

# Annual Water Year Precipitation

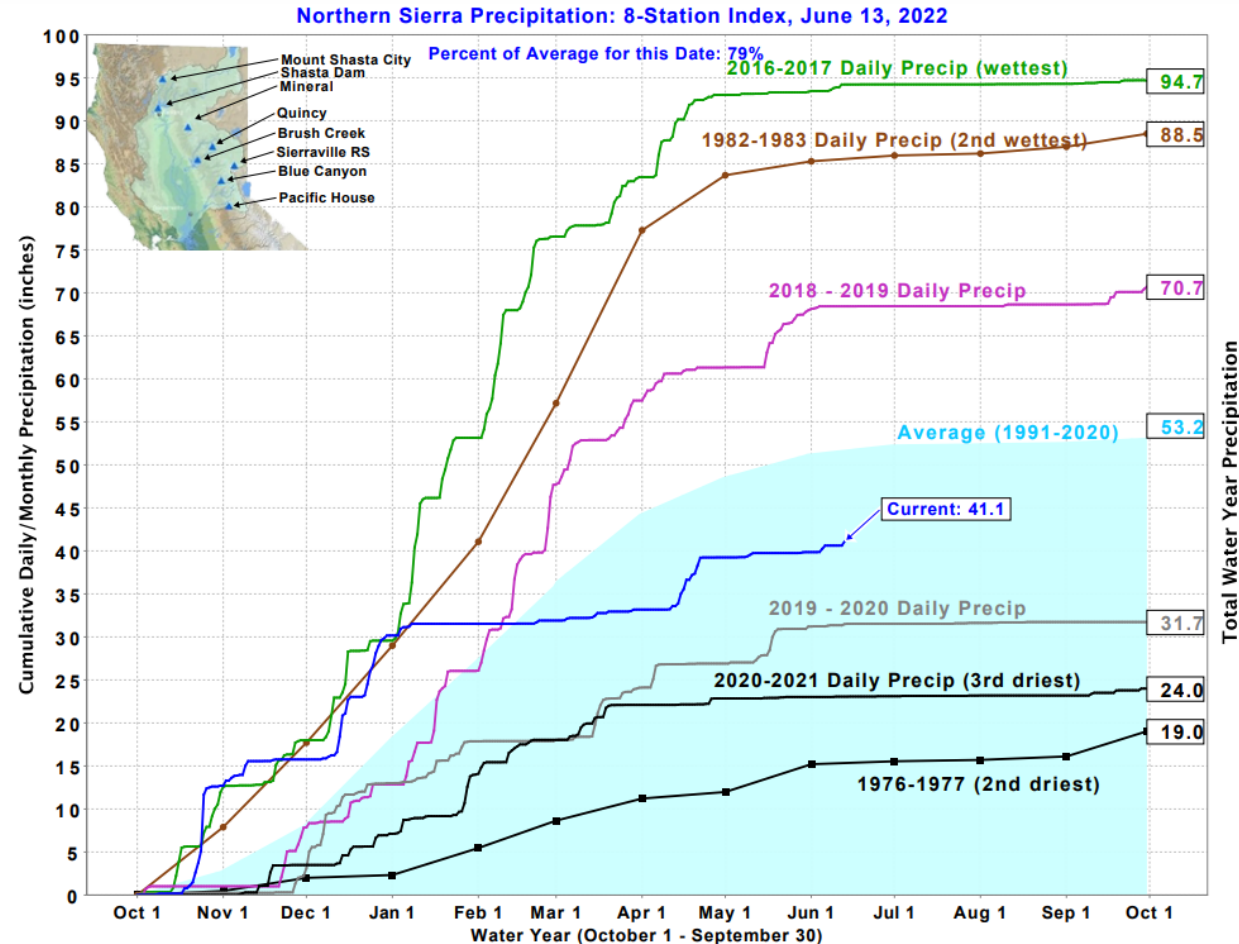
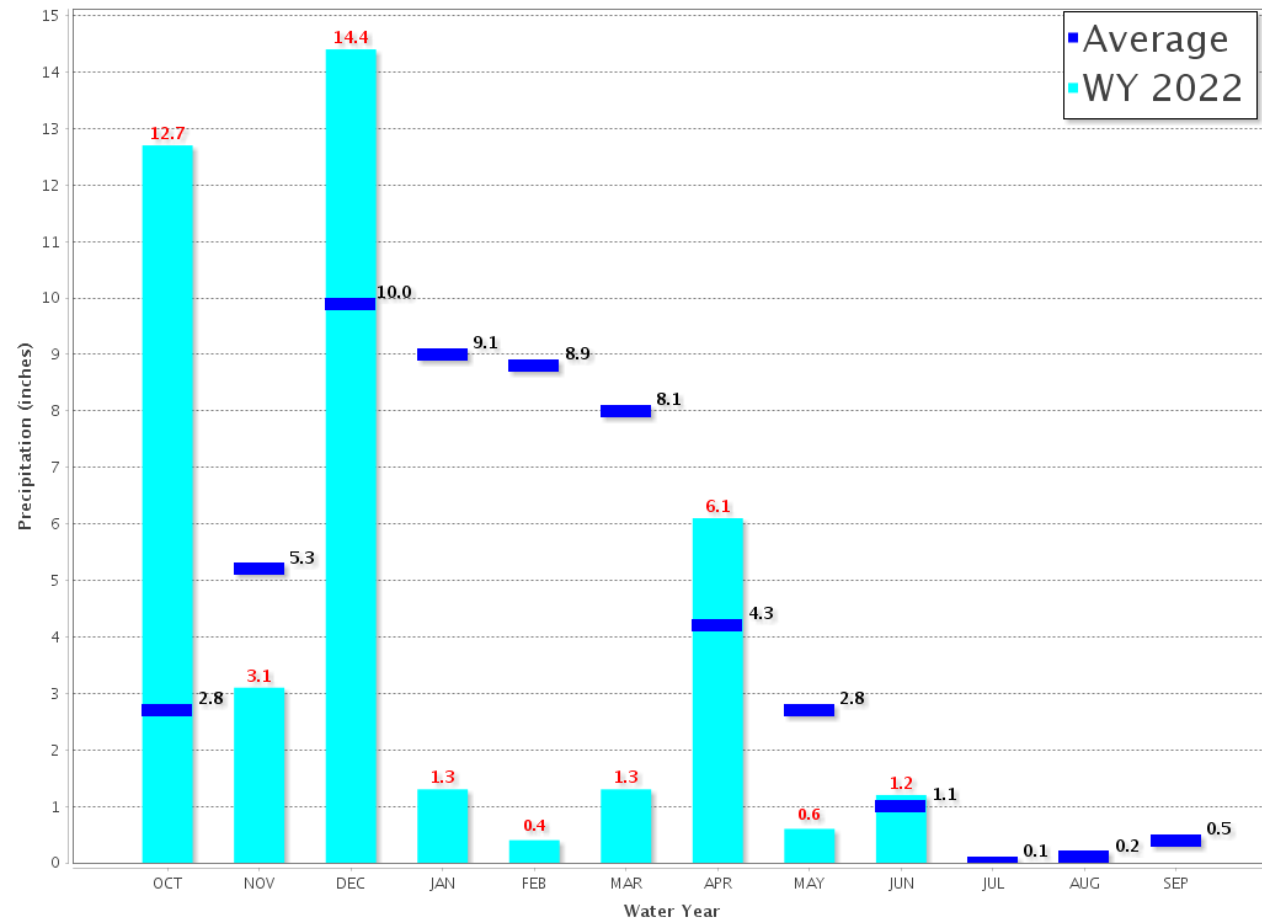


