pursuant to this Agreement, the Corps will immediately notify the SHPO and the Concurring Parties of the objection and proceed to consult with the objecting party for a period of time, not to exceed thirty (30) calendar days, to resolve the objection. If the objection is resolved through consultation, the Corps may authorize the disputed action to proceed in accordance with the terms of such resolution. If the Corps determines that the objection cannot be resolved, the Corps shall forward all documentation

relevant to the dispute to the ACHP. Within forty-five (45) calendar days after receipt of all pertinent documentation, the ACHP shall either:

- (1) Advise the Corps that the ACHP concurs in the Corps' proposed response to the objection, whereupon the Corps will respond to the objection accordingly; or
  - (2) Provide the Corps with recommendations, which the Corps shall consider in reaching a final decision regarding the objection; or
  - (3) Notify the Corps that the ACHP will comment in accordance with the requirements of Section 106 of the NHPA, and proceed to comment. Any ACHP comment provided in response shall be considered by the Corps, pursuant to the requirements of Section 106 of the NHPA.
- B.** Should the ACHP not exercise one of the options under **Stipulation XV.A. (Dispute Resolution)** within forty-five (45) calendar days after receipt of all submitted pertinent documentation, the Corps' responsibilities under Section 106 of the NHPA are fulfilled upon implementation of the proposed response to the objection.
- C.** The Corps shall consider any ACHP recommendation or comment and any comments from the SHPO to this Agreement provided in accordance with this stipulation with reference only to the subject of the objection; the Corps' responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.
- D.** The Corps shall provide the SHPO with a written copy of its final decision regarding any objection addressed pursuant to **Stipulation XV.A. (Dispute Resolution)**.
- E.** At any time during implementation of the measures stipulated in this Agreement should an objection pertaining to the Agreement be raised by a Concurring Party, Native American Tribe, or a member of the public, the Corps shall notify the Signatory and Concurring Parties and take the objection under consideration, consulting with the objecting party and, should the objecting party request, any of the Signatory and Concurring Parties to this Agreement, for no longer than fifteen (15) calendar days. The Corps shall consider the objection, and in reaching its decision, will consider all comments provided by the other parties. Within fifteen (15) calendar days following closure of the comment period, the Corps will render a decision regarding the objection and respond to the objecting party. The Corps will promptly notify the other parties of its decision in writing, including a copy of the response to the objecting party. The Corps' decision regarding resolution of the objection will be final. Following issuance of its final decision, the Corps may authorize the action that was the subject of the dispute to proceed

in accordance with the terms of that decision. The Corps' responsibility to carry out all other actions under this Agreement shall remain unchanged.

## **XVI. NOTICES**

- A.** All notices, demands, requests, consents, approvals or communications from all parties to this Agreement to other parties to this Agreement shall be personally delivered, sent by United States Mail, or emailed, and all parties shall be considered in receipt of the materials five (5) calendar days after deposit in the United States mail, certified and postage prepaid, return receipt requested.
- B.** Signatory and Concurring Parties agree to accept facsimiles or copies of signed documents and agree to rely upon such facsimiles or copies as if they bore original signatures.

## **XVII. AMENDMENTS, NONCOMPLIANCE, AND TERMINATION**

- A. Amendment:** Any Signatory Party to this Agreement may propose that the Agreement be amended, whereupon the Corps shall consult with the SHPO to consider such amendment. The Agreement may be amended only upon written concurrence of all Signatories.

All attachments to this Agreement, and other instruments prepared pursuant to this agreement including, but not limited to, the Project's description, initial cultural resource inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, may be individually revised or updated through consultation consistent with **Stipulation I (Timeframes and Review Procedures)** and agreement in writing of the Signatories without requiring amendment of this Agreement, unless the Signatories through such consultation decide otherwise. In accordance with **Stipulation XI (Tribal Involvement)** and **Stipulation XIII (Public Consultation and Public Notice)**, the Concurring Parties, interested Native American Tribes, and interested members of the public, will receive amendments to the Project's description, initial cultural resource inventory report and maps of the APE, the HPMP, HPTPs, and monitoring and discovery plans, as appropriate, and copies of any amendment(s) to the Agreement.

- B. Termination:** Only the Signatories may terminate this Agreement. If this Agreement is not amended as provided for in **Stipulation XVII.A. (Amendment)**, or if any Signatory proposes termination of this Agreement for other reasons, the Signatory proposing termination shall notify the other Signatory in writing, explain the reasons for proposing termination, and consult with the other Signatory to seek alternatives to termination, within thirty (30) calendar days of the notification.



Should such consultation result in an agreement on an alternative to termination, the Signatories shall proceed in accordance with that agreement.

Should such consultation fail, the Signatory proposing termination may terminate this Agreement by promptly notifying the other Signatory and Concurring Parties in writing.

Beginning with the date of termination, the Corps shall ensure that until and unless a new agreement is executed for the actions covered by this Agreement, such undertakings shall be reviewed individually in accordance with 36 C.F.R. § 800.4-800.6.

**C. Duration:** This Agreement shall remain in effect for a period of ten (10) years after the date it takes effect and shall automatically expire and have no further force or effect at the end of this ten-year period unless it is terminated prior to that time. No later than ninety (90) calendar days prior to the expiration date of the Agreement, the Corps shall initiate consultation to determine if the Agreement should be allowed to expire automatically or whether it should be extended, with or without amendments, as the Signatories may determine. Unless the Signatories unanimously agree through such consultation on an alternative to automatic expiration of this Agreement, this Agreement shall automatically expire and have no further force or effect in accordance with the timetable stipulated herein.

## **XVIII. ANNUAL REPORTING**

At the end of every calendar year following the execution of this Agreement, the Corps shall provide all parties to this Agreement a summary report detailing work carried out pursuant to its terms, if any. Such report shall describe progress made implementing the terms of the Agreement as well as include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the Corps' efforts to carry out the terms of this Agreement. Any Signatory party may request to meet with the other Signatories to discuss implementation of this Agreement.

## **XIX. EFFECTIVE DATE**

This Agreement shall take effect on the date that it has been fully executed by the Corps and the SHPO.


**EXECUTION** of this Agreement by the Corps and the SHPO, its transmittal to the ACHP, and subsequent implementation of its terms evidence that the Corps has afforded the ACHP an opportunity to comment on the undertaking and its effects on Historic Properties, that the Corps has taken into account the effects of the undertaking on Historic Properties, and that the Corps has satisfied its

American River Common Features Programmatic Agreement

responsibilities under Section 106 of the NHPA and applicable implementing regulations for all aspects of the undertaking.

**SIGNATORIES TO THIS AGREEMENT:**

U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT

BY:  DATE: 9 Sep 15  
Michael J. Farrell, Colonel, U.S. Army Corps of Engineers, District Commander

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY:  DATE: 10 Sept 2015  
Julianne Polanco, State Historic Preservation Officer

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

STATE OF CALIFORNIA CENTRAL VALLEY FLOOD PROTECTION BOARD

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Leslie Gallagher, Executive Officer

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

BUENA VISTA RANCHERIA OF THE ME-WUK INDIANS OF CALIFORNIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Rhonda L. Morningstar Pope, Chairwoman

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

CACHIL DEHE BAND OF WINTUN INDIANS OF THE COLUSA INDIAN  
COMMUNITY OF THE COLUSA RANCHERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Ambar Mohammed

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

COLFAX-TODDS VALLEY CONSOLIDATED TRIBE

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

CORTINA WINTUN ENVIRONMENTAL PROTECTION AGENCY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Charlie Wright, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

EL DORADO MIWOK TRIBE

BY: \_\_\_\_\_ DATE: \_\_\_\_\_



**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Rose Enos

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

ENTERPRISE RANCHERIA OF MAIDU INDIANS OF CALIFORNIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Glenda Nelson, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

FAIR OAKS HISTORICAL SOCIETY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Kesner Flores

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

GOLDEN GATE STATE MUSEUM

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

IONE BAND OF MIWOK INDIANS OF CALIFORNIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Crystal Martinez, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

