



Pacheco Reservoir Expansion Project: Water Supply Master Plan and Milestone Review

March 16, 2023

BOARD ACTIONS

Receive Information on the Work Study Session on the Pacheco Reservoir Expansion Milestone Review, Project No. 91954002 (Santa Clara County - District 1, Merced County).

STAFF RECOMMENDATIONS

- A** Receive information on Board Adopted water supply strategy, Water Supply Master Plan update and decision framework for future water supply projects;
- B** Receive information on the Work Study Session on the Pacheco Reservoir Expansion Milestone Review, Project No. 91954002 (Santa Clara County - District 1, Merced County);
- C** Schedule future Work Study Session on Water Supply Master Plan Portfolio when Project reaches 60% level design; and
- D** Provide direction to staff.

Role of Water Supply Master Plan (WSMP)

- Roadmap for future investment
- WSMP identified projects generally prioritized and used as the basis for comparison with any new water projects
- Project evaluations within the context of the WSMP
- Primary factor for all projects is their ability to meet dry year demands

WSMP and Board Approved Strategies

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Strategy 1

Secure existing supplies and infrastructure



Strategy 2

Expand water conservation and reuse



Strategy 3

Optimize the use of the existing system

Strategy 1 – Secure Existing Supplies & Infrastructure



- Complete baseline projects
 - Pipeline maintenance
 - Dam retrofits
 - Treatment plant improvements
 - Other projects to maintain existing system
- Delta Conveyance Project

Strategy 2 – Expand Water Conservation & Reuse



- 24,000 AF potable reuse

- 110,000 AF of conservation by 2040 (including stormwater capture)



Water Efficient Landscape

Strategy 3 - Optimize Use of Existing System

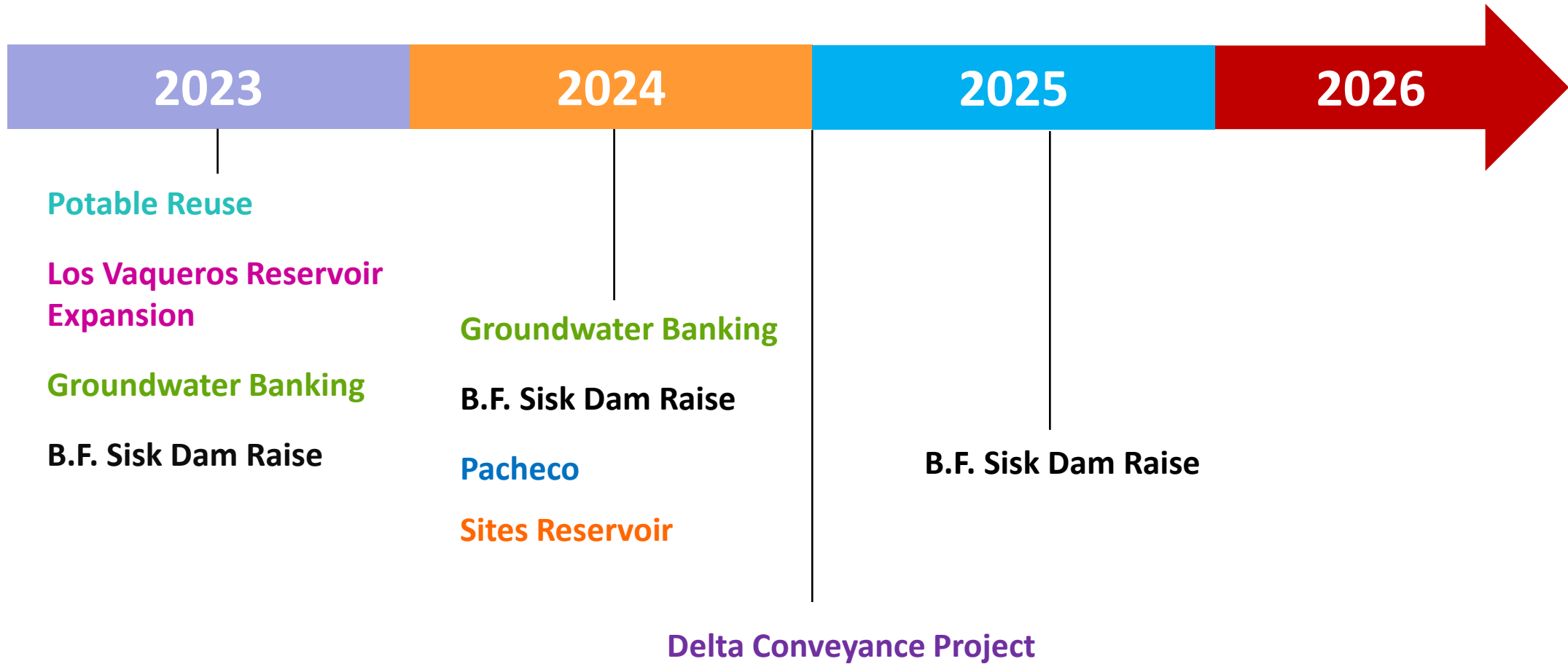
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- New Groundwater Bank
- Los Vaqueros Expansion
- Pacheco Reservoir Expansion
- B.F. Sisk Dam Raise
- Sites Reservoir