## Northern Sierra 8-Station

Precipitation Index for Water Year 2022 - Updated on June 13, 2022 09:48 PM

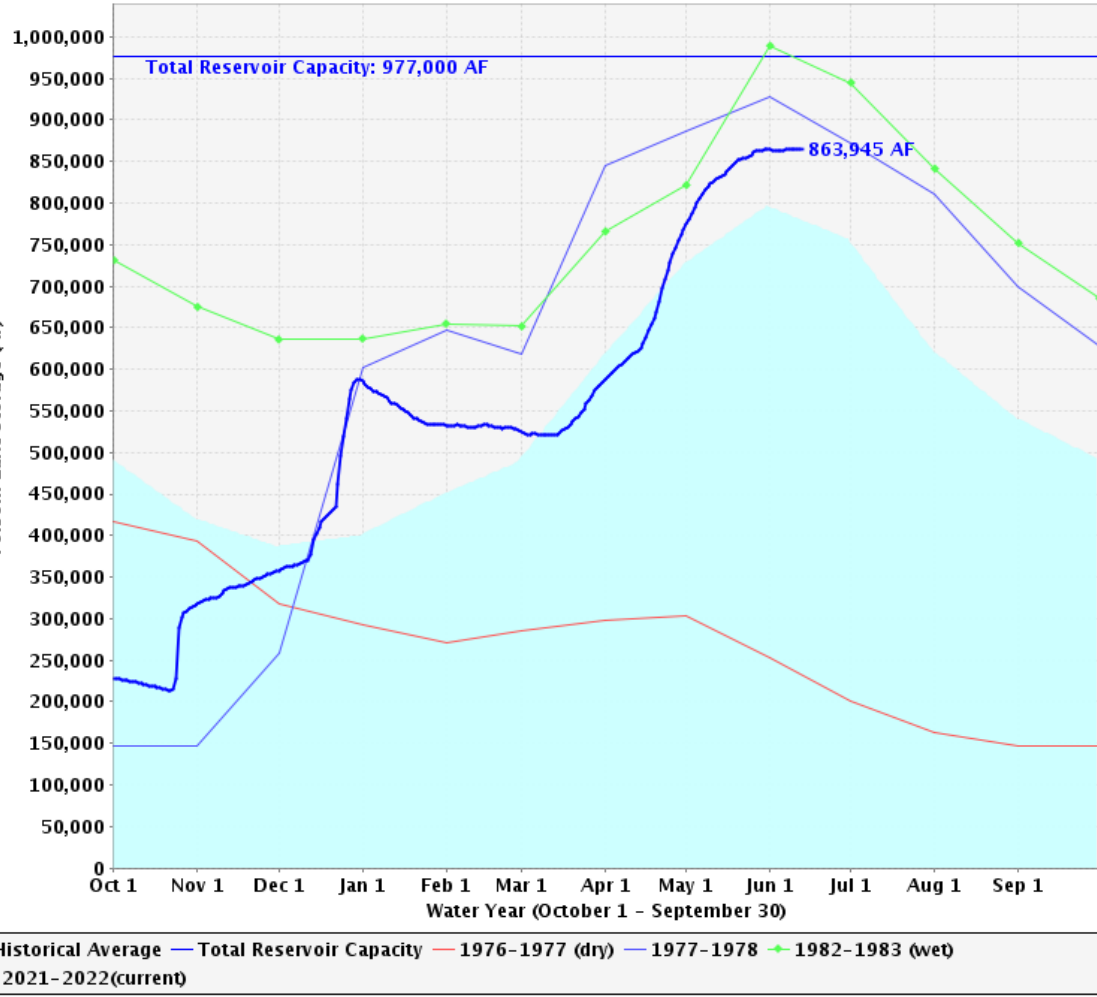
Note: Monthly totals may not add up to seasonal total because of rounding

Water Year Monthly totals are calculated based on Daily precipitation data from 12am to 12am PST