MECHOOPDA INDIAN TRIBE OF CHICO RANCHERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Dennis Ramirez, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

MOORETOWN RANCHERIA OF MAIDU INDIANS

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Guy Taylor, Representative



**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

NASHVILLE-EL DORADO MIWOK

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Cosme Valdez, Interim Chief Executive Officer

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

SACRAMENTO COUNTY HISTORICAL SOCIETY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

SHINGLE SPRINGS BAND OF MIWOK INDIANS

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Nicholas Fonseca, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

SOCIETY FOR CALIFORNIA ARCHAEOLOGY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

STRAWBERRY VALLEY RANCHERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Cathy Bishop, Chairperson

**PROGRAMMATIC AGREEMENT  
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THE U.S.ARMY CORPS OF ENGINEERS AND  
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REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

SUTTER COUNTY HISTORICAL SOCIETY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
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THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

T'SI-AKIM MAIDU

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Don Ryberg, Chairman

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

UNITED AUBURN INDIAN COMMUNITY OF THE AUBURN RANCHERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Gene Whitehouse, Chairman



**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

WEST SACRAMENTO HISTORICAL SOCIETY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
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THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

WILTON RANCHERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Raymond Hitchcock, Chairperson

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

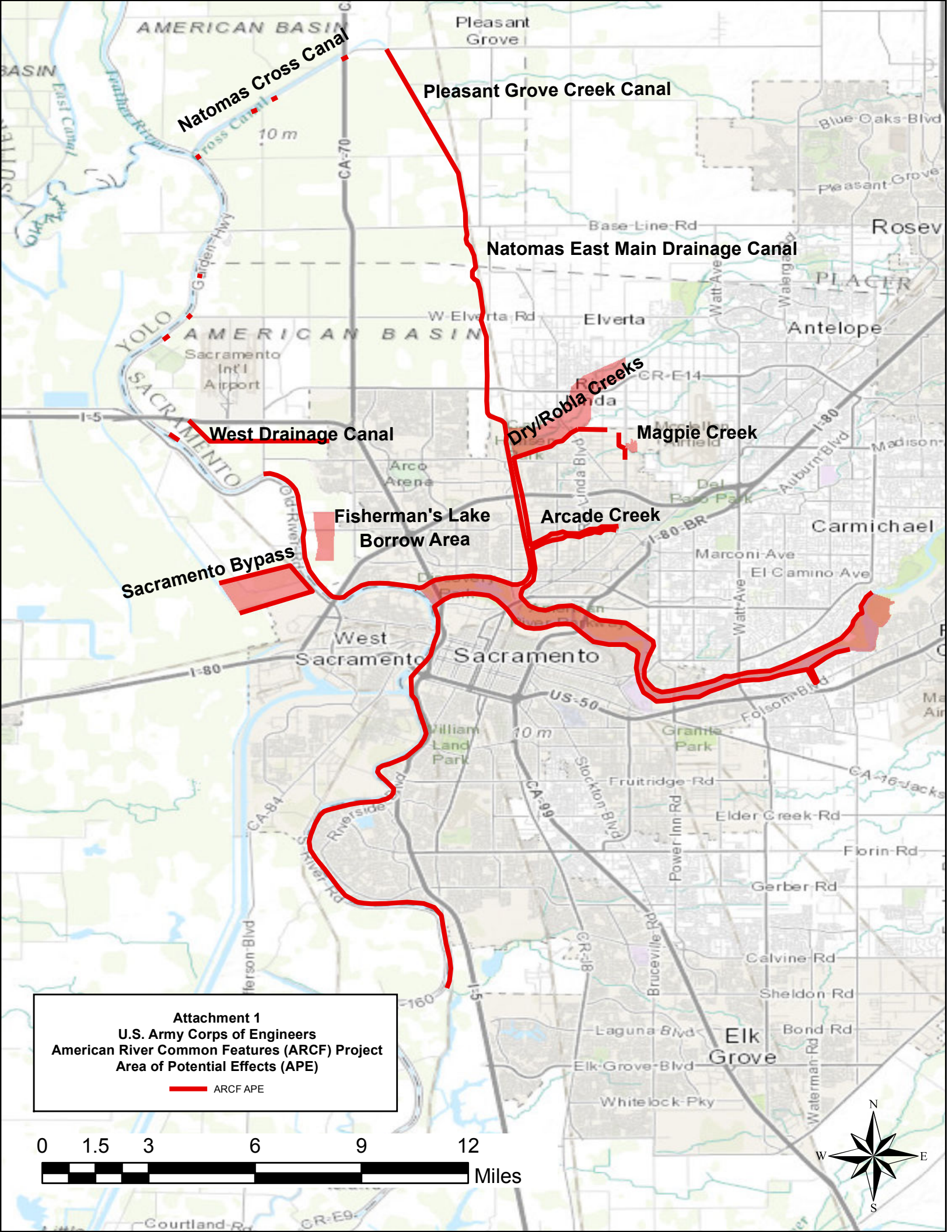
YOLO COUNTY HISTORICAL SOCIETY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROGRAMMATIC AGREEMENT  
AMONG  
THE U.S.ARMY CORPS OF ENGINEERS AND  
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REGARDING THE AMERICAN RIVER COMMON FEATURES PROJECT,  
SACRAMENTO, SACRAMENTO AND YOLO COUNTIES, CALIFORNIA**

**CONCURRING PARTIES:**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Randy Yonemura



AMERICAN BASIN  
Natomas Cross Canal  
10 m

Pleasant Grove Creek Canal

Natomas East Main Drainage Canal

West Drainage Canal

Dry/Robla Creeks

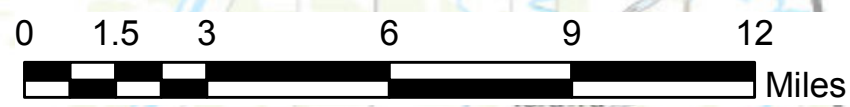
Magpie Creek

Fisherman's Lake  
Borrow Area

Arcade Creek

Sacramento Bypass

**Attachment 1**  
**U.S. Army Corps of Engineers**  
**American River Common Features (ARCF) Project**  
**Area of Potential Effects (APE)**  
— ARCF APE



## **Attachment 2**

### **American River Common Features Project**

Project Description

November 2014

The American River Common Features (ARCF) Project is being developed to provide flood risk reduction to the city of Sacramento, including the Natomas Basin, areas along the North and South banks of the American River, and areas along the East bank of the Sacramento River below the American River. The non-Federal sponsor for the ARCF Project is the State of California Central Valley Flood Protection Board (CVFPB). The Sacramento Area Flood Control Agency (SAFCA) has a Local Cooperation Agreement with the CVFPB. Authorized Local Cooperation Agreements include requirements to: 1) Provide lands, easements, and rights-of-way; 2) Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for the construction of the project; 3) Cost share the project per applicable laws; and 4) Bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.

#### **Location**

The Sacramento River Watershed covers approximately 26,000 square miles in central and northern California. Shasta Dam impounds the upper Sacramento River Watershed. Major tributaries of the Sacramento River include the Feather, Yuba and American rivers. The American River Watershed covers about 2,100 square miles northeast of the city of Sacramento and includes portions of Placer, El Dorado, Alpine, and Sacramento counties. The American River Watershed includes Folsom Dam and Reservoir; inflowing rivers and streams, including the North, South, and Middle forks of the American River; and the American River downstream to its confluence with the Sacramento River in the city of Sacramento. The Sacramento and American rivers, in the Sacramento area, form a flood plain covering approximately 110,000 acres in their confluence. The flood plain includes most of the developed portions of the city of Sacramento and encompasses the boundaries of the study area. Figure 1 shows the ARCF study area.

