



San Joaquin County Groundwater Banking Project Update

Planning Committee

April 14, 2026

Grace Su, Senior Civil Engineer

Sami Harper, Associate Civil Engineer

Agenda

- EBMUD supplemental supply strategy and need for water
- San Joaquin County (SJC) Groundwater Banking background
- Long-Term Project considerations
- Memorandum of Understanding (MOU) to develop the Long-Term Project concept and evaluate feasibility
- Preliminary project timeline
- Feedback and next steps

Supplemental Supply Strategy

Need for Water in 2050 = 15 TAF
 Third year of a drought
 Reduced CVP supply, HRL



*CVP: Central Valley Project
 MGD: Million Gallons per Day
 TAF: Thousands of Acre-Feet
 HRL: Healthy Rivers and Landscapes*

SJC Groundwater Banking Project History

SJC groundwater banking concept first described by EBMUD

Completed DREAM pilot

1993

Partnership Building

2014

Demonstration Recharge Extraction & Aquifer Management (DREAM) pilot project*

2024

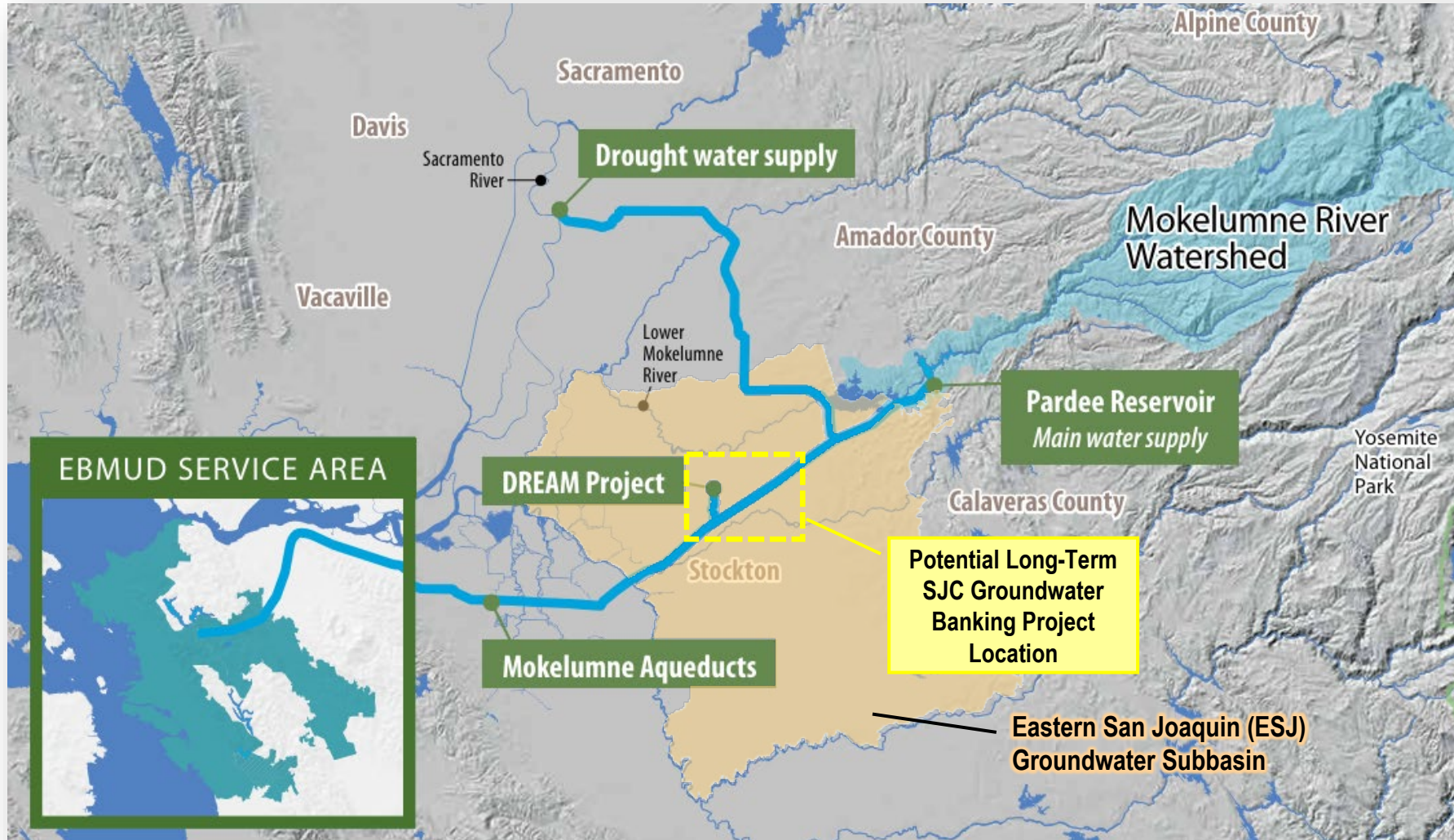
Long-Term Groundwater Banking Project development begins

Protest Dismissal Agreement (PDA) to resolve water rights protests

*DREAM Partners: North San Joaquin Water Conservation District (NSJWCD), San Joaquin County, Eastern Water Alliance, and EBMUD



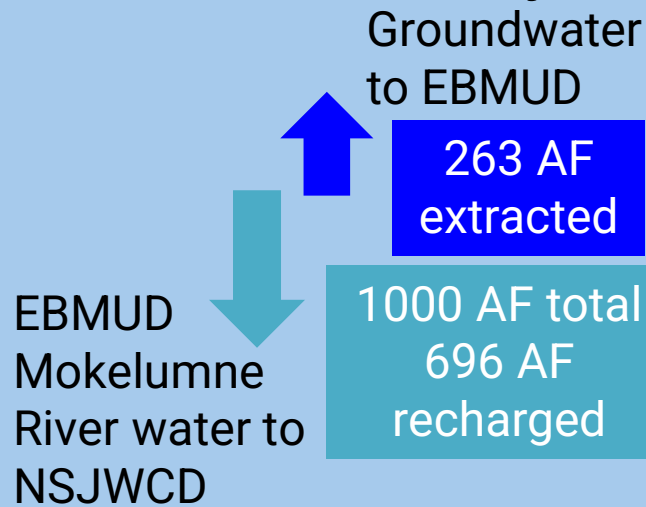
SJC Groundwater Banking Location



Available EBMUD Mokelumne River water is used to recharge and replenish the overdrafted ESJ Subbasin, and a portion credited for future EBMUD use

DREAM Pilot to Long-Term Project

Pilot Summary



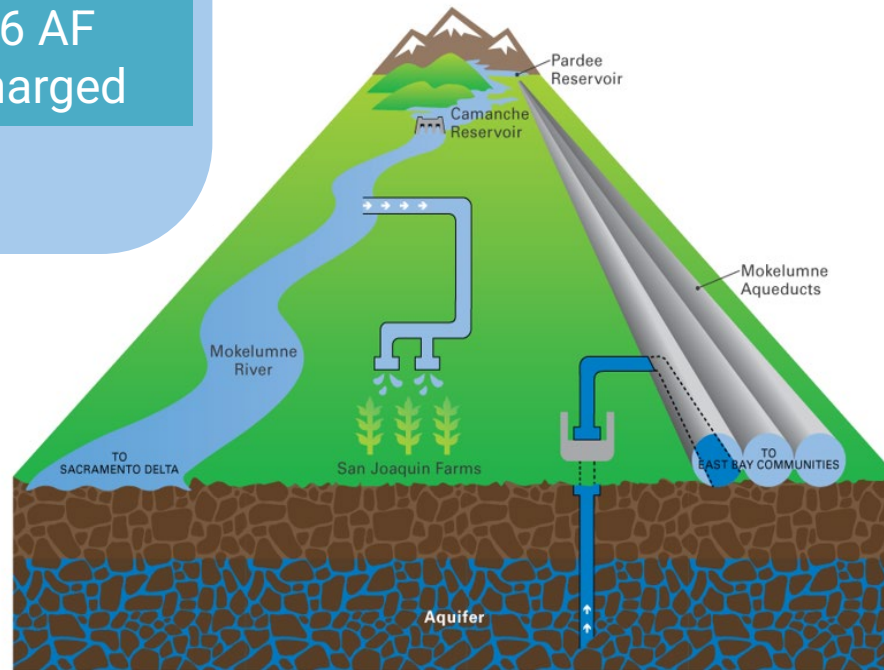
Long-Term Project

EBMUD Goal

Cost effective, long-term supplemental drought water supply that also protects the ESJ Subbasin

Key Lessons Learned

- Permit EBMUD's conserved water for groundwater banking
- Increase recharge area & invest in new facilities
- Re-evaluate groundwater export permit conditions



AF-Acre Feet

MOU Purpose and Shared Goals

Parties

EBMUD
NSJWCD
SEWD

Purpose

Advance feasibility evaluation

Develop phased concept

Shared Goals

Collaboration with Parties, other agencies, & stakeholders

ESJ Subbasin & Environmental Stewardship

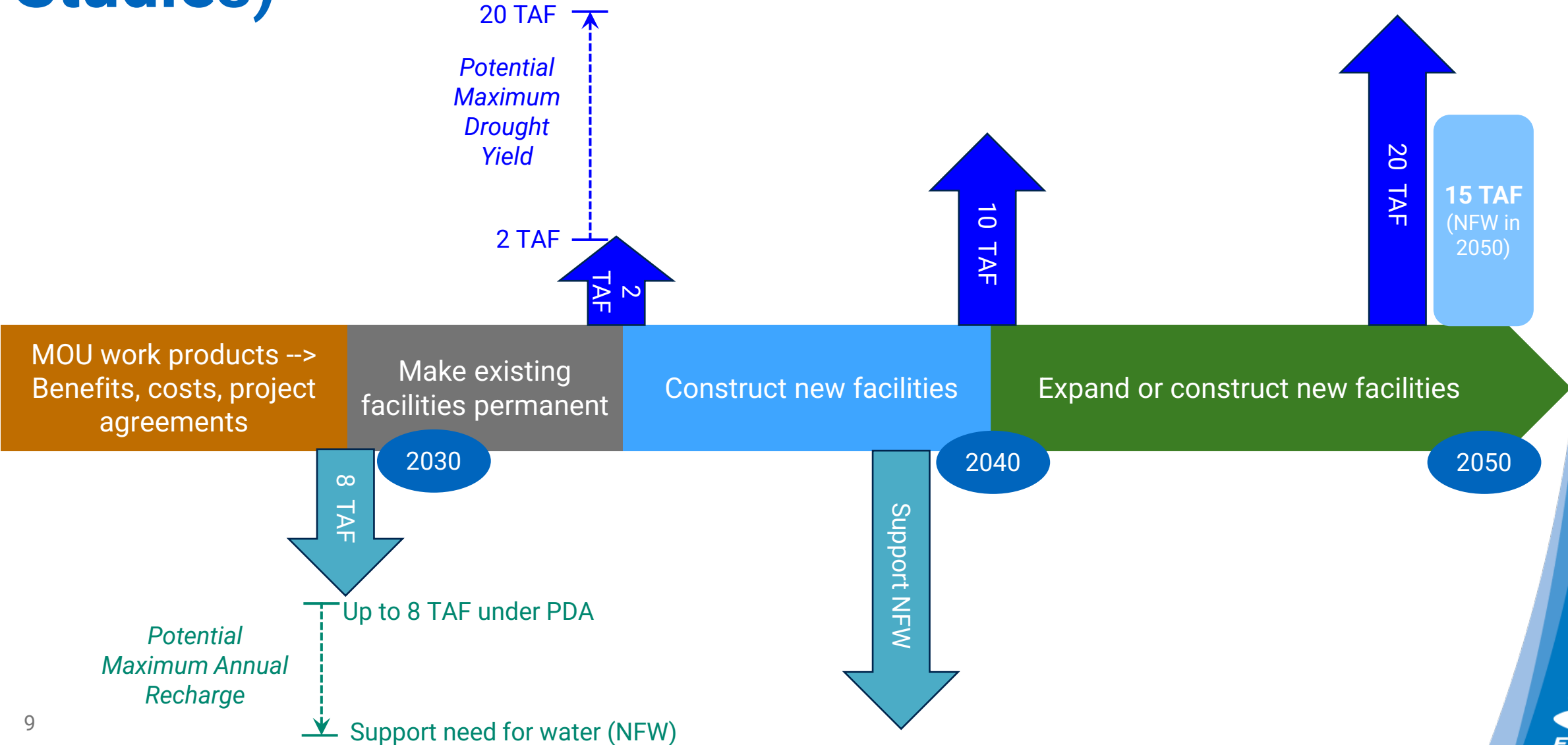
Equitable cost- and risk-sharing

Preserve operational capability to meet water supply objectives

MOU Work Products

- Five Work Products
 - Proposed project implementation plan
 - Water rights change petition(s) and environmental documents
 - Draft groundwater export permit application
 - Proposed facilities memo
 - Subbasin characterization memo
- Work Products will inform
 - Contributions and benefits
 - Preliminary cost estimate
 - Project agreements for Long-Term Project
- Funding arrangement to be negotiated in a separate agreement

Preliminary Project Timeline (to be Confirmed by Studies)



Board Feedback and Next Steps

- Seeking Board feedback on the MOU
- Next Steps:
 - NSJWCD briefed its Board on March 30 and SEWD to brief its Board on April 22 on the MOU
 - Finalize MOU and initiate tasks and studies
 - Provide periodic project updates to the Board
 - Long-term project will require Board approval at a later stage

Questions?



