

AMERICAN RIVER COMMON FEATURES 2016 Flood Risk Management Project Sacramento, California

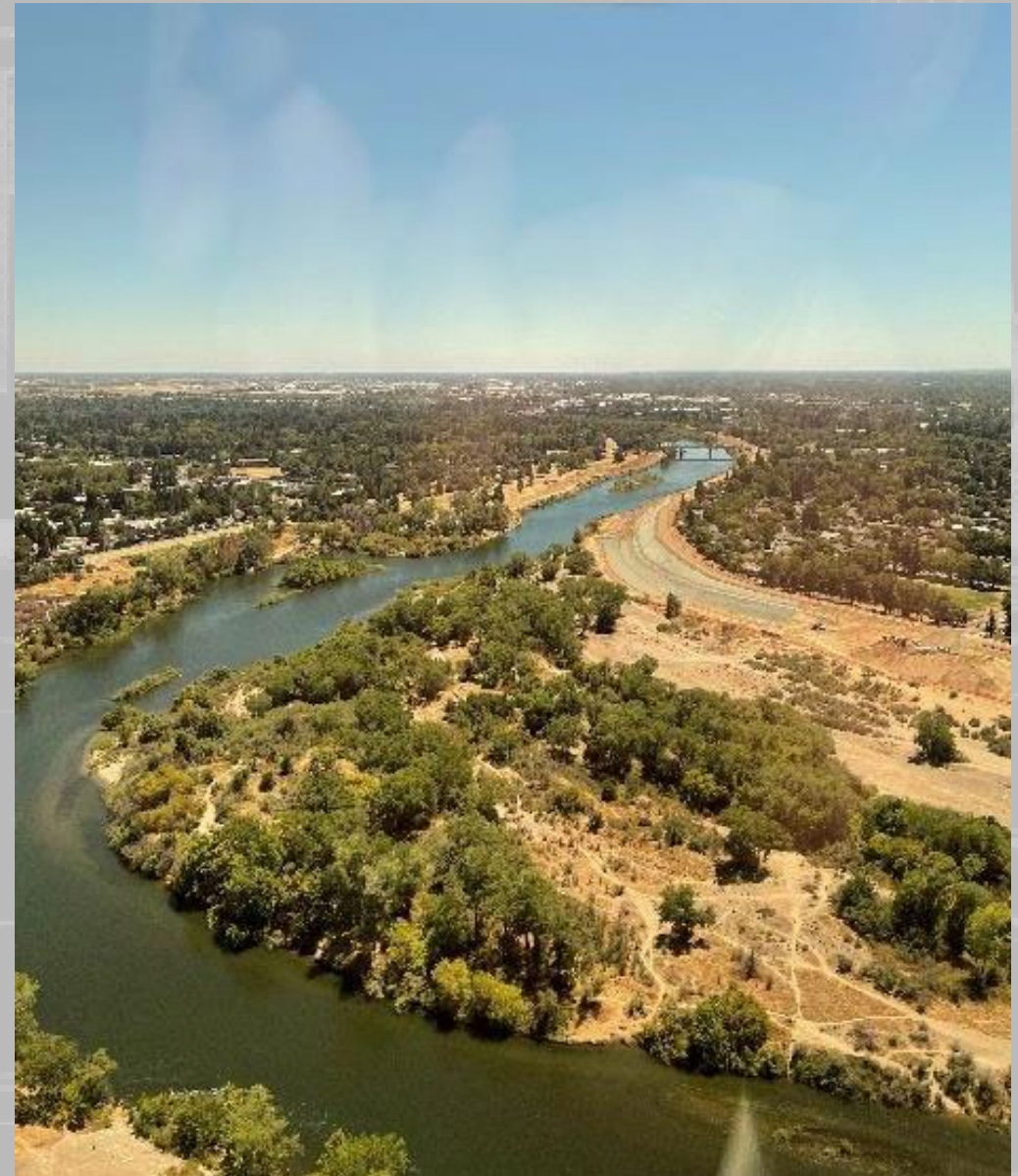
Draft Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report

Public Meeting
10 & 16 January 2024

Host - J. Paul Bruton
USACE Public Affairs Office



US Army Corps
of Engineers®





PROJECT PARTNERS



Federal Government



**US Army Corps
of Engineers®**

State Government



Central Valley
Flood Protection
Board



Department of
Water
Resources

Local Government





ARCF 2016 STUDY & PROJECT BACKGROUND



STUDY

American River Watershed Common Features (ARCF)
2016 Final General Reevaluation Report (GRR)
Environmental Impact Statement/Environmental Impact Report (EIS/EIR)

PROJECT AUTHORITY

- Water Resources Development Act (WRDA) 2016
 - Pub. L. No. 114-322 § 1322
 - Water Infrastructure Improvements for the Nation Act (WIIN Act).

CONSTRUCTION AUTHORITY

- Funded by the Bipartisan Budget Act of 2018
 - Public Law 115-123

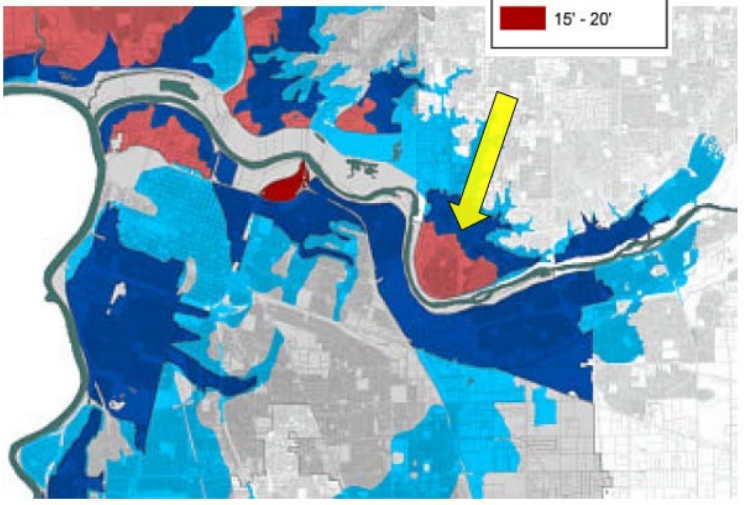
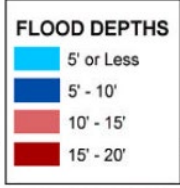


2016 STUDY PURPOSE

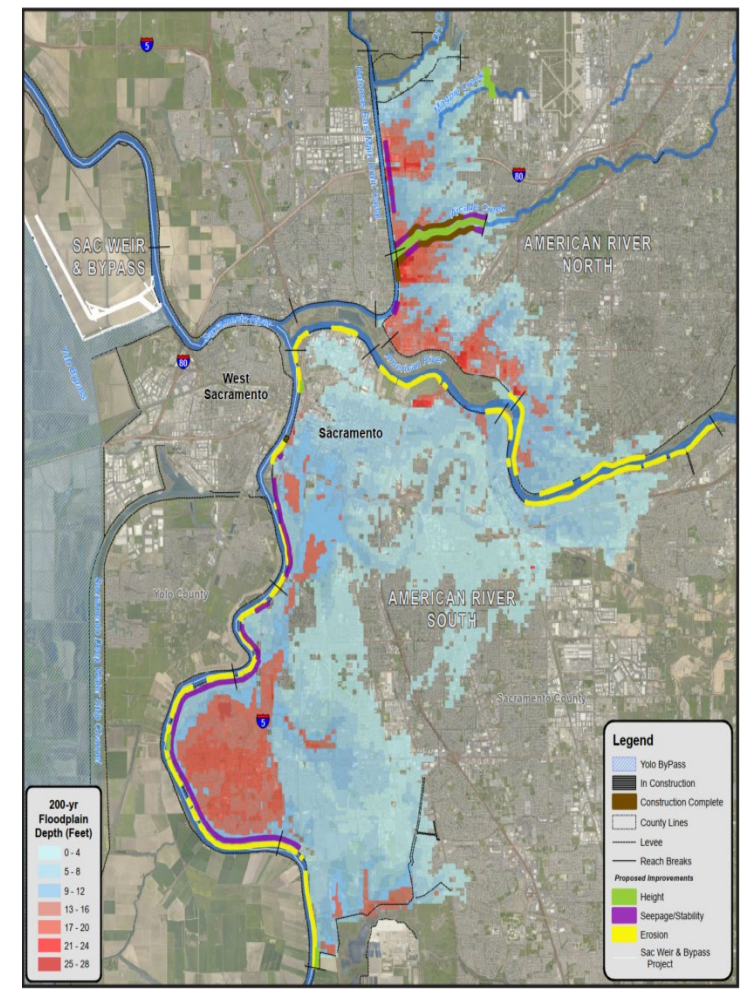


Reduce the risk of flooding to the greater Sacramento area

- Sacramento River East Levee Improvements
- American River Levee Improvements
- Sacramento Weir and Bypass Widening
- North Area Streams Levee Improvements



