



Pacheco Reservoir Expansion Project: Status Update

Capital Improvement Program Workshop (January 10, 2023)



Water Supply Master Plan Strategy

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1 Secure
existing supplies
and
infrastructure



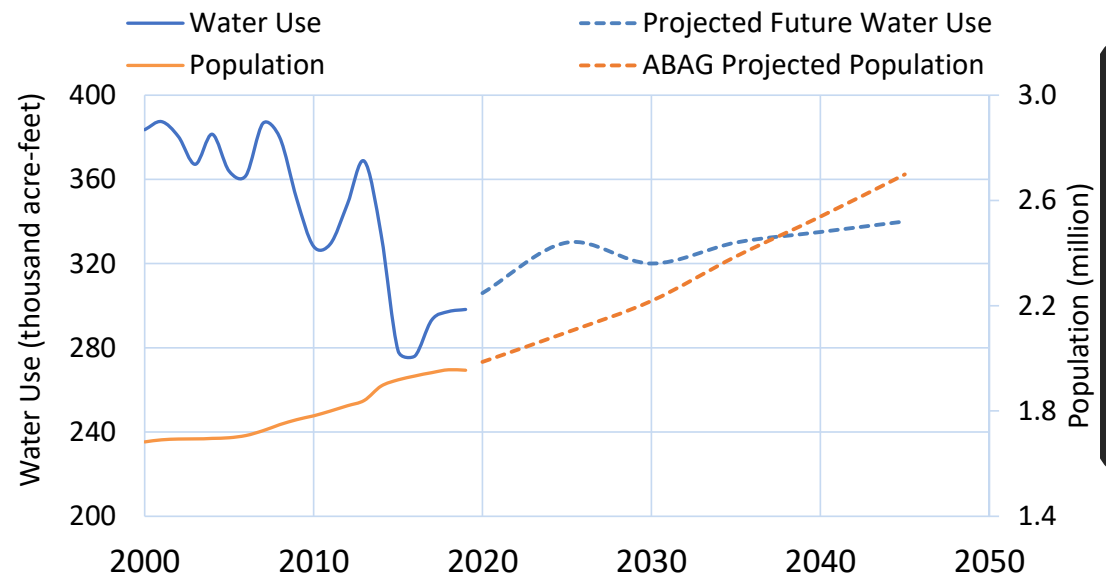
2 Expand
water conservation
and reuse



3 Optimize
the use of
existing system

Level of Service Goal

Meet 100 percent of annual water demand during non-drought years and at least 80 percent of demand in drought years
(**Board Policy E.2-2.1**)



Existing Storage

- Local groundwater basins
- Local reservoirs
- Semitropic groundwater bank

Water Supply Master Plan Recommendations

- Diversify existing storage
 - Capture wet year water
 - Operational flexibility
 - Water in dry years
- Risk management
 - Large project uncertainty
 - Pursue variety of projects