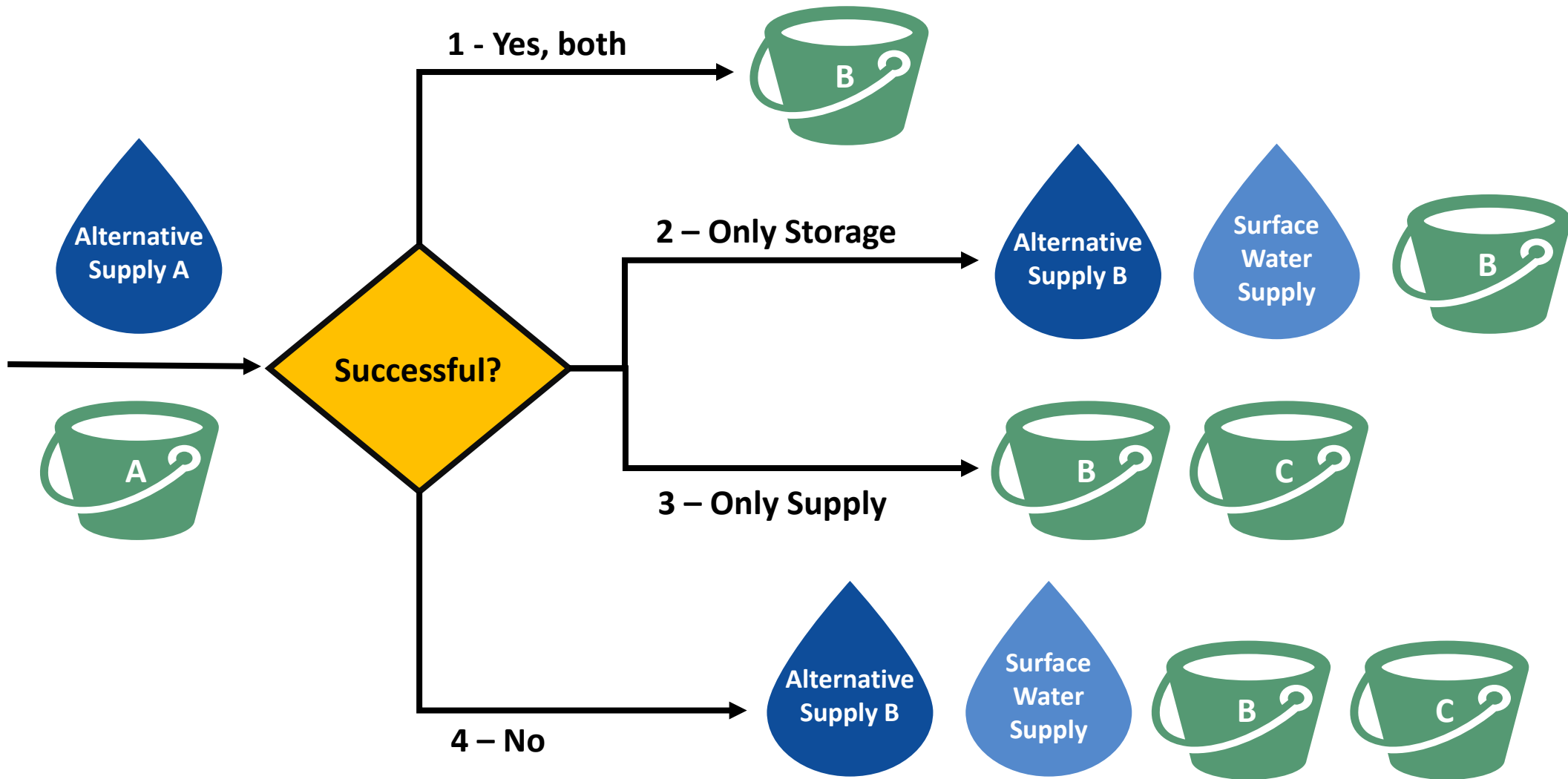


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Upcoming Project Decision Points



Strategy - Pair Supply with Diversified Storage



WSMP Update Schedule

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2023

- Support rate setting process
- Develop a workplan to establish goals and procedures
- Refine project evaluation framework
- Project/portfolio analysis and evaluation
- Stakeholder engagement