Flowing
into the
Future



2025 Mokelumne River Fishery Update

Planning Committee

April 14, 2026

Michael Beakes, Manager of Fisheries and Wildlife

Photo credit: @KingmondYoung



Agenda

2025 Salmon Returns

- Strong Fishery Performance
- Salmon Straying
- ESA-Listed Steelhead

Updates

- Fish Passage Automation
- Restoration Designs Underway



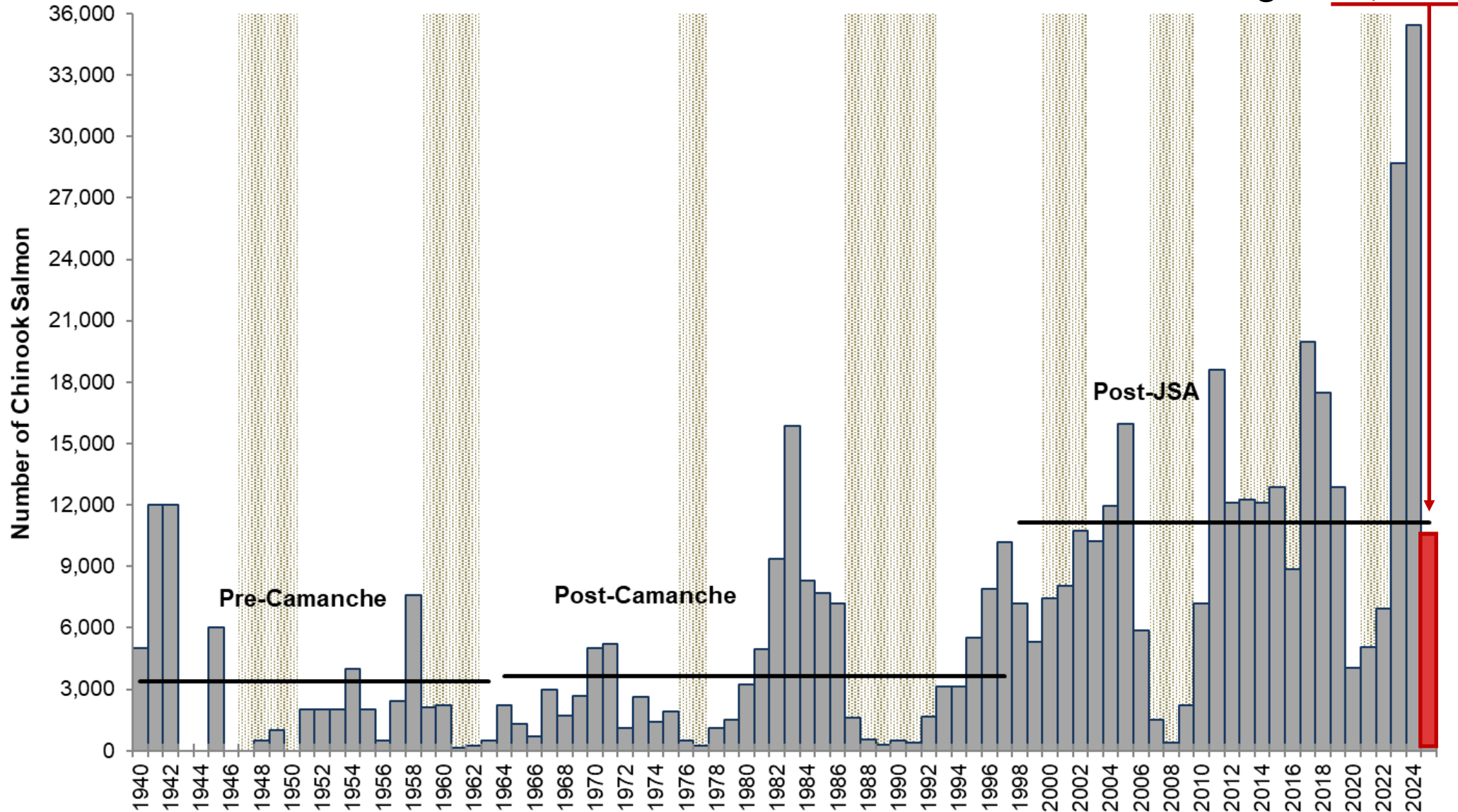
Photo credit: @KingmondYoung



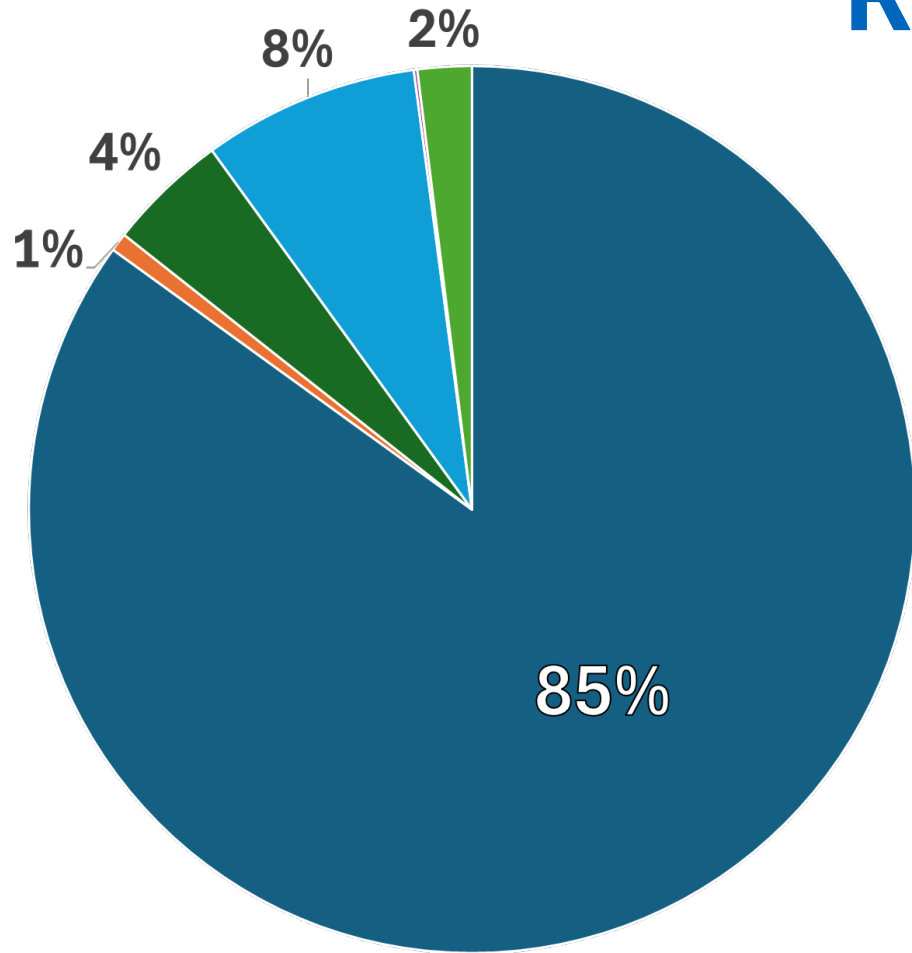
Photo credit: EBMUD staff photo

Historical Salmon Count 1940-2025

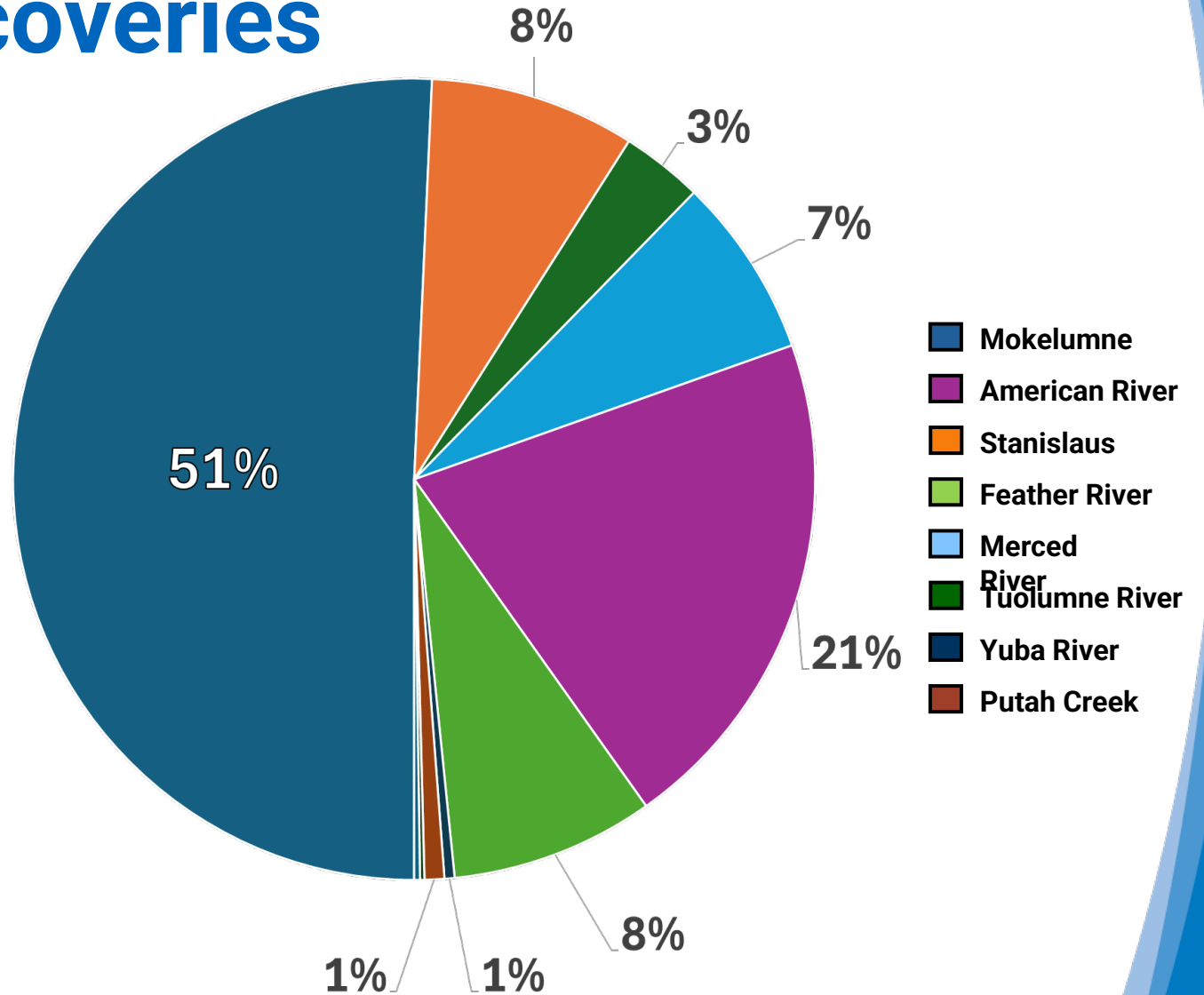
Total 2025 Passage: **10,541**