New Storage Options

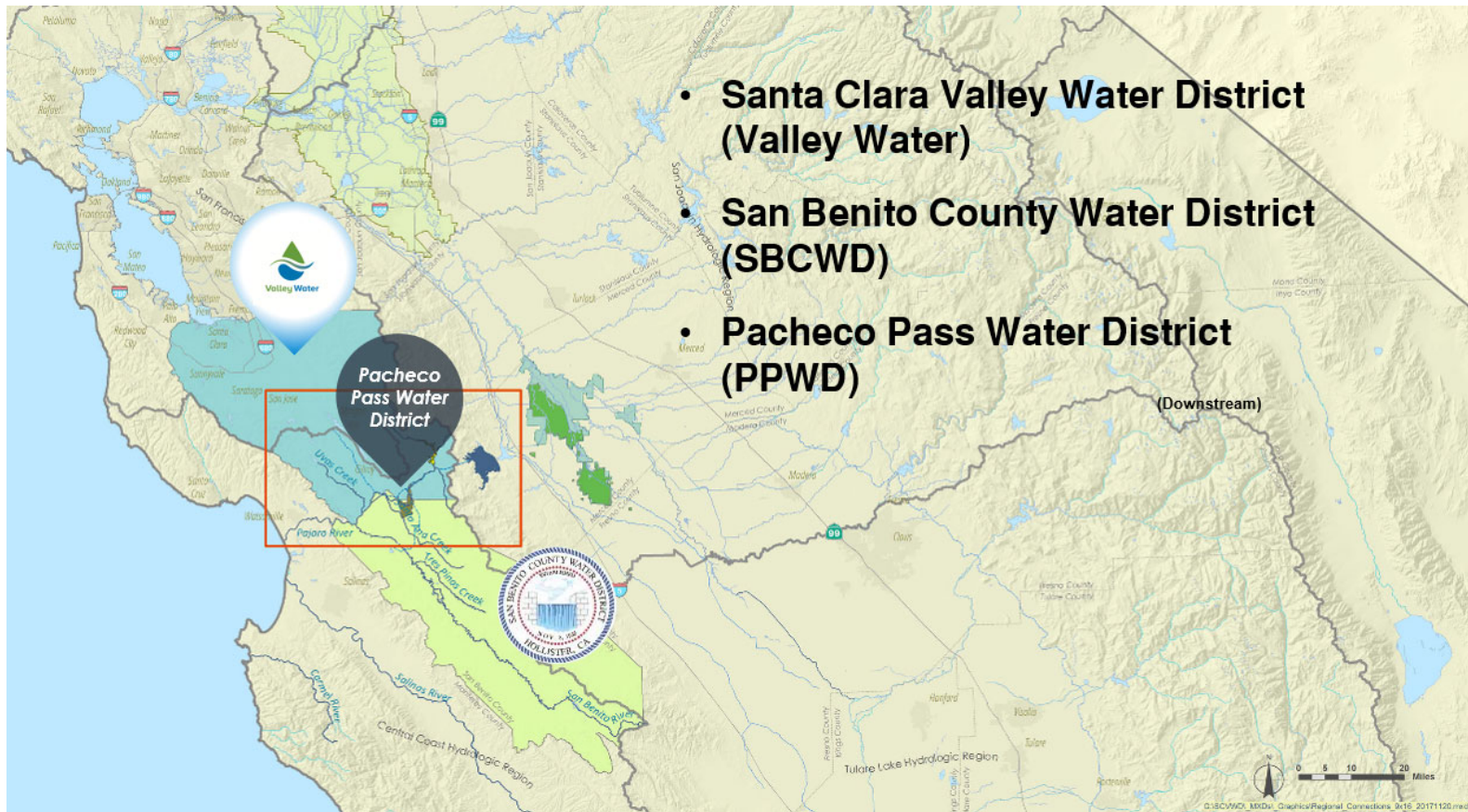
Storage Project	Valley Water Share (Thousand Acre-Feet)	Share of Capital Cost (\$)
New Groundwater Bank	200	160 Million
Los Vaqueros Expansion	50	240 Million
Pacheco Reservoir	55 - 91	1.1 – 1.7 Billion
B.F. Sisk Dam Raise	TBD	TBD
Sites Reservoir	TBD	TBD

Pacheco - One Diversification Option

- In county
- Controlled by Valley Water
- Greater operational flexibility
- Dependent on existing infrastructure requiring investment
- Similar benefits to other storage projects