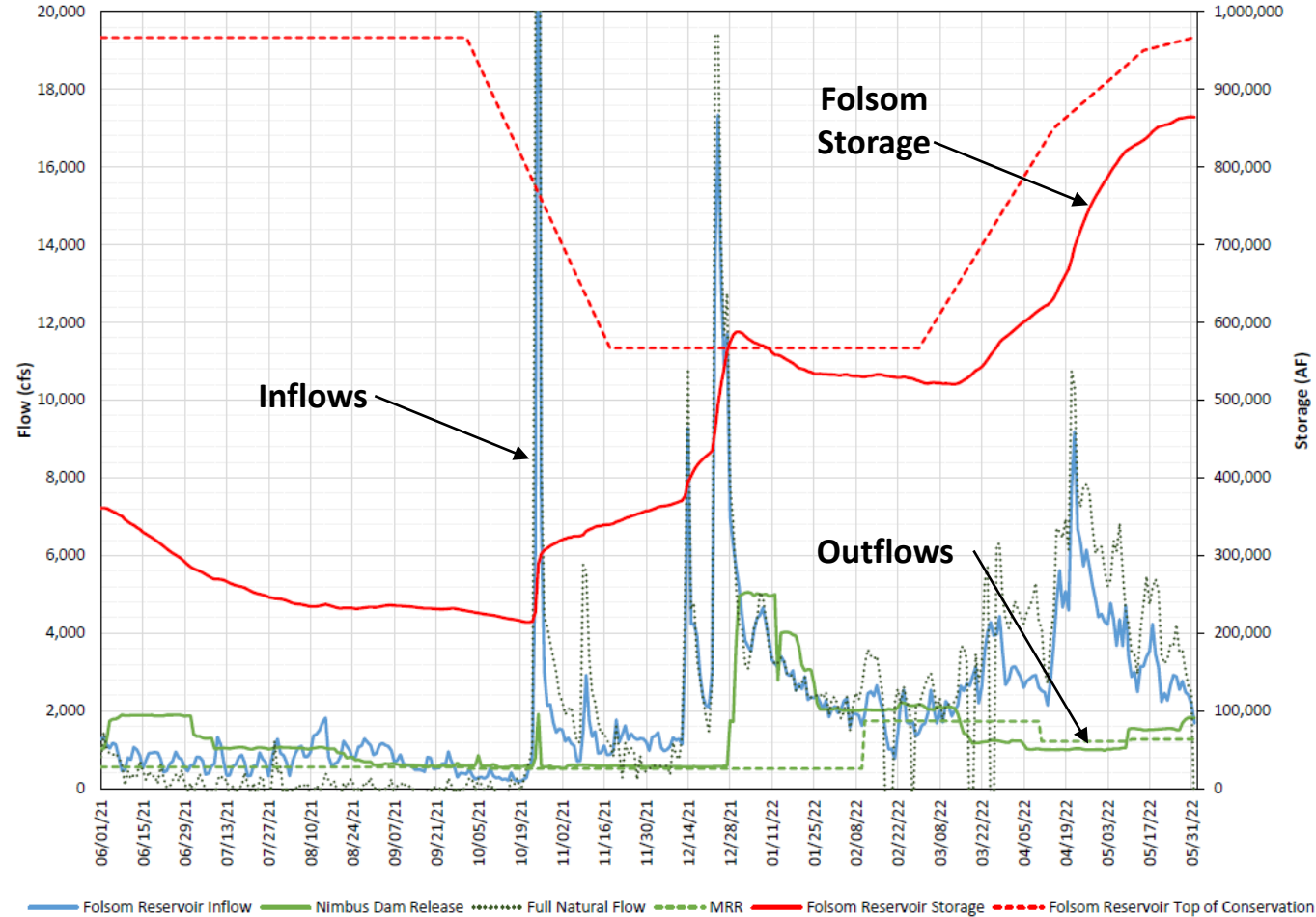


# Folsom Storage

## Folsom Lake Storage Levels



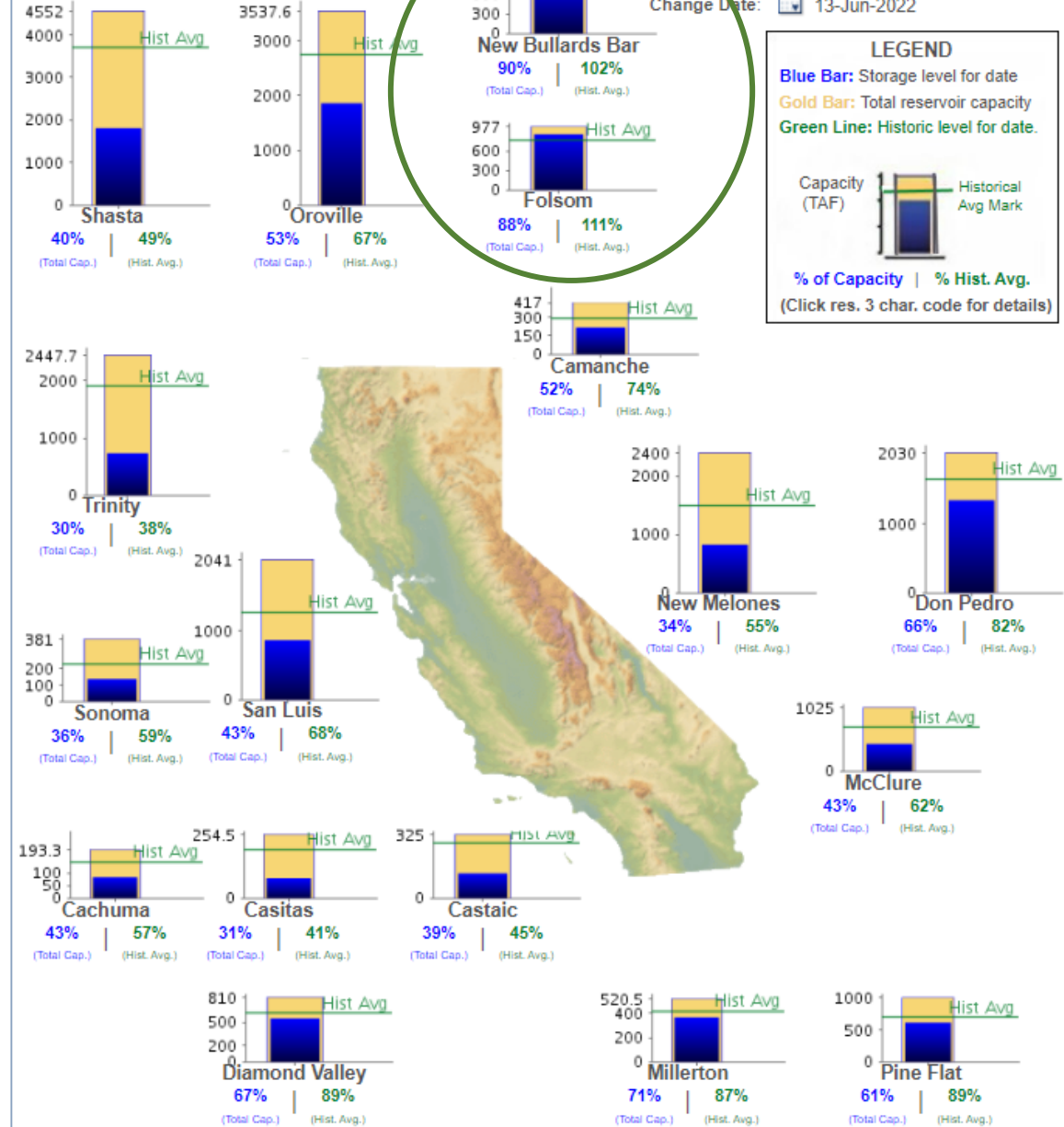
## Review of Folsom Reservoir Operations for the 365 Days Preceding 06/01/22



# Statewide Storage

- Folsom and New Bullards Bar are the only reservoirs at or above average for seasonal storage levels

Data as of Midnight: 13-Jun-2022



Click for printable version of current data.

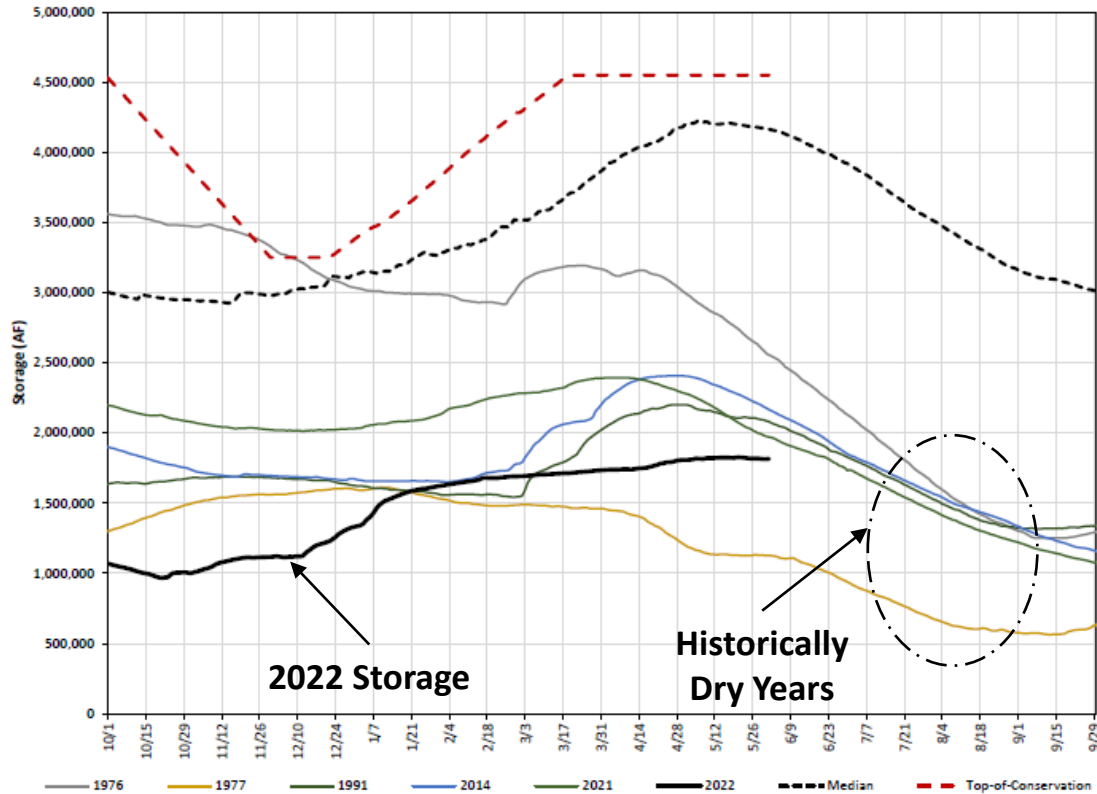
The CSI link has been disabled to zoom in, for the lack of historical data.

