Pacheco Reservoir Expansion Project

October 8, 2024

Valley Water

Operations of Expanded Pacheco Reservoir

Expanded Pacheco Reservoir Operations

Emergency Water Supply

WSIP Public Benefit

Capture and store local and imported water during wet periods with excess supplies and use during emergencies (e.g., system outages) and droughts

M&I Water Supply (non-emergency)

Capture and store water (including CVP/SWP allocations) during periods with excess supplies and release to meet unmet Valley Water customer demands

M&I Water Quality

Modify delivery patterns from San Luis Reservoir and release stored supplies from expanded Pacheco Reservoir during low point events at San Luis Reservoir

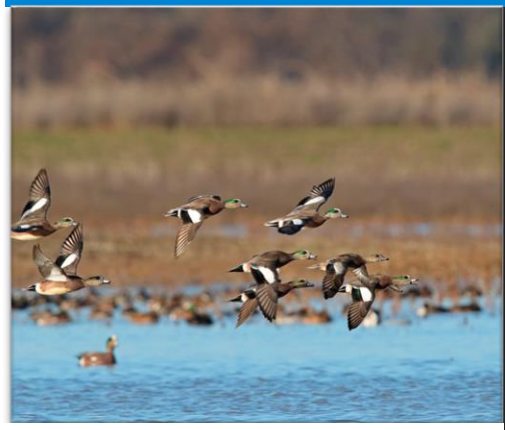
Environmental Enhancement: Pacheco Creek Fisheries

WSIP Public Benefit

Capture natural inflows for release to Pacheco Creek for improved flow and temperature conditions for federally threatened South-Central California Coast Steelhead

Environmental Enhancement: San Joaquin Watershed Wildlife Refuges

WSIP Public Benefit



Through improved system flexibility and efficiency, provide additional water supplies to south of Delta wildlife refuges in below-normal years