River Park neighborhood adjacent to I-80 bridge 1986 Levee erosional event



Hydraulic maps depict 20+feet of flooding in study area



ARCF 2016 PROJECTS





NEED FOR THIS SEIS/SEIR



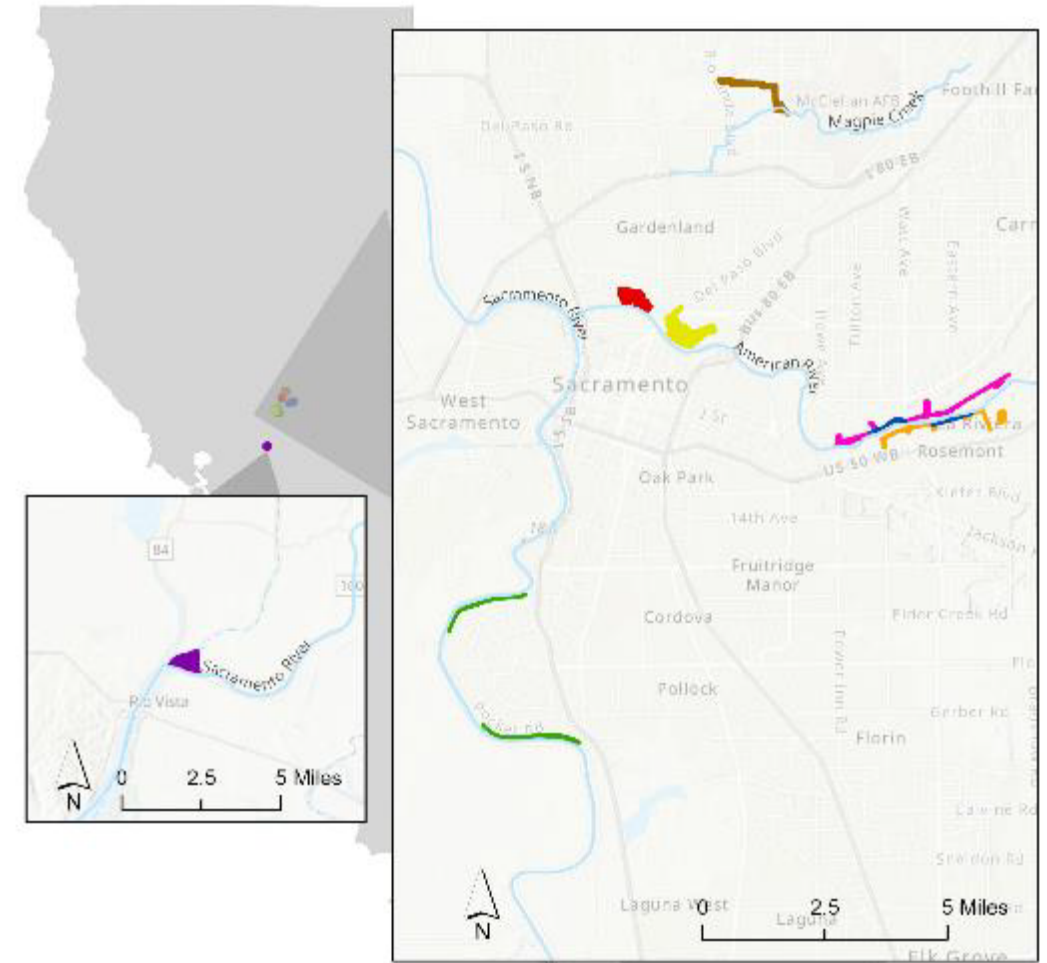
- A Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) is needed to analyze Design Refinements developed since the 2016 GRR that could result in new environmental effects.
- Written as Joint Document with CEQA and NEPA
- Project components analyzed in this SEIS/SEIR include:
 - American River Erosion Contract 3B, 4A, and 4B
 - Sacramento River Erosion Contract 3
 - Magpie Creek Project
 - American River Mitigation Site
 - Sacramento River Mitigation Site
 - Piezometer Network
- SEIS/SEIR Schedule: Record of Decision/CEQA Certification – Anticipated in Late Summer/Fall 2024



Overview of Design Refinements

Key features of the Report:

- Design Refinements to project component scope/location/detail since finalization of the 2016 ARCF GRR FEIS/EIR
- Includes SR C3, LAR C3B, LAR C4A, LAR C4B, Magpie Creek Project, American River and Sacramento River Mitigation Sites, Piezometer Network



Proposed Action Project Component Locations

- | | |
|--|-------------------------------------|
| American River Erosion Contract 38 North | Magpie Creek Project |
| American River Erosion Contract 38 South | Sacramento River Erosion Contract 3 |
| American River Erosion Contract 4A | Sacramento River Mitigation Site |
| American River Erosion Contract 4B | Waterways |
| American River Mitigation Site | |

Updated 12/15/2023



**US Army Corps
of Engineers**
Sacramento District





DESIGN REFINEMENTS



American River

- Refined erosion protection methods (launchable toe protection) to provide onsite mitigation, fisheries habitat, and to decrease impacts to heritage oak trees
- Refined haul routes and staging areas
- Erosion protection around State Route 160 Bridge
- Refined designs require more soil and rock material

Sacramento River

- Refined erosion protection methods (launchable toe protection) to provide better onsite mitigation
- Identification of land side staging areas
- Construction equipment operating on the river's shoreline (previously assumed work would be completed by barge)
- Refined designs require more soil and rock material



DESIGN REFINEMENTS CONTINUED



Magpie Creek Project

- Levee extension, widening and realignment of a portion of the Magpie Creek Diversion Channel
- Culverts beneath Sac. River Bike Trails
- Flowage easements to allow for water retention upstream of Raley Blvd.
- Night work
- Full road closure at Raley Boulevard for a portion of the construction

Piezometer Network

- Post-construction groundwater data collection for levee improvement performance monitoring

American River Mitigation Site (ARMS)