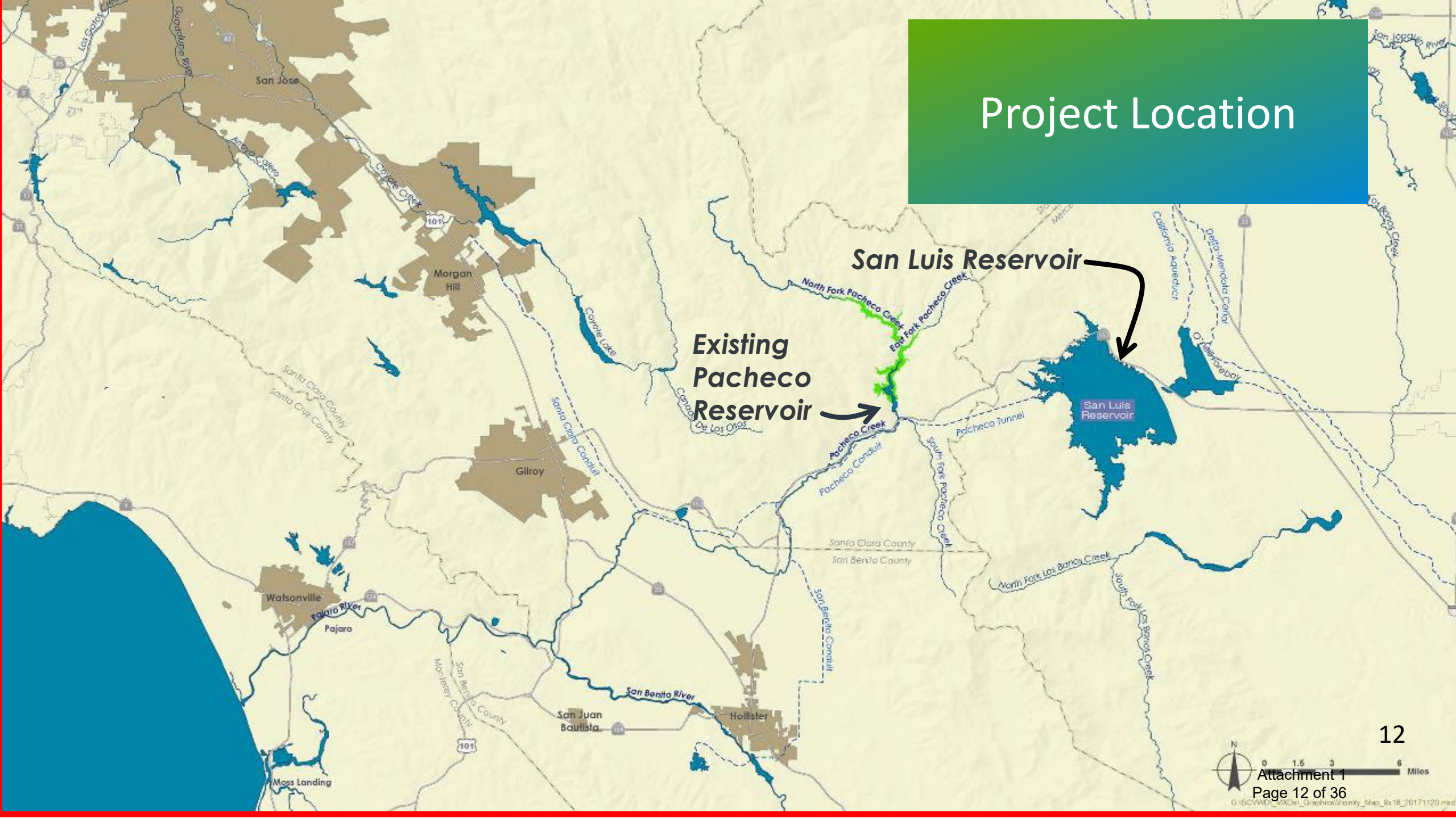
2024

- Plan development
- Stakeholder outreach
- Plan adoption



QUESTIONS

Project Location



Public Benefits

ENVIRONMENTAL

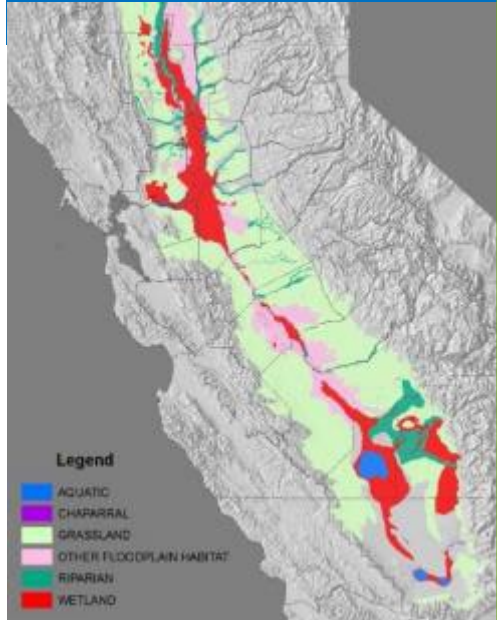
Enhance habitat for federally threatened steelhead

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

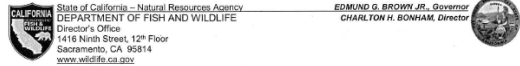


Public Benefit: Ecosystem Improvements

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California Department of
Fish and Wildlife



State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Director's Office
1416 Ninth Street, 12th Floor
Sacramento, CA 95834
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EDMUND G. BROWN, JR., Governor
CHARLTON H. BOWMAN, Director

May 23, 2018

Joseph Yun
Executive Officer
California Water Commission
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Yun:

RELATIVE ENVIRONMENTAL VALUE OF WATER STORAGE INVESTMENT PROGRAM PROJECTS AND DEPARTMENT FINDINGS

Thank you for your leadership during this process. As you know, the California Department of Fish and Wildlife (Department) is tasked with the responsibility of making recommendations to the California Water Commission (Commission). I acknowledge the complexity of the process has been challenging for you, Commissioners, the reviewing agencies, and each applicant. No one has tried a competitive approach to water storage on such a scale before. The good news is that the Commission and applicants are as close as ever to adding much needed water storage capacity through a portfolio of different types of projects across a diverse geography.