Project Partners

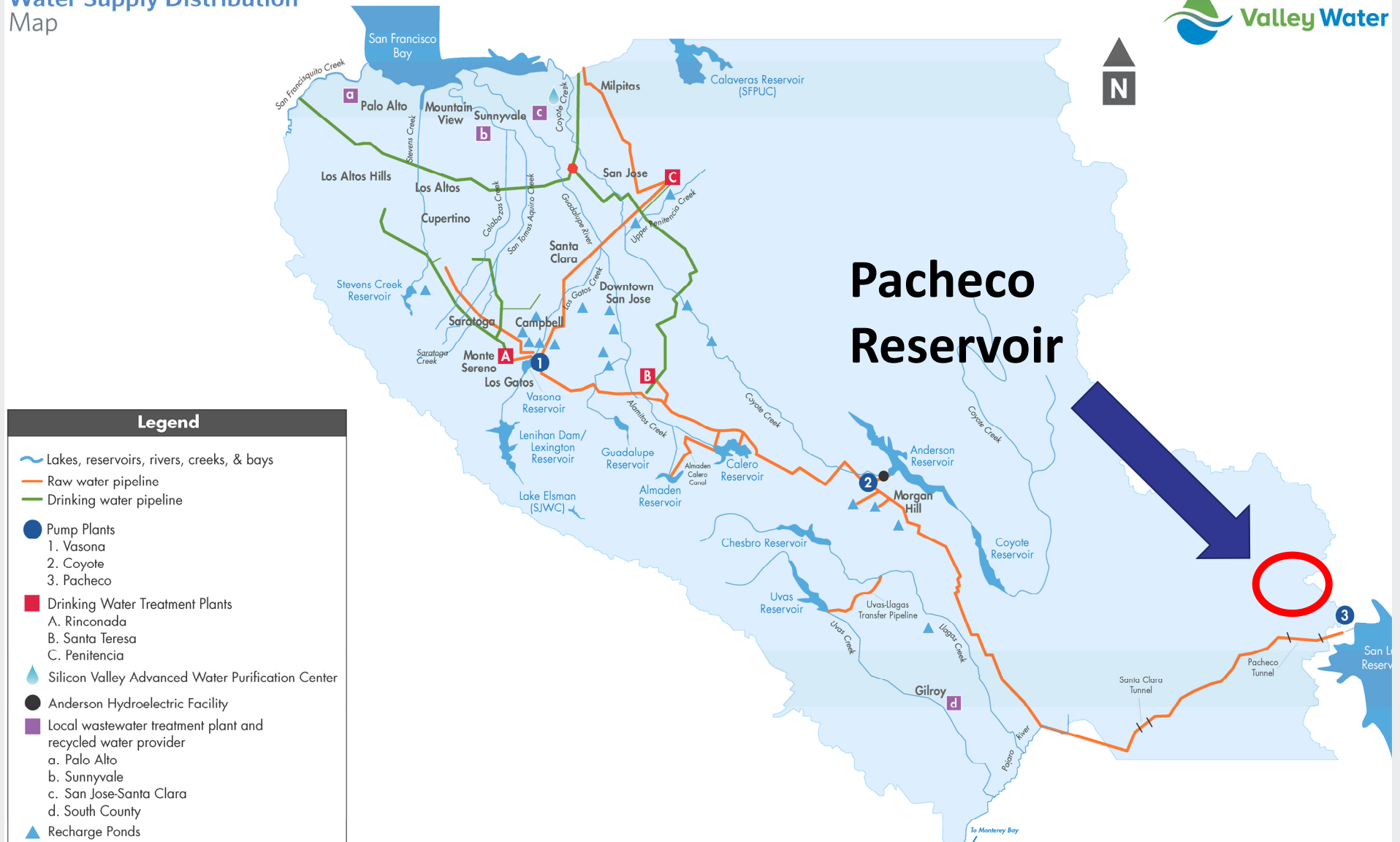