#### **Area of Potential Effects (APE)**

While the overall ARCF Project study area covers a broad geographic area, the ARCF Project area of potential effects (APE) includes those areas where the project will have potential direct or indirect effects to the character or use of historic properties. The ARCF Project APE includes approximately 12 miles of the north and south banks of the American River immediately upstream from the confluence with the Sacramento River; intermittent sites along the east bank of the Sacramento River downstream of the Natomas Cross Canal (NCC) down to the confluence with the American River; intermittent sites on the south bank of the NCC immediately upstream of the confluence with the Sacramento River; the Sacramento Bypass and Sacramento Weir; approximately 4 miles of the Pleasant Grove Creek Canal; approximately 8 miles of the Natomas East Main Drainage Canal (NEMDC); approximately 15 miles of the east bank of the Sacramento River downstream of the American River down to Morrison Creek; approximately ½ mile of the south bank of Dry/Robla Creeks; approximately 2 miles of the north and south banks of Arcade Creek; and approximately ½ mile of the Magpie Creek Diversion Canal. The APE is shown in Figure 2.

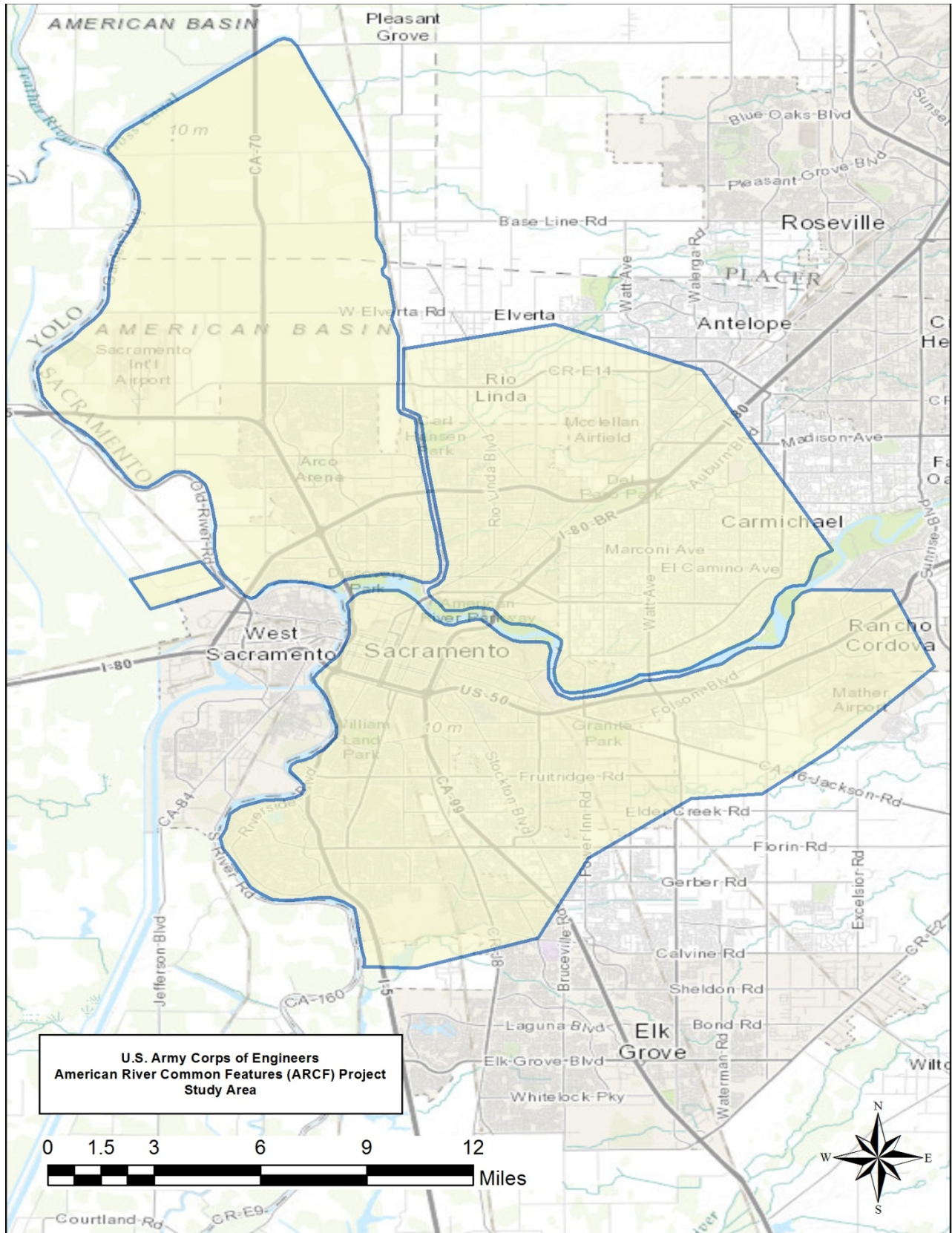
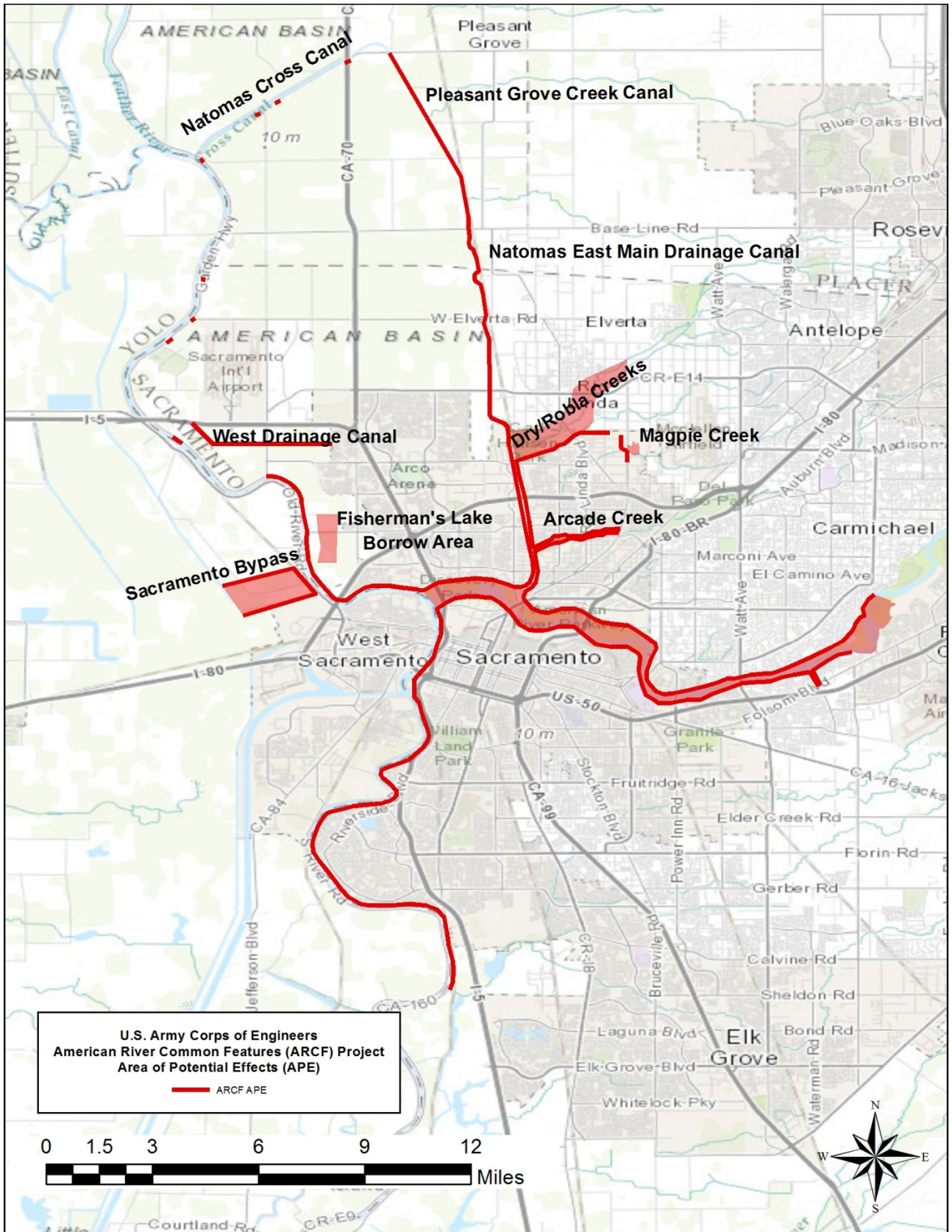


Figure 1. ARCF Project Study Area



**Figure 2. ARCF Project Area of Potential Effects**



## **Project Authorization**

The ARCF Project was authorized in the Water Resources Development Act (WRDA) of 1996 with additional authority provided in WRDA 1999. Significant changes to the project were approved via the Second Addendum to the Supplemental Information Report of March 2002. Additionally, the Energy and Water Development Appropriations Act of 2004 increased the authorized total cost of the project to \$205,000,000. The current estimated cost of the authorized project is \$277,563,000.