Report Generated: 14-Jun-2022 9:24 AM

# Shasta and Oroville Storage

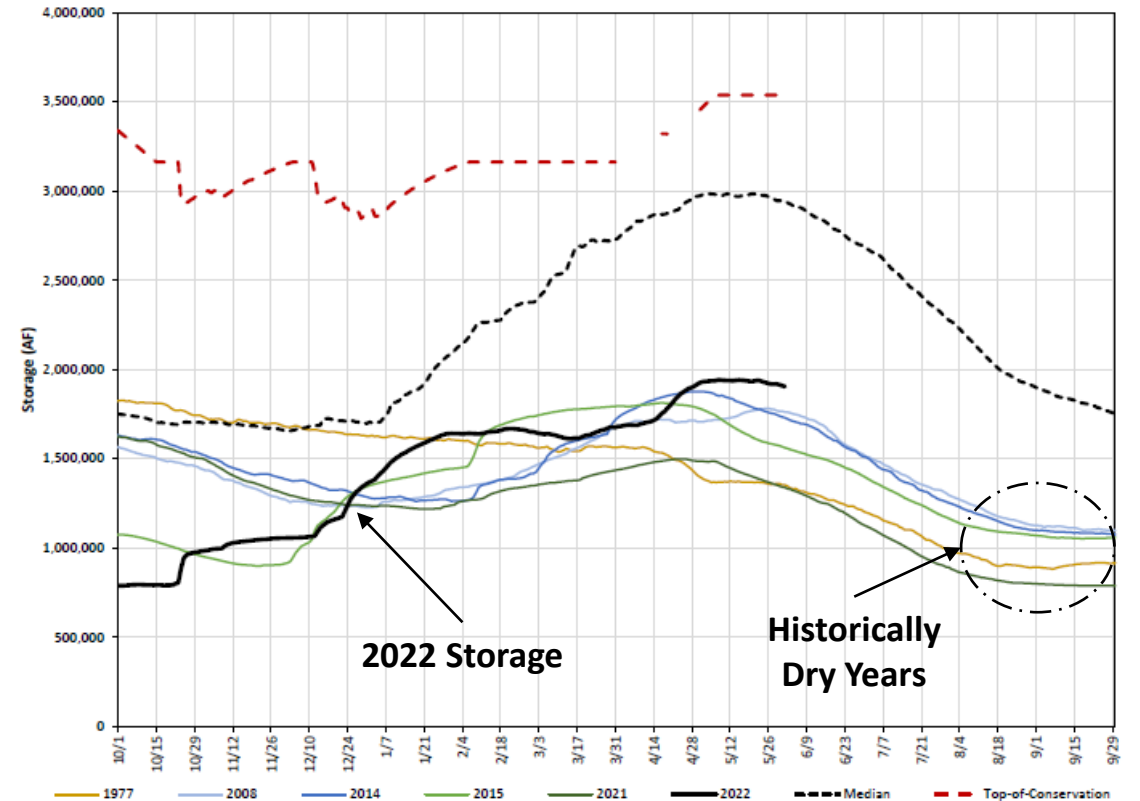
## Shasta Storage

Comparison of Lowest Historical Daily Shasta Reservoir Storage (WY1956-2022)



## Oroville Storage

Comparison of Lowest Historical Daily Oroville Reservoir Storage (WY1969-2022)





# Forecasted LAR Operations

Month	June	July	August	September	October
Projected Flow Rates (cfs)	2,650	4,415	4,140	1,840	1,300*

\*Assuming flows are not below Minimum Reservoir Releases (MRRs) per the Modified Flow Management Standard





# Mississippi Bar Gravel Sorting

- Duration: April 1 – May 1
- Dual-purpose project: LAR habitat and Fremont Weir Improvements
- 100,000 cy material sorted
  - 30,485 cy 4-inch minus spawning gravel stockpiled
  - 13,324 cy large cobble for DWR use and habitat stockpile







# Lower Cordova Creek Planning Project – Phase 2 Update

- Major elements
  - Reroute multi-use trail
  - Bridge replacement for better access/safety
  - Reroute channel for grade control, juvenile fish passage, and connectivity between Phase 1 and LAR at lowest flows.
- Stakeholder 65% design review – June 9, 2022





# Lower Cordova Creek Planning Project – Phase 2 Update

## Activities Since 30% Design Review

- Stakeholder engagement – revegetation and tree preservation
- Stakeholder engagement – Soil Born Farms access
- Kickoff Year 2 fish and temperature monitoring
- Hydraulic modeling – spawning assessment
- Habitat mapping – Phase 1 and 2 reaches
- Fish passage design
- Stable channel design/analysis
- Bridge and foundation design
- Revegetation Plan – focused on pollinators and culturally significant species



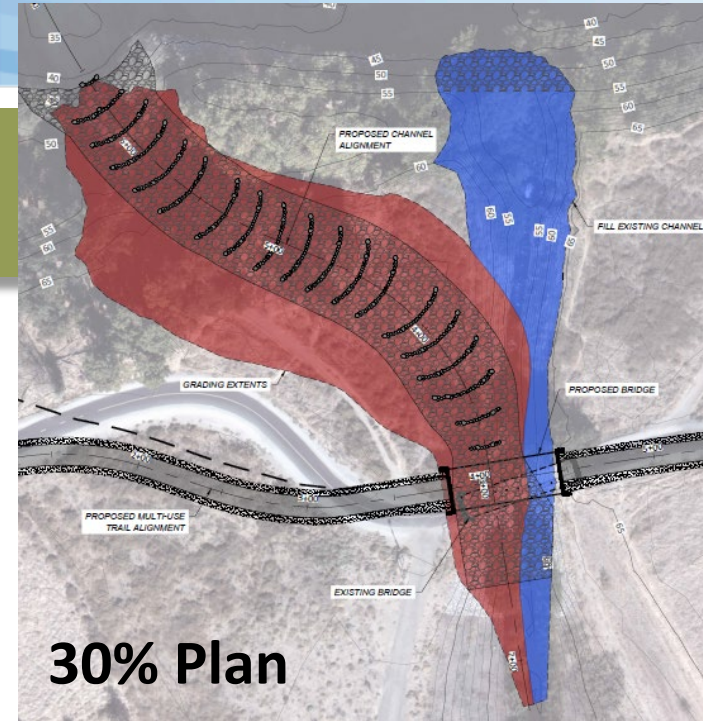
# 30% to 65% Design Features and Updates

## 30% Benefits

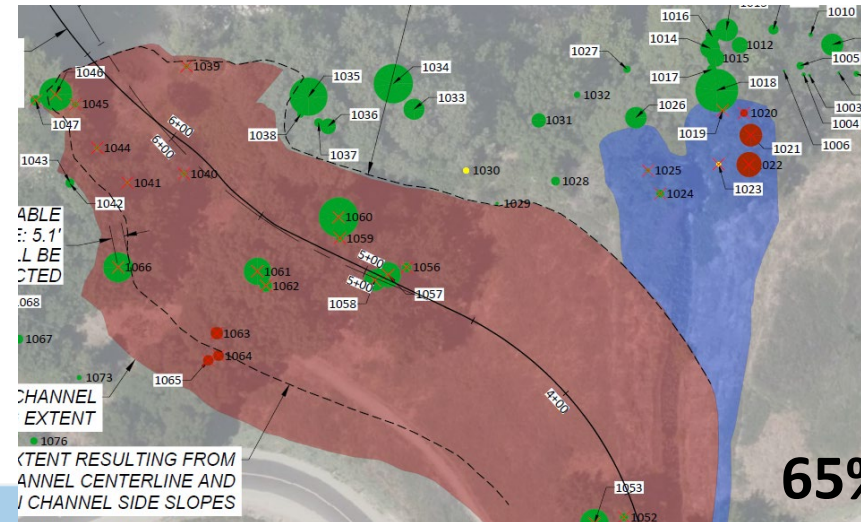
- Supports Juvenile Fish Passage: Longer channel = flatter slope
- Accessible at lowest flows (500 cfs)
- Avoided elderberries and some trees
- Much improved recreational access/safety

## 30% Issues

- Riparian trees along existing and proposed alignment
- Impacts of fill in “old” channel area
- Planting plan considerations



30% Plan



65% Plan



# Project Trade-offs and Benefits

## Project Impacts:

- 0.72 acres of riparian & oak woodland habitat impacted
- 31 native trees removed
- Temporary construction effects