Mokelumne Hatchery Chinook Coded Wire Tag Recoveries

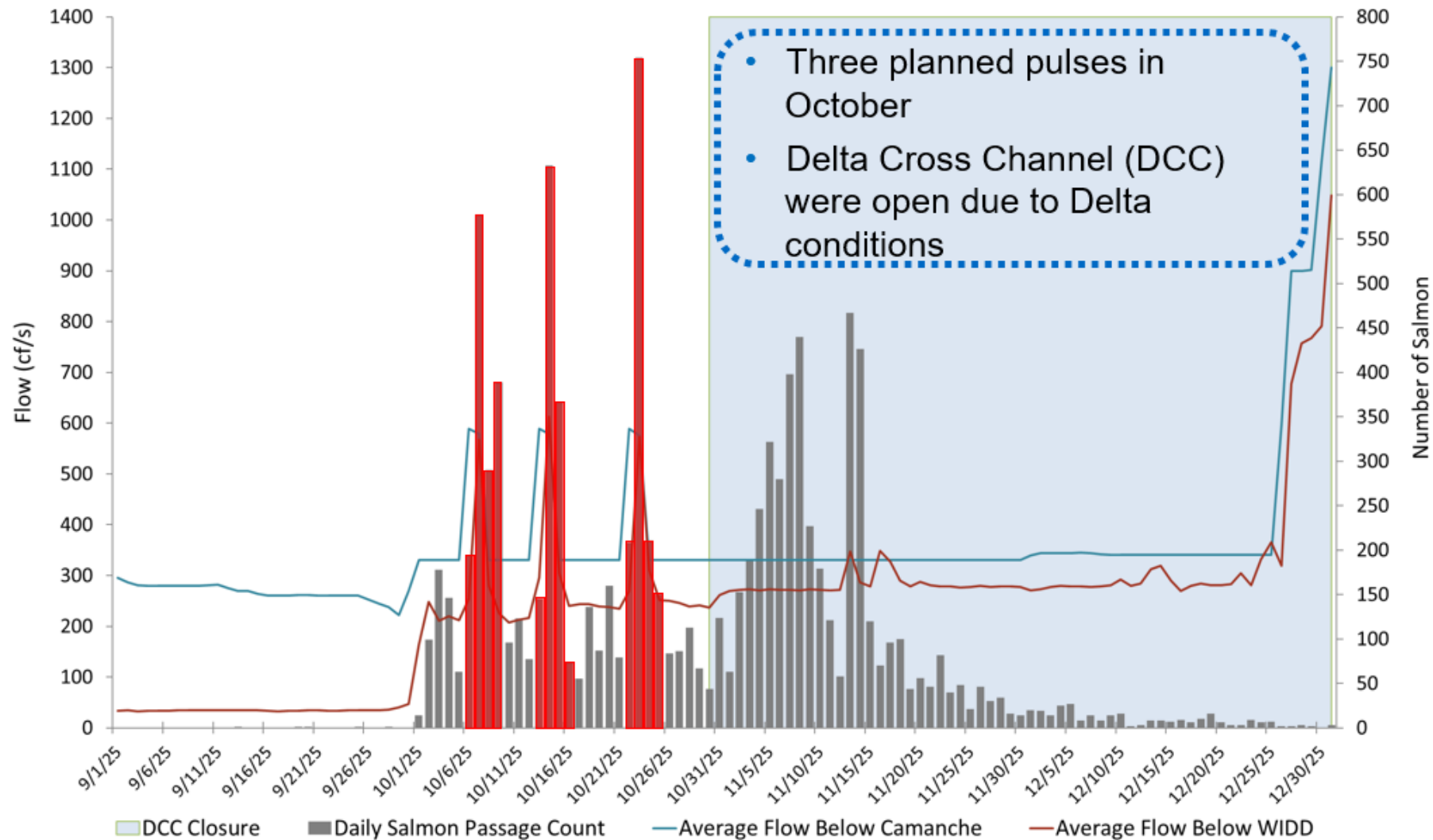


- Mokelumne
- Feather River
- Merced River
- Nimbus
- San Joaquin
- Coleman NFH

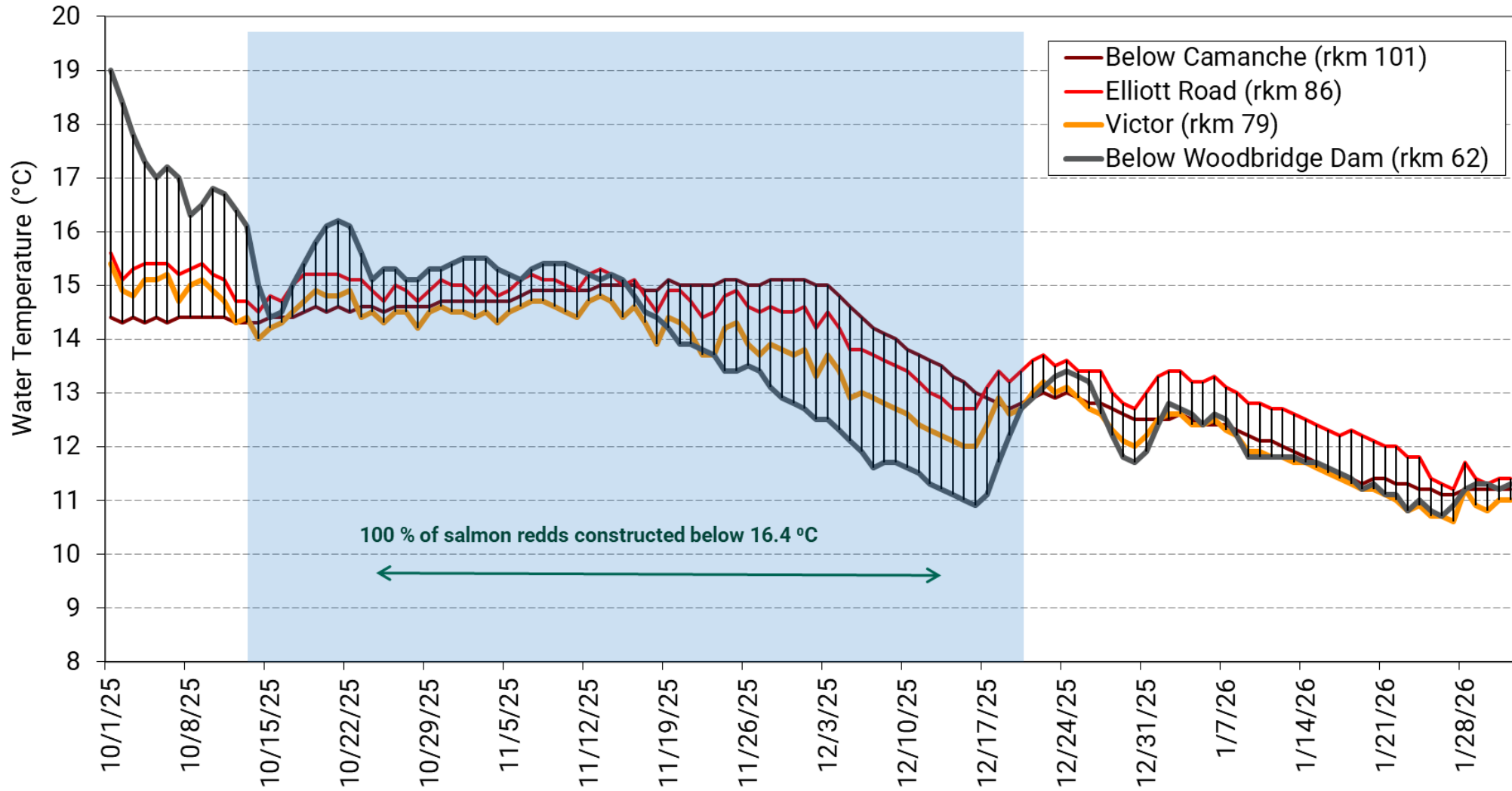


- Mokelumne
- American River
- Stanislaus
- Feather River
- Merced
- Tuolumne River
- Yuba River
- Putah Creek

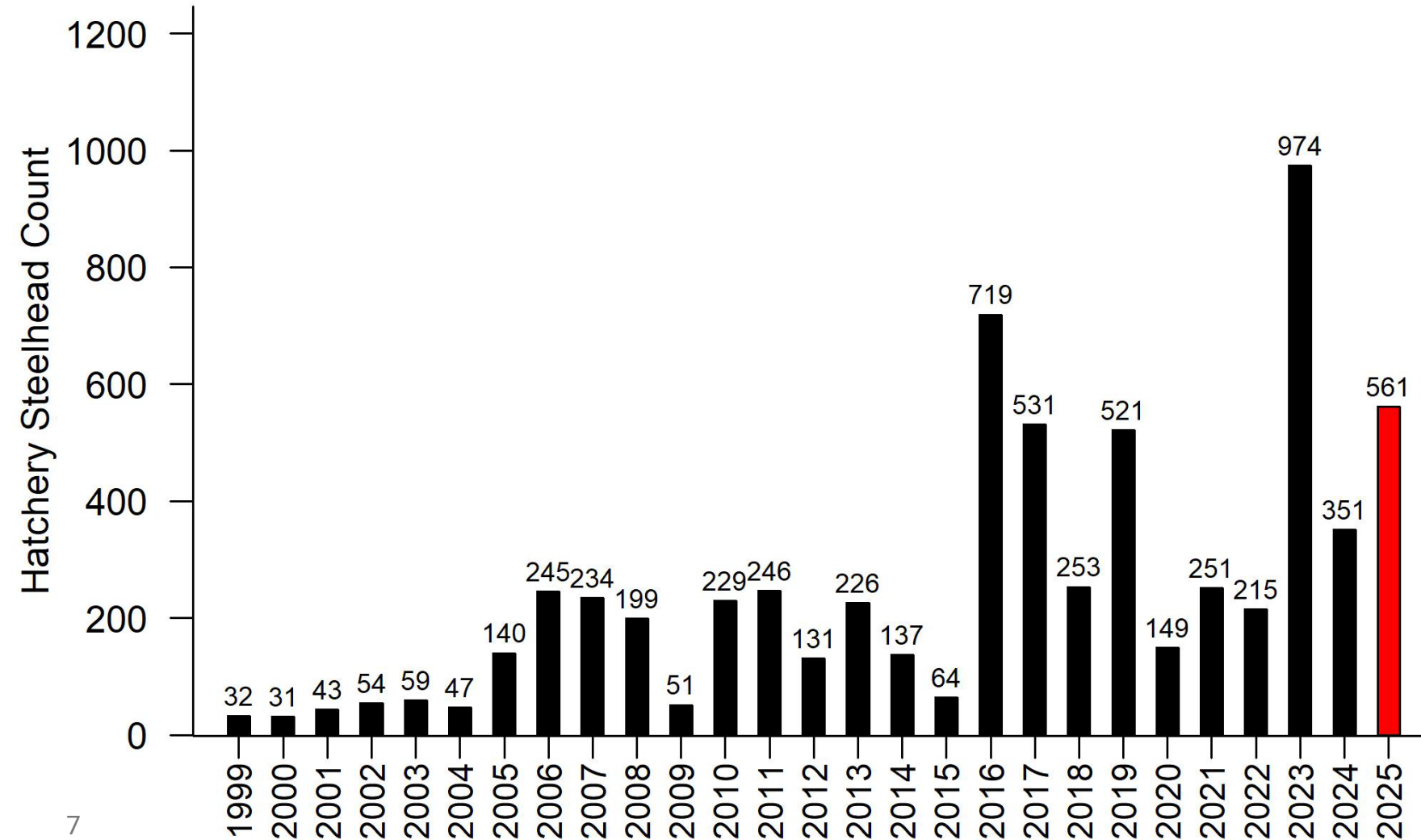
Fall Pulse Flows and Delta Cross Channel Closures



Fall Temperature Management



Steelhead Annual Hatchery Trapping Summary



- Improvement post 2015 continues
- In-river production also increased after 2015