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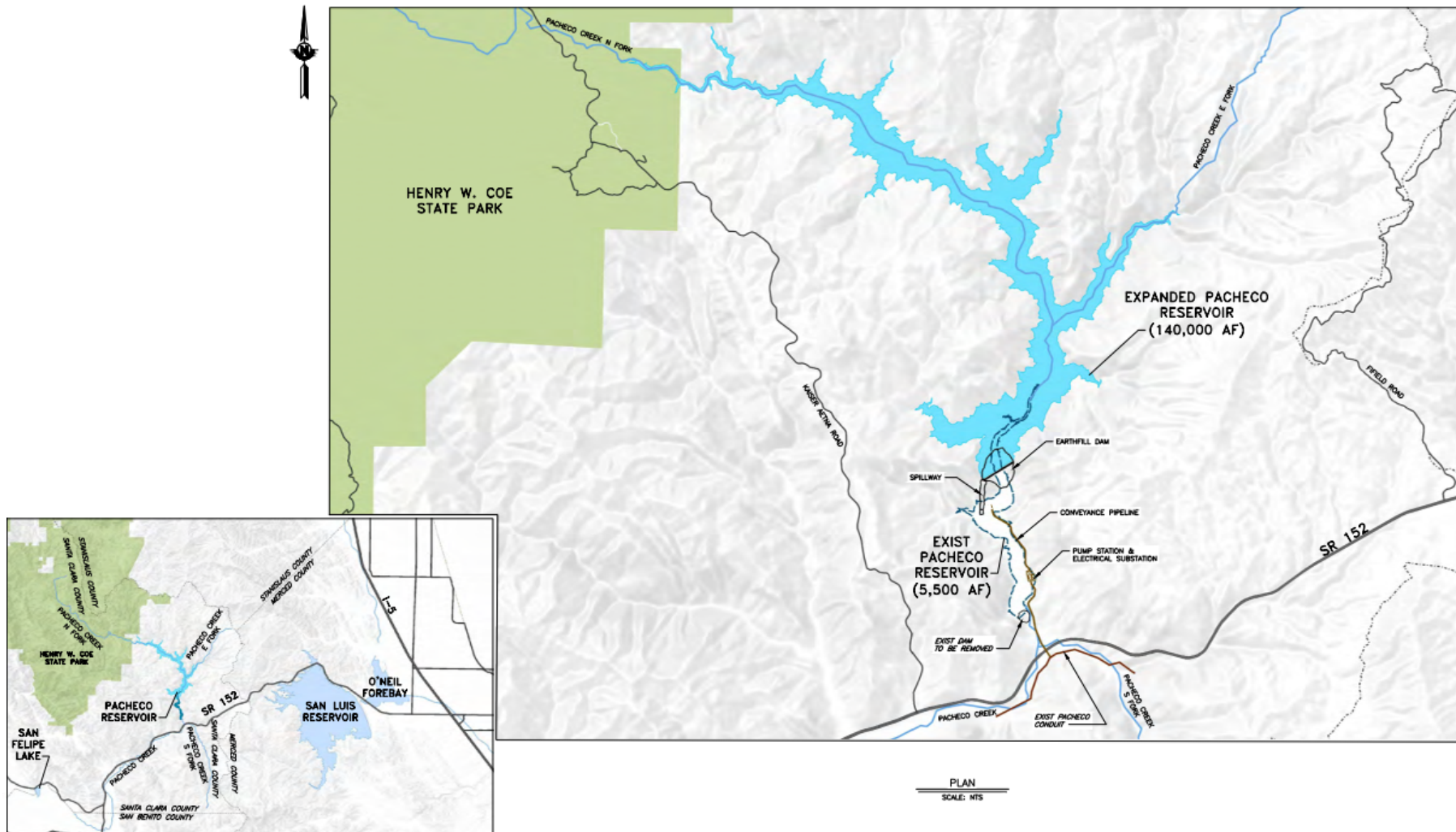