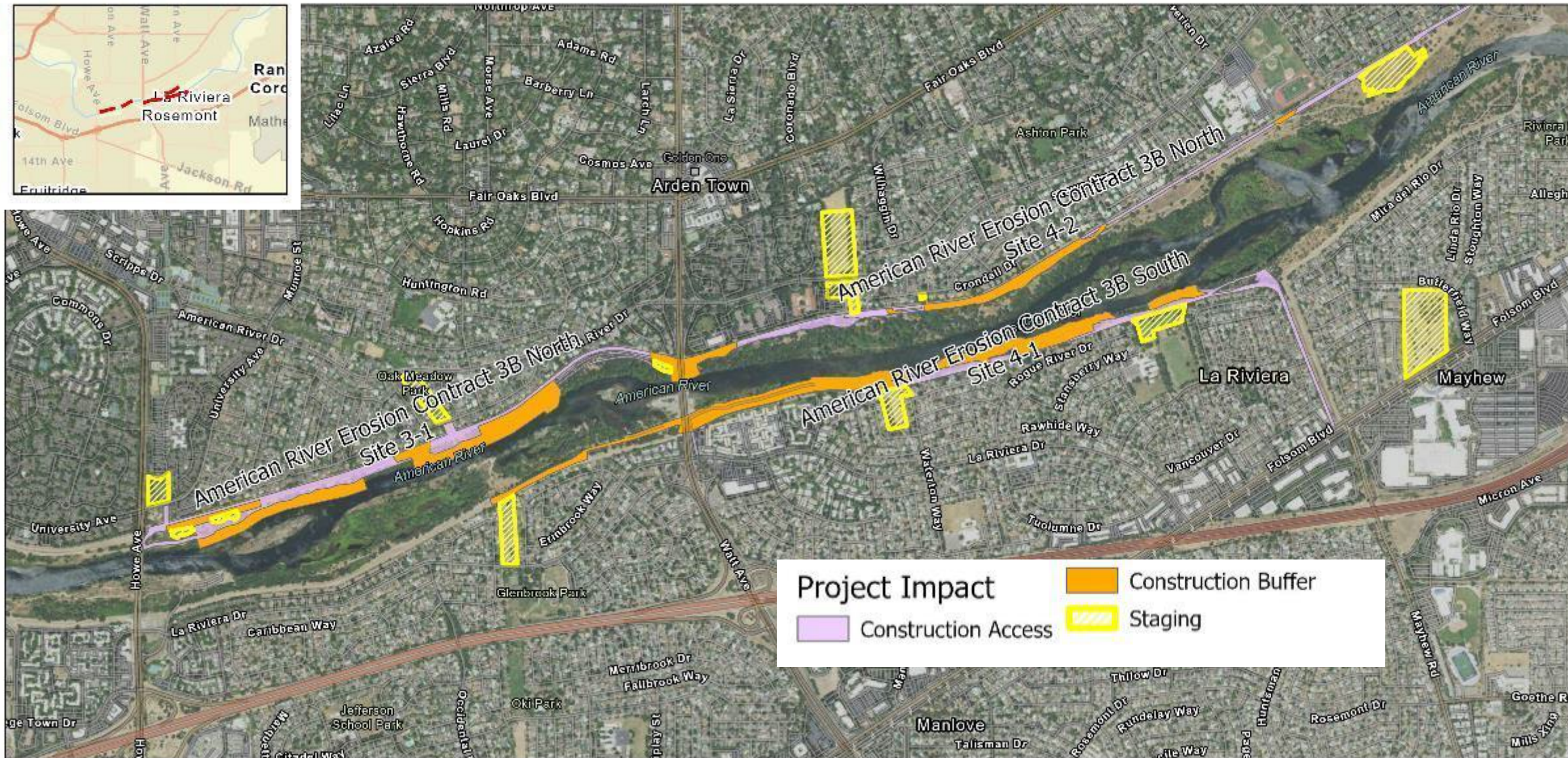
- 120-acre newly constructed mitigation site in the American River Parkway
- Listed species/habitats: salmon/steelhead, riparian/yellow-billed cuckoo, valley elderberry longhorn beetle (VELB), seasonal/forested wetland

Sacramento River Mitigation Site (SRMS)

- 200-acre newly constructed mitigation site at Grand Island near the confluence of Cache and Steamboat
- Listed species/habitats: Salmon/Steelhead/Green sturgeon, Delta smelt, riparian/yellow-billed cuckoo, VELB



American River Erosion Contact 3B





American River Erosion Contract 4B



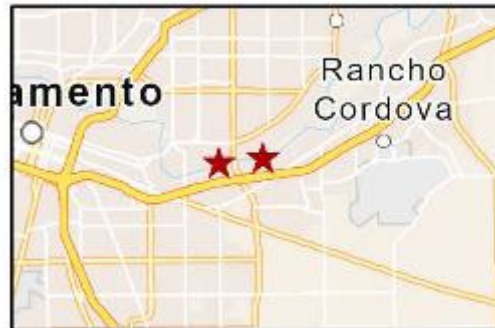
Project Impact

Construction Buffer

★ 4B Locations

Construction Access

OHWM





ENVIRONMENTAL IMPACTS- AMERICAN RIVER EROSION

CONTRACT 3B AND 4B



Recreation

- Short-term disruption during construction and staging - American River Parkway

Transportation and Circulation

- Haul trucks added to local roads during construction

Environmental Justice

- Haul trucks would pass disadvantaged communities

Aesthetics and Visual Impacts

- Vegetation removal would decrease the visual character until plant re-establishment

Water Quality

- Tree removal could increase riverbank water temperature (Contract 3B)

Air Quality and Climate Change

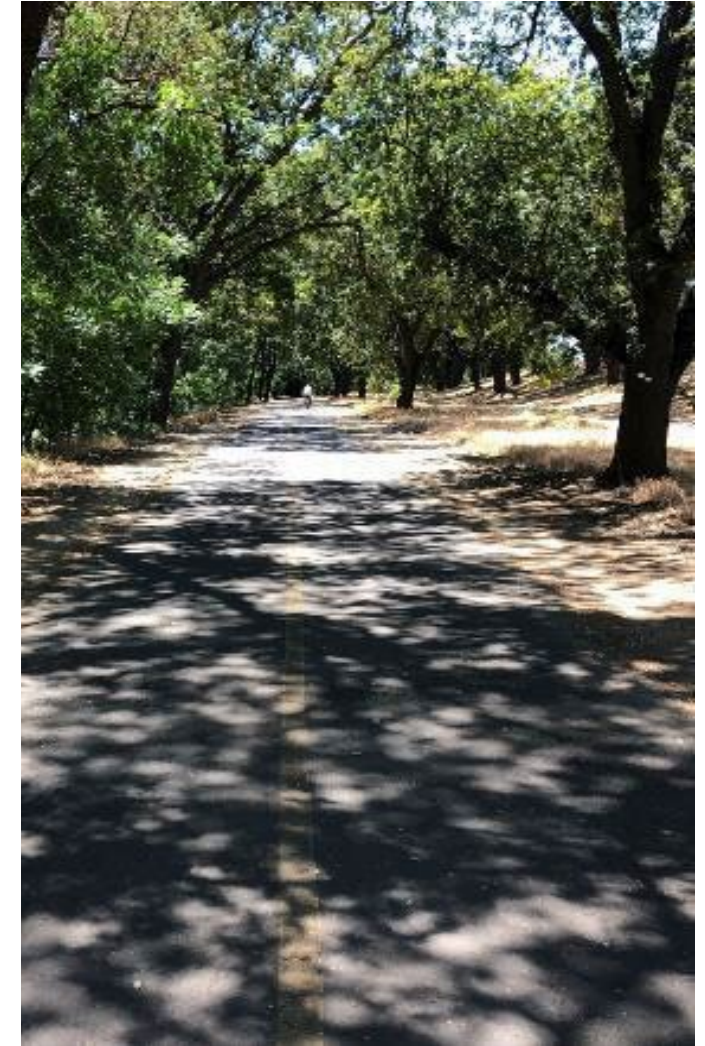
- High NO_x and greenhouse gas (GHG) emissions from haul trucks and construction equipment

Noise and Vibration

- High noise levels that could disturb sensitive receptors (homes, recreationalist, etc.)

Vegetation, Wildlife, Fisheries, and Special Status Species

- Habitat removal and disturbance is required for installation of erosion protection features