Innovation: Fish Passage Automation

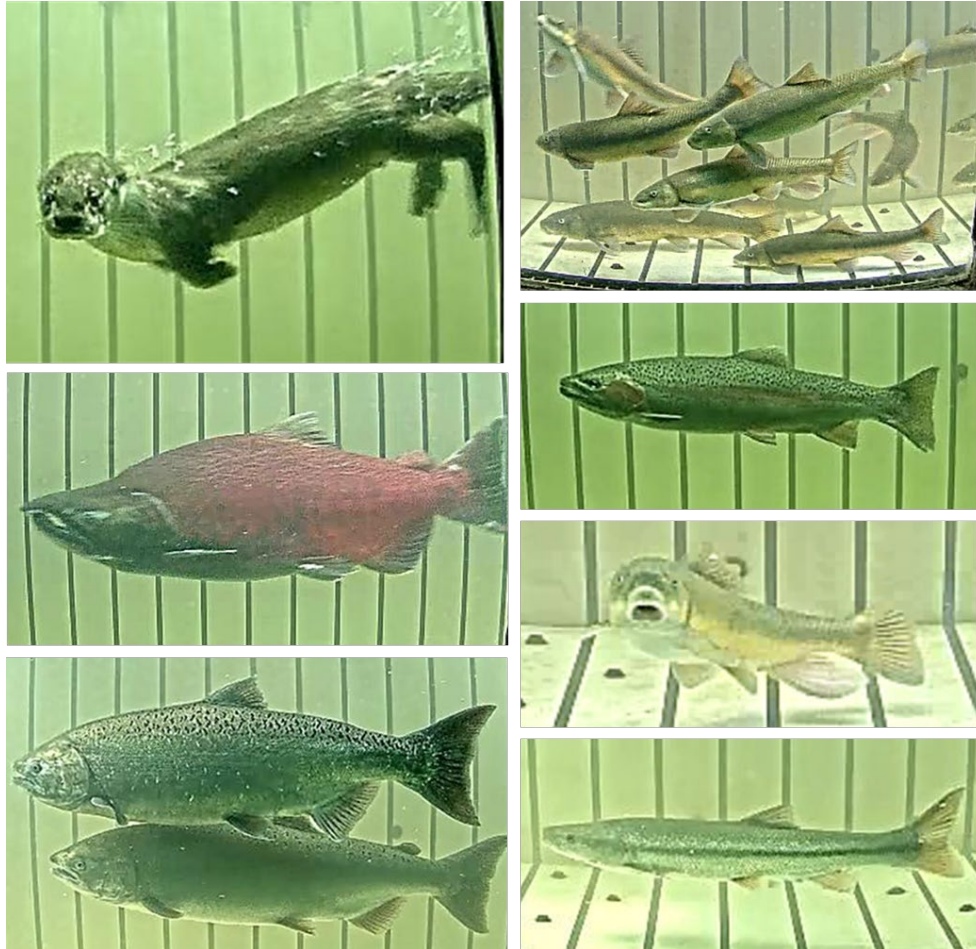


Photo credit: EBMUD staff photo

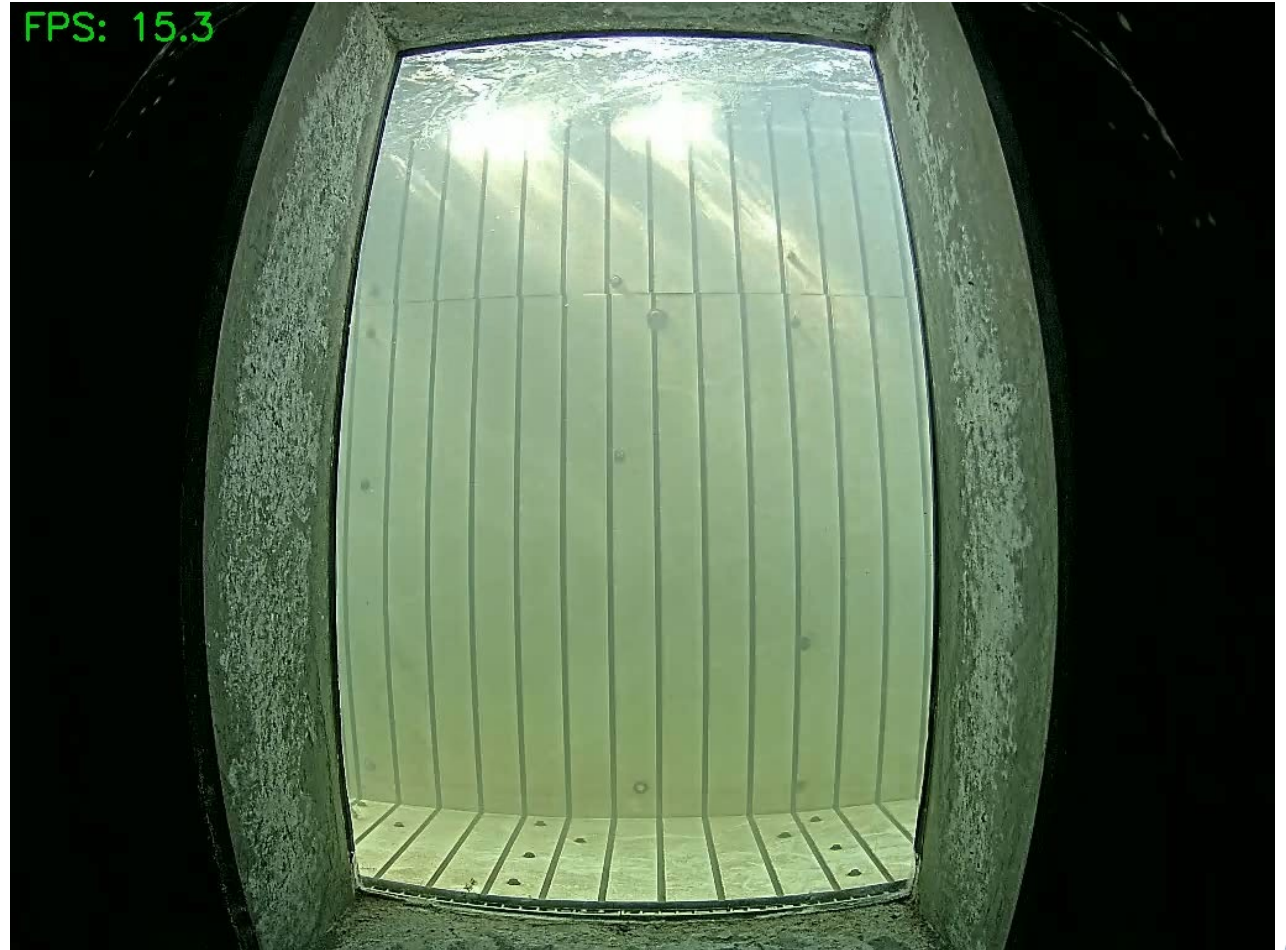


Photo credit: EBMUD staff photo

Healthy Rivers and Landscapes Habitat Restoration

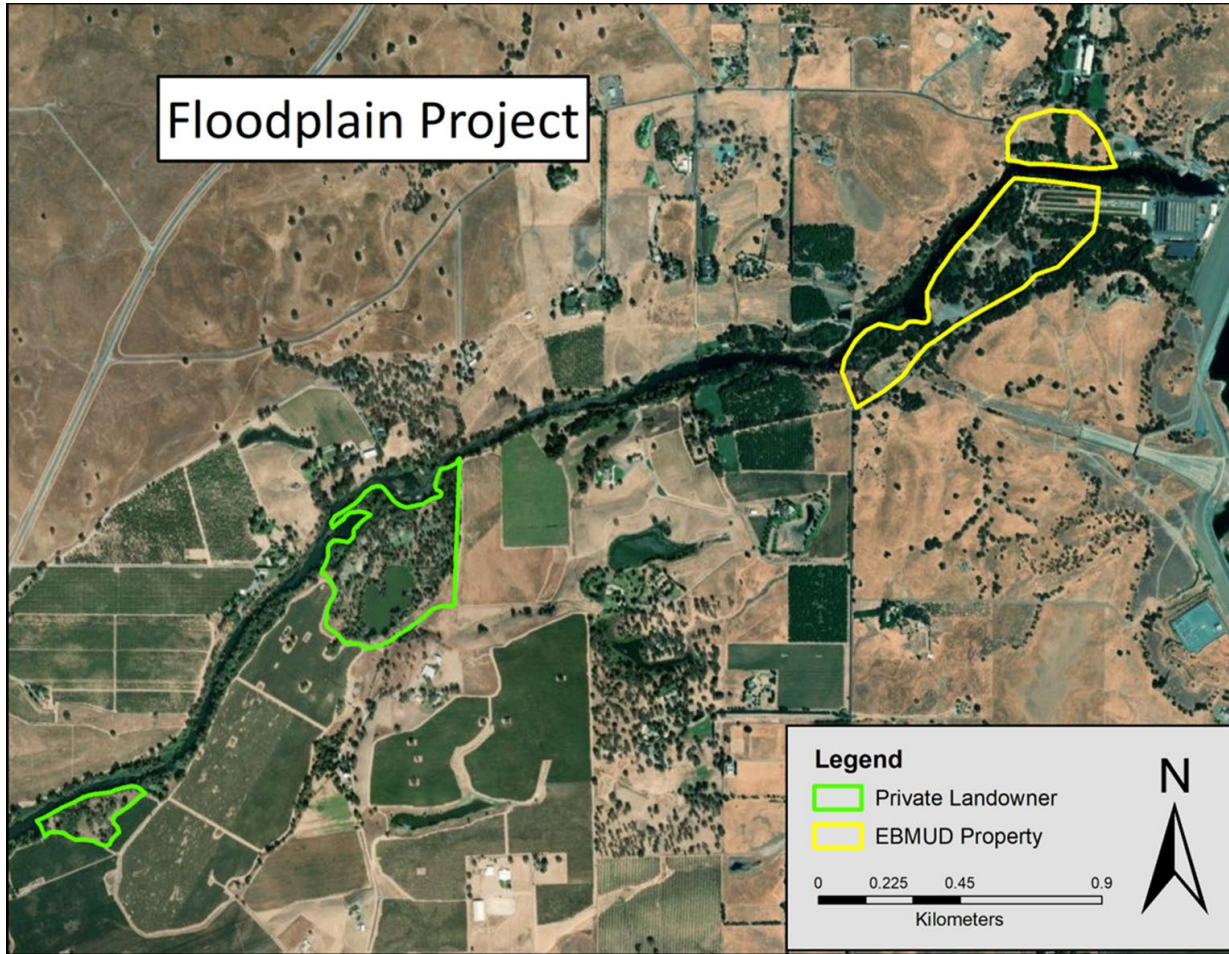


Photo credit: EBMUD staff photo

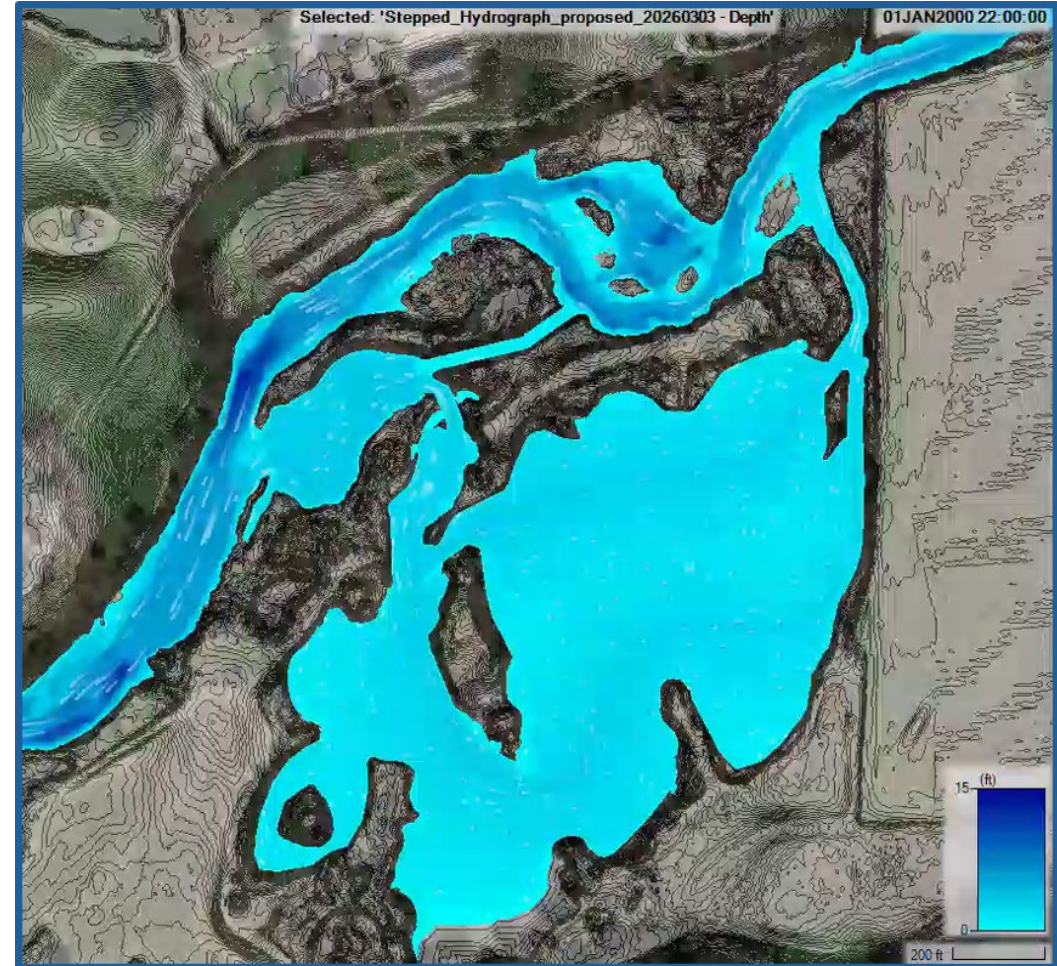


Image credit: FlowWest

Next Steps

- Continue implementing best practices to improve juvenile survival
- Mokelumne River Habitat Restoration projects for HRL will continue to move from planning to construction using grant funds
- Continue developing the science supporting fishery management and habitat restoration goals

Questions?