Water Supply Distribution Map



Project Overview Map

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Existing North Fork Dam and Pacheco Reservoir

Dam

- 100-foot-tall earthen embankment dam
- 0.4 miles upstream of North Fork Creek and South Fork Creek confluence
- Construction completed in 1939

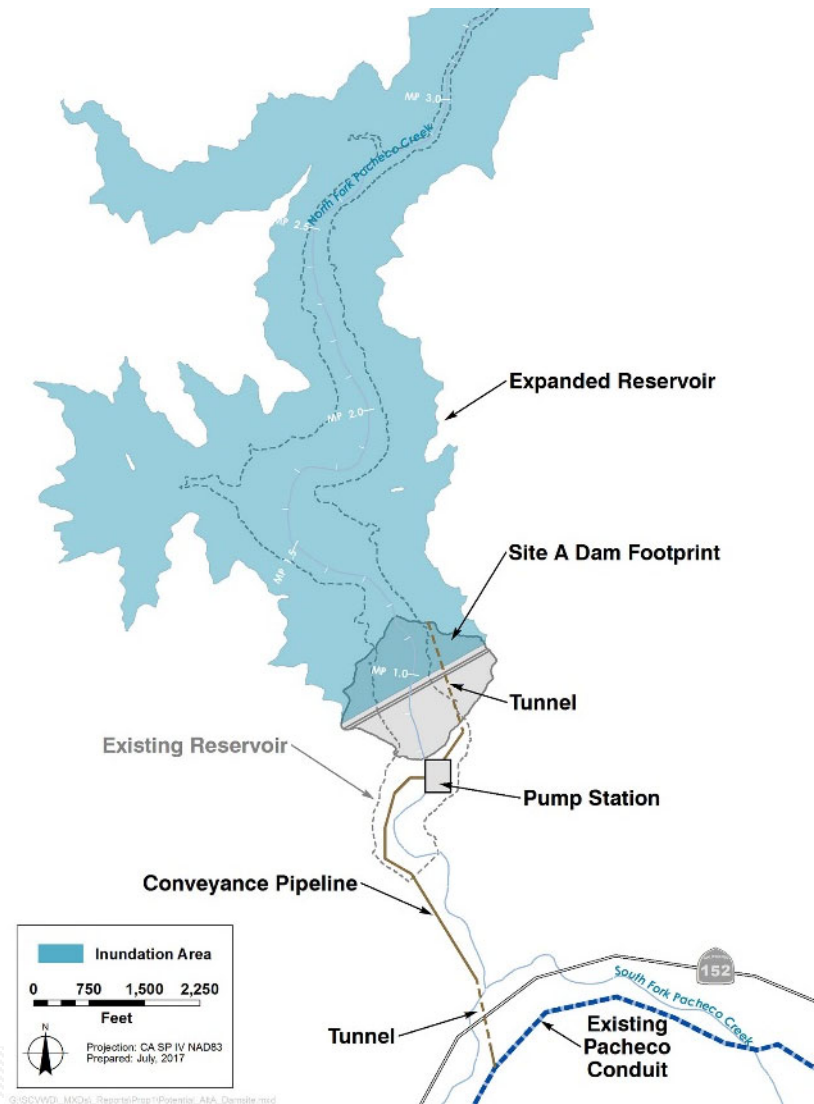
Reservoir

- Current capacity: 5,500 acre-feet
- Operated for groundwater recharge along Pacheco Creek by Pacheco Pass Water District



Project Components

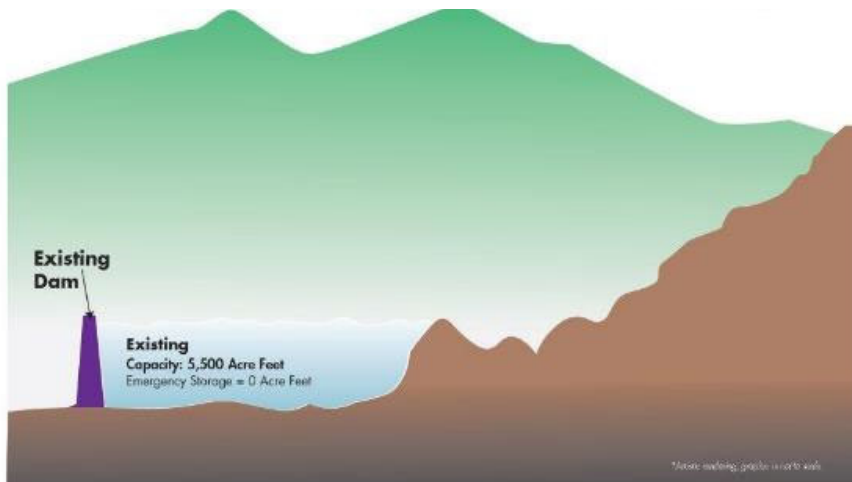
- **Dam** – approximately 300 feet high, one location under consideration
- **Reservoir** – up to 140 thousand acre-feet (TAF)
- **Spillway** – capable of passing the Maximum Probable Flood
- **Intake/Outlet Works** – large diameter pipe, smaller outlet pipe to Pacheco Creek
- **Pump Station & Conveyance Pipeline** – to transfer water to and from Pacheco Conduit
- **Roadways** – access to and from SR 152



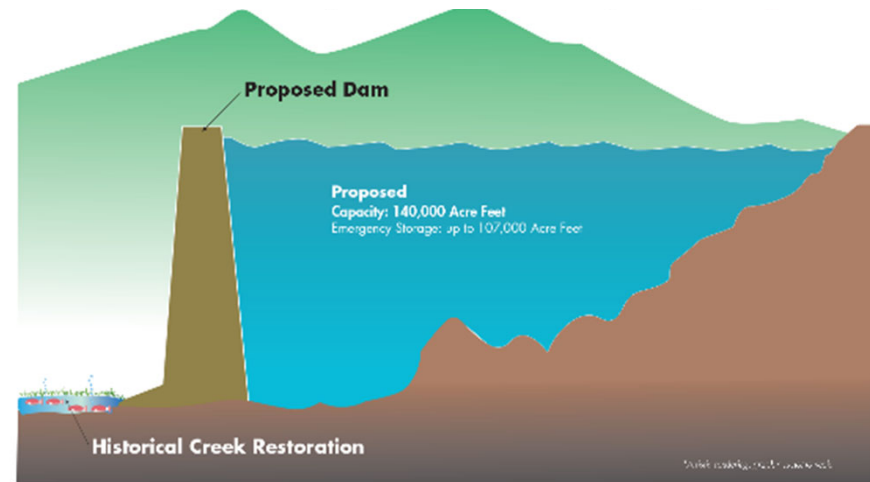
Existing & Proposed Dam Storage Capacity