In the ARCF Project, authorized features are generally located in the Lower American River, Natomas Basin and Sacramento River. All Lower American River features authorized in WRDA 1996 and 1999 have been constructed or are scheduled for construction within the next three years. Construction of authorized Natomas features were deferred as a result of deep underseepage concerns raised after the 1997 flood event in the Sacramento Valley. In 1997, considerable deep underseepage occurred on the Sacramento River in areas that had previously undergone remediation after the 1986 flood event. The previous remediation consisted of shallow seepage cutoff walls and did not account for the deep underseepage problems revealed during the 1997 flood event. Significant seepage on the American River was also observed.

Because of the considerable cost increase of seepage remediation on the American River, all funds appropriated by Congress throughout the late 1990s and the early part of the 2000s were used for construction activities on the Lower American River instead of for design efforts in the Natomas Basin. Additionally, it was recognized that all work in the Natomas Basin would require significantly more features than was anticipated at the time of authorization. Additional levee improvements were also needed on the Sacramento River and the American River below Folsom Dam in order to truly capture the benefits of the Folsom Dam projects and the Common Features project already authorized and constructed. Therefore, the Corps decided that reevaluation studies would be required for the Natomas Basin and city of Sacramento portions of the ARCF Project. This reevaluation is now called the Common Features General Reevaluation Report (CFGRR).

## **Proposed Measures**

In general, levees fail because of one of four reasons: seepage, slope stability, overtopping, and erosion. The CFGRR is looking at reducing the likelihood of having a levee failure in the city of Sacramento as a result of any of these reasons. Methods that were looked at to achieve this goal include, but are not limited to: seepage cutoff wall, seepage berm, levee slope flattening, relief wells, adjacent levee, stability berm, drained stability berm, levee raising, floodwall, bypass widening, riverbank erosion protection, and launchable rock erosion protection. These preliminary methods have been screened and refined to the following final array of measures. The ARCF Project is a single purpose flood risk management project with the measures shown in Table 1 below proposed for implementation. In addition to the measures listed in Table 1, the following measures would be implemented throughout the APE:

- Establish the Corps' standard levee footprint on all levees within the APE that are out of compliance, including a 10-foot-wide landside maintenance access easement.
- Bring utility encroachments, including pump stations, into compliance with Corps policy.
- Remove private encroachments.
- Relocate, as needed, irrigation canals within the Natomas Basin, to include the relocation of the West Drainage Canal south of the Airport Operations Area.
- Remediate the Highway 99/Natomas Cross Canal Bridge.

- Excavation of borrow materials at designated borrow sites, to include the South Fisherman’s Lake Borrow Area and the West Lakeside School site in the Natomas Basin.

**Table 1. Proposed Measures for the American River Common Features Project.**

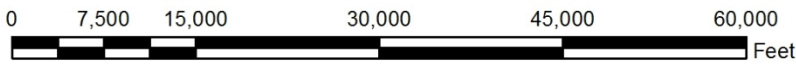
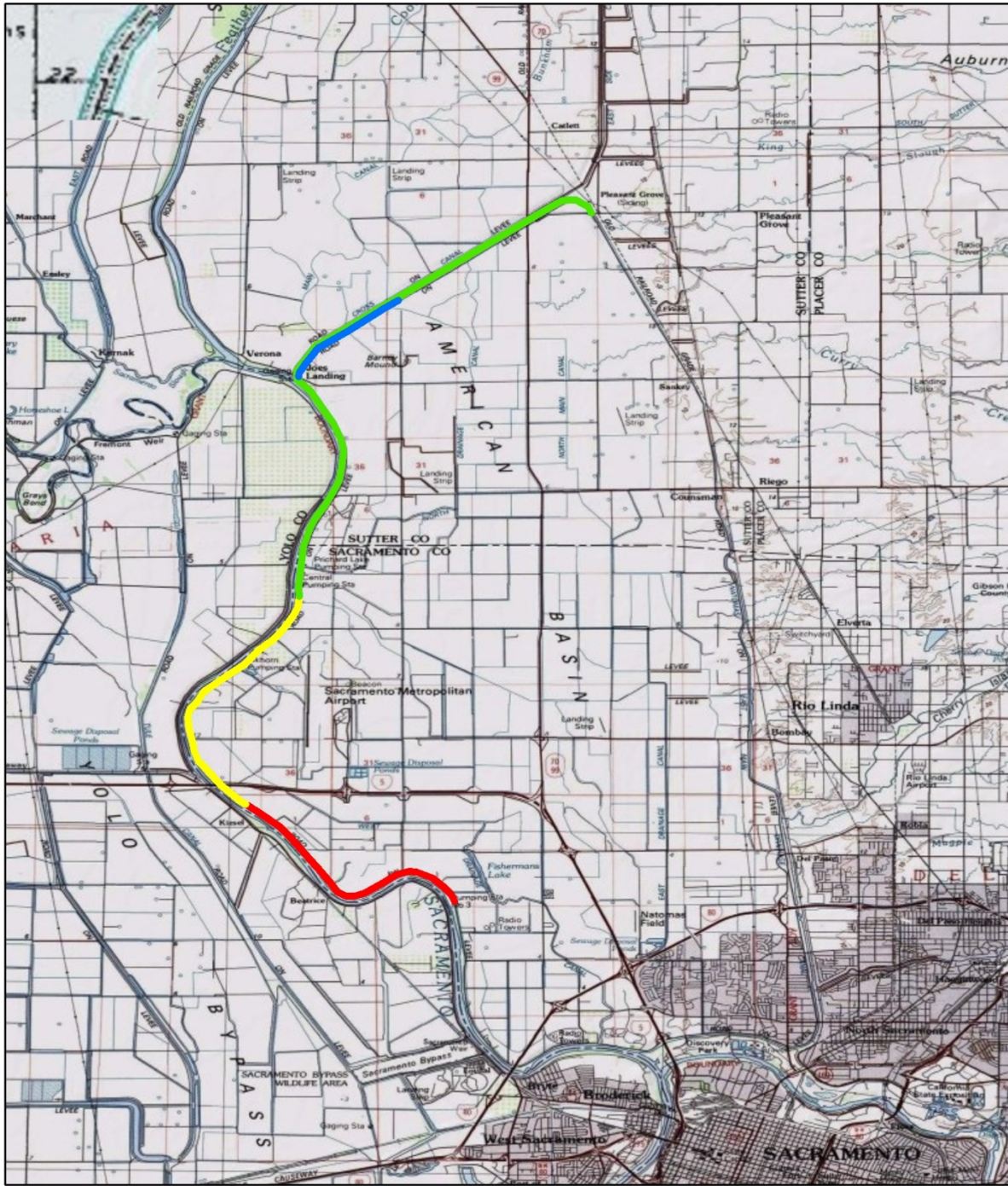
<b>Waterway/Location</b>	<b>Extent of Action</b>	<b>Proposed Measure</b>
American River	North and south levees from the confluence with the Sacramento River upstream for approximately 12 miles.	<ul style="list-style-type: none"> <li>• Construct bank protection or launchable rock trenches</li> </ul>
American River	North levee from the confluence with the Sacramento River upstream to approximately NEMDC.	<ul style="list-style-type: none"> <li>• Flatten the levee slope</li> <li>• Install cutoff walls</li> </ul>
Sacramento River	East levee from Power Line Road to the American River.	<ul style="list-style-type: none"> <li>• Construct an adjacent levee with a flattened landside slope</li> <li>• Install cutoff walls</li> <li>• Construct seepage berms</li> <li>• Install relief wells</li> <li>• Construct levee raise</li> <li>• Establish compliance with Corps vegetation requirements for upper 2/3 slopes of the levee.</li> </ul>
Sacramento River	East levee from the American River to Morrison Creek.	<ul style="list-style-type: none"> <li>• Install cutoff walls</li> <li>• Construct bank protection</li> <li>• Construct levee raise</li> <li>• Establish compliance with Corps vegetation requirements for upper 2/3 slopes of the levee.</li> </ul>
NEMDC	East levee from Dry/Robla Creek to the American River	<ul style="list-style-type: none"> <li>• Install cutoff walls</li> <li>• Construct floodwalls</li> <li>• Establish compliance with Corps vegetation requirements.</li> </ul>
NEMDC	West levee from Dry/Robla Creek to the American River	<ul style="list-style-type: none"> <li>• Construct bank protection</li> <li>• Construct levee raise and flatten levee slope</li> <li>• Establish compliance with Corps vegetation requirements.</li> </ul>
NEMDC	West levee from Sankey Road to Dry/Robla Creek	<ul style="list-style-type: none"> <li>• Construct levee raise and flatten levee slope</li> <li>• Install cutoff walls</li> <li>• Establish compliance with Corps vegetation requirements.</li> </ul>
Pleasant Grove Creek Canal	West levee	<ul style="list-style-type: none"> <li>• Construct bank protection</li> <li>• Construct levee raise with a widened levee</li> <li>• Install cutoff walls</li> <li>• Upgrade or remove culverts</li> </ul>