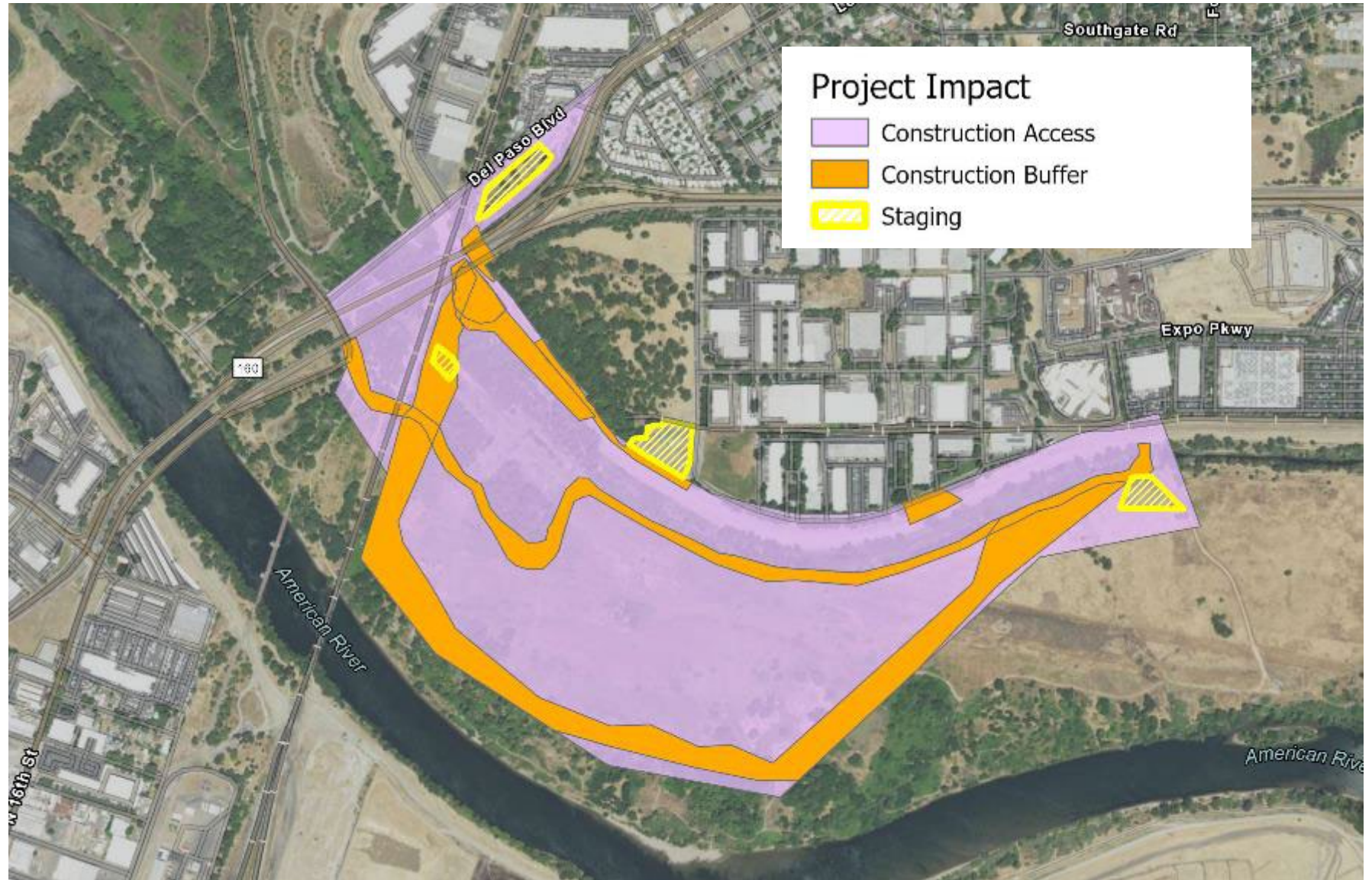
Source: PSOMAS 2020



American River Erosion Contact 4A



Source: Todd Rivas 2022





ENVIRONMENTAL IMPACTS- AMERICAN RIVER EROSION

CONTRACT 4A



Recreation

- The American River Parkway would be disrupted during construction
- The erosion features would block the Jedidiah Smith Memorial Trail- a reroute into the floodplain is being proposed

Transportation and Circulation

- Haul trucks would be added to local roads during construction

Air Quality and Climate Change

- High NO_x and GHG emissions associated with haul trucks and construction equipment

Noise and Vibration

- High noise levels that could disturb sensitive receptors (homes, recreationalist, etc.)

Vegetation, Wildlife, and Special Status Species

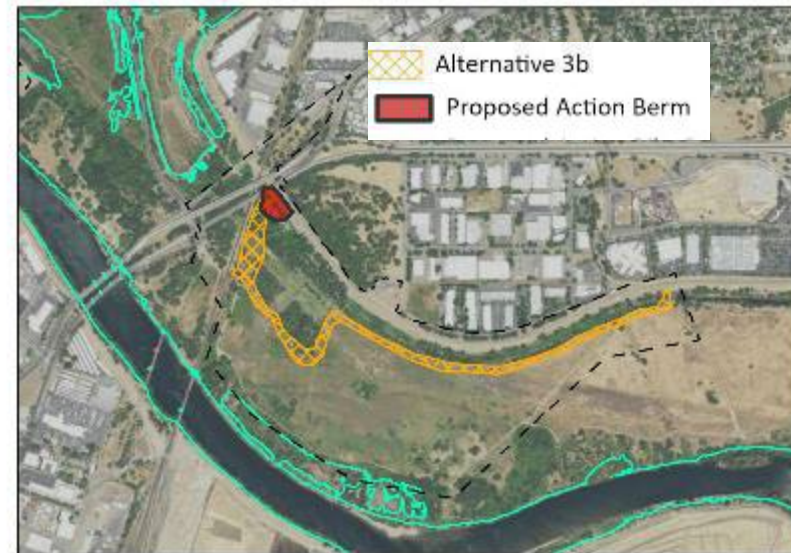
- Habitat removal and disturbance is required for installation of erosion protection features
- No opportunity to replant onsite
- Fish Stranding



Source: Bailey Hunter 2023



American River Erosion Contact 4A Alternatives





SACRAMENTO RIVER EROSION CONTRACT 3



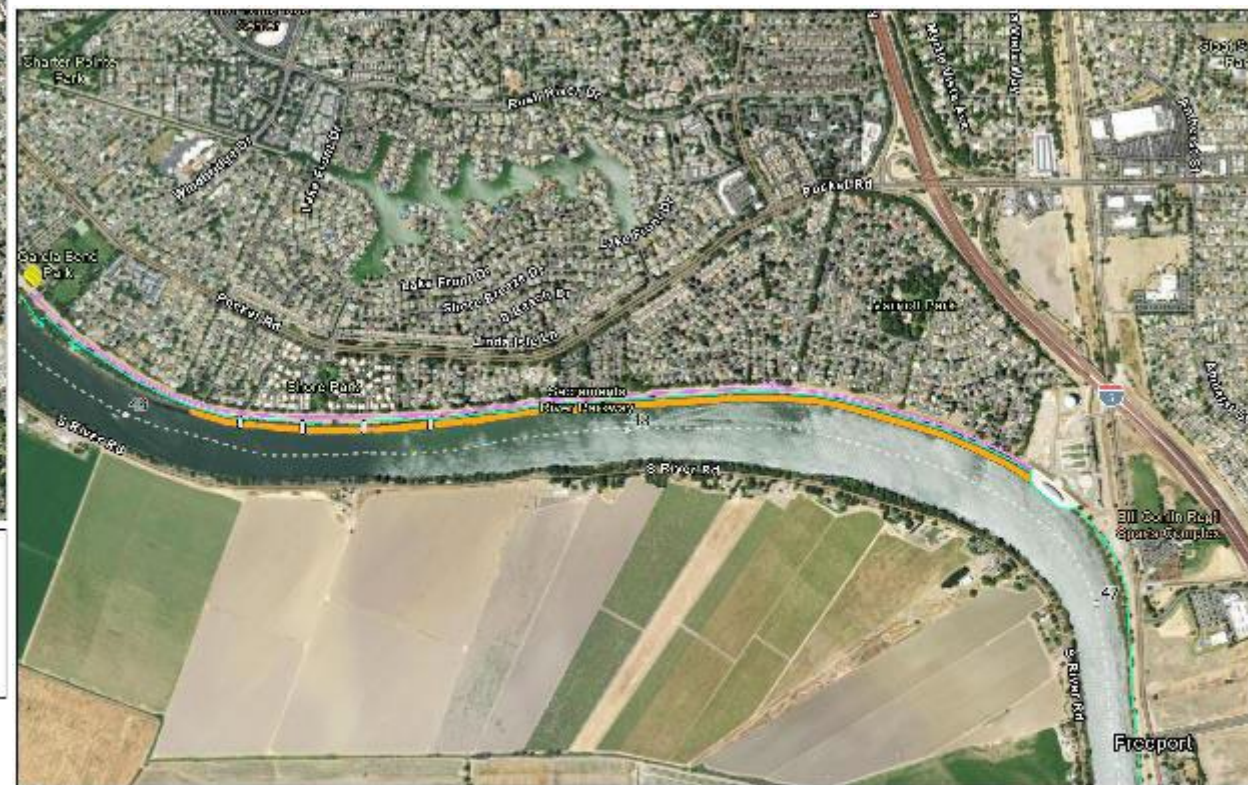
Sacramento River Contract 3 Project Footprint - Northern Portion

- River Mile
- OHWM
- Tieback Locations
- Vegetation Removal Access
- Project Footprint

Updated 12/7/2023

0 0.17 0.35 Miles

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Sacramento River Contract 3 Project Footprint - Southern Portion

- River Mile
- OHWM
- Tieback Locations
- Staging Area
- Vegetation Removal Access
- Project Footprint

Updated 12/7/2023

0 0.25 0.5 Miles

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Sacramento District



ENVIRONMENTAL IMPACTS- SACRAMENTO RIVER EROSION CONTRACT 3



Aesthetics and Visual Impacts

- Vegetation removal would decrease the visual character of the area

Water Quality

- Tree removal could increase water temperature near the riverbank

Air Quality and Climate Change

- High NO_x emissions and GHG emissions associated with barges and construction equipment

Noise and Vibration

- There would be high noise levels that could disturb sensitive receptors (homes, recreationalist, etc.)