This competitive approach must adhere to the controlling statute and the implementing regulations. At each step of your process, our Department has always based our recommendations on the plain instructions in the statute and the regulations. All of the current applicants, as members of a broad-based stakeholder advisory group, helped develop these regulations during a two-year dialogue. At the last Commission meeting, the Department's recommendations to the Commission on monetized ecosystem benefits to include in the public benefit ratio calculations were discussed. This package contains our next assignment under the regulations related to our calculation of relative environmental value for the ecosystem improvements of a project and preliminary findings. However, as I describe at the end of this letter, each applicant retains an important obligation to complete due diligence for their projects promptly.

Pursuant to the Water Storage Investment Program (WSIP) regulations, this letter and attachments transmit to California Water Commission (Commission) staff (1) the relative environmental value scores calculated by the California Department of Fish and Wildlife (Department) and (2) the Department's findings on the public benefits claimed by each WSIP project. The WSIP regulations require the Department to calculate a relative environmental value for the ecosystem improvements, based on information supplied in each project's application. (Cal. Code Regs. tit. 23, § 8007, subd. (c).) Additionally, if the Department finds the public benefits as described in a project's application meet all the requirements of Water Code section 79750 et seq. for which the reviewing

Conserving California's Wildlife Since 1870

May 23, 2018

FINDINGS ON PUBLIC ECOSYSTEM BENEFITS

Based on the information supplied in the application, the technical review of the ecosystem benefits, the requirements of Water Code section 79753, and the Department's assessment of the Project's relative environmental value in achieving the ecosystem priorities identified in the Code of Regulations, the Department hereby makes the following findings with respect to the monetized ecosystem benefits identified in the application for funding for the Pacheco Reservoir Expansion Project:

Steelhead Habitat

The Department finds that the provision of year-round reservoir releases to Pacheco Creek, targeting average monthly flows ranging from 10-20 cfs, constitutes an ecosystem improvement that meets the requirements of Water Code section 79750 et seq.

Refuge Water Supply

The Department finds that the delivery of 2,000 acre-feet of Incremental Level 4 water, during below normal water years, to south-of-Delta wildlife refuges constitutes an ecosystem improvement that meets the requirements of Water Code section 79750 et seq.

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Public Benefit: Emergency Response

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CALIFORNIA DEPARTMENT OF
WATER RESOURCES

STATE OF CALIFORNIA - CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942898
SACRAMENTO, CA 94294-0001



May 21, 2018

May 21, 2018

Mr. Joseph Yun
Executive Officer
California Water Commission
Post Office Box 942836
Sacramento, California 94236-0001

Project: Pacheco Reservoir Expansion Project
Applicant: Santa Clara Valley Water District

RE: Water Storage Investment Program — Findings

Dear Mr. Yun:

Herein, the Department of Water Resources (DWR) provides the California Water Commission (CWC) DWR's findings pursuant to California Code of Regulations, title 23, section 6012 and as required by Water Code section 79755(a)(3) for the Water Storage Investment Program (WSIP).

DWR staff has conducted a thorough review of the information provided by the applicant to develop findings for each physical public benefit per Water Code section 79753(a)(3)-5: flood control, emergency response, and recreational purposes. DWR's findings are based on the technical review of the public benefits as described in each application and using the information submitted by the applicants.

DWR staff evaluated each application as subject matter experts and implemented a careful internal review pursuant to applicable statutes, the WSIP Regulations (Cal. Code Regs., tit. 23, § 6000 et seq.) and the WSIP *Technical Reference* (Nov. 2016). Rigorous quality control measures were established to ensure all applications were reviewed in a fair and equal manner. In addition, staff and review teams met on a weekly basis to discuss preliminary findings, assure consistency, and to identify issues for further evaluation to be discussed by the broader review team.

The application and appeal materials provided by the applicant describe the potential public benefits. Based on the WSIP Regulations, a finding does not commit DWR to a definite course of action regarding any subsequent determination or approval by DWR under any regulatory or statutory authority beyond section 6012 of the WSIP Regulations.

DWR has reviewed documentation that the applicant has provided and verified that the proposed PRE Project could provide dedicated emergency response water supplies to local agencies through existing and proposed infrastructure.

Pursuant to Water Code section 79755(a)(3), DWR finds that the public benefits for emergency response of the proposed Pacheco Reservoir Expansion project meet all the requirements of Water Code, Division 26.7, Chapter 8 (Wat. Code, § 79750 et seq.).