Waterway/Location	Extent of Action	Proposed Measure
		<ul style="list-style-type: none"> <li>Establish compliance with Corps vegetation requirements.</li> </ul>
Arcade Creek	North and south levees from NEMDC to Marysville Boulevard	<ul style="list-style-type: none"> <li>Install cutoff walls</li> <li>Raise floodwalls</li> <li>Establish compliance with Corps vegetation requirements.</li> </ul>
Dry/Robla Creek		<ul style="list-style-type: none"> <li>Raise floodwalls</li> <li>Establish compliance with Corps vegetation requirements.</li> </ul>
Magpie Creek Diversion Canal	Upstream of Raley Boulevard	<ul style="list-style-type: none"> <li>Construct floodwalls</li> <li>Establish compliance with Corps vegetation requirements.</li> </ul>
Magpie Creek area	South of Raley Boulevard	<ul style="list-style-type: none"> <li>Construct new levee</li> </ul>
Magpie Creek area	East of Raley Boulevard	<ul style="list-style-type: none"> <li>Acquire property to create a flood detention basin</li> <li>Widen the Raley Boulevard/Magpie Creek bridge and raise the elevation of the roadway</li> <li>Remove the Don Julio Creek culvert</li> </ul>
Sacramento Weir and Bypass	North bypass levee to 1,500 feet north.	<ul style="list-style-type: none"> <li>Widen the Sacramento Weir and Bypass by approximately 1,500 feet</li> <li>Construct a new section of weir and levee</li> <li>Remove the existing Sacramento Bypass north levee</li> </ul>

### Construction Activities

While the Corps began its reevaluation studies, SAFCA began final design and construction on certain areas in Natomas. A local sponsor or entity may request permission under Section 408 to alter a Federal project and a Section 404 permit to comply with the Clean Water Act. Generally a local sponsor or entity will request Section 408 permission and will move forward with the funding, planning, and constructing of the Federal project with the intention of seeking later credit under Section 104 for their share of an authorized Federal project. In 2008, the SAFCA requested consideration for a Section 104 credit, permission under Section 408, and requested a Section 404 permit for the Natomas Levee Improvement Project (NLIP). The Natomas Basin portions of the ARCF Project have been divided into a number of construction phases (Figure 3).

Shortly after receiving Section 408 permission and Section 404 approval, SAFCA, in cooperation with the California Department of Water Resources (DWR) and the CVFPB, implemented urgently needed improvements to the Federal project levee system around the Natomas Basin. SAFCA has completed construction for all of Phases 1, 2A, and 3 and is finishing construction of Phase 4a. When complete, SAFCA will have completed levee improvement construction on 18 miles of the 42 miles surrounding the Natomas Basin. The Corps will be constructing the remaining 24 miles of levee improvement once authorization and appropriations are received.



ARCF Project Natomas Basin Construction Phases

- █ Phase 1
- █ Phase 2
- █ Phase 3
- █ Phase 4A

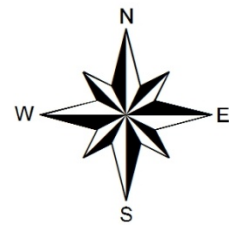


Figure 3. ARCF Project NLIP Construction Phases

## **Cultural Resources/NEPA Compliance**

For NLIP Phases 1, 2, 3, and 4a, SAFCA, DWR and CVFPB were the lead decision makers on the planning, design, environmental and cultural resources compliance, and construction for NLIP. SAFCA contracted with EDAW (now AECOM) to complete EIS/EIRs for the overall Natomas Basin. In order to meet the requirements under the Section 404 permits and Section 408 permissions and because SAFCA planned to seek credit for their share of an authorized Federal project, SAFCA was required to comply with the National Environmental Policy Act of 1969 (NEPA) and the National Historic Preservation Act of 1966, as amended (NHPA).

Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertaking on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Code of Federal Regulations 36 CFR § 800 outlines the steps and guidelines a Federal agency must follow in order to comply with Section 106. The NEPA compliance effort in the NLIP Environmental Impact Statement/Environmental Impact Report (EIS/EIR), completed in 2007, provided an overview of the known cultural resources and historic properties within the Natomas Basin and the ARCF study area. The records and literature search identified 175 cultural resources and 285 surveys and inventories conducted within the ARCF study area.

Because of the size of the study area and because the assessment of effects to historic properties could not be completed prior to the signing of the Record of Decision for the EIS/EIR, an alternate method was required to ensure that the construction efforts within the Natomas Basin undertaken by SAFCA would comply with Section 106 of the NHPA. When effects on historic properties cannot be fully determined prior to approval of an undertaking and when there may be potential adverse effects of a complex or phased project a programmatic agreement (PA) may be executed for the undertaking.

On May 1, 2008, a PA for NLIP was executed between the Corps, SAFCA and the SHPO. The NLIP PA only covered actions under the Section 408 permissions and Section 404 permits within the Natomas Basin for which SAFCA was the construction lead. By executing the PA the NLIP was then in compliance with Section 106 and the signatories to the NLIP PA (the Corps, SAFCA and the SHPO) had an agreed upon series of stipulations that fulfilled the requirements of 36.CFR § 800. The Corps had the responsibility of determining if the actions by SAFCA complied with Section 106 and coordinating concurrence with those determinations with the SHPO. All construction efforts for NLIP Phases 1, 2, 3, and 4a were funded entirely by SAFCA, DWR and CVFPB.

Prior to the construction of Phases 1, 2, 3, and 4a, a series of NEPA compliance documents were completed as supplements to the original EIS/EIR completed in 2007. Phase 1 was covered in an Environmental Assessment/Impact Statement dated November 2007. Phase 2 was covered in a supplement to the EIS/EIR completed in November 2008. Phase 3 was covered in an EIS/EIR completed May 2009. And Phase 4a was covered in a EIS/EIR completed November 2009.

Because construction of Phases 1, 2, 3, and 4a does not address all of the flood risk concerns in the Natomas Basin, it does not provide complete flood protection for the entire Natomas Basin. Due to funding constraints with SAFCA, DWR and CVFPB, construction of the remaining perimeter of the Natomas Basin will not be completed under the Section 408 permissions and Section 404 permits. Therefore, as part of our reevaluation efforts (CFGRR), the Corps is implementing completion of the remaining phases in the Natomas Basin, as well as the other portions of the ARCF Project as the Federal lead on the project. The remaining Natomas construction was covered under NEPA/CEQA in

the NLIP Phase 4b EIS/EIR in October 2010. The Corps will also be preparing a NEPA/CEQA document for the CFGRR for those activities not covered in the previous NEPA/CEQA documents.