Vegetation, Wildlife, Fisheries, and Special Status Species

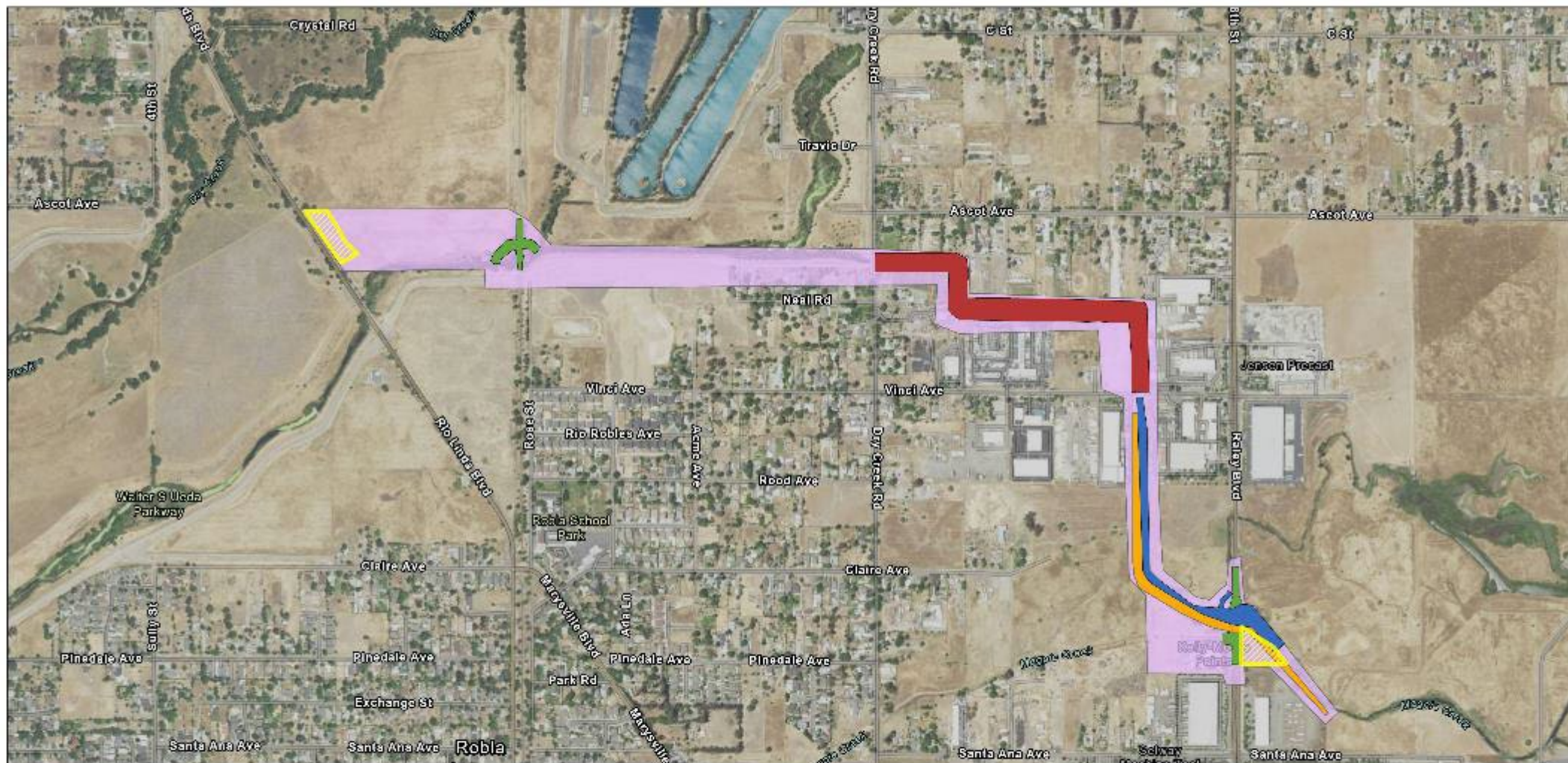
- Habitat removal and disturbance is required for installation of erosion protection features



Source: Melissa Dyer 2022



MAGPIE CREEK PROJECT



Magpie Creek Project Footprint

- Canal Widening
- Canal and Slope Modification
- Levee Extension
- Culvert
- Construction Access
- Staging

Updated 12/7/2023



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Sacramento District



ENVIRONMENTAL IMPACTS - MAGPIE CREEK PROJECT



Recreation

- Construction under the Sacramento Northern Bike Trail requiring detours

Transportation and Circulation

- Raley Boulevard would be closed for work and require traffic detours
- Haul trucks added to local roads during construction

Environmental Justice

- Haul trucks would go through disadvantaged communities

Water Quality

- Construction could cause short-term water quality issues once water is reintroduced to the new and widened channels.

Air Quality and Climate Change

- High NO_x emissions and GHG emissions associated with haul trucks and construction equipment

Noise and Vibration

- There would be high noise levels that could disturb sensitive receptors (homes, recreationalist, etc.)

Hydraulic & Wetlands

- Impacts to wetland east of Raley Blvd; downstream stage increases (upstream of the Northern Sacramento Bike Trail bridge on Robla Creek) due to increased MDCDC capacity during events larger than 7% AEP



Source: Blake Prawl 2023



ONSITE RE-VEGETATION



Reduce Impacts

- Habitat Avoidance
- Minimize Impacts
- Replace Existing Conditions
- Compensate Unavoidable Impacts

Habitat Forward Designs

- Erosion protection buried with plantings on top
- Slopes softened to facilitate growth
- Soil filled rock with willow poles
- Hydroseeding all surfaces

Post Construction

- Irrigation,
- Browse protection,
- Maintenance and
- Signage

Previously Constructed Erosion Protection Site Between Guy West Bridge and H Street