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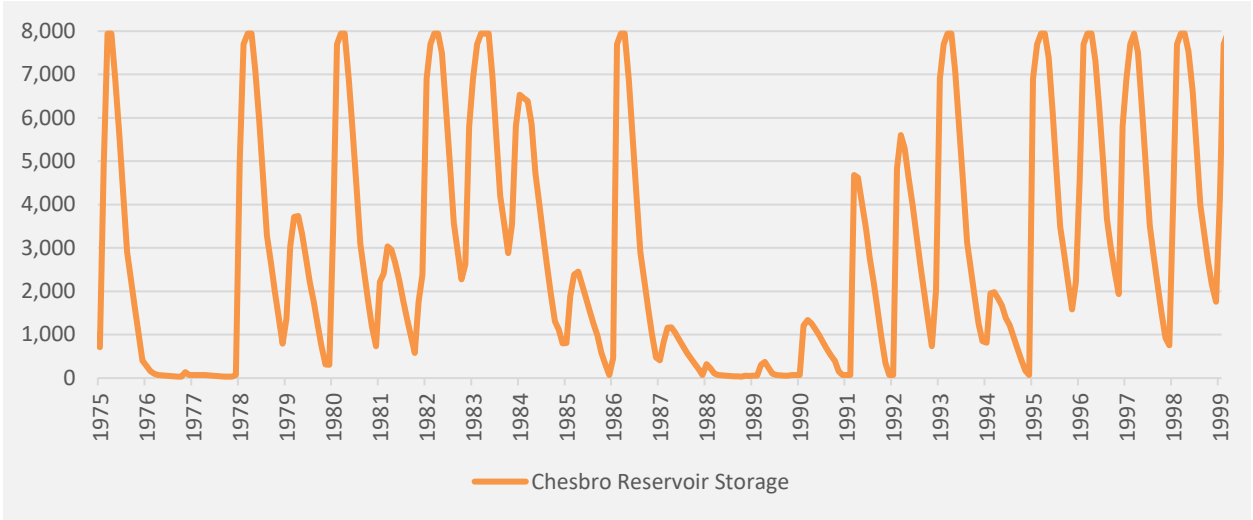
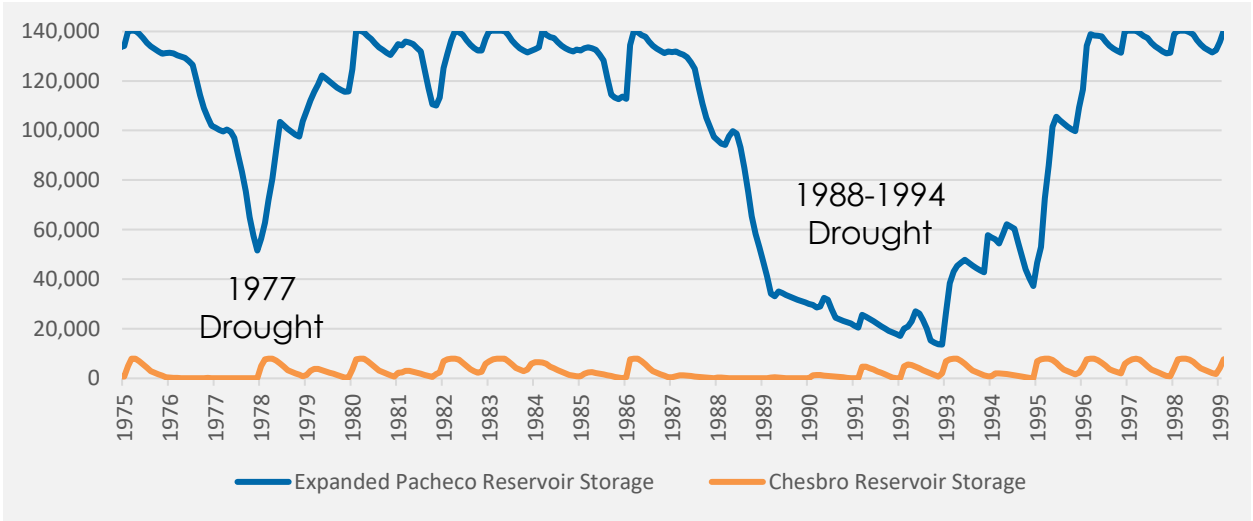
Reservoir Operations: Annual vs. Multi-Year

- Existing Valley Water reservoirs
  - Annual fill and drain pattern
  - Limited water quantities carried to next year water reserves
  - Limited ability to provide supplies during droughts
- Expanded Pacheco Reservoir
  - Multi-year fill and drain patterns (wet period to drought period)
  - Significant water quantities carried over in reservoir as future water supply reserves
  - Significant ability to provide supplies during system outage emergencies and droughts





Notes:

- Based on Draft EIR simulations for 2030 conditions (including climate change)