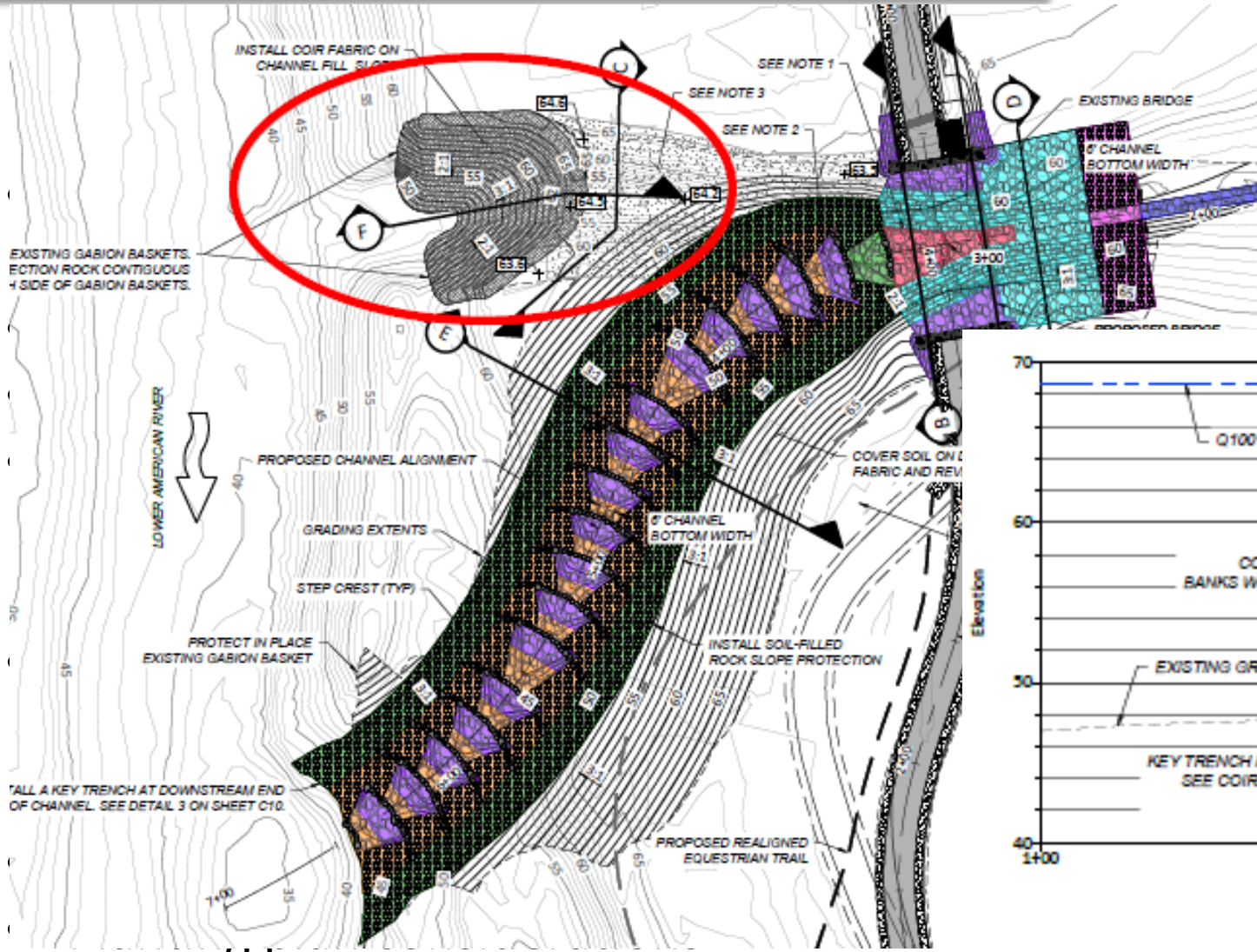


## Project Benefits:

- 1.17 acres of riparian and oak woodland habitat restored
- 128 native trees planted (>77 trees established at 60% survival standard), plus native understory
- Create fish and aquatic species habitat connectivity to LAR
- Increased habitat and plant species diversity
- Bike trail and bridge improvements

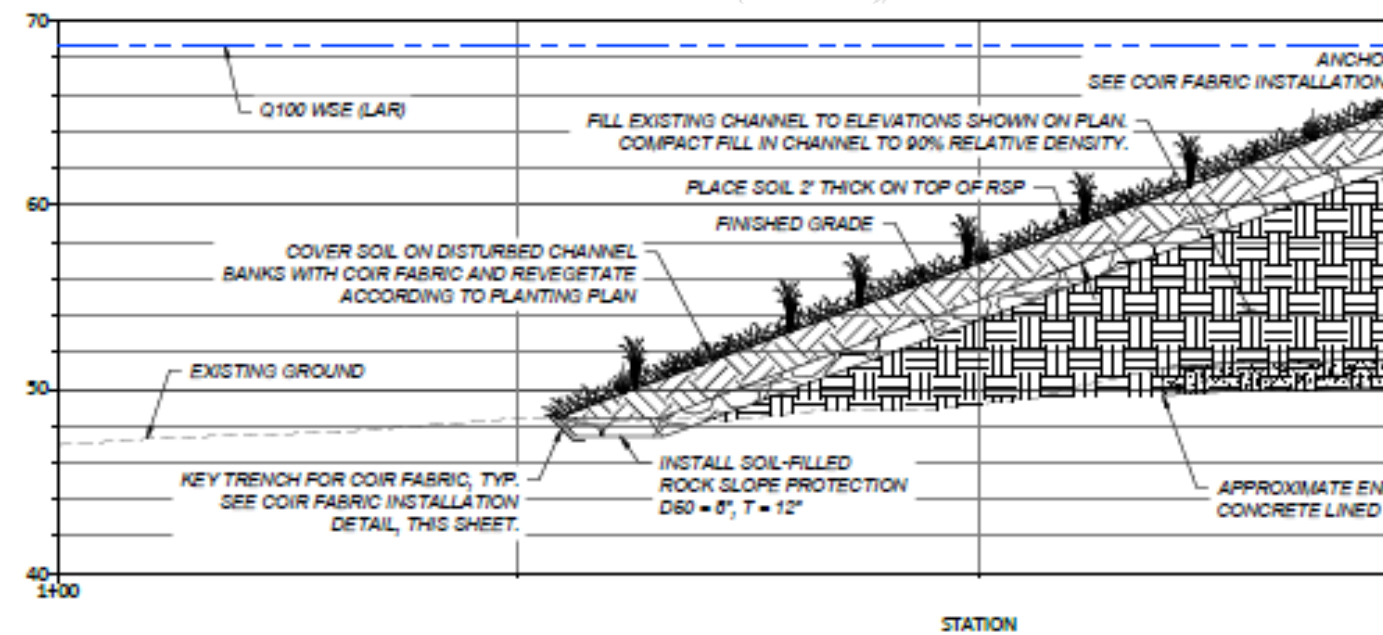


# 65% Design Feature - Alcove



## ROCK GRADATION LEGEND

- COBBLE: D50 = 2", T = 12"
- COBBLE: D50 = 5", T = 13"
- COBBLE: D50 = 6", T = 11"
- RIPRAP: D50 = 8", T = 12"
- COBBLE: D50 = 9", T = 14"
- GROUTED COBBLE: 6-8", T = 18"
- RIPRAP: D50 = 27", T = 40"
- CLEAN ROCK SLOPE PROTECTION
- SOIL-FILLED ROCK SLOPE PROTECTION