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into the
Future



Water Quality Update

Planning Committee

April 14, 2026

Susan Teefy, Manager of Water Quality

Overview

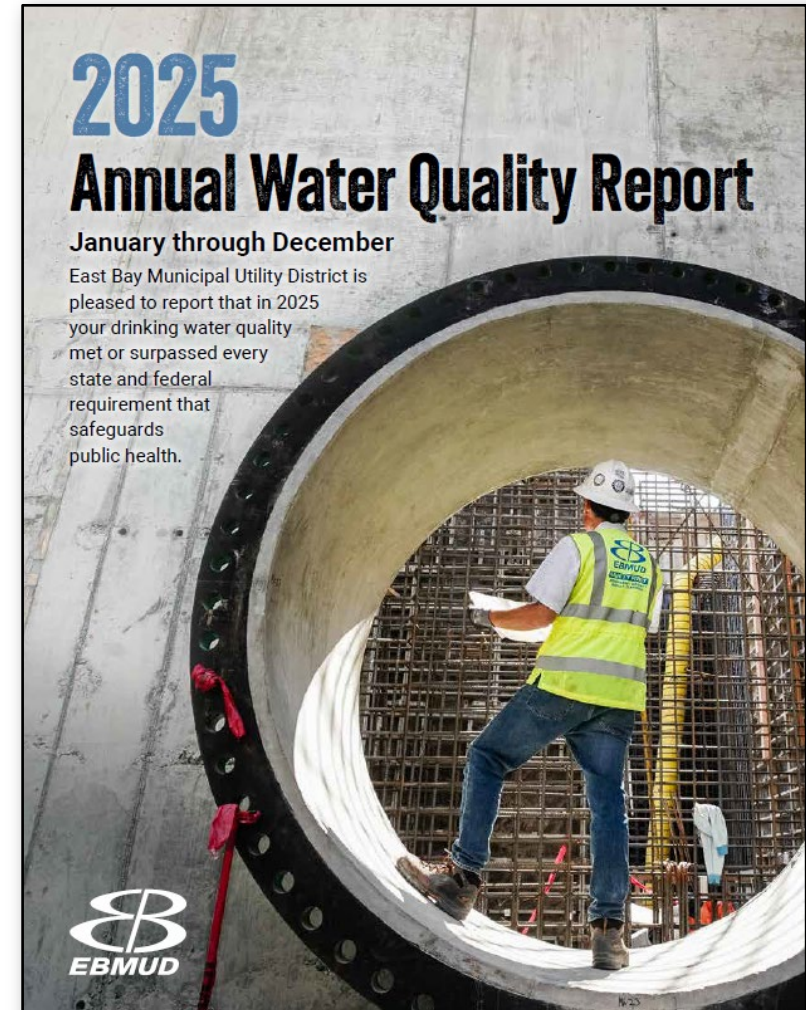
- Program updates are provided every six months; this report is for calendar year 2025
- Regulations and internal goals
- Other water quality issues



Refreshing glass of water

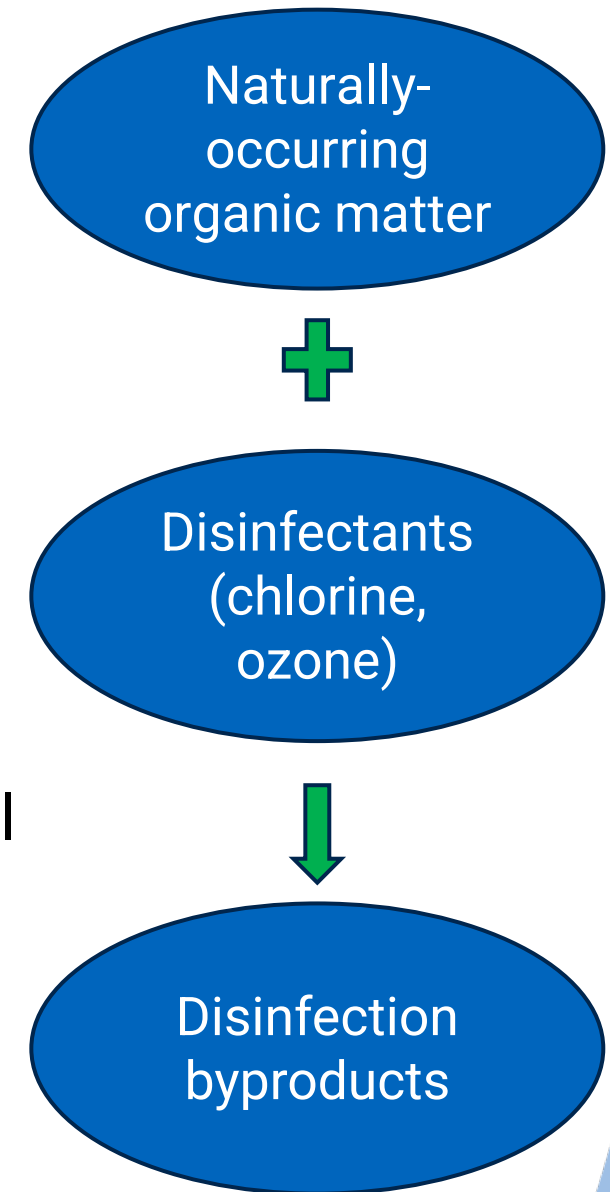
Calendar Year 2025

- Met all state and federal drinking water regulations
- Data presented in Annual Report
- Met 95% of internal water quality goals
 - Goals are significantly more stringent than regulatory requirements
 - 127 of 133 internal goals were met
 - Unmet goals were associated with disinfection byproducts and system operations

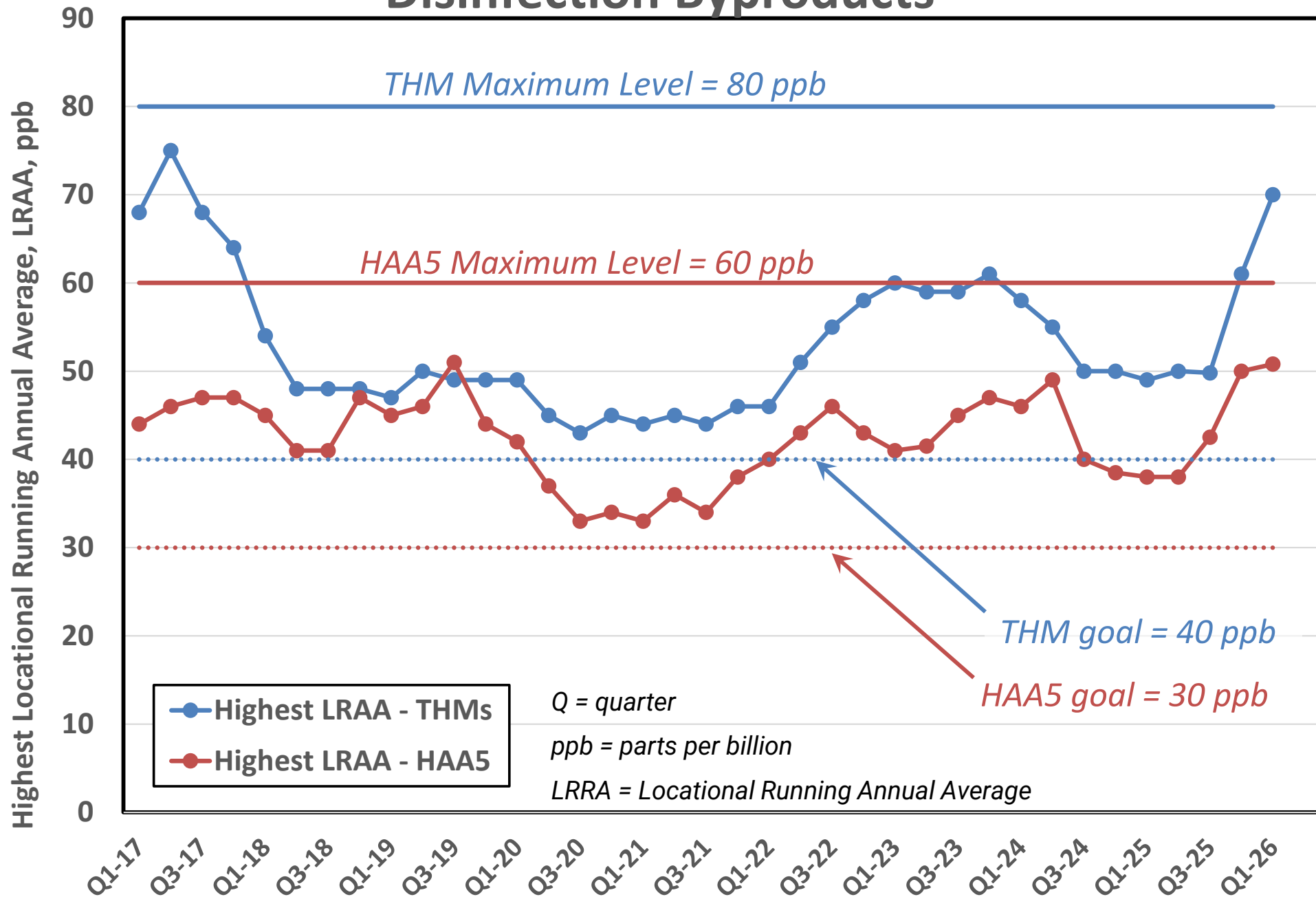


Disinfection Byproducts

- Samples collected from 16 locations each quarter, compliance is based on running annual average at each location
- Trihalomethanes (THMs)
 - 30 of 64 individual samples exceeded internal goal
- Haloacetic Acids (HAAs)
 - 43 out of 64 individual samples exceeded internal goal