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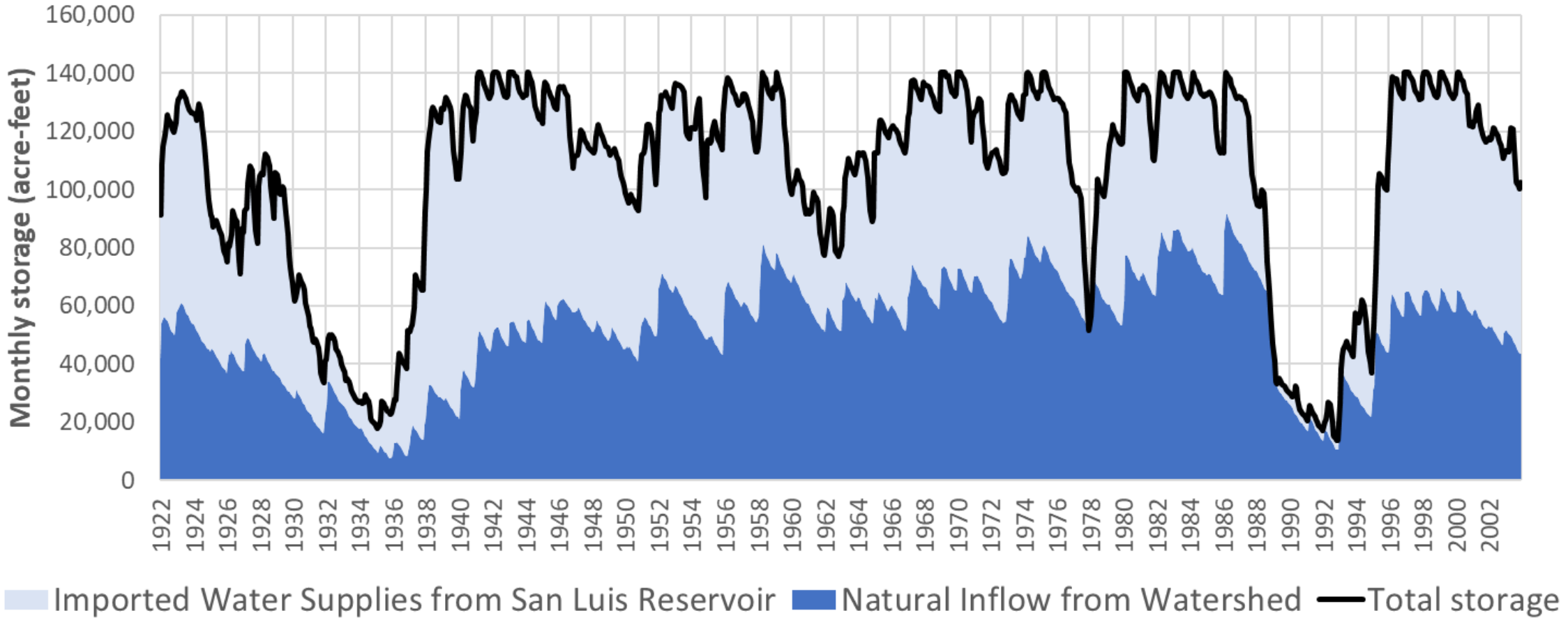
Water Rights Processes with California State Water Resources Control Board

Expanded Reservoir Water Sources



Results from Proposed Project for 2030 conditions (including climate change)

Water Rights

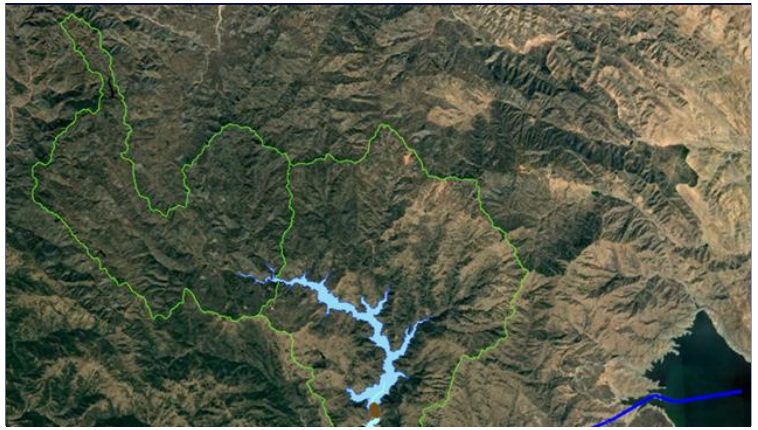
Potential Changes to Imported Water Contracts or Water Rights

Water right or contractual changes may be necessary to store imported water supplies, pending upcoming discussions

Pacheco Pass Water District Water Right Permit 004312 (7,250 acre-feet annually)