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Existing – 5,500 AF



Expanded – 140,000 AF



Project Benefits

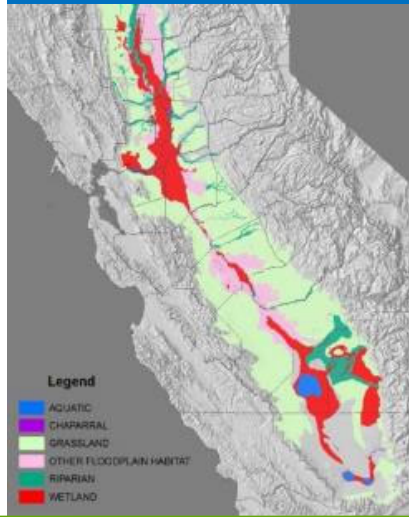
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ENVIRONMENTAL

Enhance habitat for federally threatened steelhead



Enhance water supply in below- normal years to wildlife refuges in the Delta



Increase water supply reliability and emergency water supply



Resolve the water quality problem in supply sourced from San Luis Reservoir



Reduce flooding along Pacheco Creek and to disadvantaged communities



Project Funding

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WSIP Grant - \$504,141,383

CA Water Commission –
Dec. 15, 2021, found Project
feasible and remains eligible for
funding

Early Funding Agreement
extension has been approved

Low Cost Federal WIFIA Loan - up to \$1.4B

Board approved Master Agreement
Dec. 13, 2022

Initial loan available for planning and
design costs only

Construction loan subject to Board
approval of CEQA and Project Plans
and Specs

WIIN Act Grant through Reclamation

DEC Review of 30% Design and
Cost Estimate - no official
comments