Although the NLIP PA covered Section 106 compliance for the entirety of possible construction activities in the Natomas Basin, the roles and responsibilities of the NLIP PA designated SAFCA as responsible for the execution of inventories, surveys, recordation of sites, determinations of eligibility, and development of historic properties treatment plans and mitigation measures. The NLIP PA includes the Corps and SAFCA in roles as regulatory authority but with no involvement in the production of technical studies or determinations of effect.

The previously completed EIS/EIRs are applicable for overall NEPA compliance for the Natomas Basin. However, in order for the Corps to be in compliance with Section 106 of the NHPA, and due to the changing roles and responsibilities and authorities, a new PA will need to be developed and executed for the remaining construction activities the Corps will undertake in the Natomas Basin as well as the other authorized project features for the rest of the ARCF Project.

Similar to the NLIP PA, the ARCF PA will outline the steps the Corps, as the lead Federal agency for NEPA, will take in order to comply with Section 106 of the NHPA. The ARCF PA must be executed in advance of any construction activities the Corps may undertake for the ARCF Project.

**Attachment 3**

Historic Properties Management Plan

Historic Properties Management Plan (HPMP) shall include:

- I. Introduction and Description of the Undertaking
  - a. Overview and Executive Summary
  - b. Purpose and Application of the HPMP
  - c. Regulatory context
  - d. Description of the Undertaking
  
- II. General Standards and Procedures
  - a. Professional Qualifications
  - b. Documentation Standards
  - c. Dissemination and Confidentiality of Information
  - d. Permits and Rights of Entry
  - e. Curation
  
- III. Background Information
  - a. Records and Literature Search
  - b. Archaeological Sensitivity Assessment Procedure
  - c. Correspondence with Knowledgeable Individuals and Groups
  - d. American Indian Outreach
  
- IV. Historic Context
  - a. Prehistoric Resource Types
  - b. Historic Resource Types
  - c. Environmental Context
    - i. Regional Surface Geology
    - ii. Regional Geomorphology
    - iii. Climate
    - iv. Flora and Fauna
  - d. Cultural Context
    - i. Prehistoric Archaeology
    - ii. Ethnographic Context
    - iii. Historic Context
  
- V. Identification of Historic Properties
  - a. General Methods
  - b. Evaluation
  - c. Documentation
  
- VI. American Indian Consultation Procedures
  - a. American Indians and Organizations as Concurring Parties
  - b. American Indians and Organizations as Non-Concurring Parties
  
- VII. Assessment of Effects
  - a. Criteria of Adverse Effect
  - b. Finding of Effect



- c. Consultation and Documentation of Effect Findings
- VIII. Resolution of Adverse Effects
- a. Consultation and Documentation
  - b. Avoidance
  - c. Treatment Options
  - d. Development of Historic Properties Treatment Plans
  - e. Inadvertent Discoveries

## **Attachment 4**

Property Types Exempt from Evaluation

This attachment defines categories of properties that do not warrant evaluation pursuant to Stipulation IV.B of this Agreement. Only individuals meeting the Secretary of the Interior's Professional Qualification Standards pursuant to Stipulation VII.A of this agreement are authorized to determine whether properties meet the requirements of this attachment and are therefore exempt from evaluation and consultation with SHPO. Exempted properties may be documented, if documentation is warranted, at a level commensurate with the nature of the property (e.g., DPR 523 Primary Form, Location Map, memo). The Corps Cultural Resources staff shall make any final determinations on level of documentation required under this agreement.

### **Exempt Property Type 1: Archaeological Property Types and Features**

1. Isolated prehistoric finds consisting of fewer than three items per 100 m<sup>2</sup>
2. Isolated historic finds consisting of fewer than three artifacts per 100 m<sup>2</sup> (several fragments from a single glass bottle, and similar vessels are to be counted as one artifact)
3. Refuse scatters less than 50 years old (scatters containing no material that can be dated with certainty as older than 50 years old)
4. Features less than 50 years old (those known to be less than 50 years old through map research, inscribed dates, etc.)
5. Isolated refuse dumps and scatters over 50 years old that lack specific associations
6. Isolated mining prospect pits
7. Placer mining features with no associated structural remains or archaeological deposits
8. Foundations and mapped locations of buildings or structures more than 50 years old with few or no associated artifacts or ecofacts, and with no potential for subsurface archaeological deposits

### **Exempt Property Type 2: Minor, Ubiquitous, or Fragmentary Infrastructure Elements**

The following list does not apply to properties 50 years old or older that could be potentially important, nor does it apply to properties that may contribute to the significance of larger historic properties such as districts or cultural landscapes.

### **Water Conveyance and Control Features**

- Natural bodies of water providing a water source, conveyance, or drainage
- Modified natural waterways

- Concrete-lined canals less than 50 years old and fragments of abandoned canals
- Roadside drainage ditches and secondary agricultural ditches
- Small drainage tunnels
- Flood storage basins
- Reservoirs and artificial ponds
- Levees and weirs
- Gates, valves, pumps, and other flow control devices
- Pipelines and associated control devices
- Water supply and waste disposal systems
- Rip-rap

### **Recent Transportation or Pedestrian Facilities**

- Railroad grades converted to other uses, such as roads, levees, or bike paths
- Bus shelters and benches
- Vista points and rest stops
- Bike paths, off-road vehicle trails, equestrian trails, and hiking trails
- Parking lots and driveways

### **Highway and Roadside Features**

- Isolated segments of bypassed or abandoned roads
- Retaining walls
- Highway fencing, soundwalls, guard rails, and barriers
- Drains and culverts, excluding culverts assigned a Caltrans bridge number
- Cattle crossing guards
- Roadside landscaping and associated irrigation systems
- Signs and reflectors
- Telecommunications services, including towers, poles, dishes, antennas, boxes, lines, cables, transformers, and transmission facilities
- Utility services, including towers, poles, boxes, pipes, lines, cables, and transformers
- Oil and gas pipelines and associated control devices

### **Adjacent Features**

- Fences, walls, gates, and gateposts

- Isolated rock walls and stone fences
- Telephone booths, call boxes, mailboxes, and newspaper receptacles
- Fire hydrants and alarms
- Markers, monuments, signs, and billboards
- Fragments of bypassed or demolished bridges
- Temporary roadside structures, such as seasonal vendors' stands
- Pastures, fields, crops, and orchards
- Corrals, animal pens, and dog runs
- Open space, including parks and recreational facilities
- Building and structure ruins and foundations less than 50 years old

#### **Movable or Minor Objects**

- Movable vehicles
- Stationary vehicles less than 50 years old or moved within the last 50 years
- Agricultural, industrial and commercial equipment and machinery
- Sculpture, statuary, and decorative elements less than 50 years old or moved within the last 50 years

**Kerkhove-Peltier, Sydney A CIV USARMY CESPCK (USA)**

---

**From:** Anna Starkey <astarkey@auburnrancheria.com>  
**Sent:** Tuesday, November 23, 2021 2:59 PM  
**To:** Kerkhove-Peltier, Sydney A CIV USARMY CESPCK (USA)  
**Subject:** [Non-DoD Source] Sec.106: USACE ARCF Sac River Erosion C2/3/4 APE Consultation Package

Dear Ms. Kerkhove-Peltier,

On behalf of the United Auburn Indian Community, Tribal Historic Preservation Department, thank you for the notification and opportunity to consult on the above referenced project. UAIC agrees to consult and would like confirmation of receipt of this email for our records.

Below are the sensitive areas that we've identified in contract 2, 3 and 4. We hope to get detailed project activities so we can ensure that these resources are not impacted. Has a cultural survey been completed yet?