Incidental Benefit: Flood Protection

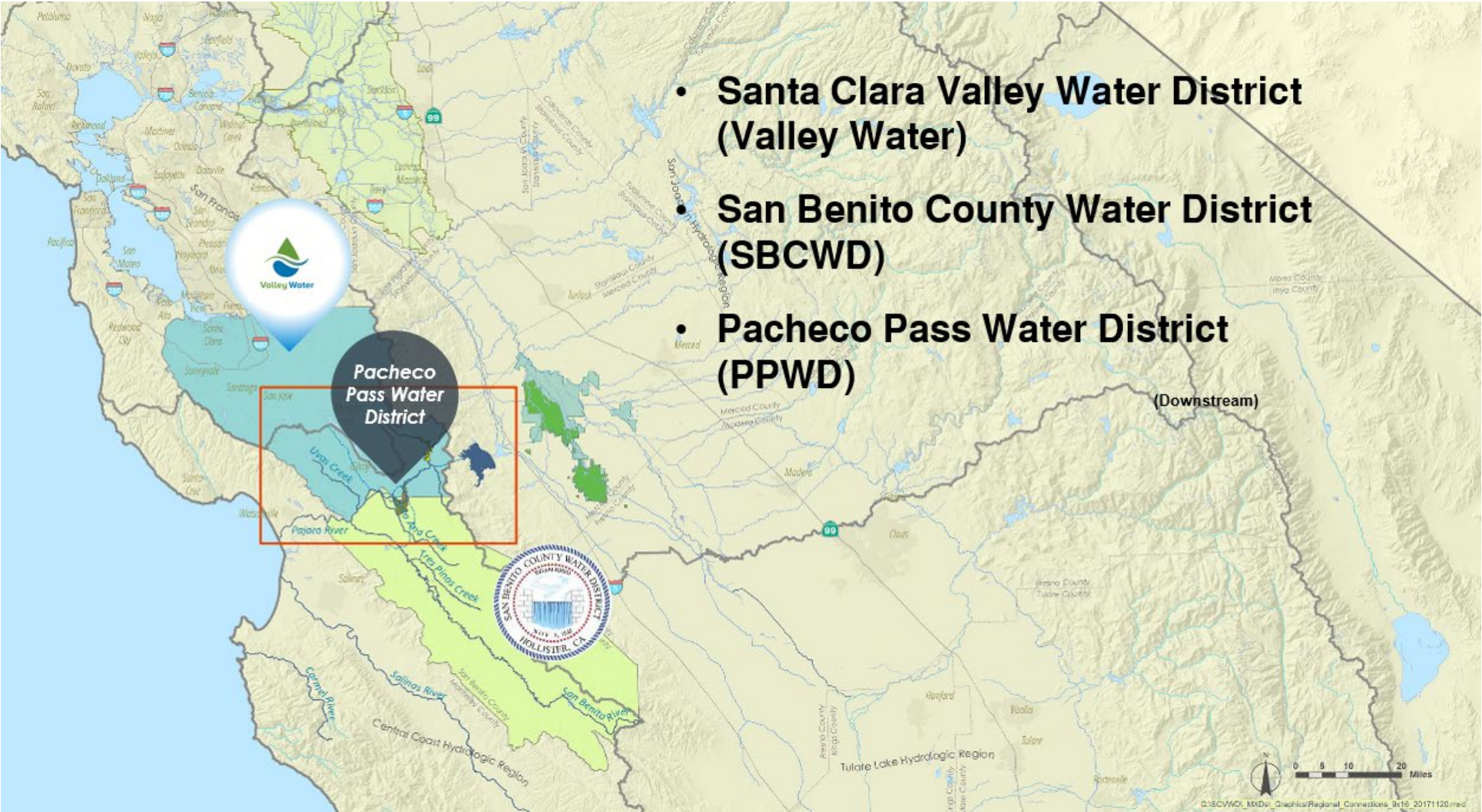
An expanded Pacheco Reservoir would provide for flow attenuation, controlled releases, and flood protection benefit to the flood prone downstream areas on Pacheco Creek

- In January 2023, the daily flow on Pacheco Creek at the USGS stream gage near Walnut Avenue peaked at 15,000 cfs and exceeded 2,000 cfs several times
- Based on the hydrologic analysis presented in the Draft EIR, if the expanded reservoir had been in place, these mean daily flows within Pacheco Creek near Walnut Avenue would have been reduced 15 - 24% on average



January 11, 2017, Flooding from Pacheco Creek

Pacheco Reservoir Expansion Project Partners



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Example of Potential Partner Use



Partnership Status

2018 Memorandum of Understanding

- San Benito County Water District (SBCWD)
- Pacheco Pass Water District (PPWD)

Partnership Interest

- Four water agencies comprised of 11 members expressed interest
- Pending discussions with other agencies
- Two Letters of Interest (LOI) received

Partner Agreements

- No partner agreements have been finalized
- Public benefit agreements will need to be negotiated with the State prior to execution of partnership agreements