Disinfection Byproducts



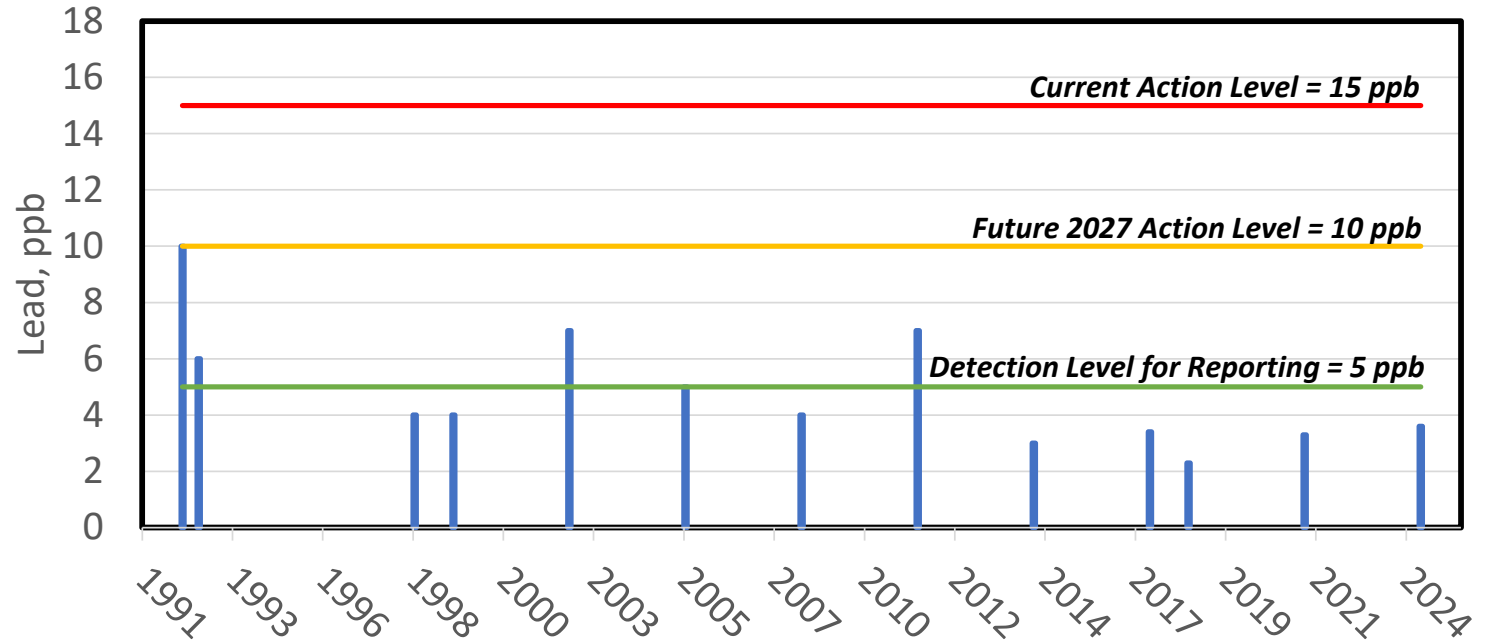
Lead Regulatory Update



Regulatory Requirements

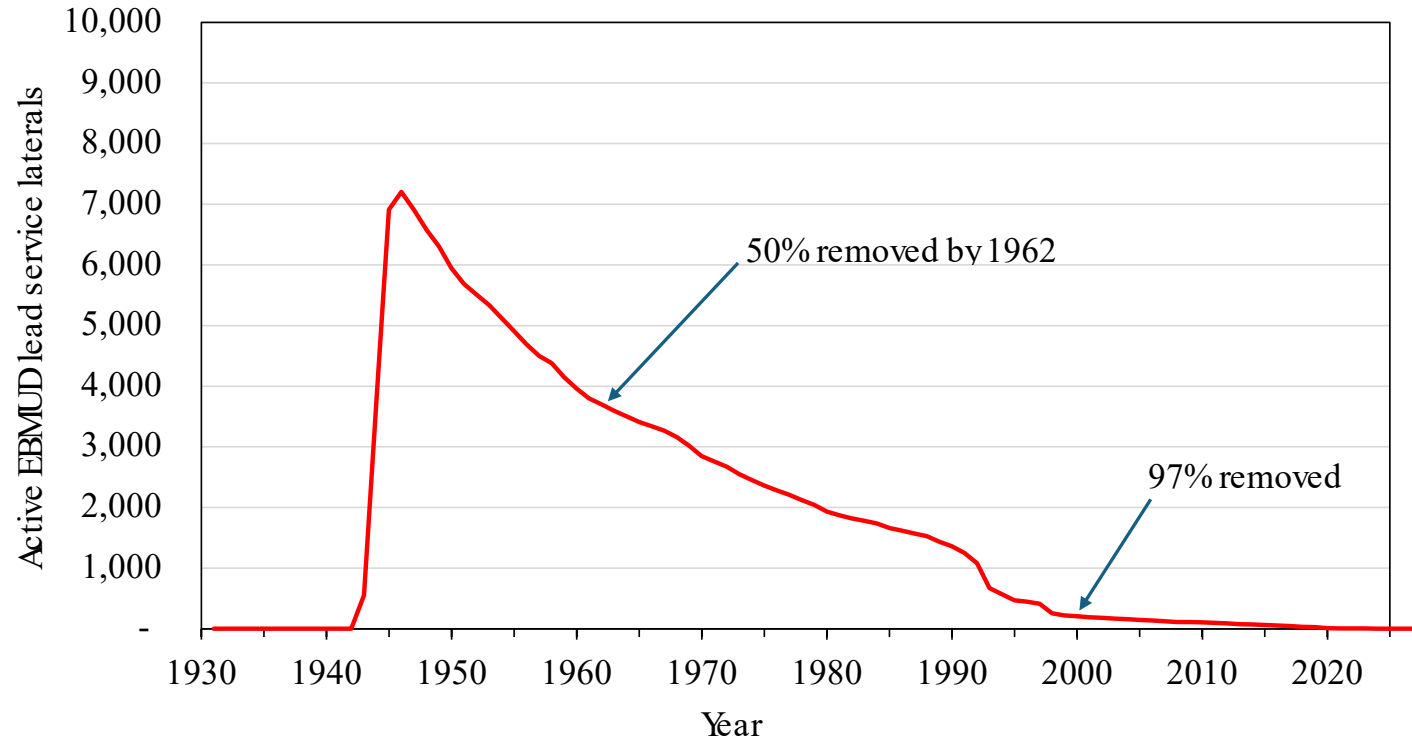
- Original Lead and Copper Rule (LCR) promulgated in 1991, revised in 2021 and 2024
- EBMUD has consistently complied with regulations
- Additional California state requirements
- New category of pipe: Galvanized Requiring Replacement (GRR)
 - Galvanized pipes formerly connected to lead pipes essentially treated like lead in the regulations
 - Under some conditions, GRRs can leach lead into water

EBMUD LCR Compliance History, 90th Percentile Lead Concentration



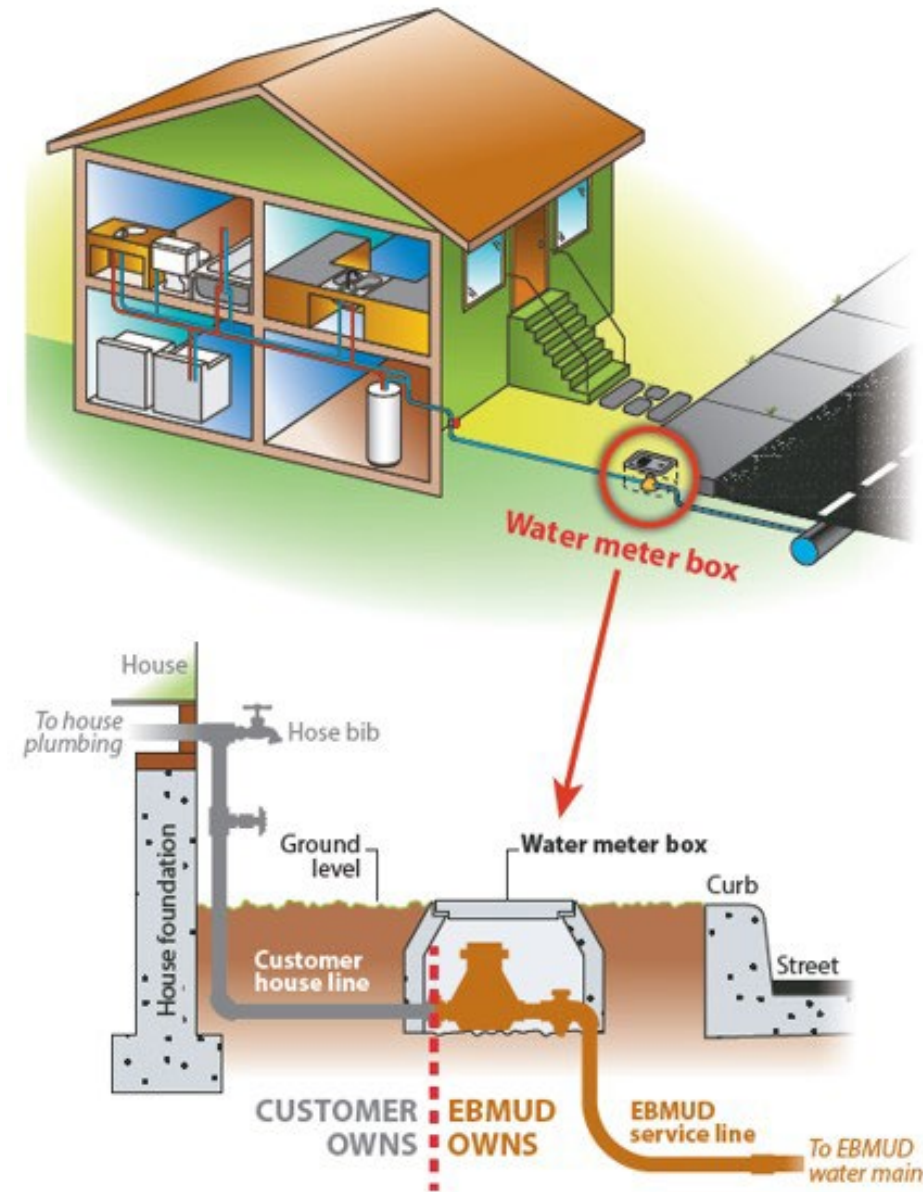
EBMUD History

- Approximately 7,500 lead service lines were installed during World War II when copper was unavailable
- EBMUD began removing them at end of war
 - 50% were removed by 1962
 - 97% were removed by 2000
 - All known lead service lines are removed

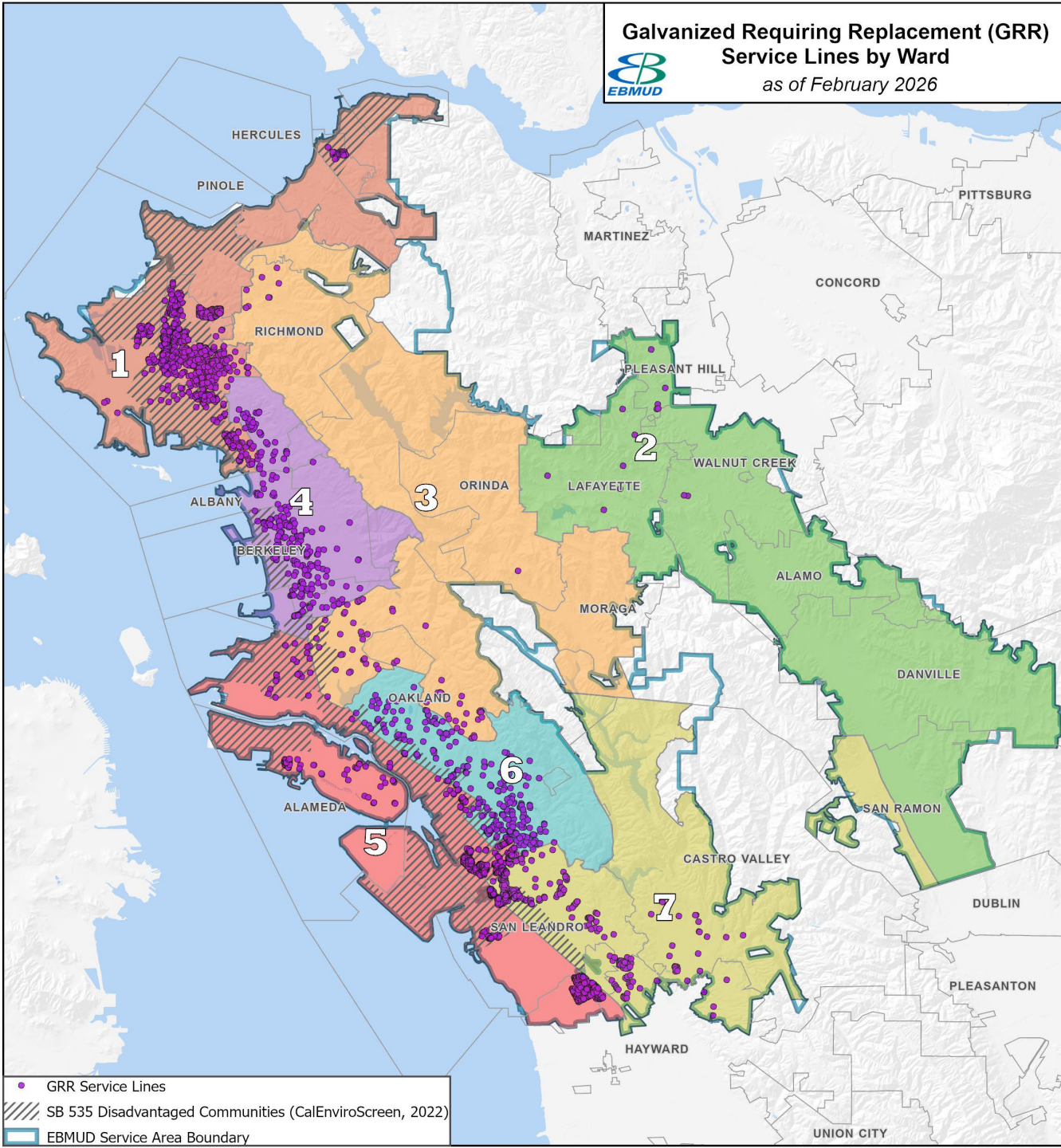


Service Line Configuration

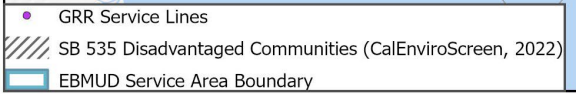
- District owns and maintains service lines from the water main to the meter
- Customer owns and maintains service line from the meter to the building
- All EBMUD GRRs are customer-side service lines (on private property)



**Galvanized Requiring Replacement (GRR)
Service Lines by Ward**
as of February 2026



- Field inspections completed at approximately 10,000 locations with former lead service lines
- Approximately 4,000 have galvanized house lines, now considered “galvanized requiring replacement” service lines
- Customers at these locations have been notified
 - Initial notification
 - Annual notifications
 - Notification when line is disturbed



Additional Requirements

- Replacement of GRRs is required within 10 years (starting November 2027)
 - Customers are responsible for replacement costs since GRR's installed on private property.
 - Total estimated cost to replace 4,000 GRR's is \$40-\$60 million
- Develop and submit service line replacement plan
- If replacement progress is insufficient, must develop and implement a public outreach program to encourage participation

Study of Galvanized Iron Pipes

- Study completed in 2025
- Hundreds of water samples collected
- Extracted 13 galvanized iron pipes
 - With and without lead connectors
 - GRRs and non-GRRs
- Sent to U.S. Environmental Protection Agency's lab in Cincinnati
 - Sliced open horizontally
 - Examination of scale inside pipes
 - Hand-held x-ray diffraction
 - Scraping, dissolution, and quantification via inductively coupled plasma mass spectrometry for relative amount of each element



District employees extracting service line



Galvanized pipes after slicing open

Conclusions of Study

- EBMUD data indicate that removal of the 4,000 GRRs is not necessary
- Lead levels in water from GRRs is indistinguishable from non-GRRs

Regulation	Service Line Type	Number of Sample	90th Percentile Lead, ppb
Original Lead and Copper Rule	Lead Service Lines	112	8
	Copper with lead solder	524	4.1
Not Regulated	Random, all customers via free lead test program	1,743	0.98
New Lead and Copper Regulations	Galvanized pipes with lead connectors	77	1.2
	GRRs	71	<0.4

Variance Request

- Safe Drinking Water Act variances can be granted from Treatment Technique requirements
- The alternative treatment technique must be “at least as efficient” at reducing the levels of the contaminant
- EBMUD data indicate that removing the GRRs would not reduce customers’ lead concentrations; not removing them is equally efficient
- EPA has issued three other variances from the Lead and Copper Rule
 - Denver, Colorado; Milwaukee, Wisconsin; and Columbus, Ohio
 - Each proposed an alternative to the statutory requirements that was shown to reduce customers’ exposure to lead
- Informal discussions with the Division of Drinking Water (DDW) have been positive

If Variance is Granted

- Upcoming (November 2027) GRR requirements would not apply
 - Greatly reduced risks of regulatory violations
 - Avoid customer expense
 - Avoid unnecessarily alarming customers
- Required to sample from homes with copper pipes with lead solder
- Required to treat any new GRRs like lead for 10 years
- Offer additional actions
 - Free lead testing for all customers (currently voluntary)
 - Additional study and sampling of galvanized pipes to confirm results
 - Additional monitoring of corrosion control treatment

Questions?