Kind regards,  
Anna Starkey



*The United Auburn Indian Community is now accepting electronic consultation request, project notifications, and requests for information! Please fill out and submit through our website. Do not mail hard copy letters or documents. <https://auburnrancheria.com/programs-services/tribal-preservation> **Bookmark this link!***



**Anna M. Starkey, M.A., RPA**  
Cultural Regulatory Specialist  
Tribal Historic Preservation Department | UAIC  
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Auburn, CA 95603  
Direct line: (916) 251-1565 | Cell: (530) 863-6503  
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Signatures in Global and National Commerce Act (E-Sign Act), 15, U.S.C. §§ 7001 to 7006 or the Uniform Electronic Transactions Act of any state or the federal government unless a specific statement to the contrary is included in this e-mail.



DEPARTMENT OF PARKS AND RECREATION  
OFFICE OF HISTORIC PRESERVATION

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

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Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov [www.ohp.parks.ca.gov](http://www.ohp.parks.ca.gov)

December 3, 2021

In reply refer to: COE120203C

VIA ELECTRONIC MAIL

Daniel F. Artho  
Deputy Chief, Planning Division  
Army Corps of Engineers, Sacramento District  
1325 J Street  
Sacramento, CA 95814-2922

RE: Consultation for the preliminary Area of p for the Sacramento River Erosion Contract 2, Contract 3, and Contract 4 of the American River Common Features Project (ARCF) in Sacramento

Dear Daniel Artho,

The U.S. Army Corps of Engineers (COE) is consulting with the State Historic Preservation Officer (SHPO) pursuant to the *Programmatic Agreement Among the U.S. Army Corps of Engineers and the California State Historic Preservation Officer Regarding the American River Common Features Project, Sacramento and Yolo Counties (PA)*, executed September 10, 2015. By letter received on November 5, 2021, the COE is seeking comments on their delineation of the Area of Potential Effects (APE) or the Sacramento River Erosion Contract 2, Contract 3, and Contract 4, pursuant to Stipulation I (Time Frames and Review Procedures) and Stipulation II (Area of Potential Effects). The COE submitted the following document to support their APE delineation:

- *Sacramento River Erosion Contracts 2, 3, and 4 APE Maps (USACE 2021)*

Briefly, the ARCF is a levee improvement project that is being consulted on in reaches pursuant to the PA. The COE is establishing the APE for the Sacramento River Erosion Contract phase (SRC) consisting of three reaches (SRC2, SRC3, and SRC4) to address erosion issues along the Sacramento River's east levee, including constructing rock bank protection, planting benches, and establishing in-stream woody material. The APE is described as 148 acres for SRC2, 105 acres for SRC3, and 13 acres for SRC4.

After review of the COE's submission letter and supporting preliminary APE maps, I have no comments on the preliminary APE.



Daniel Artho  
December 3, 2021  
Page 2

OHP File No. COE120203C

I anticipate continuing to consult on the COE's implementation of the PA. If the COE receives comments from other parties to the PA, please convey those comments and how the COE addressed those comments to the SHPO. If you require further information, please contact Elizabeth Hodges of my staff at (916) 445-7017 or [Elizabeth.Hodges@parks.ca.gov](mailto:Elizabeth.Hodges@parks.ca.gov).

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line extending to the right.

Julianne Polanco  
State Historic Preservation Officer



DEPARTMENT OF PARKS AND RECREATION  
OFFICE OF HISTORIC PRESERVATION

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000 FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov [www.ohp.parks.ca.gov](http://www.ohp.parks.ca.gov)

July 21, 2022

In reply refer to: COE120203C

VIA ELECTRONIC MAIL

Marshall K. Harper  
Chief, Environmental Resources Branch  
Army Corps of Engineers, Sacramento District  
1325 J Street  
Sacramento, CA 95814-2922

RE: Continuing consultation for the draft identification efforts for the Sacramento River Erosion Contract 2, Contract 3, and Contract 4 of the American River Common Features Project (ARCF) in Sacramento

Dear Marshall Harper,

The U.S. Army Corps of Engineers (COE) is consulting with the State Historic Preservation Officer (SHPO) pursuant to the *Programmatic Agreement Among the U.S. Army Corps of Engineers and the California State Historic Preservation Officer Regarding the American River Common Features Project, Sacramento and Yolo Counties (PA)*, executed September 10, 2015. By letter received on June 23, 2022, the COE is seeking review and comments on their draft cultural resources inventory and evaluation report for Sacramento River Erosion Contract (SRC) 2, Contract 3, and Contract 4, pursuant to Stipulation I (Time Frames and Review Procedures), IV (Identification and Evaluation), and VI (Determination of Effects). The COE submitted the following document for review and comment:

- *(draft) Cultural Resources Inventory and Evaluation Report; American River Common Features 2016 Project, Sacramento River Erosion Protection, Contracts 2, 3, and 4 Phase (GEI 2022)*

Briefly, the ARCF is a levee improvement project that is being consulted on in reaches pursuant to the PA. The APE for the Sacramento River Erosion Contract phase (SRC) consists of three reaches (SRC2, SRC3, and SRC4) to address erosion issues along the Sacramento River's east levee, including constructing rock bank protection, planting benches, and establishing in-stream woody material. The APE is described as 148 acres for SRC2, 105 acres for SRC3, and 13 acres for SRC4.

Marshall Harper  
July 21, 2022  
Page 2

OHP File No. COE\_2021\_

Your submission is currently under review. Comments should be expected by August 2, 2022. If you require further information, please contact Elizabeth Hodges of my staff at (916) 445-7017 or [Elizabeth.Hodges@parks.ca.gov](mailto:Elizabeth.Hodges@parks.ca.gov).

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'J' followed by a horizontal line that tapers to the right.

Julianne Polanco  
State Historic Preservation Officer



**DEPARTMENT OF PARKS AND RECREATION  
OFFICE OF HISTORIC PRESERVATION**

Armando Quintero, Director

Julianne Polanco, State Historic Preservation Officer

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November 17, 2022

In reply refer to: COE120203C

VIA ELECTRONIC MAIL

Marshall K. Harper  
Chief, Environmental Resources Branch  
Army Corps of Engineers, Sacramento District  
1325 J Street  
Sacramento, CA 95814-2922

RE: Consultation for the final identification and evaluation report, determinations of eligibility and finding of effect for the Sacramento River Erosion Control (SRC) Contracts 2 (C2) of the American River Common Features Project (ARCF) in Sacramento

Dear Marshall Harper,

The U.S. Army Corps of Engineers (COE) is consulting with the State Historic Preservation Officer (SHPO) pursuant to the *Programmatic Agreement Among the U.S. Army Corps of Engineers and the California State Historic Preservation Officer Regarding the American River Common Features Project, Sacramento and Yolo Counties* (PA), executed September 10, 2015.

Briefly, the ARCF is a levee improvement project that is being consulted on in reaches pursuant to the PA. The APE for the Sacramento River Erosion Contract phase (SRC) consists of three reaches (SRC C2, SRC C3, and SRC C4) to address erosion issues along the Sacramento River's east levee, including constructing rock bank protection, planting benches, and establishing in-stream woody material. The APE is described as 148 acres for SRC C2, 105 acres for SRC C3, and 13 acres for SRC C4.

By letter received on October 17, 2022, the COE is addressing comments on the draft identification and evaluation report offered by the SHPO on June 23, 2022, and seeking review and comments on their final cultural resources inventory and evaluation report, concurrence with their determinations of eligibility, and comment on their finding of effect for Sacramento River Erosion Control (SRC) Contract 2 pursuant to Stipulation I (Time Frames and Review Procedures), IV (Identification and Evaluation), and VI (Determination of Effects). The COE submitted the following document for review and comment:

- *(final) Cultural Resources Inventory and Evaluation Report; American River Common Features 2016 Project, Sacramento River Erosion Protection, Contracts 2, 3, and 4 Phase (GEI 2022)*

By letter dated August 1, 2022, the SHPO recommended that the COE ensure their tribal contact list has been updated within the past year, as changes to the appropriate way to contact Native American parties may have occurred. The COE responded by letter received on October 17, 2022, that the COE's Sacramento District maintains a regularly updated list of Native American contacts for consultation purposes provided through NAHC contact lists and by the Native American tribes. Thank you for the clarification. In future submissions, please provide the date the contact list used in the submission was last updated.