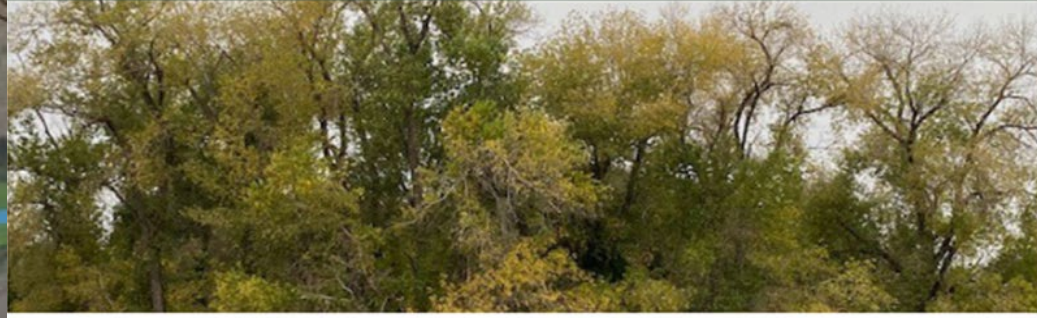


**F CHANNEL FILL BANK PROTECTION SECTION**  
**C6 SCALE: 1" = 6'**





Willow Scrub / Mixed Riparian Woodland



Mixed Riparian Woodland

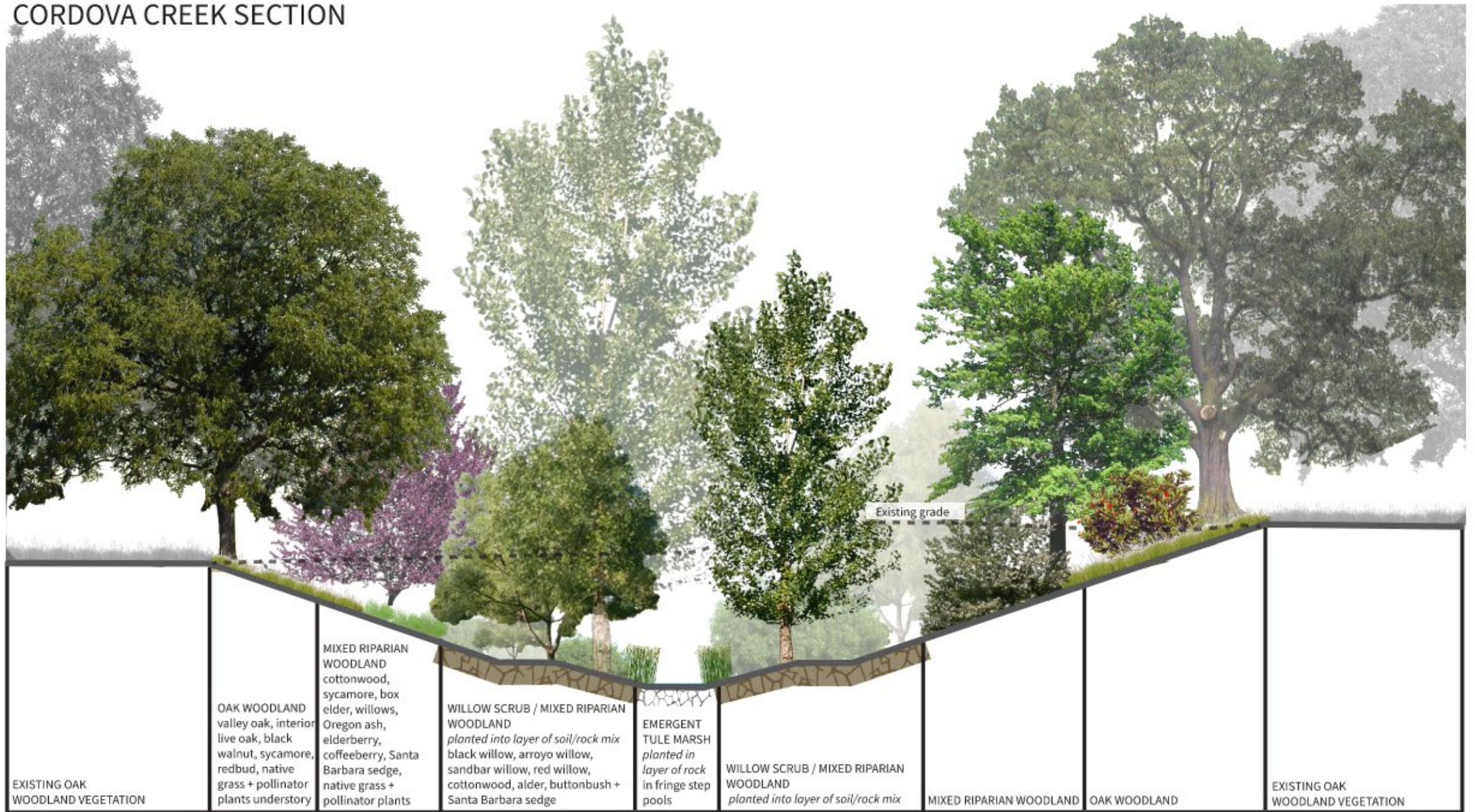


Oak Woodland





# CORDOVA CREEK SECTION

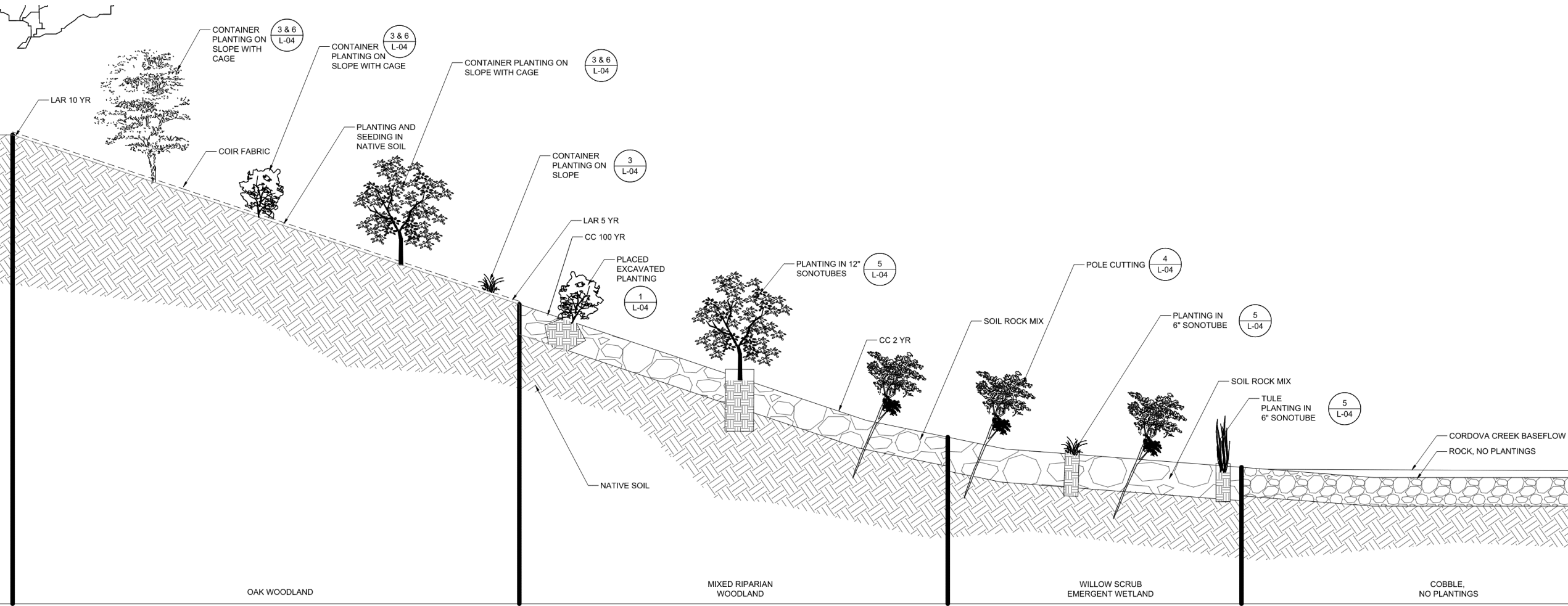


0 6 12 18 FT

1" = 6'