Owner Advisor Services for MWWTP Dewatering Improvements Project

Planning Committee

April 14, 2026

Garin Warren, Manager of Wastewater Engineering

MWWTP = Main Wastewater Treatment Plant

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Agenda

- Project Status Update
- The Role of an Owner Advisor (OA)
- Proposed Contract Structure
- Next Steps

Dewatering Improvements Project

Major Project Scope Elements

- Digested sludge transfer pumping
- Centrifuges
- Polymer storage and dosing system
- Dewatered cake storage and offload
- Odor control system

Project Delivery Approach

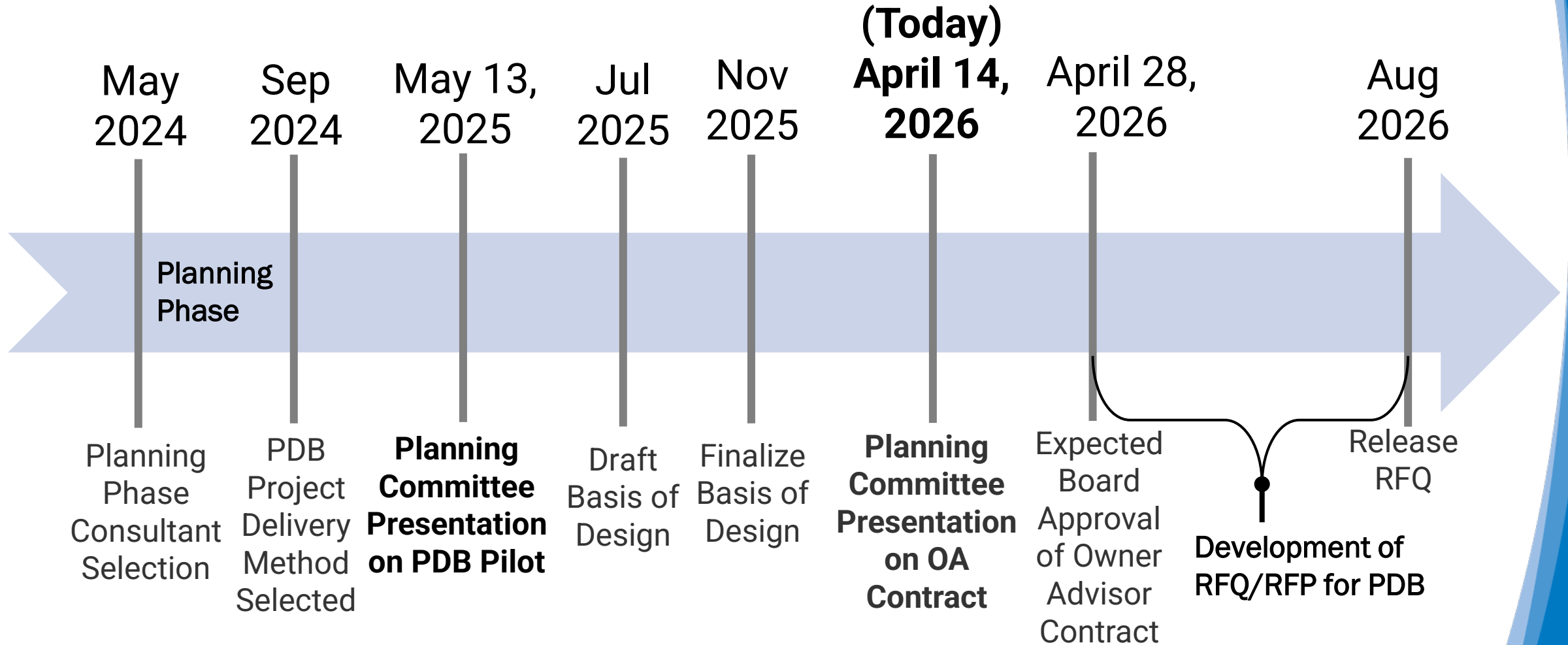
- Progressive design build (PDB)
- Select PDB team by qualifications
- OA role to guide District through PDB project



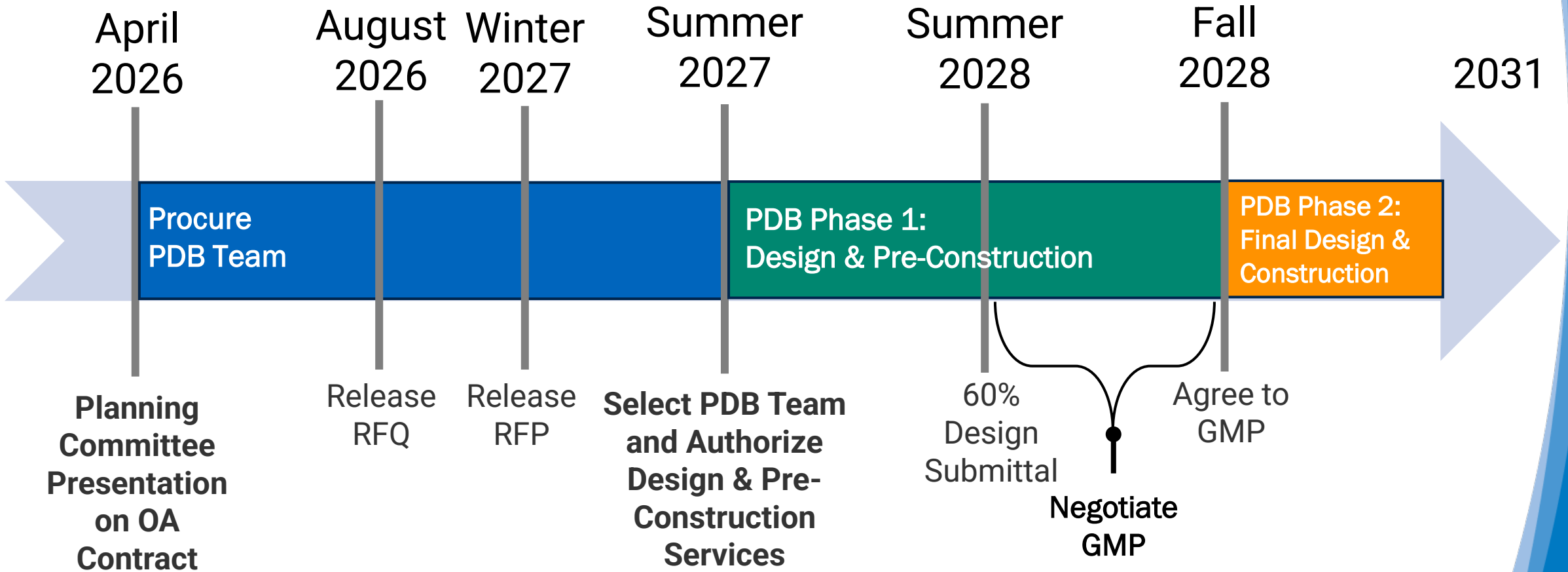
Proposed New Dewatering Building



Project Schedule – Work Completed

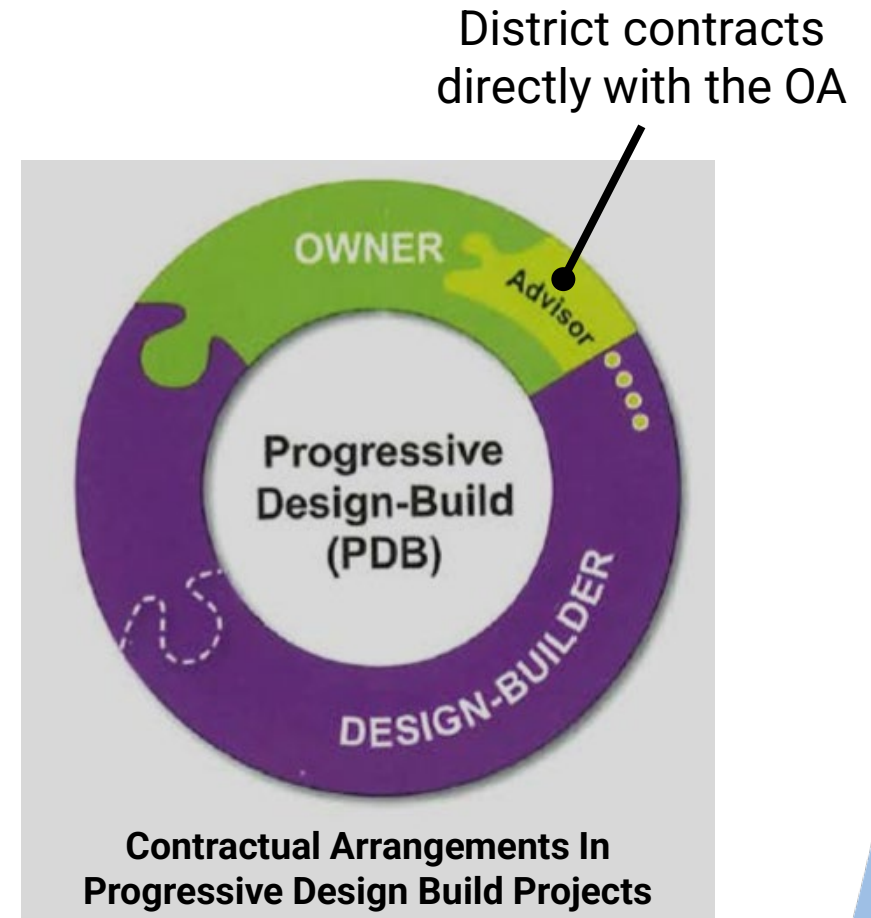


Project Schedule – Looking Forward



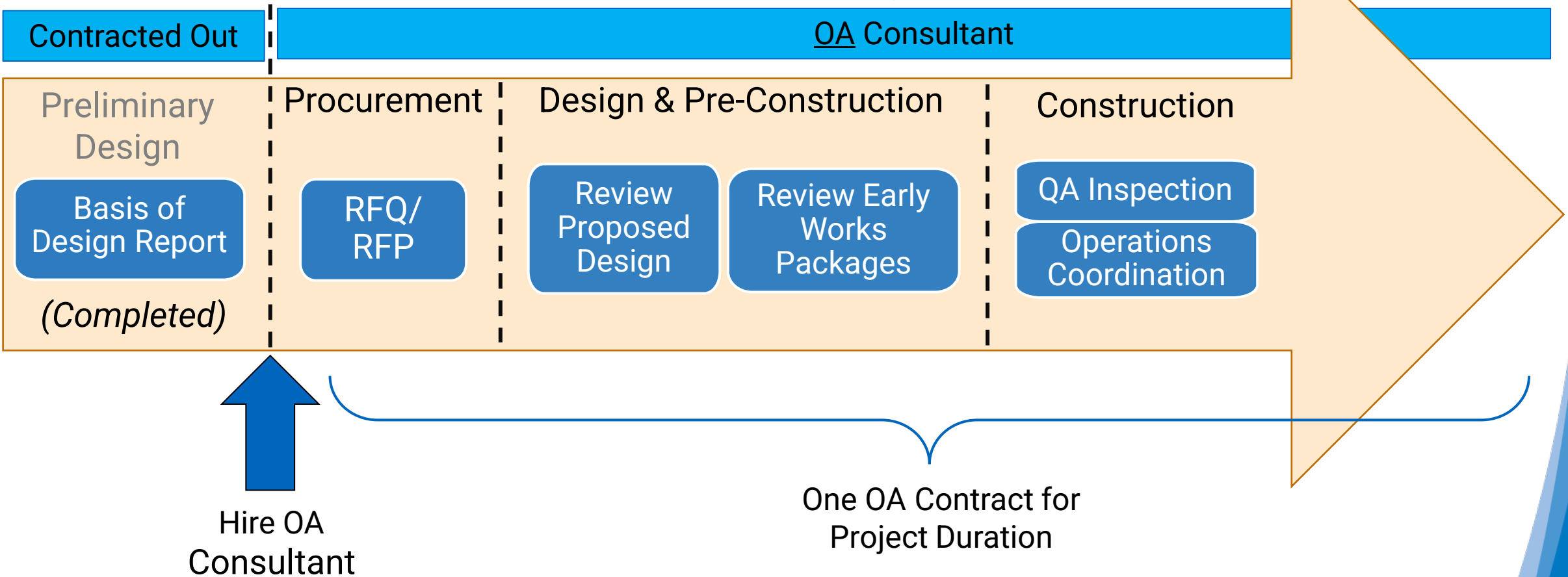
What is an OA?