May 2001



June 2005



July 2010



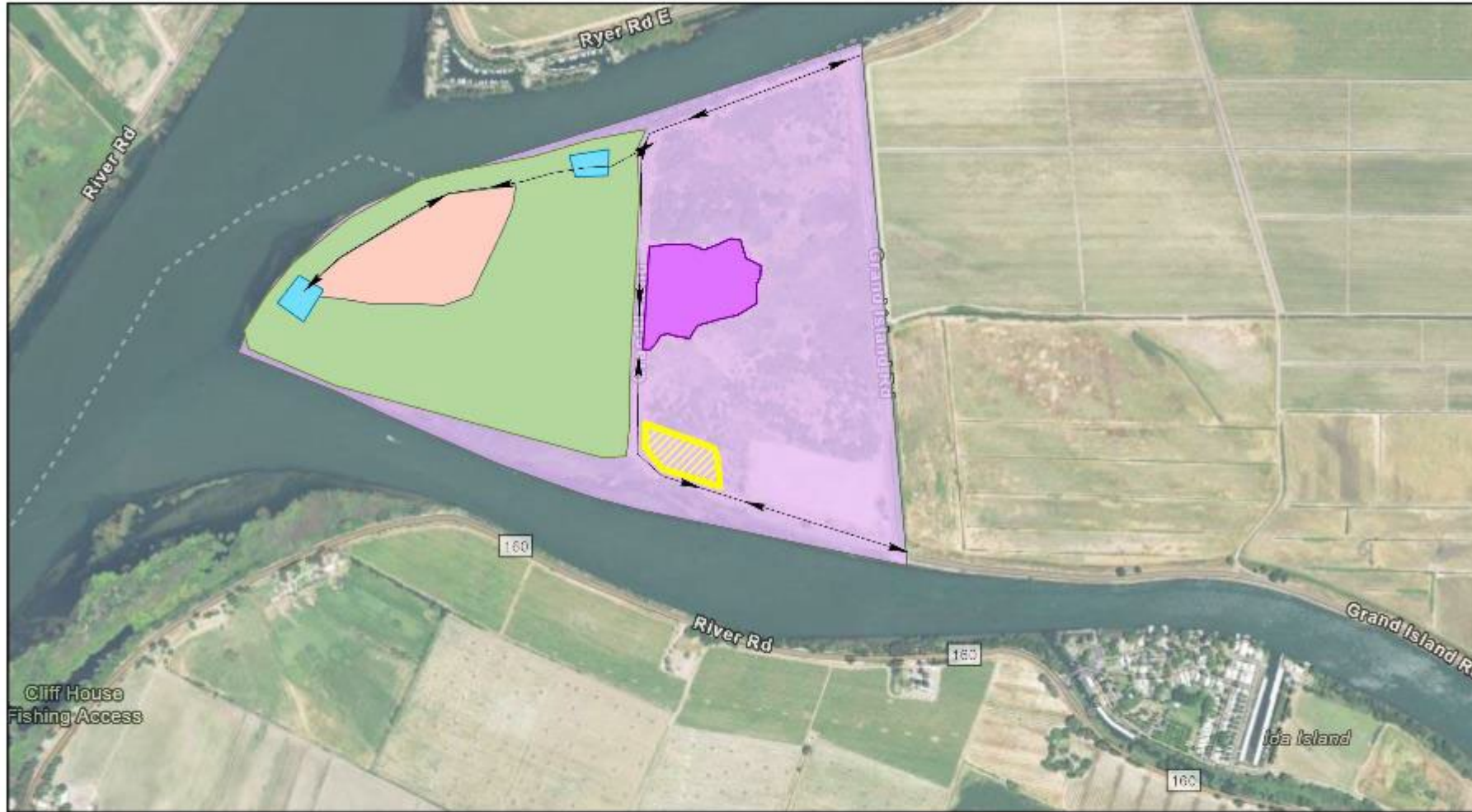
June 2014



October 2015

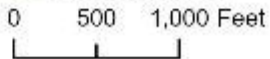


Sacramento River Mitigation Site (SRMS)



Sacramento River Mitigation Site Footprint

- Access Route
- Potential Breach Zone
- Potential Reconditioned Dredge Cell
- Potential Fish and Lower Riparian Habitat Improvement Areas
- Potential staging
- VELB and upper Riparian Zone
- Construction Access



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Updated 12/7/2023



ENVIRONMENTAL IMPACTS - SRMS



Aesthetics and Visual Impacts

- Vegetation removal would decrease the visual character of the area until plants establish
 - The area could be visible to those driving along SR 160, which is a scenic highway in this area.

Water Quality

- Tree removal could increase water temperature near the riverbank

Air Quality and Climate Change

- There would be high NO_x emissions and GHG emissions associated with haul trucks/barges and construction equipment



Source: Nicky Schleeter 2022



SRMS ALTERNATIVES



Alternative 5a: Purchase Mitigation Credits

- Bank credits needed for all species and habitat impacts
- Credits have limited availability
- Off-site mitigation is least preferable option for species conservation
- IMPACTS - No construction; Fewer impacts than Proposed Action

Alternative 5b: Construct Watermark Farms

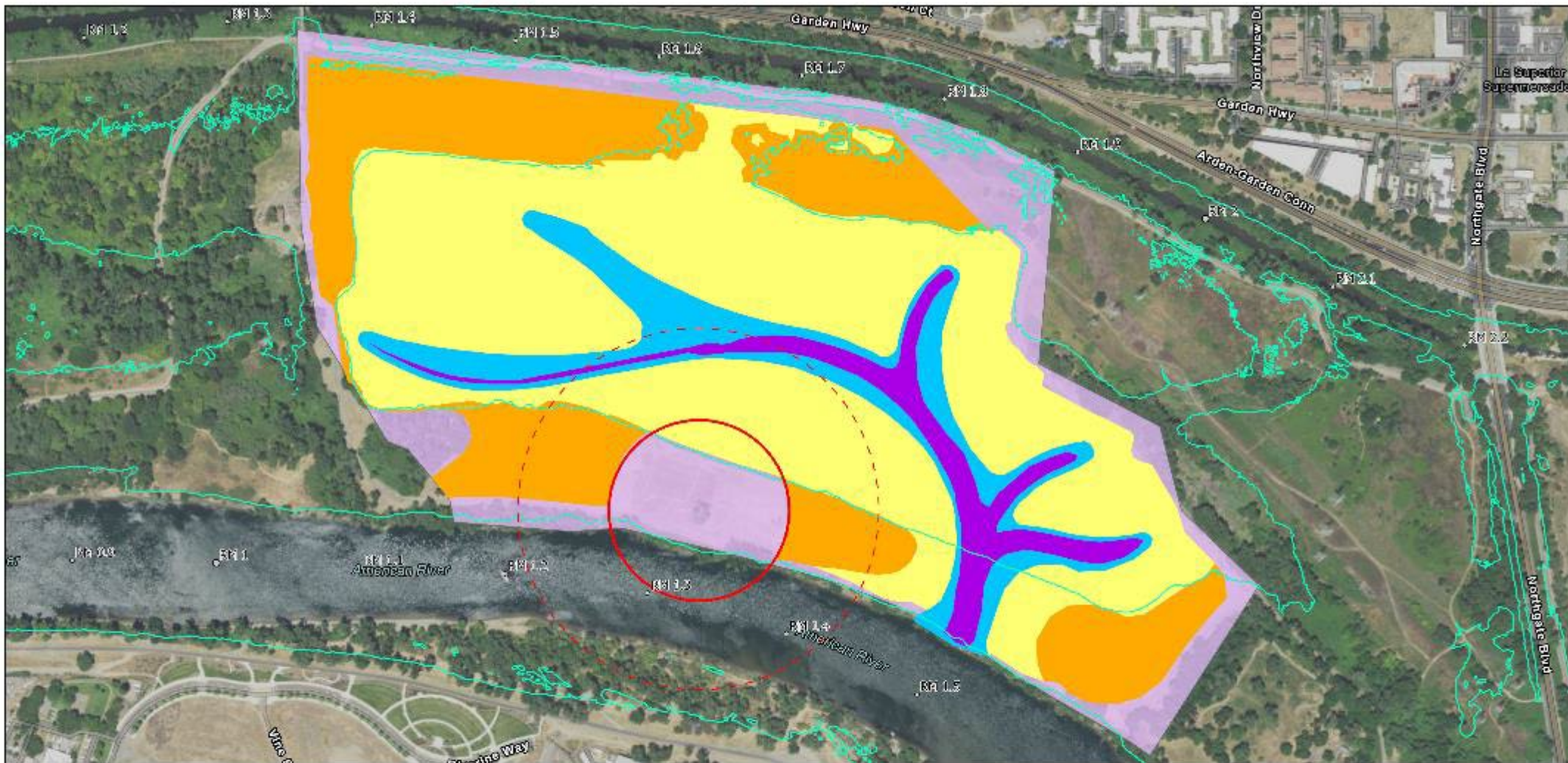
- Newly constructed mitigation site for SR species
- Located on the Sacramento River across the river from the Pocket neighborhood
- IMPACTS
 - Prime Farmland impacts
 - Earth/material needed for regrading the slope
 - Lane closures, traffic controls
 - Transportation, air quality, greenhouse gas, noise

Alternative 5c: Delta Smelt Bank and Sunset Pumps Mitigation Credits

1. Purchase Delta smelt bank credits
 2. Cost share to fund Sunset Pumps Project “rock weir removal”
 - NMFS recovery plan and high priority for Reclamation, DWR, and USFWS.
 - Reopens migratory corridor for green sturgeon, chinook salmon, and steelhead
 3. Supporting water allocation to wildlife refuge
 1. “Credit” for riparian habitat mitigation within the yellow-billed cuckoo migration corridor
- IMPACTS – No construction, fewer impacts than Proposed Action



American River Mitigation Site (ARMS)



American River Mitigation Site Project Footprint

- ▲ RM tenths
- OHWM
- Highflow Channel (Riverine)
- Low Riparian Connected Floodplain
- Lowflow Channel (Riverine)
- Upland
- Construction Access

Updated 12/7/2023

- Work Restriction Area
 - Seasonal Work Restriction Area
- 0 300 600 Feet



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ENVIRONMENTAL IMPACTS - ARMS



Recreation

- The American River Parkway would be disrupted during construction due to haul truck routes