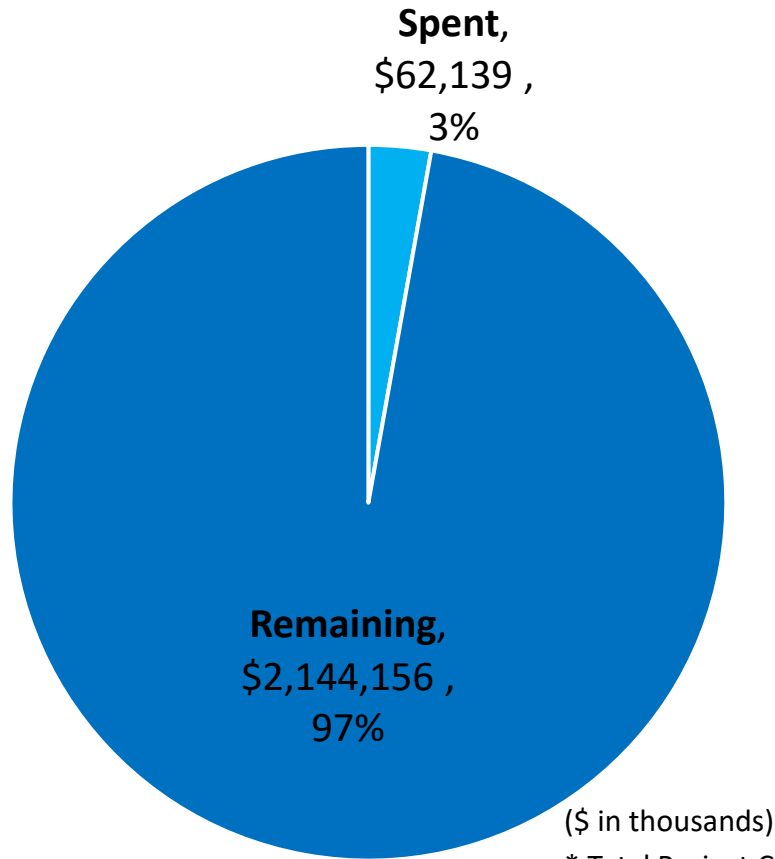


QUESTIONS

Project Cost Summary

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Total Project Cost: \$2.206B (without inflation)*



(\$ in thousands)

* Total Project Cost with inflation: \$2.78 billion

(\$ in thousands)

	Budget	Spent	Remaining
Planning	\$ 11,302	\$ 12,921	\$ (1,619)
Environmental	\$ 34,574	\$ 14,135	\$ 20,439
Design	\$ 127,847	\$ 32,908	\$ 94,939
ROW	\$ 21,910	\$ 1,846	\$ 20,064
Construction	\$ 2,006,770	\$ -	\$ 2,006,770
Close-out	\$ 360	\$ -	\$ 360
Task 0000	\$ 3,308	\$ 329	\$ 2,979
Total	\$ 2,206,071	\$ 62,139	\$ 2,143,932

Notes:

1. Construction phase includes \$50 million for mitigation measures.
2. Spent as of 2/22/23. Task 0000 Spent reflects re-allocation of \$2.688M to a phase.
3. Annual operational costs projected at approximately \$5 million.

Project Financing Costs

(\$ in millions)

Fiscal Year	B	C	D	E	F	G	H	I
In 5 Year	Capital	Prop 1	WIFIA	Rev Bond	WIFIA	Rev Bond	35%	Net Cash
Increments	Cost	Grant	Debt	Debt	Debt	Debt	Partner	Flow
			Proceeds	Proceeds	Service	Service	Payments	
FY 19 - 23	102.6	(20.2)	(15.4)	-	-	-	-	66.9
FY 24 - 28	345.8	(93.2)	(171.3)	(57.5)	-	2.3	(10.1)	15.9
FY 29 - 33	1,642.2	(390.7)	(664.3)	(178.5)	8.0	74.7	(63.6)	427.8
FY 34 - 38	690.1	-	(513.2)	-	298.4	94.4	(224.1)	345.6
FY 39 - 43	-	-	-	-	479.6	94.4	(291.5)	282.5
FY 44 - 48	-	-	-	-	479.8	94.4	(291.5)	282.6
FY 49 - 53	-	-	-	-	495.7	94.4	(297.1)	293.0
FY 54 - 58	-	-	-	-	863.4	92.1	(415.6)	539.8
FY 59 - 63	-	-	-	-	935.7	19.7	(390.3)	565.1
FY 64 - 67	-	-	-	-	705.6	-	(251.0)	454.7
Total	2,780.7	(504.1)	(1,364.2)	(236.0)	4,266.2	566.4	(2,234.9)	3,274.1

- Key Assumptions:**
- WIFIA principal payments for construction loan begin in FY 55
 - WIFIA borrowing rate is 4.7% for planning and design loan, 5.7% for construction loan
 - WIFIA loan draws start in FY 27, including refunding short-term debt issued in prior years

\$5,509.0M without partners

Translation of net cash flow to North County groundwater charge, or monthly impact to average household:

	<u>With Partners Payments</u>	<u>Without Partner Payments</u>
FY 29 to FY 33:	\$387/AF or \$13.35/month	\$444/AF or \$15.30/month
FY 34 to FY 53:	\$255/AF or \$8.80/month	\$488/AF or \$16.82/month
FY 54 to FY 67:	\$430/AF or \$14.75/month	\$720/AF or \$24.80/month