The SHPO commented that if the COE had determined the vertical extent of the APE that this dimension of the APE be included in the final version of the identification and evaluation report at Section 1.4. In the letter dated October 17, 2022, the COE conveyed that the vertical extent of the APE is up to 3-feet below the crown of the levee and that the final identification and evaluation report (GEI 2022) has been updated to reflect this information. Thank you for the clarification.

The SHPO recommended that the project activities be shown on the APE maps along with cultural resource locations so as to better convey how the resource spatially relate to proposed project activities. The COE declined this suggestion, stating that under Stipulation II of the PA, only a map delineating the APE and a description of the project activities is required. Though not one of the minimum requirements stipulated in the PA, the way a Federal agency determines their APE can be more easily understood by displaying project activities and is considered a basic element of any APE map submitted for Section 106 review (OHP 2020). The COE is free to incorporate this suggestion or not for submissions under the PA, as it is not stipulated in the agreement or its tiered documents.

Identification efforts included record searches in 2014, 2015, 2019, and 2021; archival research; pedestrian surveys in 2016, 2020, 2021 and 2022; a buried site-sensitivity assessment; review of archaeological and geoarchaeological testing conducted in 2016, 2018, 2019, and 2021; and Native American consultation.

Identification efforts resulted in the documentation of cultural resources in the SRL C2 APE:

Primary number	Other ID	Description	COE determination	SHPO concurrence	Contract	Effect
P-34-000055	CA-SAC-028, Strawberry site, S-28	Precontact lithic scatter, burials, habitation site	None provided/discussed.	None requested.	2	Not extant in APE. Remnants outside (under) APE, no effect

Primary number	Other ID	Description	COE determination	SHPO concurrence	Contract	Effect
P-34-001497	CA-SAC-1092, Walnut Grove branch line of the SPRR	Railroad segment	Previously determined eligible, most recently by BUR	2022, not provided	2	No effect
P-34-002143	JSA-100/SREL Levee Unit 115	Earthen levee	Previously determined eligible as contributor to the SRFCP	October 20, 2020 (COE120203 C)	2, 3, 4	No adverse effect
P-34-004261	Sump 119-1	Line of bents/piers	Not eligible	Sought in this consultation	2	N/A
P-34-004464	US160/D040/M156/C0086	Underwater object	Not evaluated	Not discussed	2	In APE but outside project activities area (GEI)- No Effect
P-34-005225	Sacramento River TCL	Traditional cultural landscape	Eligible	Sought in this consultation	2, 3, 4	No adverse effect
P-34-005257	CA-SAC-1253/UAIC-TCR-182	Precontact lithics, faunal remains, and burial site	Previously determined eligible	November 13, 2019 (COE120203 C)	3	No effect
P-34-005258	CA-SAC-1254H, Sacramento Transportation Company's riverside backyard	Historic bricks	Previously determined not eligible	November 13, 2019 (COE120203 C)	2	N/A
P-34-005379	CA-SAC-1276, SREL_65S	Mound site remnants	Eligible under D	Sought in this consultation	2	Not within APE, 15-20 ft below levee, no effect
n/a	Pocket Canal	Canal	Not eligible	Offered in this consultation	2	N/A

The final Identification and Evaluation Report (GEI 2022, pg. 4.3) describes P-34-000055 as not extant within the APE, having been partially destroyed by the construction of Interstate-5

and SREL Levee Unit 115 (P-34-2143), and partially buried under 30-feet of dredged sand. It is therefore presumed that any remnants of this resource are outside the APE.

The COE states that P-34-001497 and P-34-002143 have not undergone significant changes since their last evaluations and determinations of eligibility, and the COE has therefore determined no reevaluation is warranted and the properties remain eligible.

The COE has determined that P-34-004261 is not eligible for the NRHP due to a lack of historic significance and integrity. I concur.

The final Identification and Evaluation Report (GEI 2022, pg. 4-8) states that while P-34-004464 (US160) and P-34-004472 (US412) are within the project APE, both resources are outside the area that will be affected by project activities, and therefore, an evaluation of the resources is not warranted. From the provided maps, it appears that P-34-004472 (US412) is not within the APE for SRC C2, C3, or C4. From the provided maps, it appears that P-34-004464 (US160) is within the APE for SRC C2. Should the COE have conflicting information that proposed bank protection or other project activities near the resource be proposed, please provide an evaluation and determination of this resource for inclusion in the NRHP.

The COE has determined that P-34-005225, a traditional cultural landscape, as eligible for inclusion in the NRHP. The COE has not provided an evaluation of this resource; therefore, I cannot provide concurrence.

The COE states that P-34-005257 has not undergone significant changes since its last evaluation and determination of eligibility, and the COE has therefore determined no reevaluation is warranted and the property remains eligible. The final Identification and Evaluation Report (GEI 2022, pg. 4-3) states that P-34-005257 is identified by the UAIC as UAIC-TCR-182 and is considered important to the UAIC. This indicates P-34-005257 may be eligible under Criterion A, as well as Criterion D, which the COE is urged to consider should future evaluation be warranted.

The COE states that P-34-005258 has not undergone significant changes since its last evaluation and determination of eligibility, and the COE has therefore determined no reevaluation is warranted and the resource remains ineligible for inclusion on the NRHP.

The COE has determined that P-34-005379, remnants of a prehistoric mound site, is significant under Criterion D for its ability to yield information important to prehistory. Not enough information has been provided in the evaluation to concur with the COE's determination. However, the final Identification and Evaluation Report (GEI 2022, pg. 4-3) indicates that, based upon geoarchaeological testing in 2016 and the initial recording of the resource, this resource is 15-20 feet below the surface of the levee crown. This resource appears to be outside (below) the APE and will not be affected by project activities. Should the project activities of future phases of the undertaking extend closer to the elevation of the resource, a more comprehensive evaluation with which to make a determination of eligibility would be suggested. Further, the final Identification and Evaluation Report (GEI 2022, pg. 4-3) states that P-34-005379 is geographically located within UAIC-TCR-187 and is considered important to the

UAIC. This indicates P-34-005379 may be eligible under Criterion A, as well as Criterion D, which the COE is urged to consider should future evaluation be warranted.

The final Identification and Evaluation Report (GEI 2022, pg. 4-9) provides an evaluation of the Pocket Canal. After a review of that evaluation, I am able to concur with the COE's previous determination that the Pocket Canal is not eligible for inclusion in the NRHP.

Resulting from Native American consultation, 11 areas of cultural and religious importance within or adjacent to the SREL APE were identified by the United Auburn Indian Community of the Auburn Rancheria. The COE states that identification efforts from previous ARCF phases have been conducted within these areas, and that to date, no physical cultural materials have been identified in those areas beyond those within previously documented archaeological sites. The COE states they are unable to evaluate the 11 areas of cultural and religious importance for inclusion in the National Register of Historic Places (NRHP), due to the lack of physically concrete properties that are relatively fixed in location.

The COE conveyed that cultural materials associated with the areas of tribal importance may be identified during ground disturbing activities. The COE states they have prepared draft site-forms for these resources describing their significance under Criteria A, C, and D, focusing on their Tribal values as communicated by the UAIC. The COE will include these draft site-forms in the Monitoring and Discovery Plan for SRC C2, SRC C3, and SCR C4, which the COE states they will submit for review in the future pursuant to Stipulation I.

I anticipate continuing to consult on the COE's implementation of the PA. If the COE receives comments from other parties to the PA, please convey those comments and how the COE addressed those comments to the SHPO. If you require further information, please contact Elizabeth Hodges of my staff at (916) 445-7017 or [Elizabeth.Hodges@parks.ca.gov](mailto:Elizabeth.Hodges@parks.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julianne Polanco', with a long horizontal line extending to the right.

Julianne Polanco  
State Historic Preservation Officer