Transportation and Circulation

- Many haul trucks added to local roads during construction to haul materials

Air Quality and Climate Change

- There would be high NO_x emissions and GHG emissions associated with haul trucks and construction equipment

Aesthetics and Visual Impacts

- Vegetation removal would decrease the visual character of the area until plant establishment within one season

Water Quality

- Short term impacts to water quality during construction

Noise and Vibration

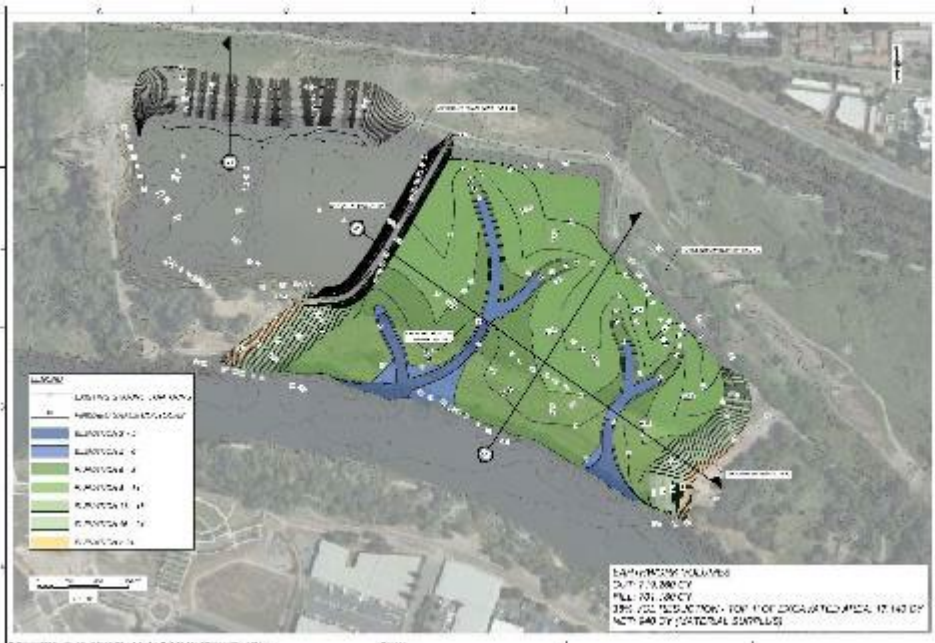
- There would be high noise levels that could disturb sensitive receptors (homes, recreationalist, etc.)

Cultural and Tribal Cultural Resources

- There are known resources within areas where ground would be disturbed

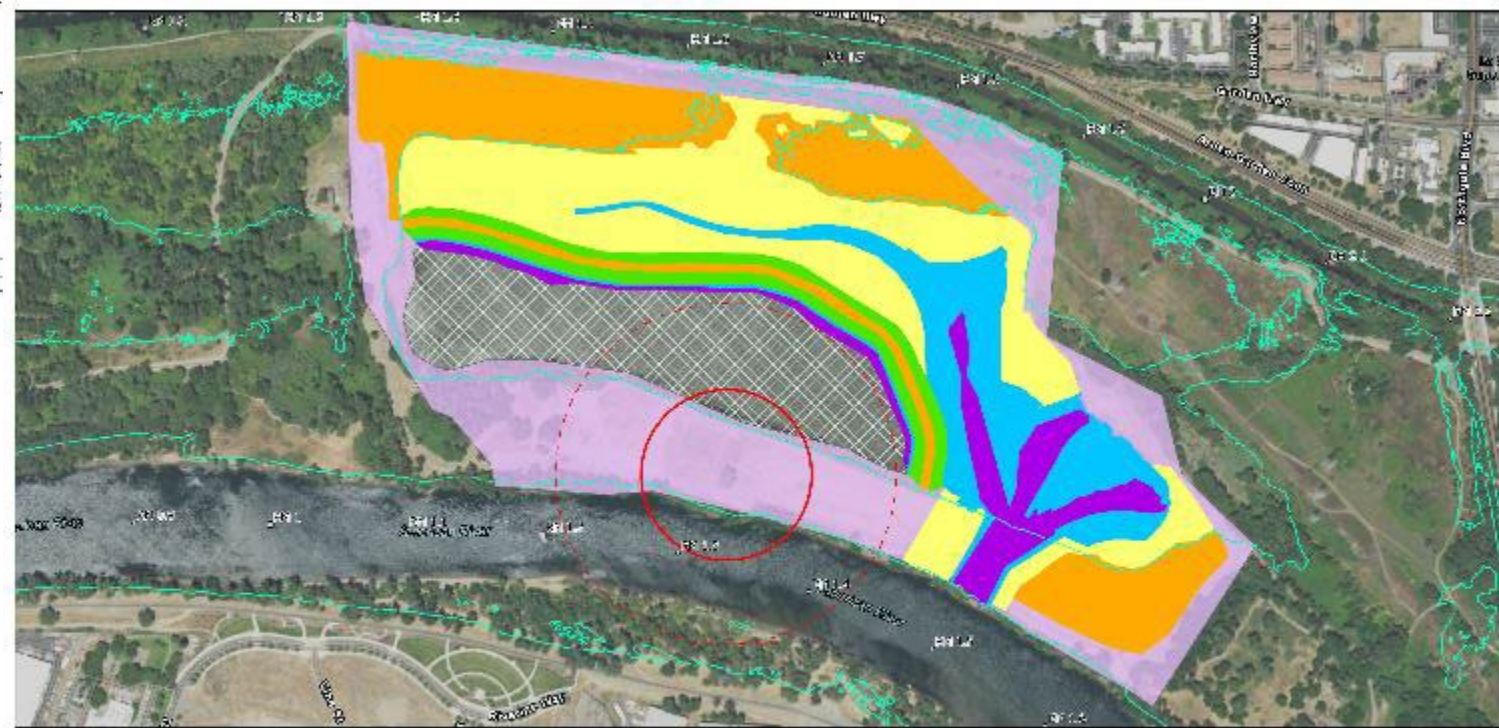


ARMS ALTERNATIVES (CEQA only)- Alternatives 4a and 4b



Both alternatives preserve a portion of the existing manmade pond

- Retaining the pond reduces available land needed for habitat mitigation
- Site does not provide enough acreage for species impacts



Source: Kevin Fellows 2023

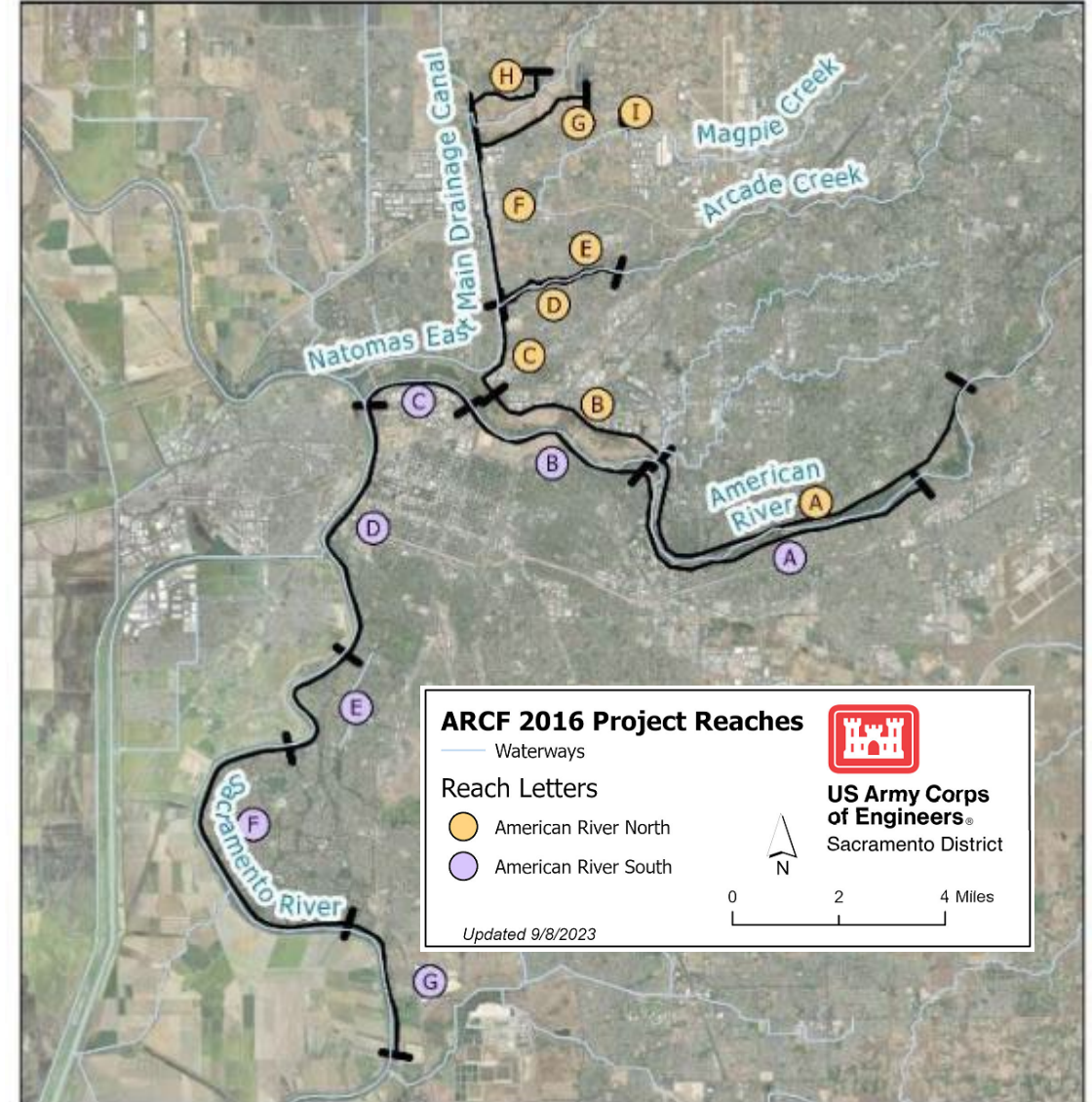
Alternative 4b Project Footprint (CEQA Only)