Needs Reclamation / Department
of Interior Approval for funding

VW & Partners

Valley Water rate payers

Potential partners

Planning Phase - Complete

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2020

- ✓ Phase 1 Geotechnical Exploration – June

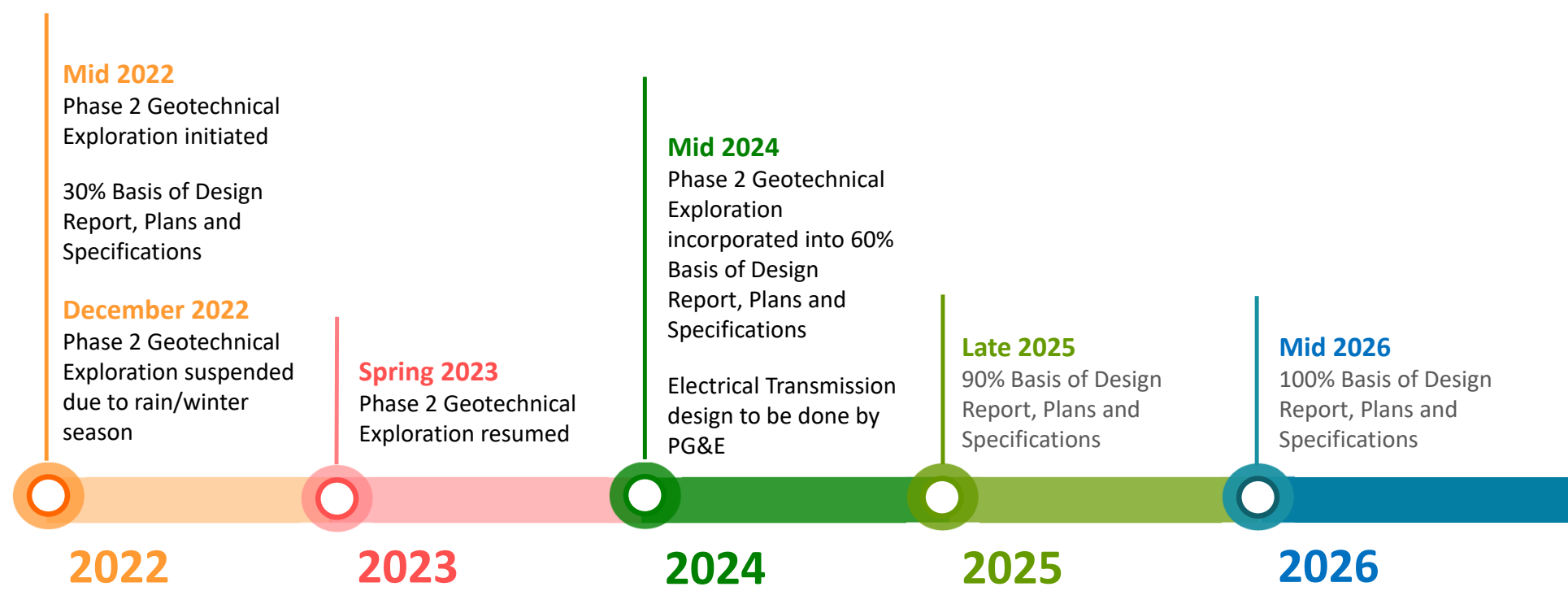
2021

- ✓ Problem Definition Report– March

2022

- ✓ Revised Alternatives Analysis - September
 - Based on DSOD Hardfill Dam Concerns and Other Updated Information
 - Updated Recommended Alternative from U/S Hardfill to U/S Earthfill
- ✓ Staff Recommend Alternative/Alternatives Formulation Report – November
- ✓ Planning Study Report – November

Current Design Timeline



Current Environmental Timeline

Draft Environmental Impact report (EIR)

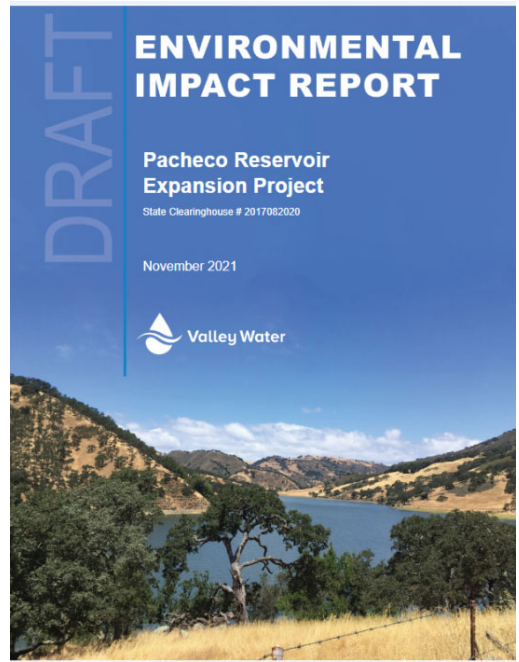
- Preferred alternative – US Hardfill Dam
- Released to Public – November 17, 2021
- Public Meeting & Scoping Meeting – January 13, 2022
 - Comments Received – February 15, 2022

Recirculated Draft EIR

- Recirculate Mid 2025
- Combined EIR/EIS
- Preferred alternative – US Earthfill Dam
- Extension of electrical transmission line & SR 152 overcrossing Tribal consultation