Roughly 10% of overall North County groundwater charge

Project Funding

WSIP Grant - \$504,141,383 (Conditional Award)

CA Water Commission (CWC) – December 15, 2021, found Project feasible and remains eligible for funding

Early Funding Agreement (\$24.2M) extension has been approved

Low Cost Federal WIFIA Loan - up to \$1.4B (Repaid through Groundwater Charges)

Initial loan available for planning and design costs only

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

Federal 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 (Groundwater Charges)

Potential partners (currently 35% participation targeted per VW Board direction on April 14, 2021, no participation required per CWC)

“Early Funding” Reimbursement to Date

Cost Share Total	Total Cost Share (48%) this Invoice	Total Cost Share (48%) to Date	Total Amount Remaining	Estimated Cost Share Next Reporting Period (10/1/22 – 12/31/22)
\$ 24,200,000	\$ 1,271,531	\$ 18,866,526	\$ 5,333,474	\$ 1,500,000

Notes:

- 1. The above numbers are as of the December 2022 progress report to CWC
- 2. Early funding reimbursement may be required to be repaid to the State if grant conditions are not met

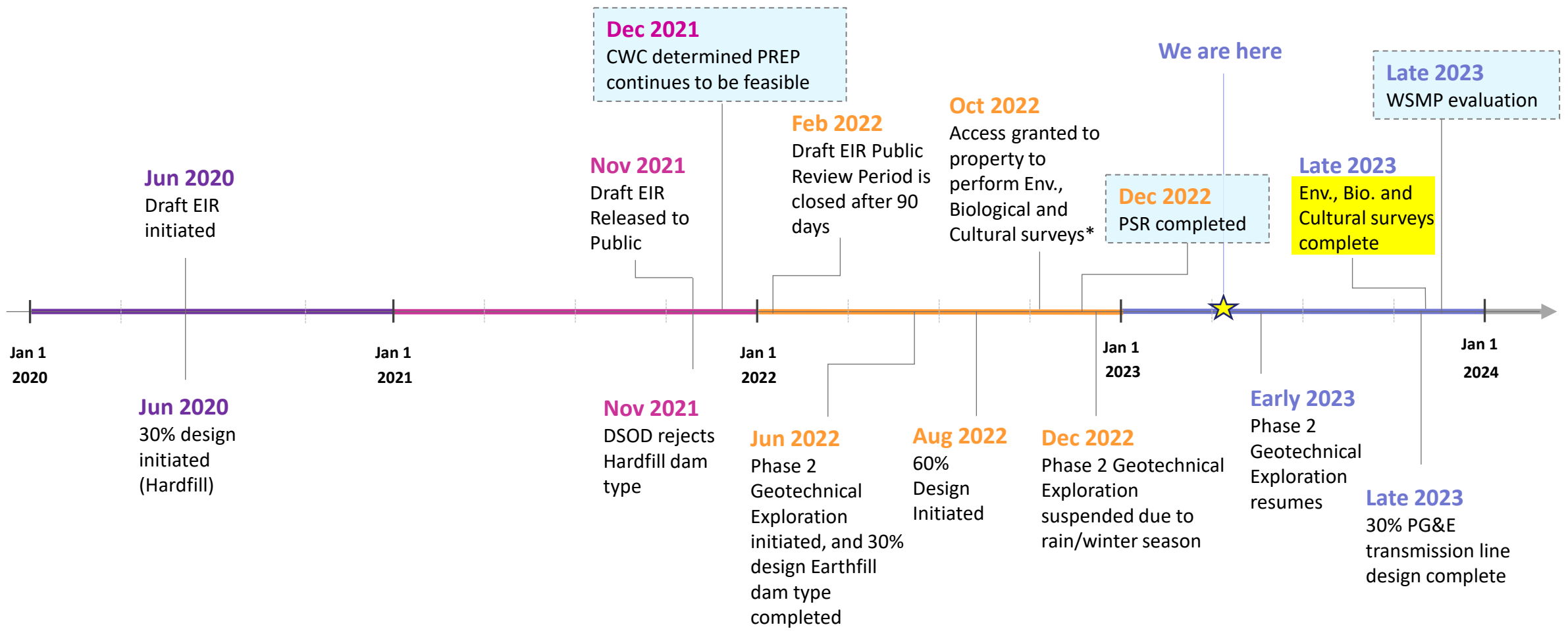


QUESTIONS

Environmental and Design Milestone Timeline

ENVIRONMENTAL

DESIGN



 Non-Environmental , Non-Design

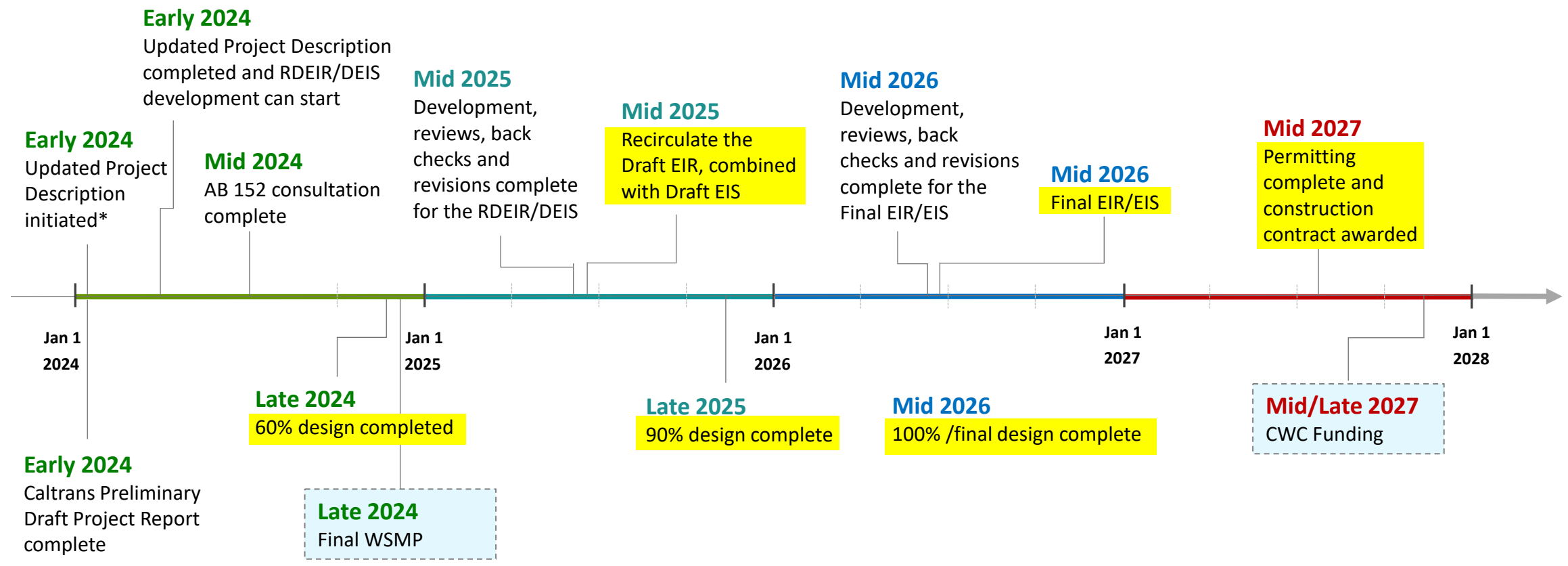
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Environmental and Design Milestone Timeline

ENVIRONMENTAL

DESIGN



Non-Environmental , Non-Design



Recommended WSMP Work Study Session - 60% Level Design: Mid to Late 2024

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Technical

- Design at 60% level
- Geotechnical information for all project components
- Site access (Caltrans) and power transmission (PG&E) developed to 30%

Environmental

- Biological and cultural surveys completed
- AB 152 consultation complete
- Additional input from regulatory agencies on mitigation and permitting

Economic

- Updated cost estimate (60% Design level) with latest economic conditions/forecast
- Additional information on potential partnerships, funding, and financing
- Updated Cost/Benefit analysis

Draft EIR/EIS Release: Mid 2025

Technical

Environmental