100 ft Buffer	Highflow Channel (Riverine)	Pond	Seasonal Work Restriction Area
Low Riparian Commercial Facilities	Low flow Channel (Riverine)	Construction Access	
Upland	Work Restriction Area		
 Updated: 02/14/2021	US Army Corps of Engineers Sacramento District		



PIEZOMETER NETWORK

- **What:** Tool that measures underground water pressure
- **Why:** Monitors groundwater levels and flow patterns
- **Purpose:** Collects data used to evaluate the long-term performance of the levee improvements and flood risk reduction measures
- **When:** Post-construction
- **Where:** Within the 2016 Authorized Project Footprint





ENVIRONMENTAL IMPACTS- PIEZOMETER NETWORK



Minor environmental impacts associated with the installation and/or operation:

- Temporary and minor disruption of bike trails
 - May include short-term single lane closures for safety of passerby's
- Minor visual, noise and recreational impacts during installation and operation
 - Drill rig used for installation
 - Data collected remotely, solar-powered
- Mitigation measures would be implemented to ensure no groundwater contamination occurs



*Photo: USACE Engineering (Geotech)
Location: Sacramento River East Levee (SREL)*



CULTURAL RESOURCES



- USACE must identify and consider impacts to cultural, historic, archaeological, and Tribal resources.
- The process to identify these impacts is defined in a Programmatic Agreement with the California State Historic Preservation Officer.
- This process is followed individually for each phase of ARCF.
- Cultural, historic, archaeological, and Tribal resources are identified through research, site surveys, ground testing, and consultation with the public and Native American Tribes.
- Any information provided by the public for any phase of ARCF will be considered by USACE and included in the identification efforts.



SEIS/SEIR MILESTONE SCHEDULE



Milestone	Completion
NOI Published	OCT 2022
Scoping Public Meeting	NOV 2022
Release Draft SEIS/SEIR for Public Review	DEC 2023
Public Comment Period	DEC 22, 2023, to FEB 5, 2024
Response to Comments Admin Final SEIS/SEIR	FEB - SPRING 2024
Prepare Final SEIS/SEIR	SUMMER 2024
CEQA Board Informational Briefing	SUMMER 2024
Federal Register Notification	AUG/SEPT 2024
Record of Decision/CEQA Certification	FALL 2024
Delta Stewardship Council Consistency Determination	FALL 2024



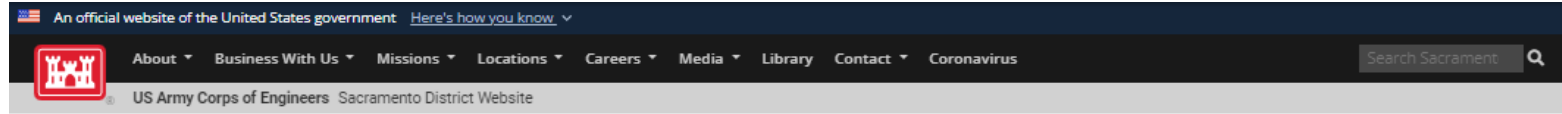
ANTICIPATED CONSTRUCTION SCHEDULE



1. MCP Construction Schedule (Summer 2027 – Fall/Winter 2027)
2. American River Erosion Contract 3B (Summer 2024– Fall/Winter 2026)
3. American River Erosion Contract 4A (Summer 2026 – Fall/Winter 2027)
4. American River Erosion Contract 4B (Unknown due to early designs)
5. Sacramento River Erosion Contract 3 (Summer 2025 – Fall/Winter 2026)
6. ARMS Construction Schedule (Summer 2025 – Fall/Winter 2027)
7. SRMS Construction Schedule (Summer 2025 to Fall/Winter 2026)
8. Piezometer Network (Summer 2025 to Fall/Winter 2029)



FOR MORE INFORMATION VISIT WWW.SACLEVEEUPGRADES.COM



Home / Missions / Civil Works / Sacramento Levee Upgrades



- Project Overview
- American River Levees
- Sacramento River Levees
- Sacramento Weir
- Mitigation

Reducing flood risk in Sacramento

Greater Sacramento, California, is often considered to be the most at-risk region in America for catastrophic flooding, relying on an aging system of levees, weirs and bypasses and Folsom Dam to reduce its flood risk. But that system, just like a chain, is only as strong as its weakest link. Together, the U.S. Army Corps of Engineers, California's Central Valley Flood Protection Board, California Department of Water Resources, and the Sacramento Area Flood Control Agency have made tremendous progress in reducing the flood risk, but more work remains. Through the Bipartisan Budget Act, the Corps has received full upfront funding to modernize Sacramento's aging flood infrastructure. This allows us to more efficiently implement nearly \$1.8 billion in upgrades to Sacramento's flood risk management system. The authorized work includes up to: 13 miles of seepage cutoff walls, 21 miles of bank protection, 5 miles of levee stabilization, 5 miles of levee raises and widening the Sacramento Weir and bypass.

Public Meeting regarding American River Common Features Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report

We will hold two virtual public meetings, one on Wednesday, January 10, 2024 and one on Tuesday, January 16, 2024 to present this document. Both public meetings are scheduled for 5:30 - 6:30 p.m. Please use the following Webex links to attend the meetings. *If you don't have a Webex account, you can still attend by signing in as a [guest](#).

Webex Link for Jan. 10, 2024

To join by phone: 1-844-800-2712 (U.S. Toll Free) When asked, enter access code: 2763 131 8567 #

Webex Link for Jan. 16, 2024

To join by phone: 1-844-800-2712 (U.S. Toll Free) When asked, enter access code: 2763 755 9029 #

For more information, click on American River Common Features (ARCF) SEIS/SEIR, below



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Project Information Tri-fold

Construction Work Inquiry & Concern Submission Form

QUESTIONS

Comments are due February 5, 2024.

USACE and DWR encourage full public participation to promote open communication.

We value your input.

A 2-minute time slot will be provided to each participant for clarifications.

We request participants provide written comments to be considered in the Final SEIS/SEIR.

Written comments can be mailed or emailed to the following:

U.S Army Corps of Engineers

E-mail:

ARCF_SEIS@usace.army.mil

Mail: Public Affairs Office
Attn: ARCF SEIS
1325 J Street Room 1513
Sacramento, CA 95814-2922

Department of Water Resources

E-mail:

PublicCommentARCF16@water.ca.gov

Mail: Flood Projects Branch
ATTN: ARCF SEIR
3464 El Camino Avenue Room 200
Sacramento, CA 95821