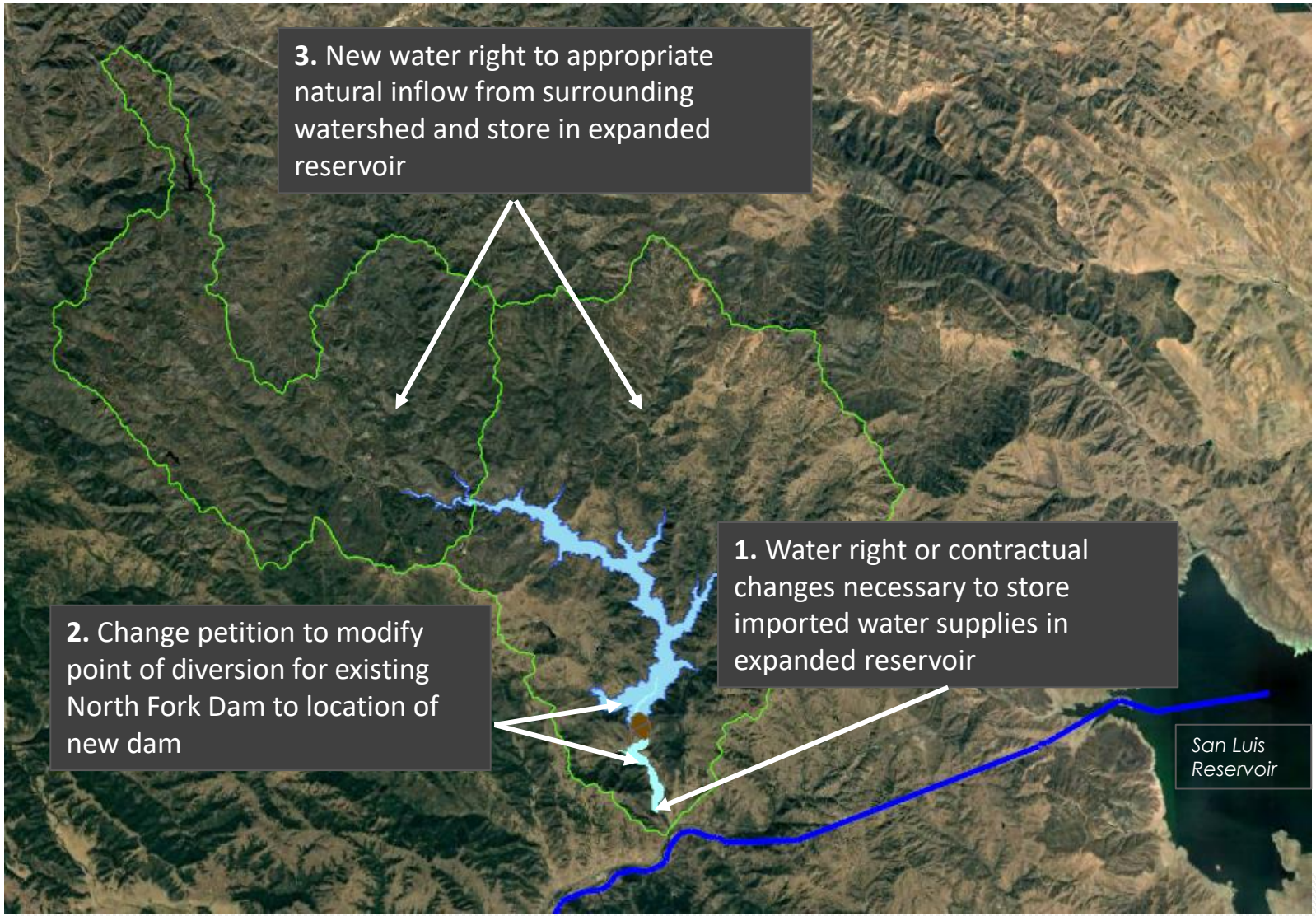
Change petition to modify point of diversion for existing North Fork Dam to location of new dam

New Water Right for North Fork Pacheco Creek Natural Inflows



New water right to appropriate natural inflow from surrounding watershed for storage