- Recirculated DEIR/DEIS released for public review
- Significant progress on permitting and identifying mitigation

Economic

- Updates to permitting/mitigation costs

90% Design Level: End 2025

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Technical

- Design at 90% level for all project components

Environmental

- RDEIR/DEIS public comments available

Economic

- Updated cost estimate (90% Design level) with O&M
- Additional information on potential partnerships, funding, and financing
- Updated Cost/Benefit analysis

Finalized Design & EIR/EIS: Late 2026

31

Technical

- Design at 100%/Final level for all project components
- Construction contract procurement process established, potential early input

Environmental

- Final EIR/EIS completed
- Most permit applications submitted or near completion

Economic

- Final Engineer's Estimate on construction cost with potential third-party estimate
- Partnerships, funding, and financing plan complete

Advertisement for Construction: Mid 2027

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Technical

- Completed bid package to Board for approval to release for bids

Environmental

- All environmental permitting complete
- Mitigation measures developed

Economic

- Final costs developed
- All funding and financing sources arranged including WSIP full funding determination

Feasibility Information Available by Milestone

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Milestone	Technical	Environmental	Economic
Late 2024 60% Design Completion	☑	☑	☑
Mid 2025 Draft EIR Recirculation/EIS Release		☑	☑
End 2025 90% Design Completion	☑	☑	☑
Mid 2026 EIR/EIS Adoption	☑	☑	☑
Mid 2027 Construction Contract Award			☑

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Board Actions

A

Receive information on the Board Adopted Water supply strategy, Water Supply Master Plan Update and decision framework for future water supply projects



B

Receive information on the Work Study Session on the Pacheco Reservoir Expansion Milestone Review



C

Schedule future Work Study Session on Water Supply Master Plan Portfolio when Project reaches 60% level design



D

Provide direction to staff



QUESTIONS





Valley Water

Clean Water • Healthy Environment • Flood Protection