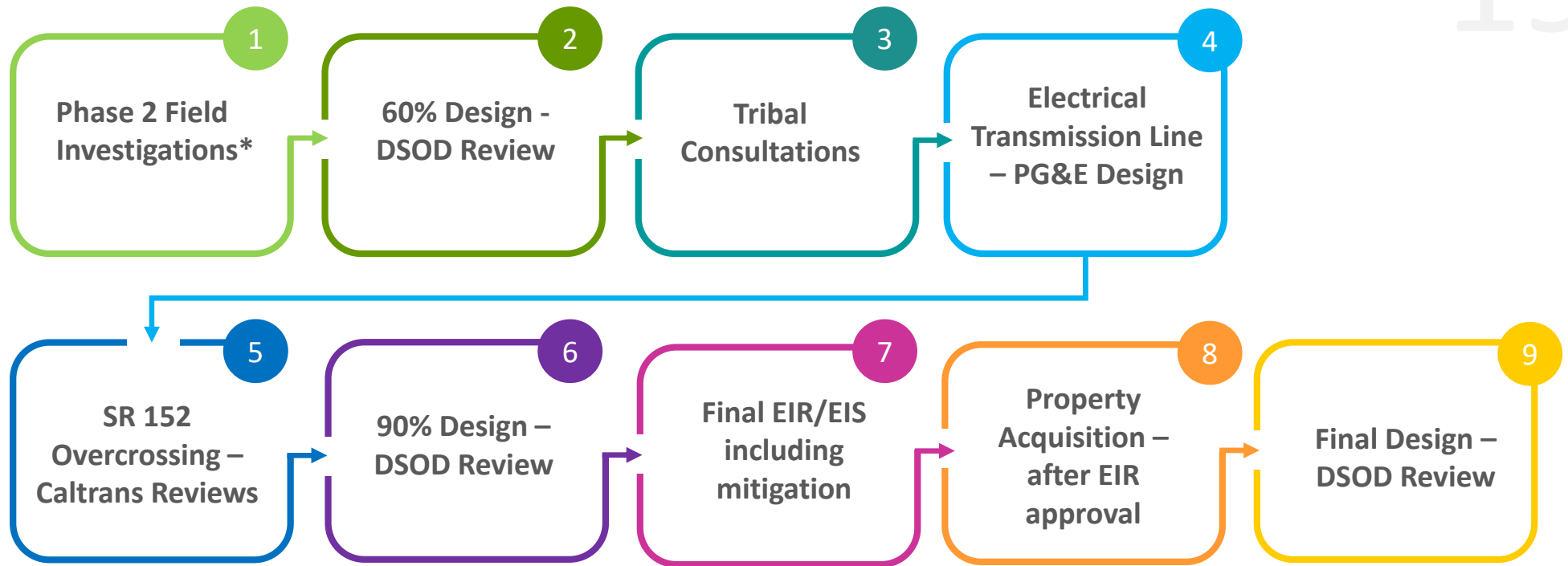
Final EIR / EIS

- Mid 2026



Project Risks – Critical/Near Critical Path Activities

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*Biological Studies – 3 Seasonal Surveys; Cultural Studies – Pedestrian Survey and Excavations; Geological/Geotechnical Studies

Planning Study Report

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Recommended Project Facilities

- 140 TAF U/S Earthfill Dam
- Spillway & Inlet/Outlet Works
- Conveyance Facilities (pipelines, tunnel, pump station)
- Decommission Existing Dam & Creek Restoration
- Electrical Transmission Line & Substation
- Permanent & Temporary Access Roads

Estimated Construction

- Cost: \$2.3B
- Time: 7.5 years

Operational Dependencies – Transmission Facility Projects

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Project No.	Project Name	Cost*
95084002	10-Year Pipeline Rehabilitation (FY18-FY27)	140,053
92304001	Almaden Valley Pipeline Replacement Project	110,599
95044001	Distribution System Master Plan Implementation	8,957
26764001	IRP2 Additional Line Valves (A3)	16,551
95044002	SCADA Master Plan Implementation	6,470
92764009	Small Capital Improvements, Raw Water Transmission	12,948
94764006	Small Capital Improvements, Treated Water Transmission	1,200
94084007	Treated Water Isolation Valves	8,502
92264001	Vasona Pump Station Upgrade	22,268

*2023-2027 Five-Year Capital Improvement Program (cost in thousands)

Total 327,548

Operational Dependencies – Treatment Facility Projects

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Project No.	Project Name	Cost*
93234044	PWTP Residuals Management	43,044
93294051s	RWTP Residuals Remediation	80,423
93294057	RWTP Reliability Improvement	461,739
93764004	Small Capital Improvements, Water Treatment	54,733
93284013	STWTP Filter Media Replacement Project	14,333
93084004	Water Treatment Plant Electrical Improvement Project	11,626
93044001	WTP Master Plan Implementation	9,457

* 2023-2027 Five-Year Capital Improvement Program (cost in thousands)

Total 675,355

Water Supply Distribution Map



QUESTIONS





Valley Water

Clean Water • Healthy Environment • Flood Protection

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