Water Rights Process



Water Storage Investment Contracts for Program Public Benefits and Funding Agreement

Pictured above: Pacheco Creek below Existing North Fork Dam

Water Storage Investment Program Contracts and Agreements

- Public Benefit Contracts with Administering Agencies (DWR and CDFW)
  - Public Benefits are State Level benefits and a requirement of the WSIP Grant
  - Required for each public benefit
    - Emergency response
    - Environmental enhancement - Pacheco Creek Fisheries
    - Environmental enhancement - San Joaquin Watershed Wildlife Refuges
  - Each contract to include an adaptive management plan for public benefit including monitoring, metric evaluation methods, and decision-making processes
- Funding Agreement
  - California Water Commission

WSIP Contracts for Administering Public Benefits

Public Benefit Type		Contract Entity	Contract Considerations
	**Emergency Water Supply**	California Department of Water Resources	Average increase in groundwater and surface water storage available for emergency response: • 99,900 acre-feet (2021 Supplemental Feasibility) • 86,700 (2018 Maximum Eligibility Determination)
	**Environmental Enhancement: Pacheco Creek Fisheries**	California Department of Fish and Wildlife	Increased viable habitat for Pacheco Creek Steelhead • Year-round flows to allow fish to migrate up and down the Creek • Lower Creek water temperatures needed for fish survival
	**Environmental Enhancement: San Joaquin Watershed Wildlife Refuges**	California Department of Fish and Wildlife	Increase in water supplies to San Joaquin watershed through transfer or exchange of Valley Water CVP supplies in below normal years • 2,000 acre-feet (2021 Supplemental Feasibility) • 2,000 acre-feet (2018 Maximum Eligibility Determination)

California Water Commission Funding Agreement

Requirements for final approval of the WSIP funding agreement and encumberment of funds requires:

- Contracts executed with DWR and CDFW for State Level public benefits (emergency water supply and environmental enhancements)
- Completed feasibility studies
- Completed final environmental documentation
- Obtained federal, state, and local approvals and permits
- Contracts executed with other beneficiaries that derive benefits from the project

Pictured above: Existing Pacheco Reservoir March 2024

Ability to Capture Natural Inflows and Unstorable* CVP and SWP Supplies

*Excess Delta Water that can not be stored at any CVP or SWP storage facilities – need to be moved to Valley Water facilities

Ability to Capture Natural Inflows and Unstorable CVP and SWP Supplies

- Capture of natural inflows in expanded Pacheco Reservoir
- Section 215 water (unstorable CVP supplies) can be conveyed via Delta-Mendota Canal, San Luis Reservoir, and Pacheco Conduit to expanded Pacheco Reservoir
- Article 21 water (unstorable SWP supplies) can be conveyed via California Aqueduct, San Luis Reservoir, and Pacheco Conduit to expanded Pacheco Reservoir
- Storing unstorable water in Pacheco during wet years can help reduce reliance on Delta during drier years
- Section 215/Article 21 water mentioned would be in excess of contract amounts

Ability to Secure Drought and Emergency Water Supply: 2023 Water Year Case Study

42,900 acre-feet	**Natural Inflow** • Increased capture of natural inflow by expanded reservoir
58,000 acre-feet	**SWP Article 21 and CVP Section 215** • Increased capture of unstorable CVP and SWP water supplies and storage within expanded reservoir
20,200 acre-feet	**San Luis Reservoir Carryover Protection** • CVP water in San Luis Reservoir that could have been stored in Pacheco for future use

Other Unique Elements

Partnership Opportunity

- Up to 50,000 AF of storage capacity available for Partners.
- More in depth presentation to follow in the future.

Incidental Flood Protection

- Operated without flood rule curve but with empty space for winter flood flow capture.
- Reduces extensive flooding even for frequent/small events; 3 events in last seven years.

First new reservoir in Santa Clara County since 1957 (Uvas)

- Expands upon an existing reservoir not currently owned by Valley Water.

QUESTIONS

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