- Provides expertise in procurement of PDB teams, contracting, technical support, and construction support
- Contract spans the entire duration of the PDB project through closeout
- Guides the owner through the PDB process and provides the right mix of expertise and interpersonal skills to:
 - Encourage collaboration
 - Facilitate quick, decisive action to ensure progress is made



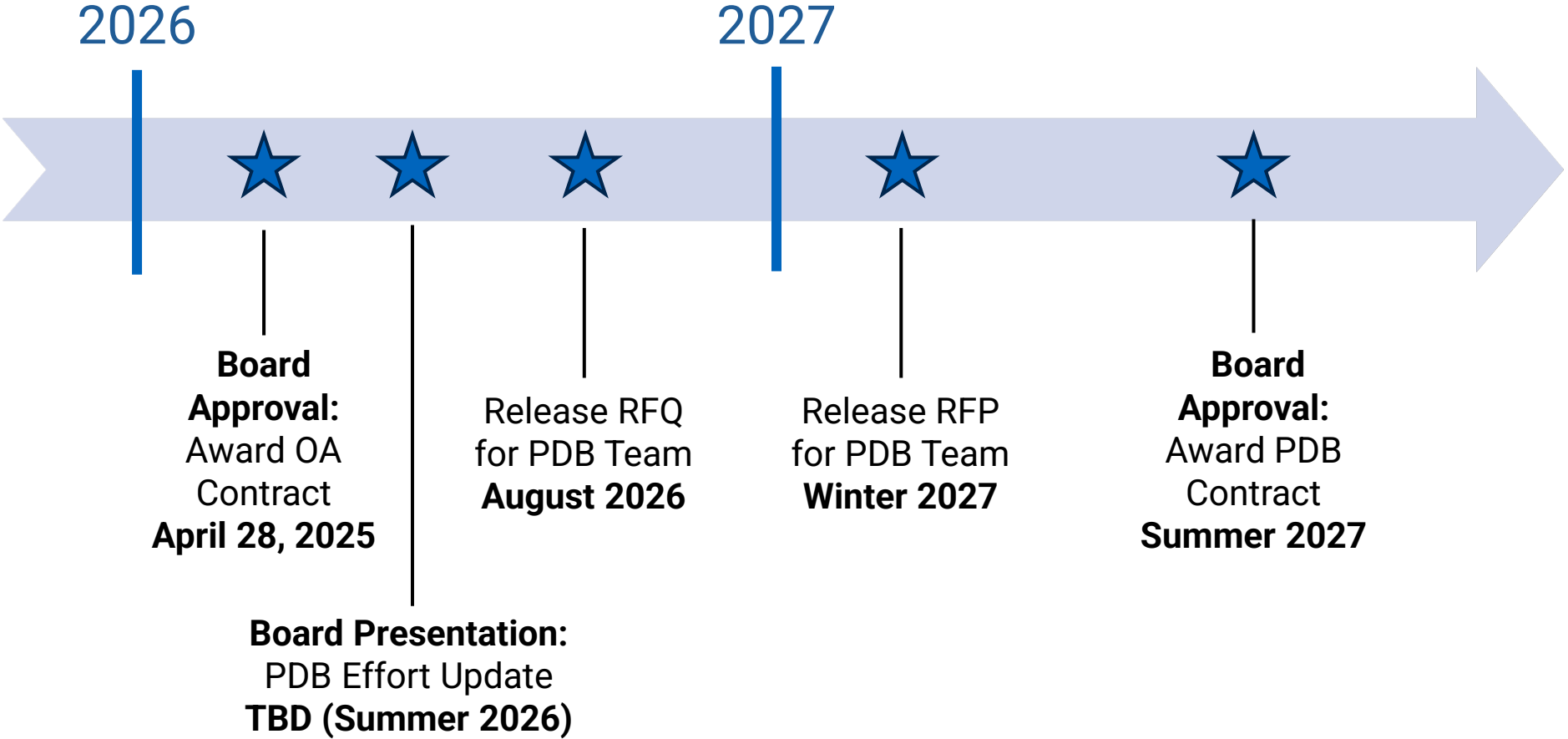
Approach to OA Consultant Management

Proposed for the Dewatering Improvements Project



Next Steps

Proposed for the Dewatering Improvements Project



Questions?



Flowing
into the
Future



Annual Watershed and Recreation Report

Planning Committee

April 14, 2026

Scott Hill, Manager of Watershed & Recreation

Chuck Beckman, Manager of Watershed & Recreation



San Pablo Reservoir sunrise

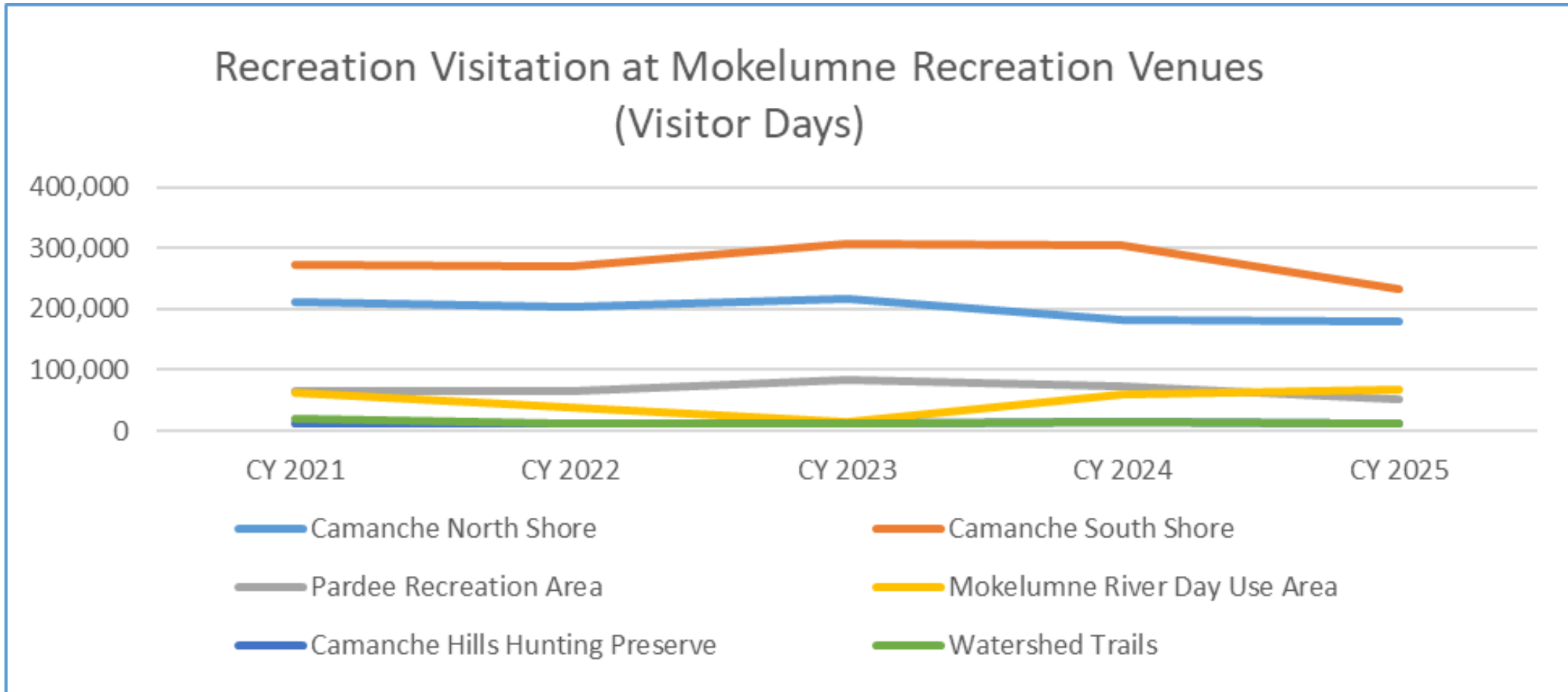
Agenda

- Mokelumne and East Bay programs
- Major activities and initiatives in 2025
- Anticipated 2026 activities

Mokelumne Watershed and Recreation

- Four developed Recreation Areas plus over 35 miles of trails
- More than 600,000 visitors a year
- Implementing Mokelumne Watershed Master Plan

Mokelumne Recreation Visitation



CY – Calendar Year

Environmental Education

Ranger leading Argonaut High School students at Camanche recreation area



Ranger speaking to students at Calaveras High School



Recreation Area Restrictions

Launch closure sign at Camanche South Shore recreation area



Alcohol prohibition sign at Camanche recreation area



Camanche South Arm Prescribed Burn

Camanche South Arm prescribed burn



Aerial Image of Camanche South Arm prescribed burn



Camanche South Arm Prescribed Burn

Camanche South Arm prescribed burn as of spring 2026



Watershed Protection

Ranger installing fence near Mokelumne River



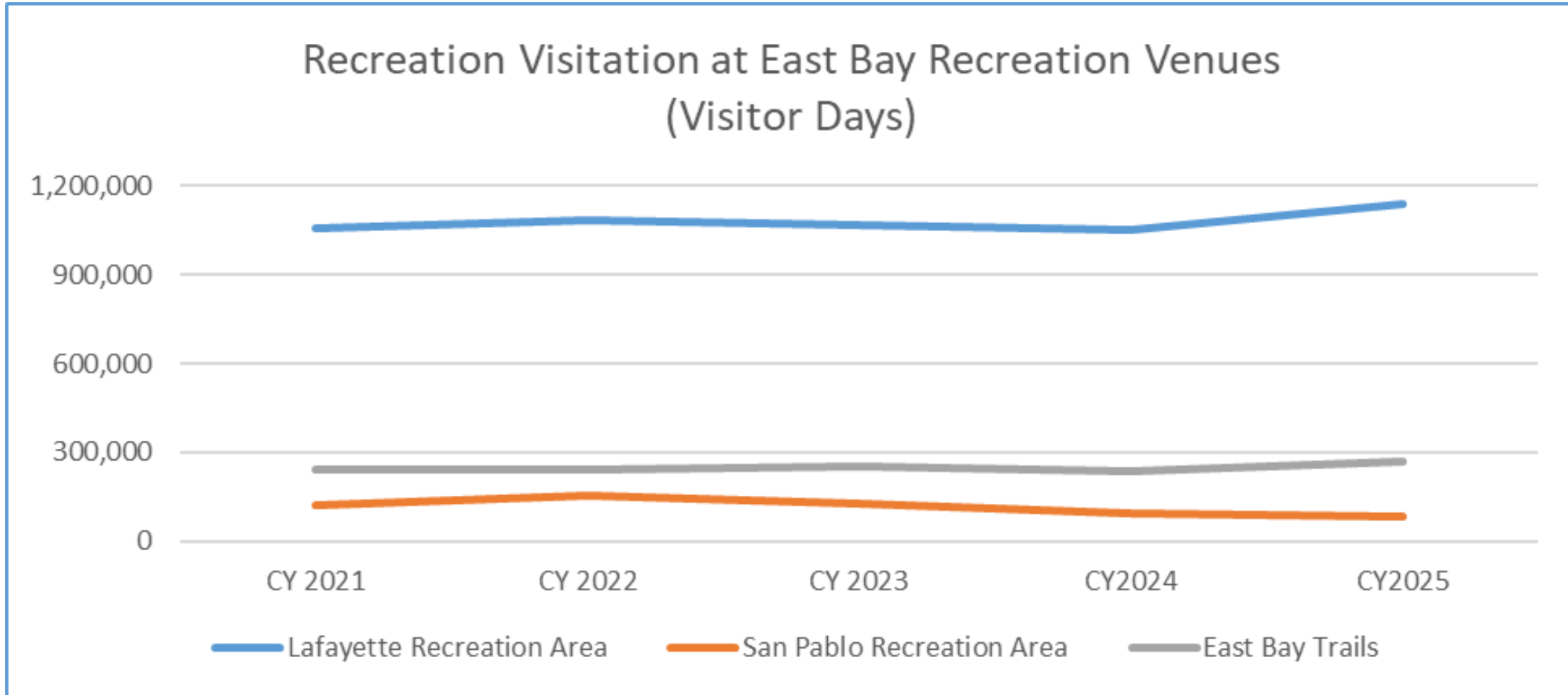
Rangers removing debris from cannabis cultivation site



East Bay Watershed Recreation

- Lafayette and San Pablo Reservoir Recreation Areas
- Over 1.4 million visitors annually
- 90 miles of trails for hiking, horseback riding, and limited mountain biking

East Bay Watershed Recreation Visitation



Wildfire Management

Grizzly Peak Fuel Break Joint Agency Project



San Pablo Reservoir Community Outreach

Family Fishing Day



Water Education Field Trip



Lafayette Reservoir Recreation Area

Wastewater Collection System Improvements



Lafayette Reservoir Community Outreach

Outdoor Afro



Water Education Field Trip





Questions?