# Planting Plan - Cross Section



# Planting Palettes – Floral Resources for Pollinators and Culturally Significant Species

BOTANICAL NAME	COMMON NAME	Planting Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ACHILLEA MILLEFOLIUM	YARROW	Mixed Riparian Woodland, Oak Woodland				X	X	X	X	X				
APOCYNUM CANNABINUM	INDIANHEMP	Willow Scrub/Emergent Marsh; Mixed Riparian Woodland						X	X	X				
ASCLEPIAS FASCICULARIS	NARROW-LEAVED MILKWEED	Mixed Riparian Woodland, Oak Woodland						X	X	X	X			
ASCLEPIAS SPECIOSA	SHOWY MILKWEED	Mixed Riparian Woodland, Oak Woodland						X	X					
CALANDRINIA MENZESII	RED MAIDS	Mixed Riparian Woodland, Oak Woodland		X	X	X	X							
CERCIS OCCIDENTALIS	WESTERN REDBUD	Oak Woodland		X	X	X								
FRAXINUS LATIFOLIA	OREGON ASH	Mixed Riparian Woodland				X	X							
SAMBUCUS NIGRA SSP. CAERULA	BLUE ELDERBERRY	Mixed Riparian Woodland, Oak Woodland			X	X	X	X	X					
ACMISPON AMERICANUS	BIRDSFOOT TREFOIL	Mixed Riparian Woodland, Oak Woodland				X	X	X	X					
ACMISPON GLABER	DEERWEED	Mixed Riparian Woodland, Oak Woodland			X	X	X	X	X	X				
BACCHARIS SALICIFOLIA	MULEFAT	Mixed Riparian Woodland	X	X	X	X	X	X	X	X	X	X	X	X
CEPHALANTUS OCCIDENTALIS	COMMON BUTTONBUSH	Mixed Riparian Woodland								X	X	X		
ERIOGONUM FASCICULATUM	CALIFORNIA BUCKWHEAT	Oak Woodland				X	X	X	X	X	X			
ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	Mixed Riparian Woodland, Oak Woodland		X	X	X	X	X	X	X	X			
FRANGULA CALIFORNICA	CALIFORNIA COFFEEBERRY	Mixed Riparian Woodland, Oak Woodland						X	X	X				
GRINDELIA CAMPORUM	COMMON GUMPLANT	Mixed Riparian Woodland, Oak Woodland				X	X	X	X	X	X	X		
LASTHENIA CALIFORNICA	CALIFORNIA GOLDFIELDS	Mixed Riparian Woodland, Oak Woodland		X	X	X	X	X						
LUPINUS BICOLOR	MINIATURE LUPINE	Mixed Riparian Woodland, Oak Woodland			X	X	X	X						
LUPINUS NANUS	SKY LUPINE	Mixed Riparian Woodland, Oak Woodland			X	X	X							
NEMOPHILA MENZIESII	BABY BLUE-EYES	Mixed Riparian Woodland, Oak Woodland			X	X	X	X						
PHACELIA TANACETIFOLIA	TANSY LEAFED PHACELIA	Mixed Riparian Woodland, Oak Woodland			X	X	X							
SOLIDAGO ELONGATA	CANADA GOLDENROD	Mixed Riparian Woodland, Oak Woodland							X	X	X			
TRIFOLIUM WILLDENOVII	TOMCAT CLOVER	Mixed Riparian Woodland, Oak Woodland				X	X							

# Project Trade-offs and Benefits

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# Beyond Phase 2 – Next Steps

Collect 65% Design  
Comments  
JUN 2022

Monitoring Data CEDEN  
Upload  
JUN 2022

Submit Deliverables and  
Grant Close-Out  
JUL 2022

Update Project Website  
JUL 2022

Seek Funding for Final  
Design and  
Implementation  
2022-2023

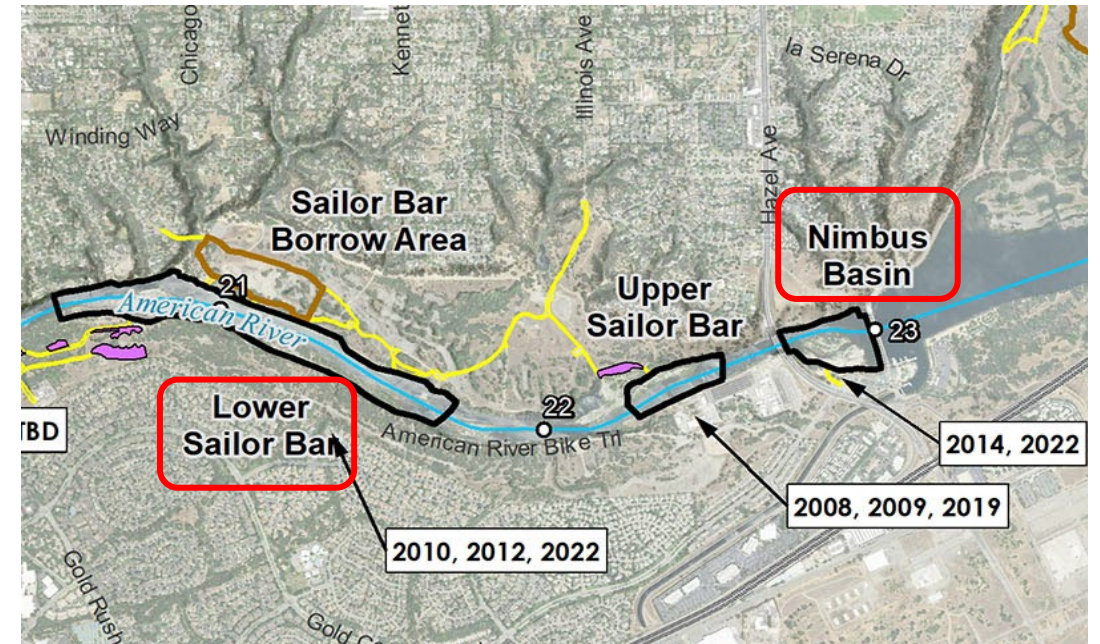
Continue Stakeholder  
Engagement

Construct Phase 2  
???

# 2022 Habitat

## *Lower Sailor Bar + Nimbus Basin*

- Duration: August 1<sup>st</sup> - October 7<sup>th</sup>
- Active construction (~8 weeks)
- Crews on site Mon-Sat, 6 a.m.-6 p.m. (noise starts 7 a.m.)
- In-river work on weekdays only (no work on Labor Day)

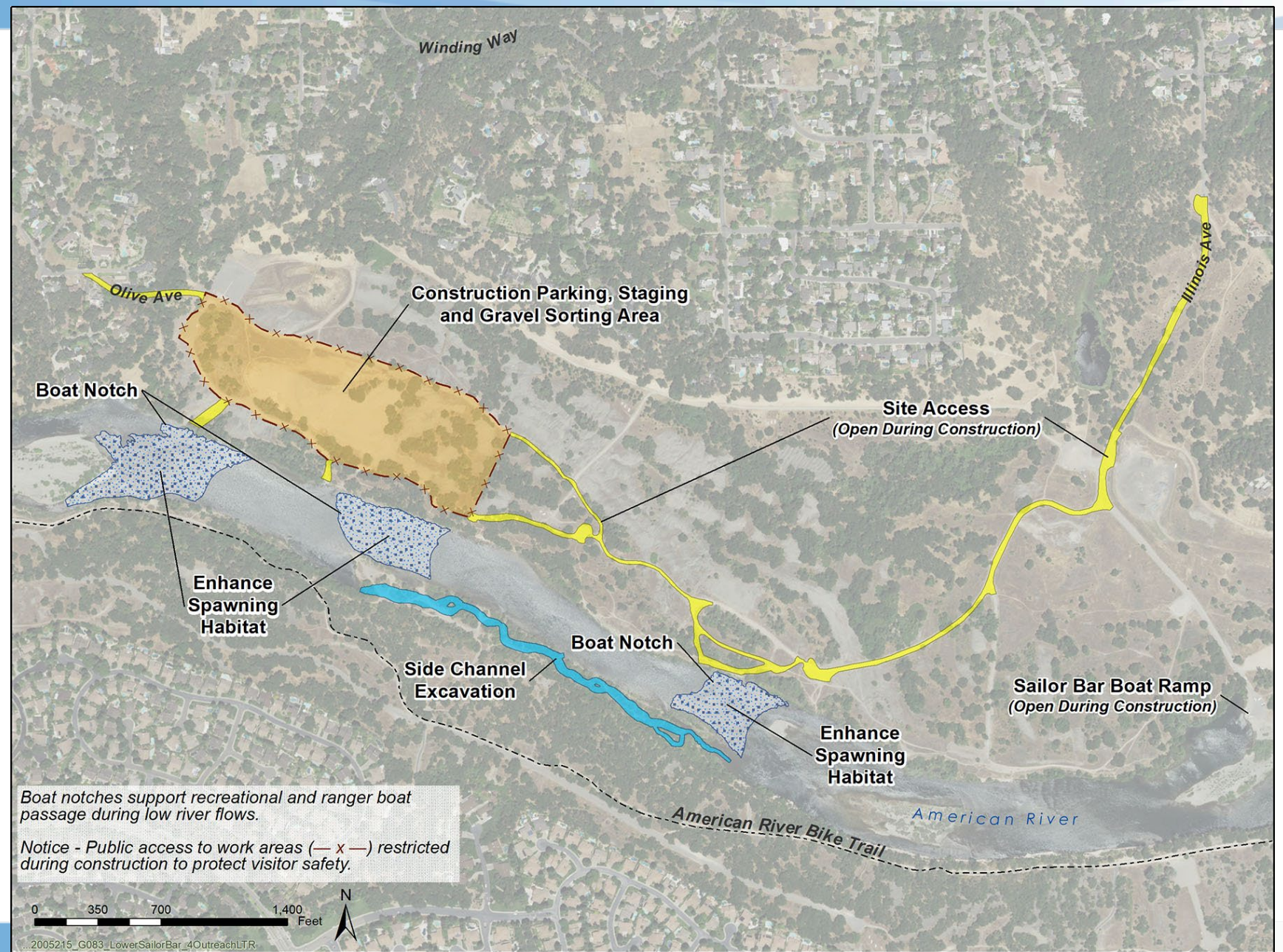




# Lower Sailor Bar

- 3 spawning riffles (13.5 ac)
- 37,000 cy spawning gravel
- 2,500 ft side channel (4.9 ac)
- ~80 woody habitat structures - repurposed from Corps project
- Seeding – Fall 2022
- Willow planting - Jan 2023
- Onsite borrow

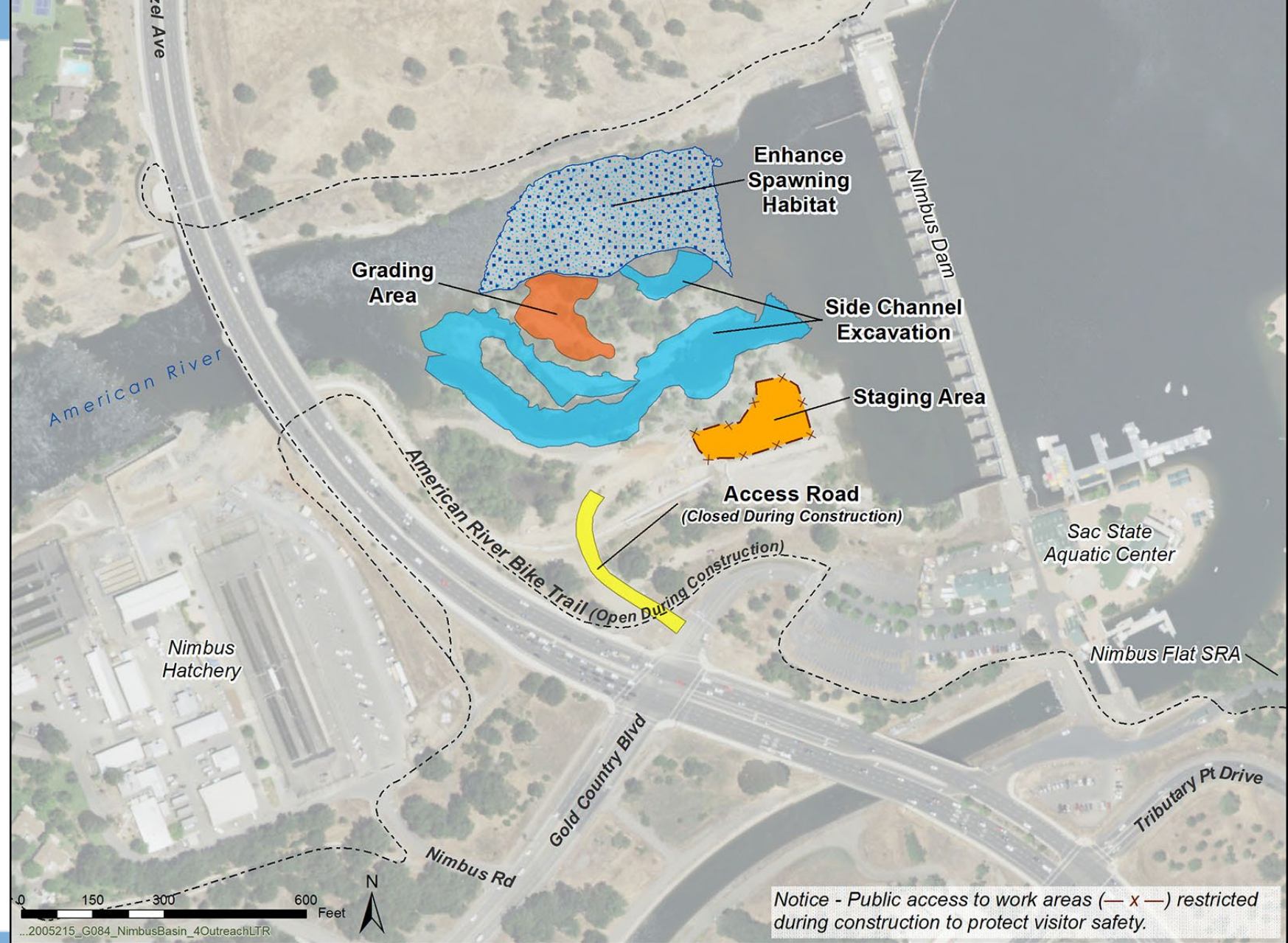
\*\*Addresses a known juvenile stranding area.





# Nimbus Basin

- 1 spawning riffle (3.7 ac)
- 4,200 cy spawning gravel
- 800 ft side channels and floodplain grading (2.5 ac)
- 30 repurposed woody habitat structures
- Seeding – Fall 2022
- Willow planting - January 2023
- Offsite borrow – haul from Mississippi Bar






# COORDINATION AND OUTREACH

- ✓ ARPAC and Regional Parks Commission (May approvals)
- ✓ Direct mail sent to neighbors (2,600 in 2022!)
- ✓ Project FAQs: [waterforum.org/habitat2022](https://waterforum.org/habitat2022)
- ✓ Virtual Public Briefing (June 13, 2022)
- ✓ Direct contact with rafting and fishing community/vendors
- Lower American River Task Force (quarterly)
- Signage (four languages – mid-July)
- News media, social media outreach (during construction)
- Regional Parks dept. leadership weekly communications (during construction)



 **YOU'RE INVITED**  
**2021 HABITAT RESTORATION PROJECT AT ANCIL HOFFMAN**

**Open Houses**

Please join us in learning about a new project to enhance crucial habitat for native salmon and steelhead trout in the Lower American River at Ancil Hoffman Park, near Effie Yeaw Nature Center. The Ancil Hoffman Habitat Restoration Project will create spawning and rearing areas by constructing new gravel beds in the river and carving a new alcove to protect juvenile fish.

**VIRTUAL OPEN HOUSE**  
Thursday, July 15, 2021, 6-7 p.m.  
Please RSVP at [waterforum.org/AH](https://waterforum.org/AH) to receive access information

**HOSTED BY THE EFFIE YEAW NATURE CENTER**  
Tuesday, July 20, 2021, 6-8 p.m.  
2850 San Lorenzo Way, Carmichael, CA 95608

**HOSTED BY ANCIL HOFFMAN GOLF COURSE**  
Monday, July 26, 2021, 6-8 p.m.  
6700 Tarshes Drive, Carmichael, CA 95608

**Learn About:**

- The habitat restoration project and what to expect
- Fascinating facts about fish
- How enhancing habitat helps fish survival
- New educational opportunities and improvements coming to the Effie Yeaw Nature Center
- Fun activities for kids, too!

**The Project Will Take Place**  
Late-August through late-October 2021, Monday through Saturday, 6 a.m. to 6 p.m. (noise starting at 7 a.m.) with in-river work occurring only on weekdays (and not on Labor Day)

**More Information**  
Visit [waterforum.org/AH](https://waterforum.org/AH) (or scan the QR code using the camera app on your phone) to find additional information, list of Frequently Asked Questions and more!

**Thank You Partners!**  
The project is made possible through partnerships with:

