



One Water & Stewardship Committee

Bay-Delta & Conveyance

Managing Risks and Water Supply Reliability

Item 6a

October 7, 2024

Item 6a
**Bay-Delta &
Conveyance:
Managing
Risks and
Water Supply
Reliability**

Subject

Update on actions to address risks to the State Water Project and Bay-Delta water supply reliability.

Purpose

Provide background information on Bay-Delta related risk factors, the Delta Conveyance Project and associated planning funding.

State Water Project

Core Component of Metropolitan's Supply Portfolio

Vital To Metropolitan

- Metropolitan's infrastructure is designed and built to benefit from the SWP

Surface Storage

- San Luis Reservoir Carryover
- Flexible Storage
- Diamond Valley Lake

SWP Groundwater Banking

- Central Valley Programs
- High Desert Water Bank

Develop New Local Supplies

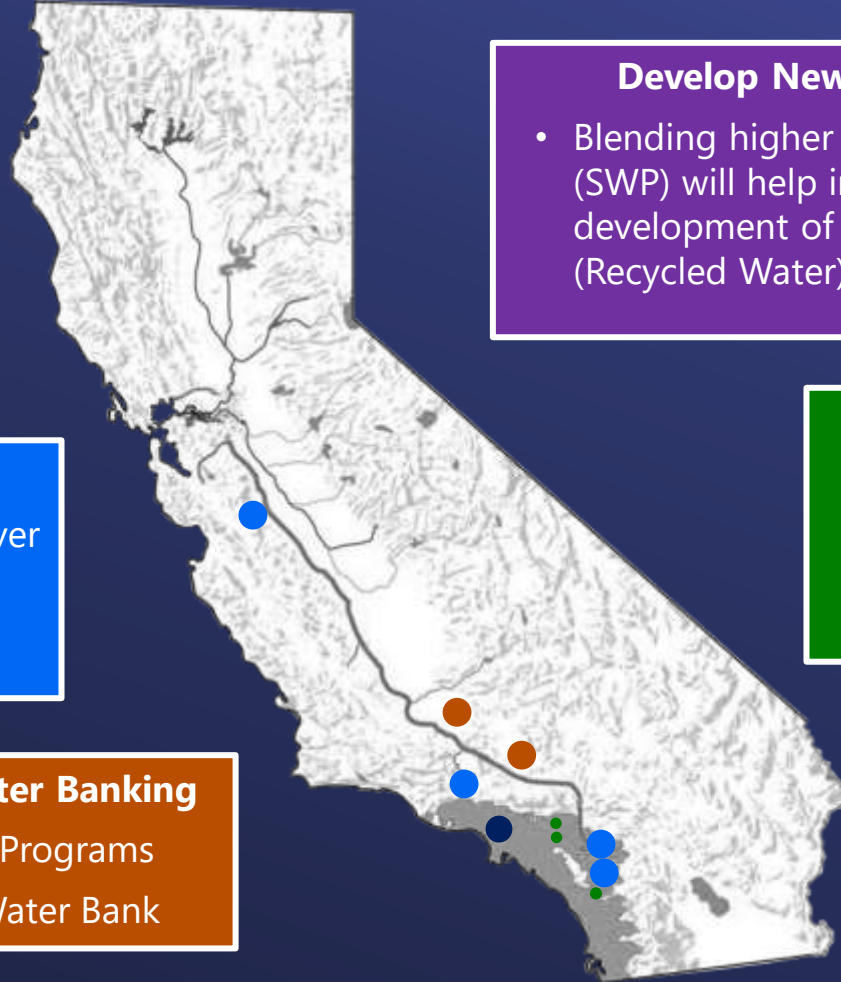
- Blending higher quality source water (SWP) will help in maintenance and development of local supplies (Recycled Water)

Water Quality at Existing Metropolitan Treatment Facilities

- Blending with Colorado River Supplies at Weymouth, Diemer, and Skinner Treatment Plants

Local Groundwater Recharge

- Supply for In-Service Area Groundwater Basins
- Conjunctive Use Programs



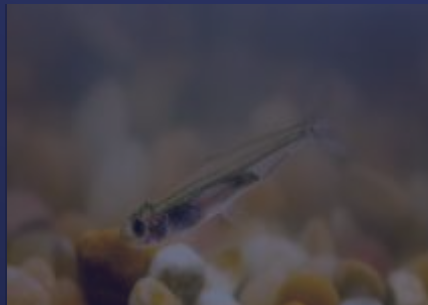
Risks to the Bay-Delta Water Supply Reliability



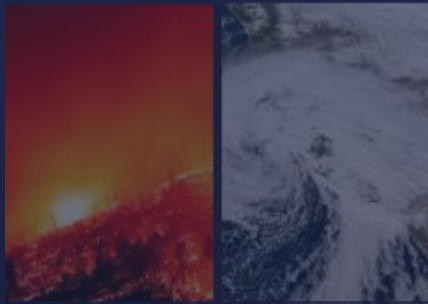
Delta Seismic Event: Seawater Intrusion and Disruption



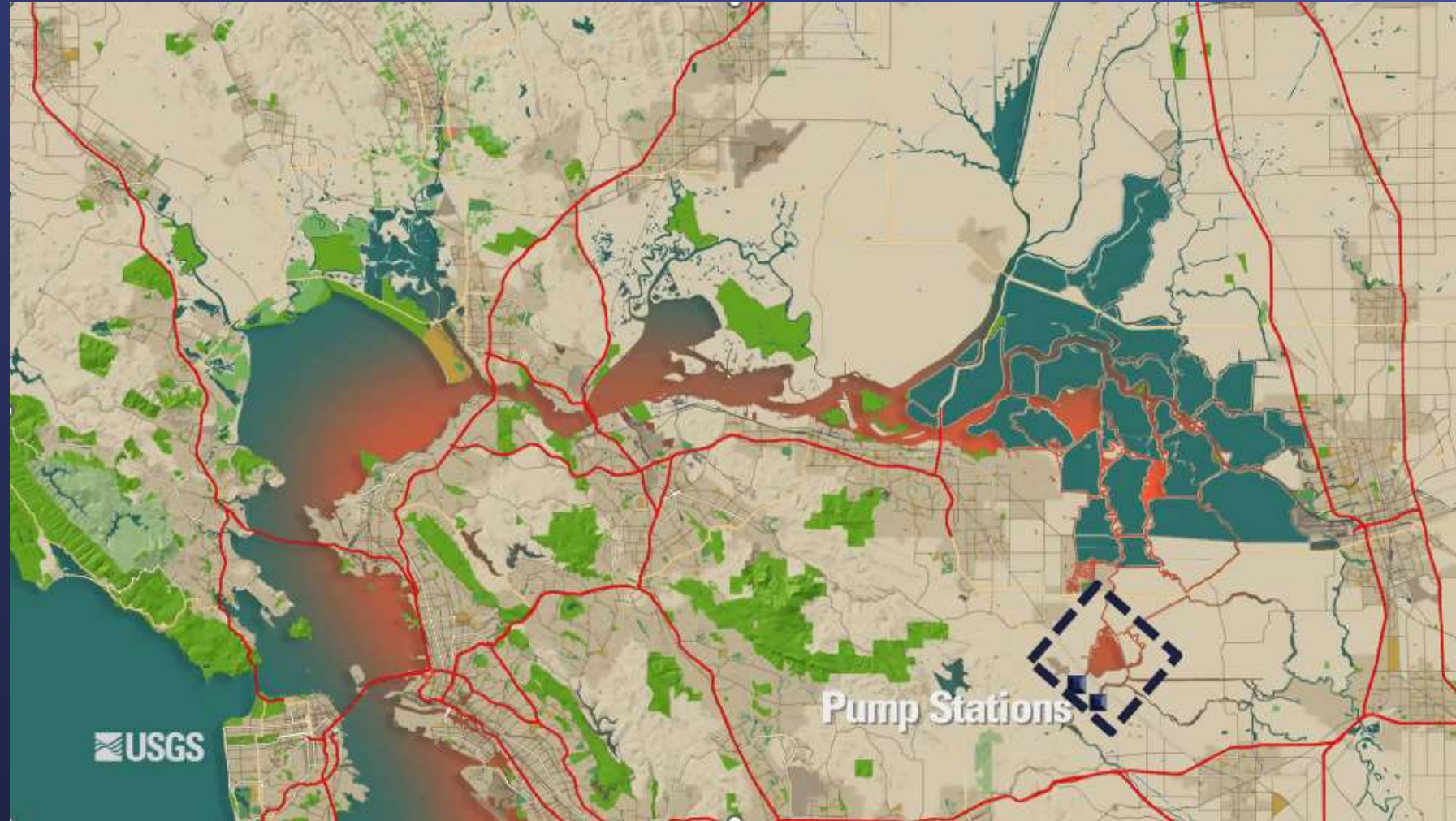
Seismic Threats



Regulatory

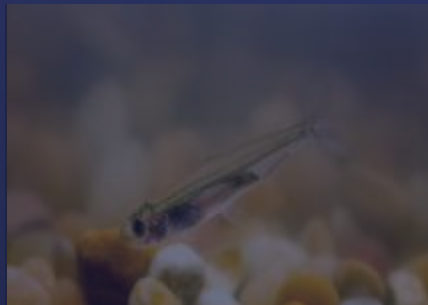


Climate Change

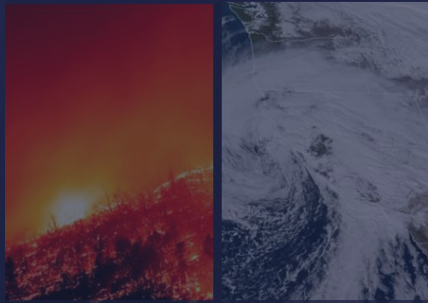




Seismic Threats



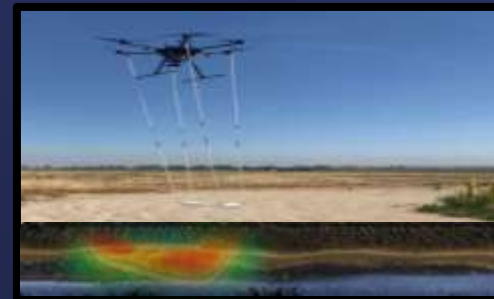
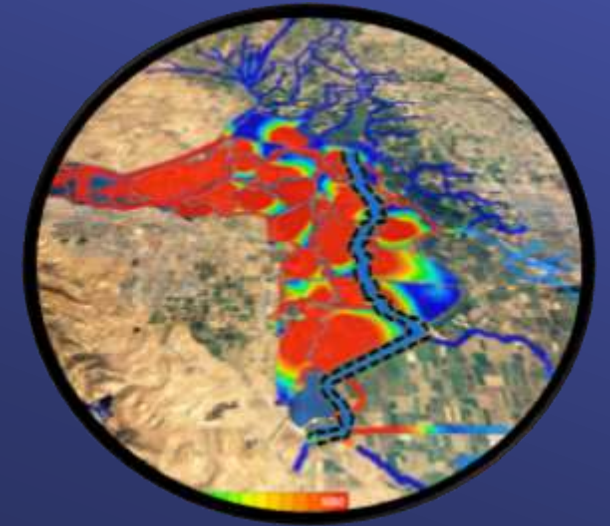
Regulatory



Climate Change

Actions Today: Levee Modernization & Emergency Preparedness

- Levee Improvements and Repairs
- New Modernized Levee Design
- Void Detection Technology
- Localized Material Stockpiles
- Freshwater Pathway



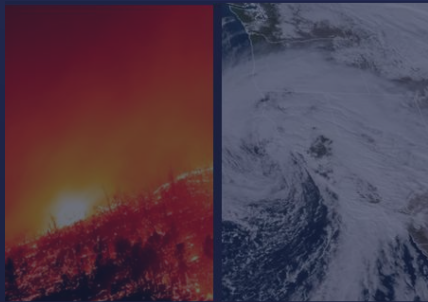
Increasing Regulation: Key Listed Species in the Delta



Seismic Threats



Regulatory



Climate Change



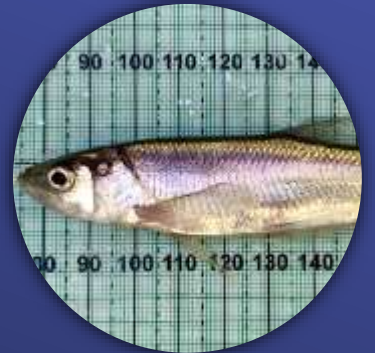
Winter-Run
Chinook Salmon



Spring-Run
Chinook Salmon



Delta
Smelt



Longfin
Smelt



Steelhead



Green Sturgeon

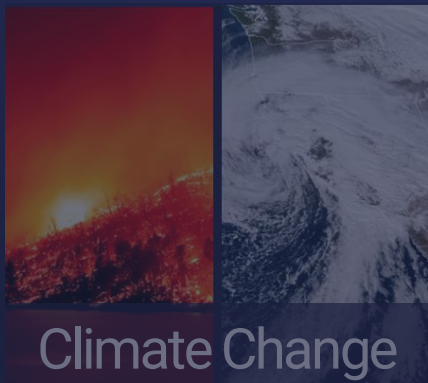
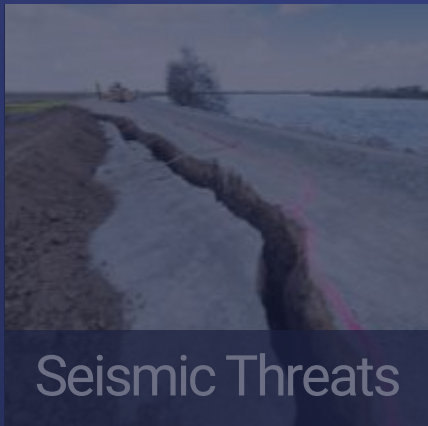


White Sturgeon

Key: Both State & Federal-Listed Species, Federal-Listed Species, State Listing Pending

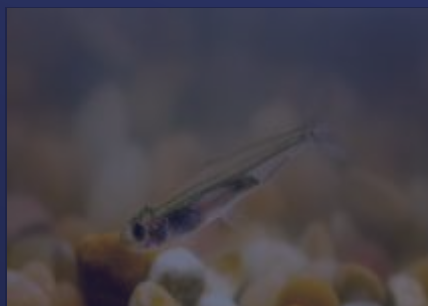
Actions Today: Bay-Delta Science Program

- Effectiveness of Management Actions (i.e. Fall X2)
- Delta Stressors and Habitat Needs
- Innovations and New Technology
- Delta Smelt Supplementation





Seismic Threats

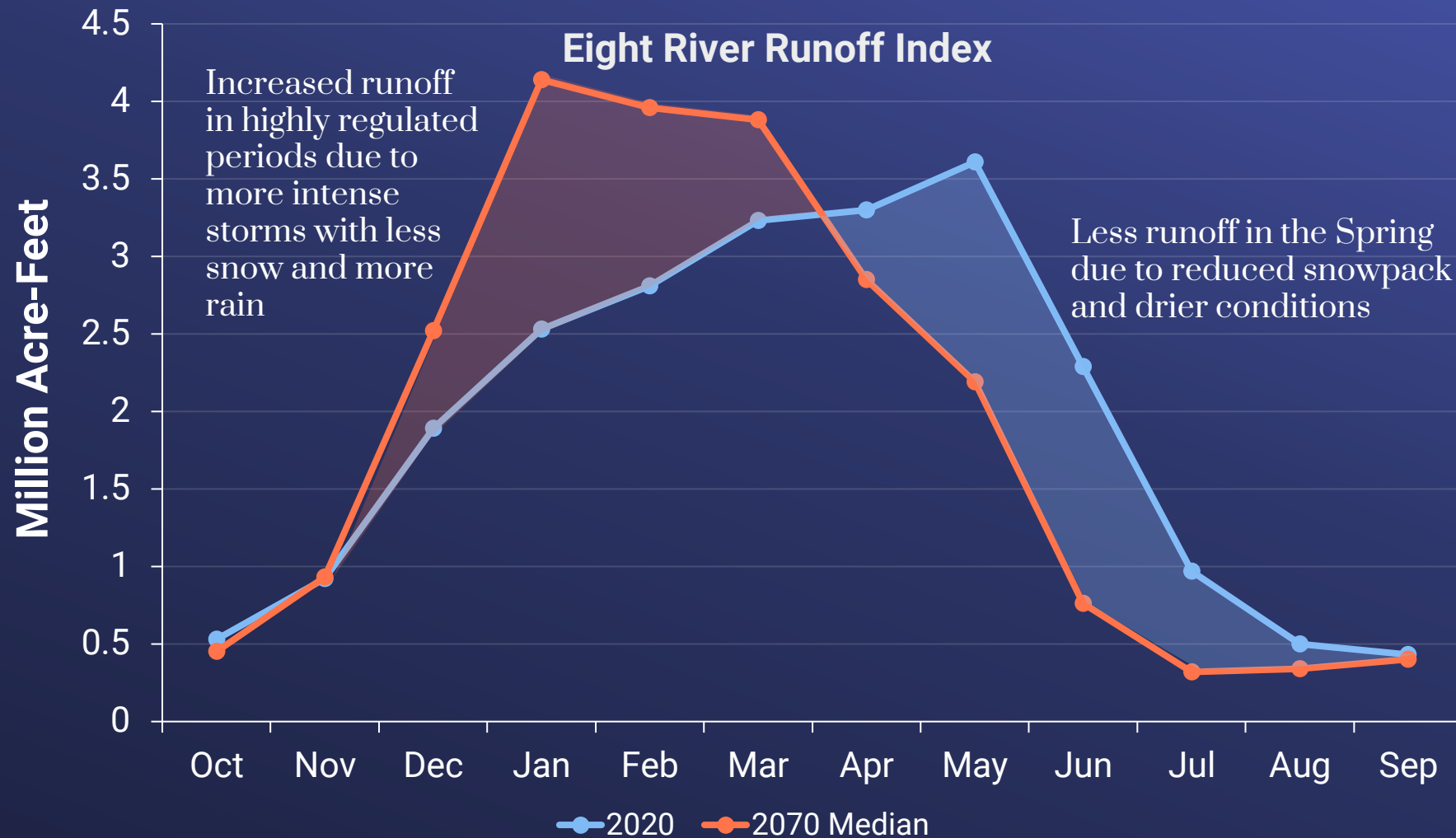


Regulatory



Climate Change

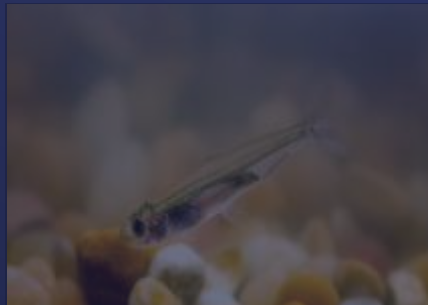
Climate Change: Shift in Historical Hydrology



Source: Delta Conveyance Project Final EIR Appendix 4A, Table 4A-1.



Seismic Threats



Regulatory



Climate Change

Actions Today: Evaluating Storage and Conveyance

- Groundwater basin studies
- Surface storage
- CAMP4W process
- Conveyance improvements

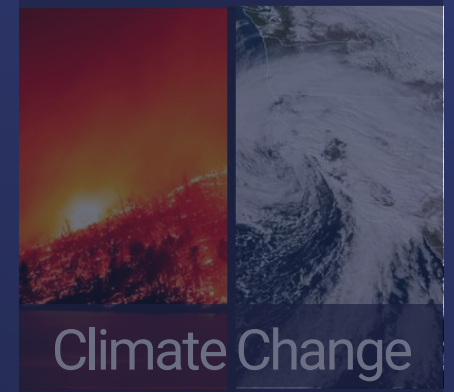
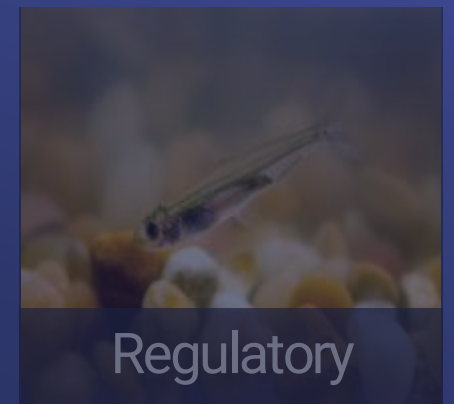
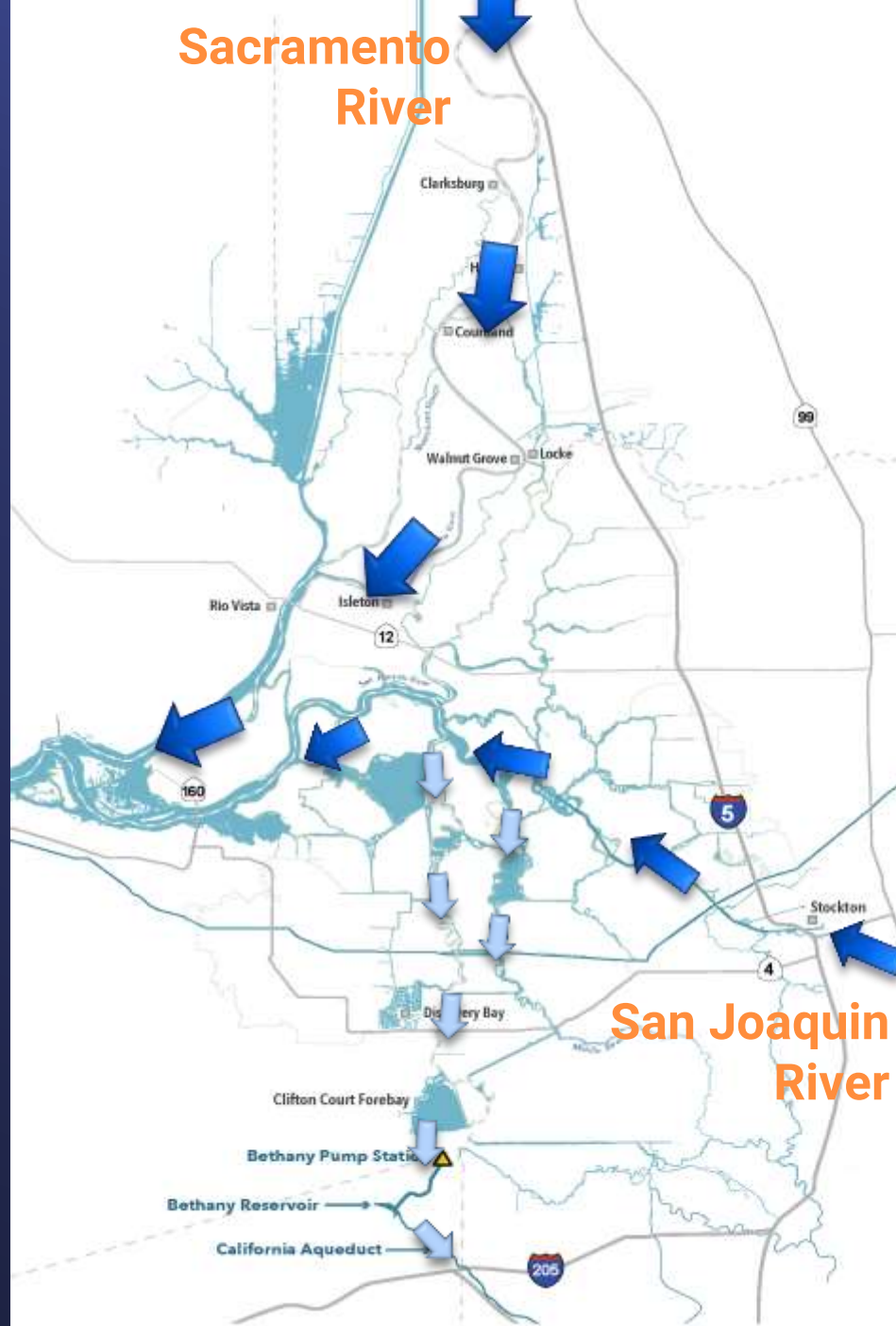




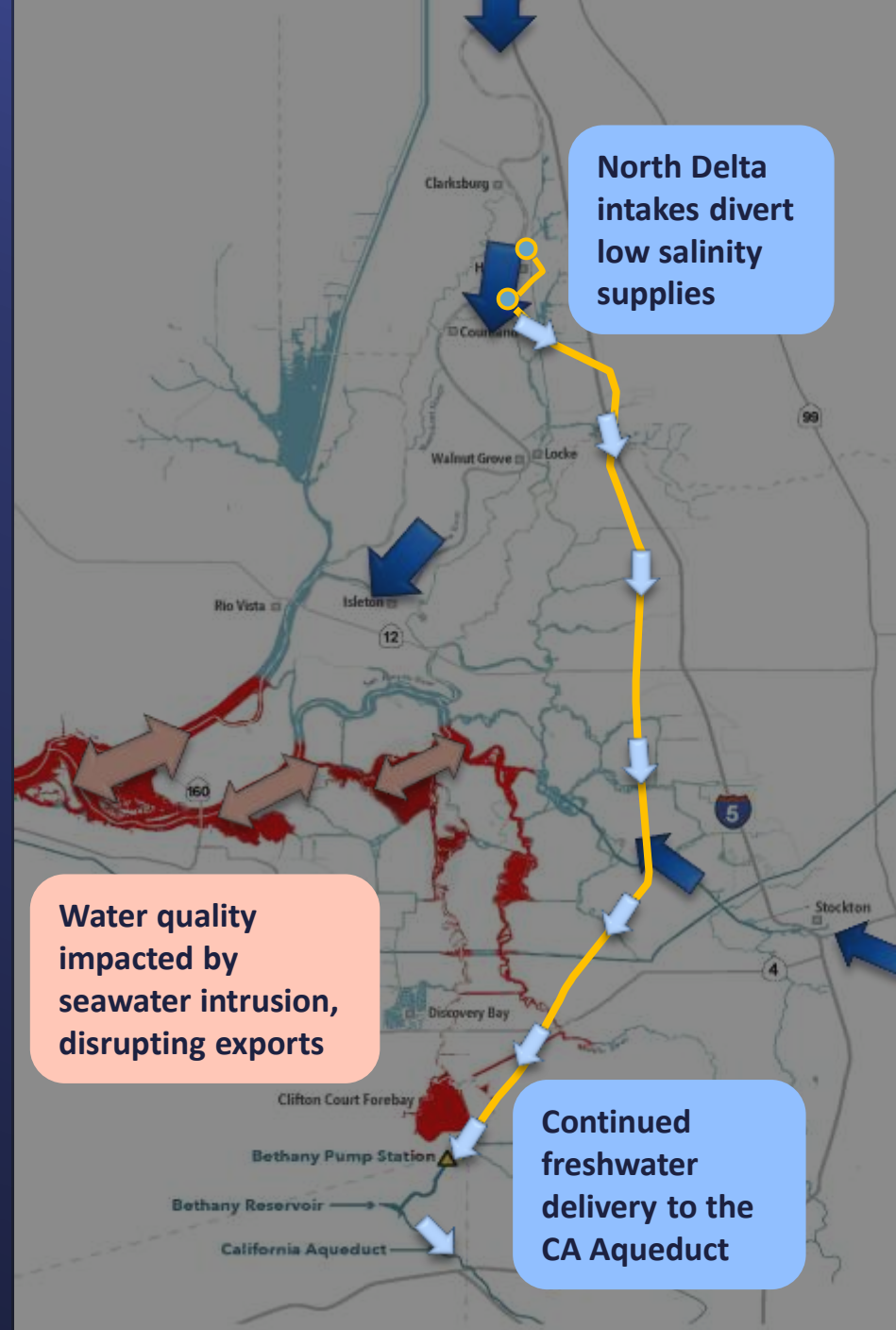
Photo Credit: DWR

Delta Conveyance

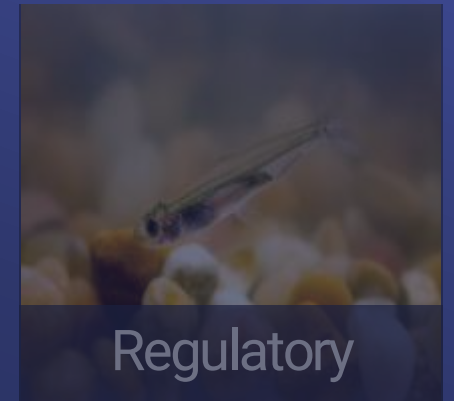
Existing Through Delta Conveyance



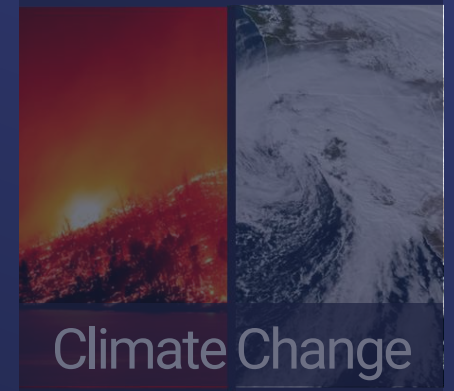
Delta Conveyance



Seismic Threats

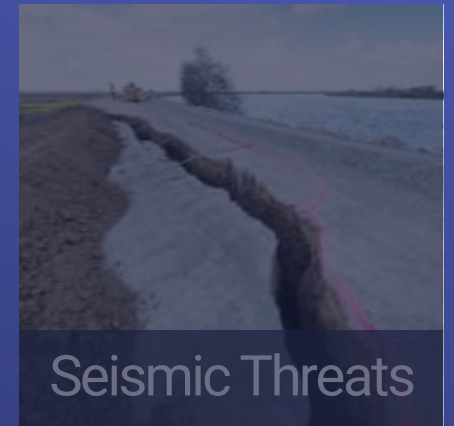
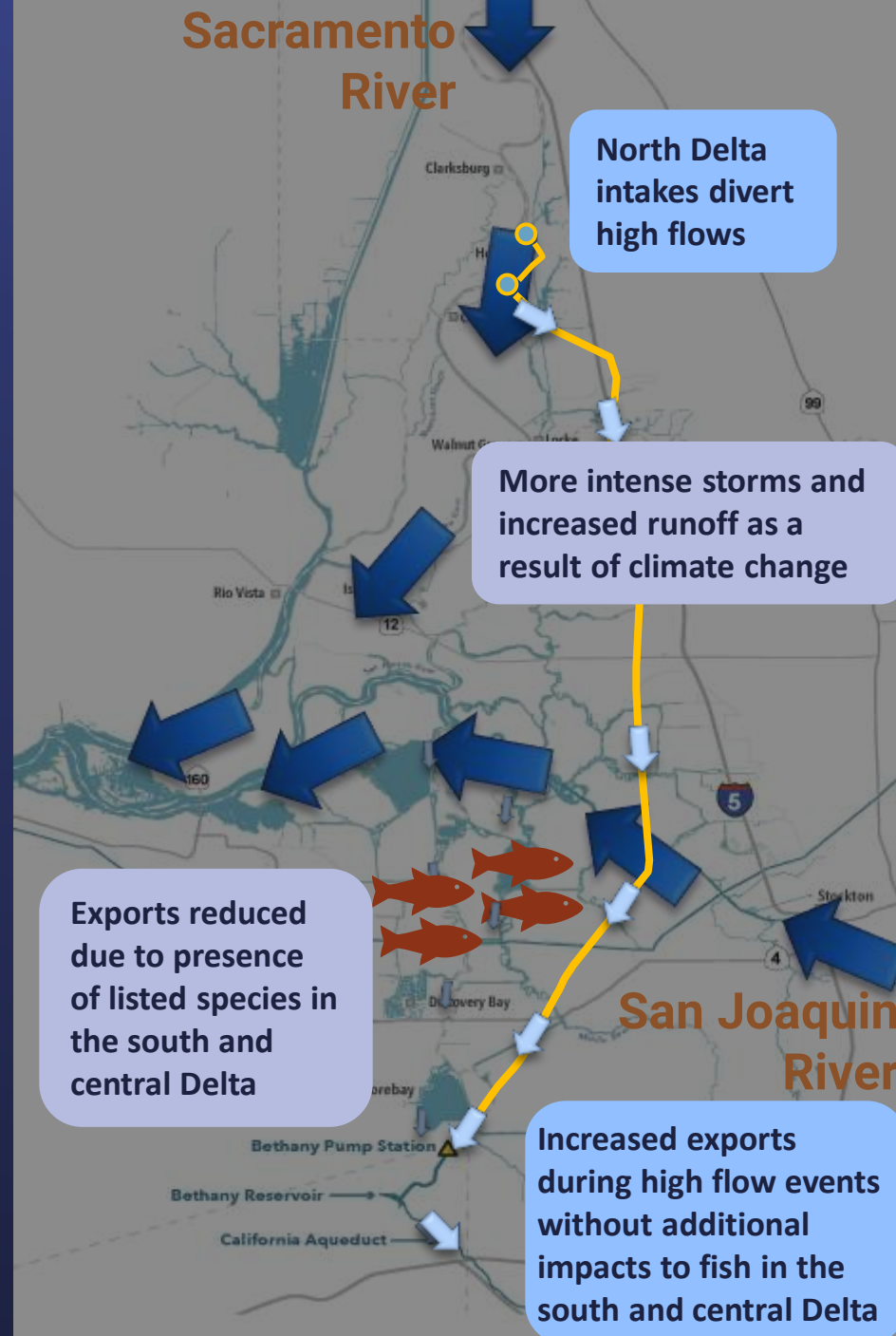


Regulatory



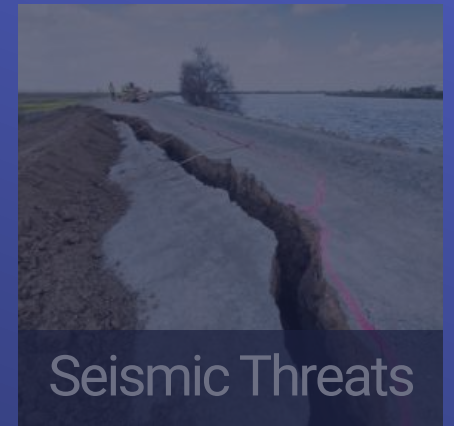
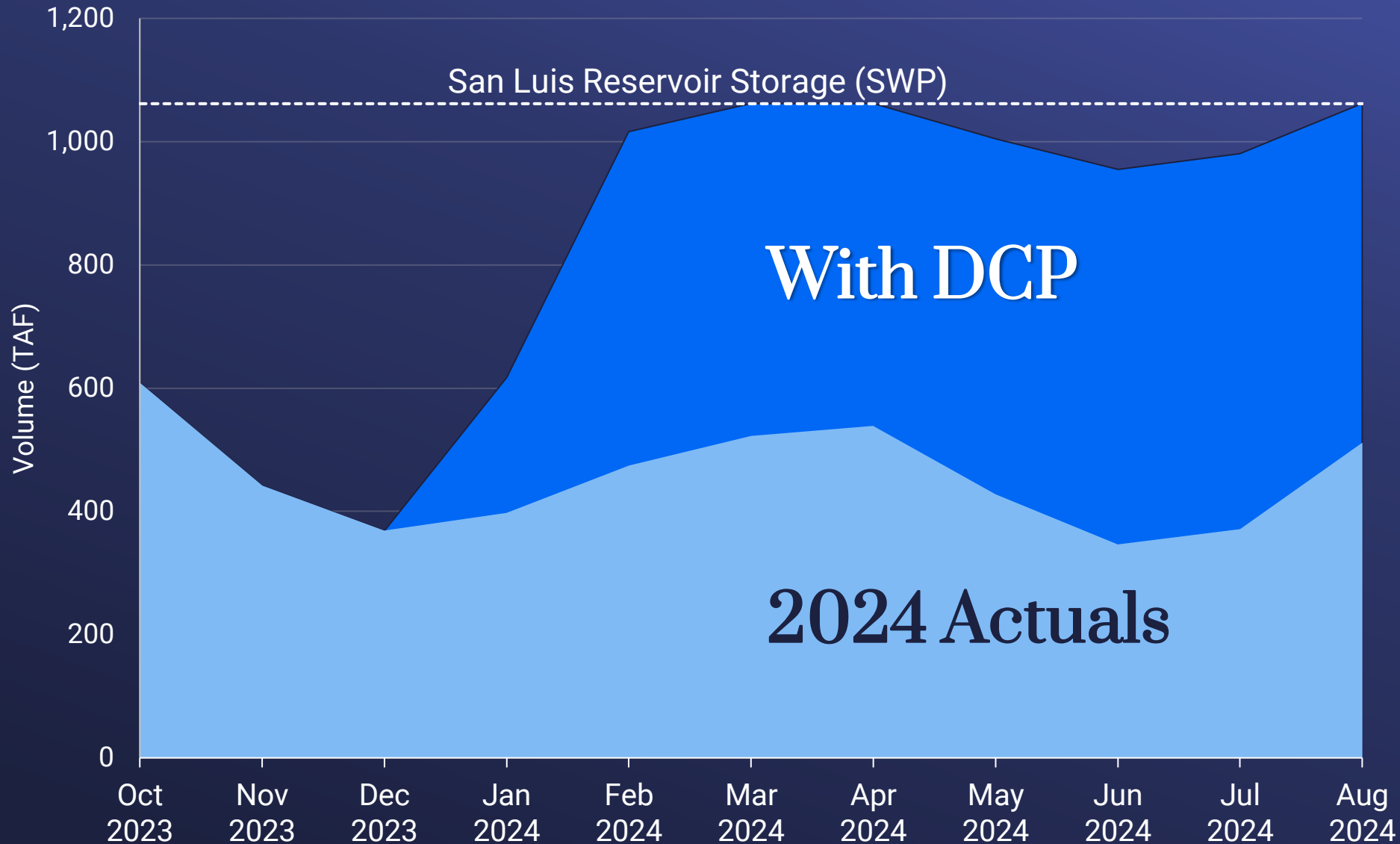
Climate Change

Delta Conveyance



Examples of SWP Performance with Delta Conveyance

Delta Conveyance & Operational Flexibility



Seismic Threats



Regulatory



Climate Change

Sources: DCP Theoretical Diversions WY 2024 (DWR), historical San Luis storage accessed from California Data Exchange Center

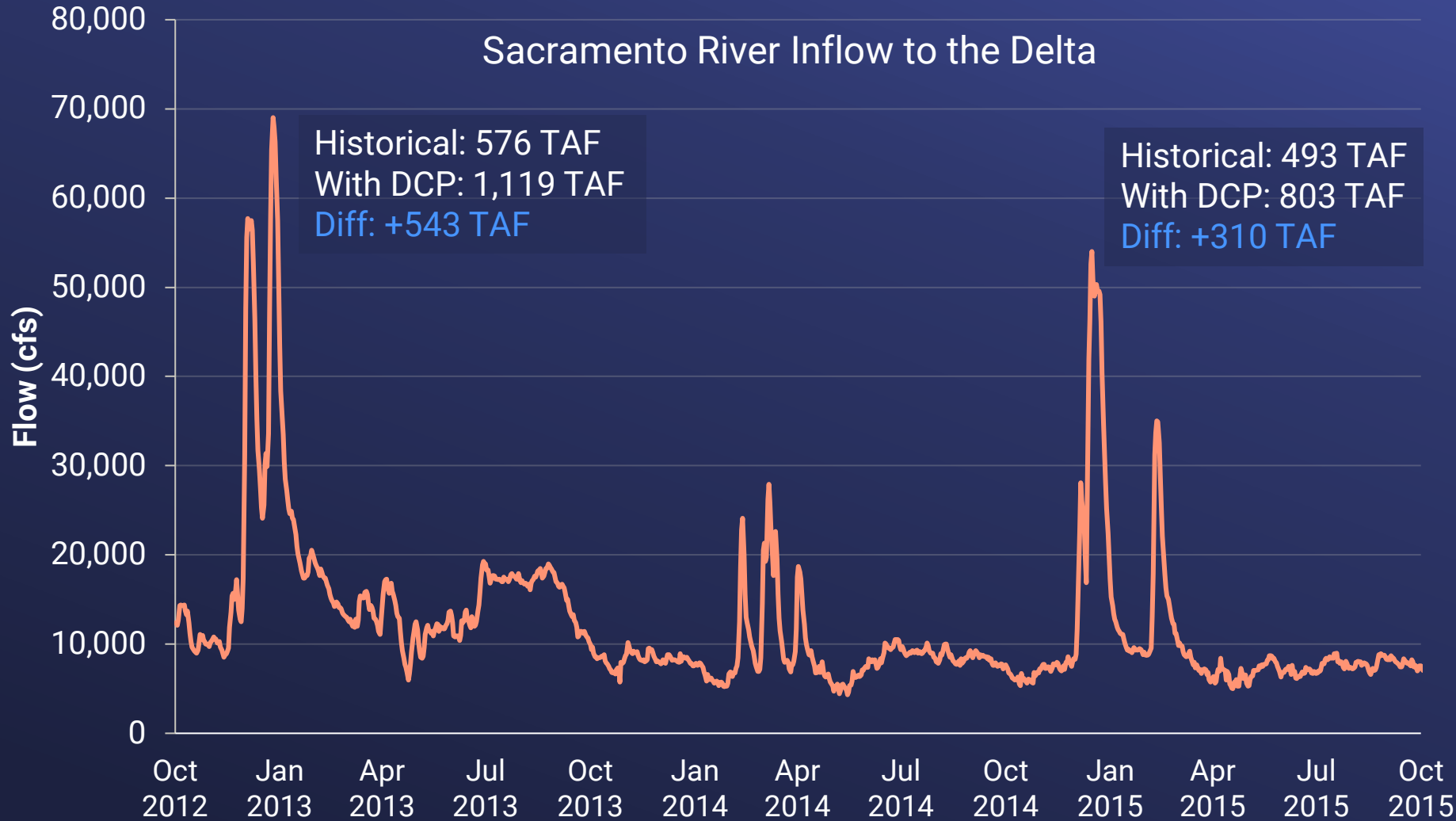
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Delta Conveyance

High Flow Events Amidst Drought



Sources: DWR CALSIM 3 Delta Conveyance Modeling Results, DAYFLOW historical data

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Seismic Threats



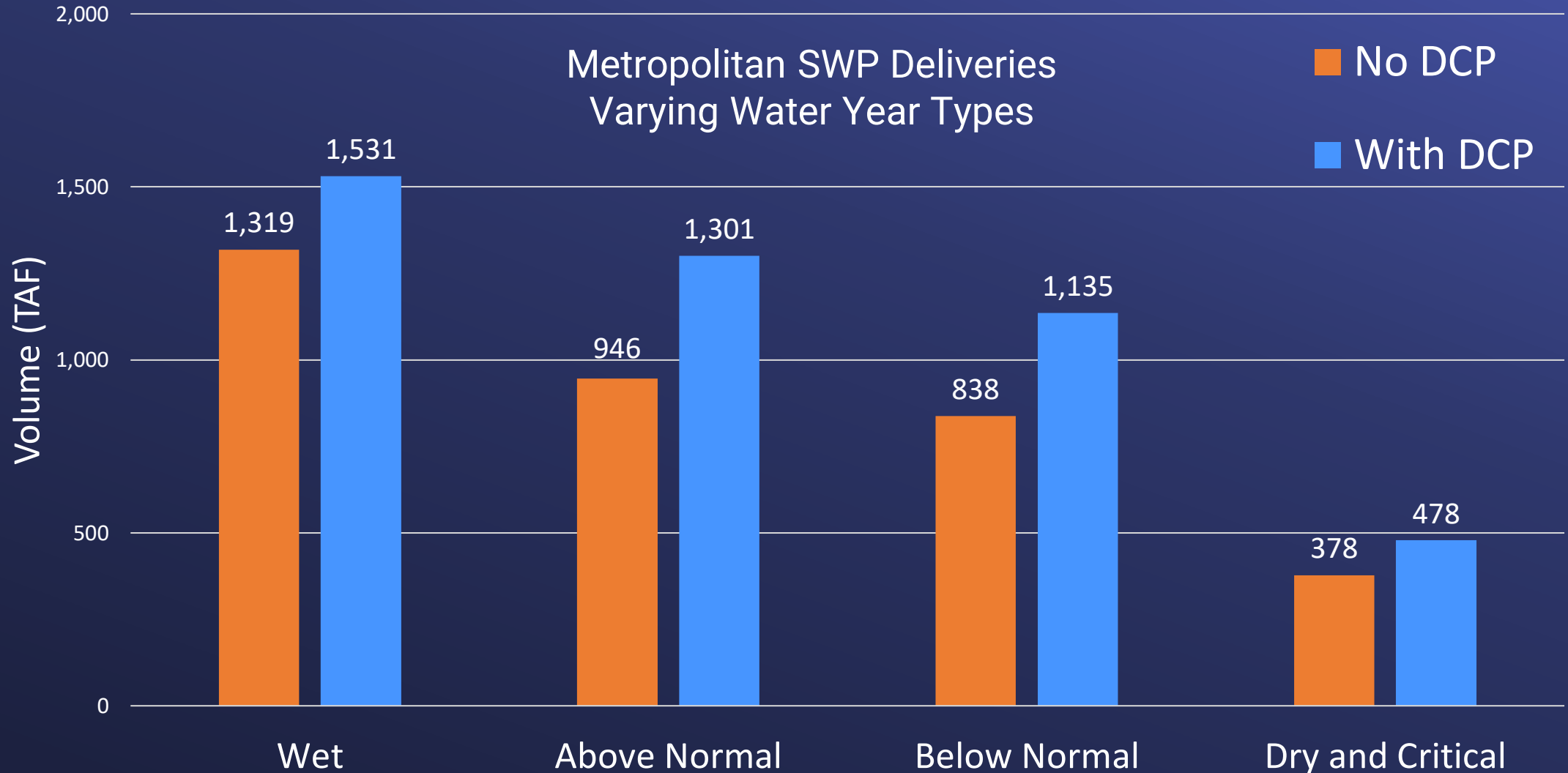
Regulatory



Climate Change

Delta Conveyance

Enhanced Reliability in Wet and Dry Conditions



Sources: DWR CALSIM 3 Delta Conveyance Modeling Results – 2070 median hydrology with 1.8 ft of SLR. Assumes 47.2% of South of Delta deliveries.



Photo Credit: DWR

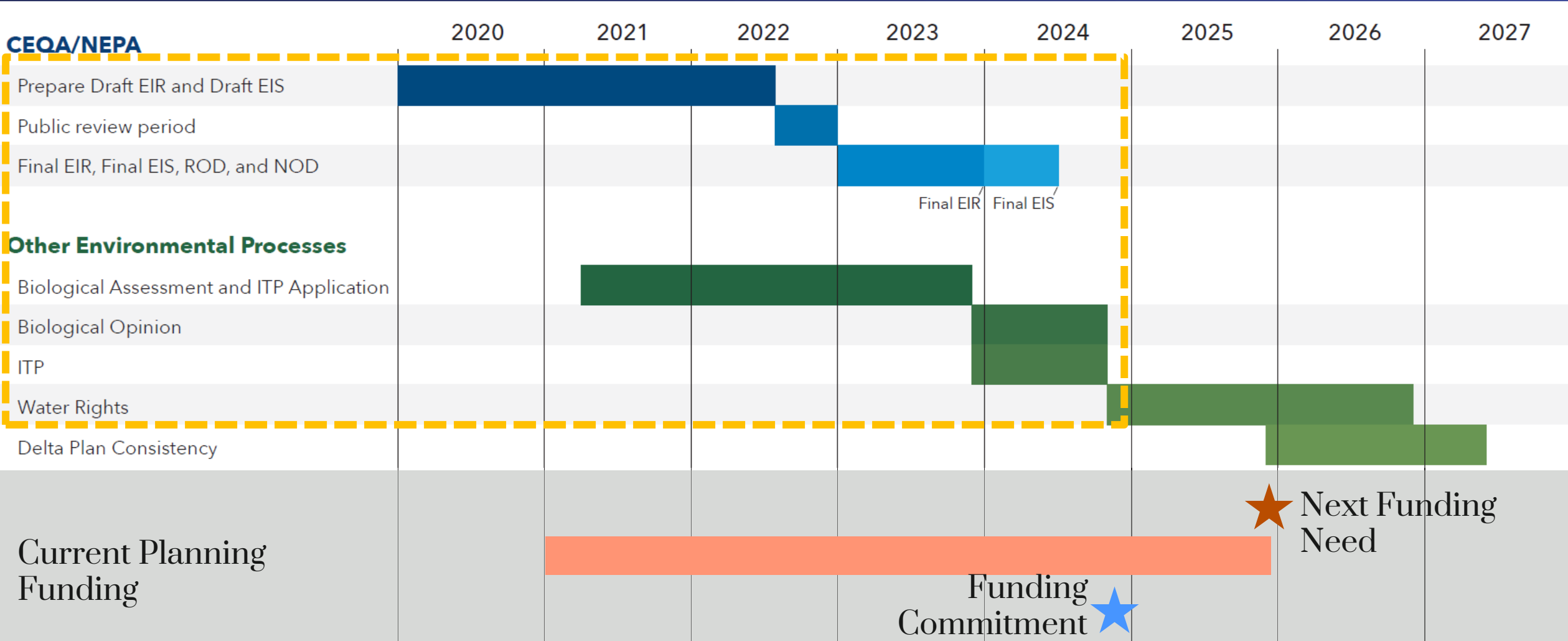
Delta Conveyance Planning Efforts

December 2020 Board Action

Delta
Conveyance
Project
Planning
Budget
(\$ millions)

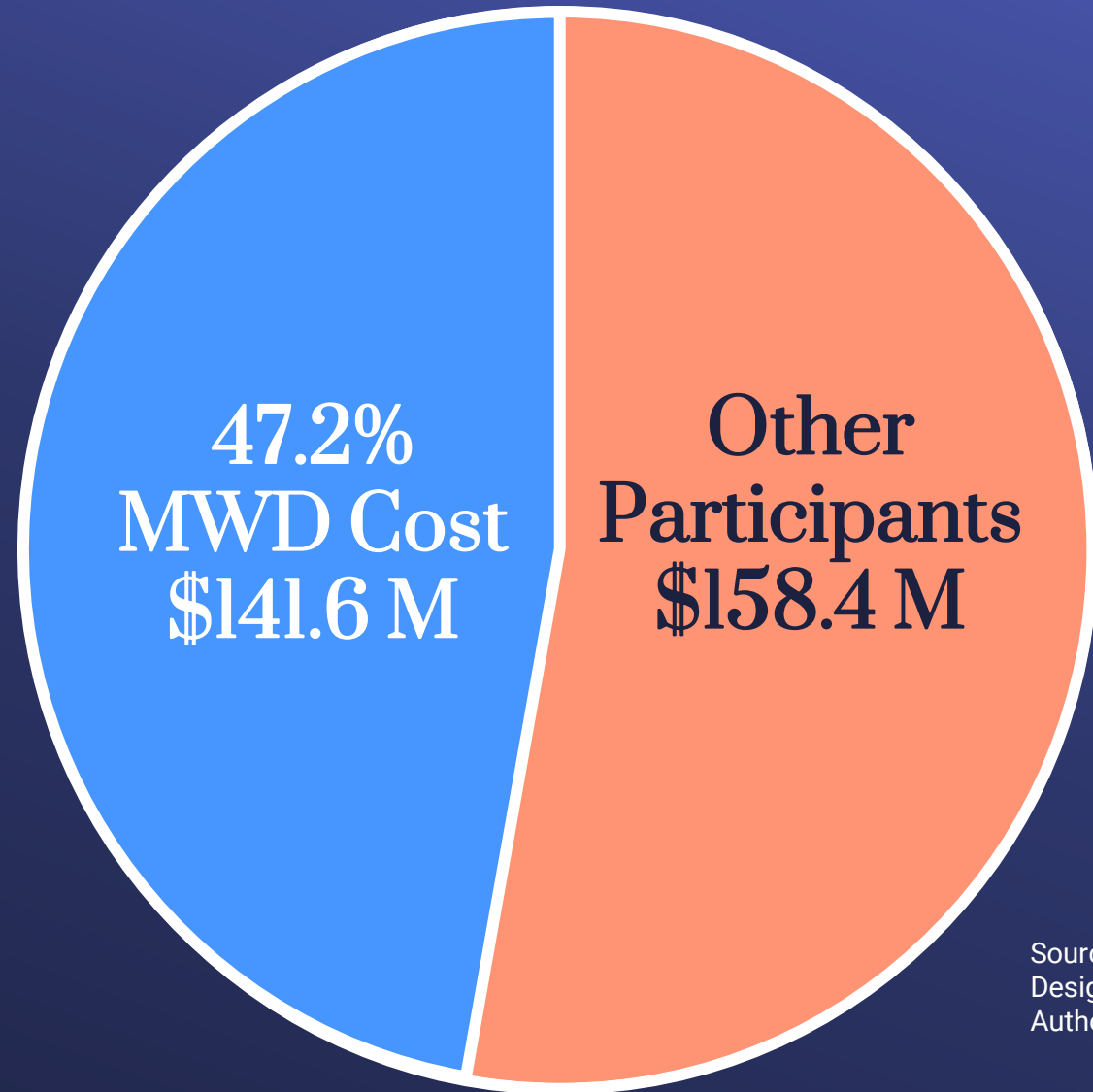
Calendar Year	Total Planning	Metropolitan Option #1 (60.2 %)	Metropolitan Option #2 (47.2 %)
2021	\$63.2	\$38.0	\$29.8
2022	\$61.7	\$37.1	\$29.1
2023	\$102.8	\$61.9	\$48.5
2024	\$113.1	\$68.1	\$53.4
Total	\$340.7	\$205.1	\$160.8

Delta Conveyance Planning Schedule



DWR Requested Planning Dollars (2026-2027)

Delta
Conveyance
Project
Continued
Planning
Funding

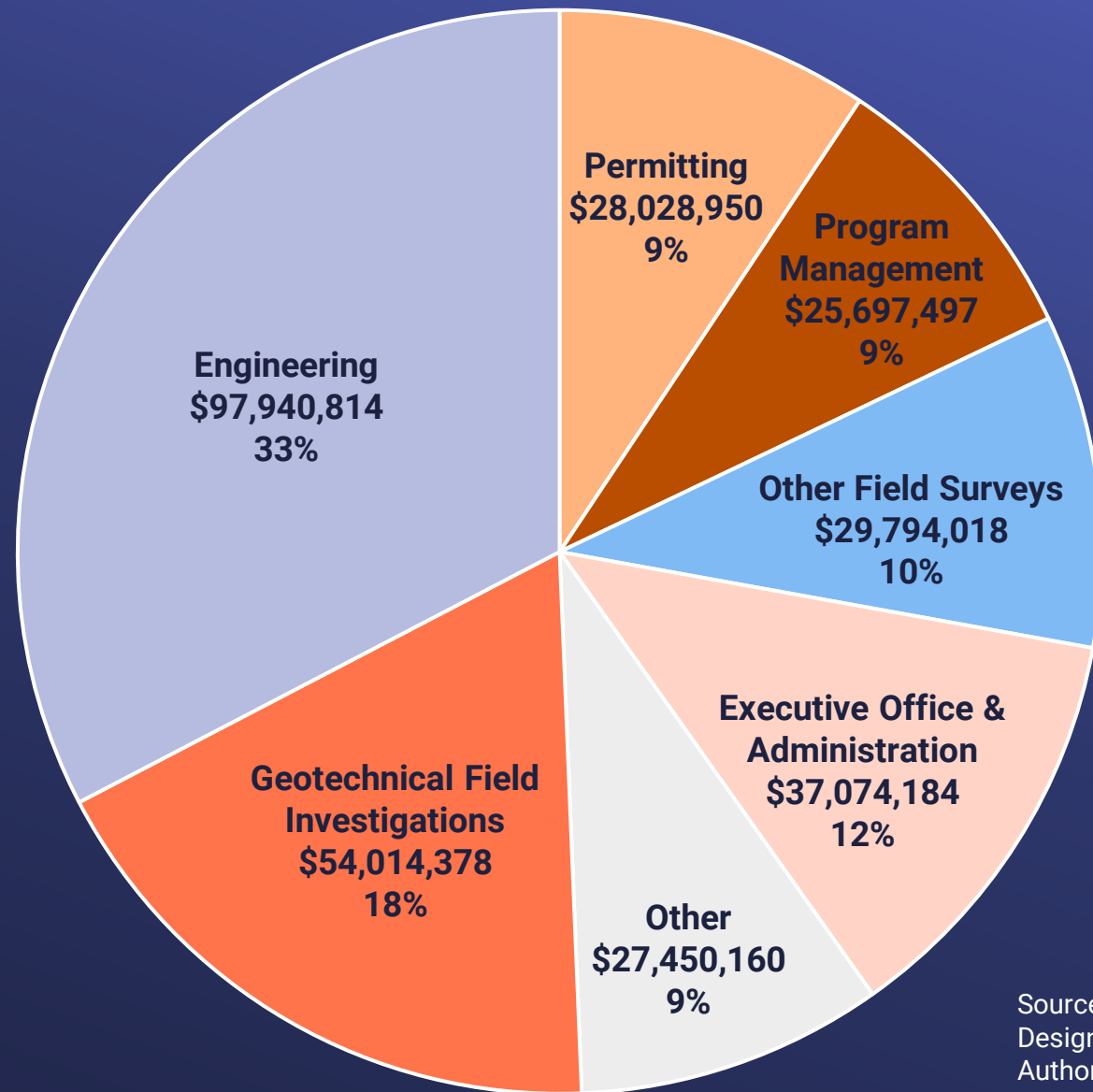


Source: Delta Conveyance Design and Construction Authority.

Metropolitan Costs
(Fiscal Year)

FY 25-26	FY 26-27	FY 27-28	Total
\$26 M	\$74.4 M	\$41.2 M	\$141.6 M

Delta Conveyance Project Continued Planning Funding



Source: Delta Conveyance Design and Construction Authority.

Note: Category "Other" includes Property and Easements (\$13M), Community Engagement/Outreach (\$7M), and Mitigation (\$7M).

DCP Participating Agencies



Note: Map not drawn to scale.

M&I {
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Region	Contractors
South Bay	Alameda County FC&WCD, Zone 7 Alameda County WD Santa Clara Valley WD
San Joaquin Valley	Dudley Ridge WD Kern County WA
Central Coastal	San Luis Obispo County FC&WCD
Southern California	Antelope Valley-East Kern WA Santa Clarita Valley WA ✓ Coachella Valley WD Crestline-Lake Arrowhead WA ✓ Desert Water Agency Metropolitan Water District Mojave Water Agency Palmdale Water District San Bernardino Valley MWD ✓ San Gabriel Valley MWD San Geronio Pass WA ✓ Ventura County WPD

✓ indicates board action taken to support additional DCP planning and preconstruction activities.

Permitting, Planning & Litigation Considerations



Full Participation
Close existing funding gap

Pending Litigation
CEQA, Geotech,
Bond Validation, etc.



Delta Stewardship Council
Certification of Consistency

Water Rights Permitting
Hearing set to begin
in January 2025



2026-2027
Permitting,
Planning &
Litigation
Evaluate
Project with
All Available
Information



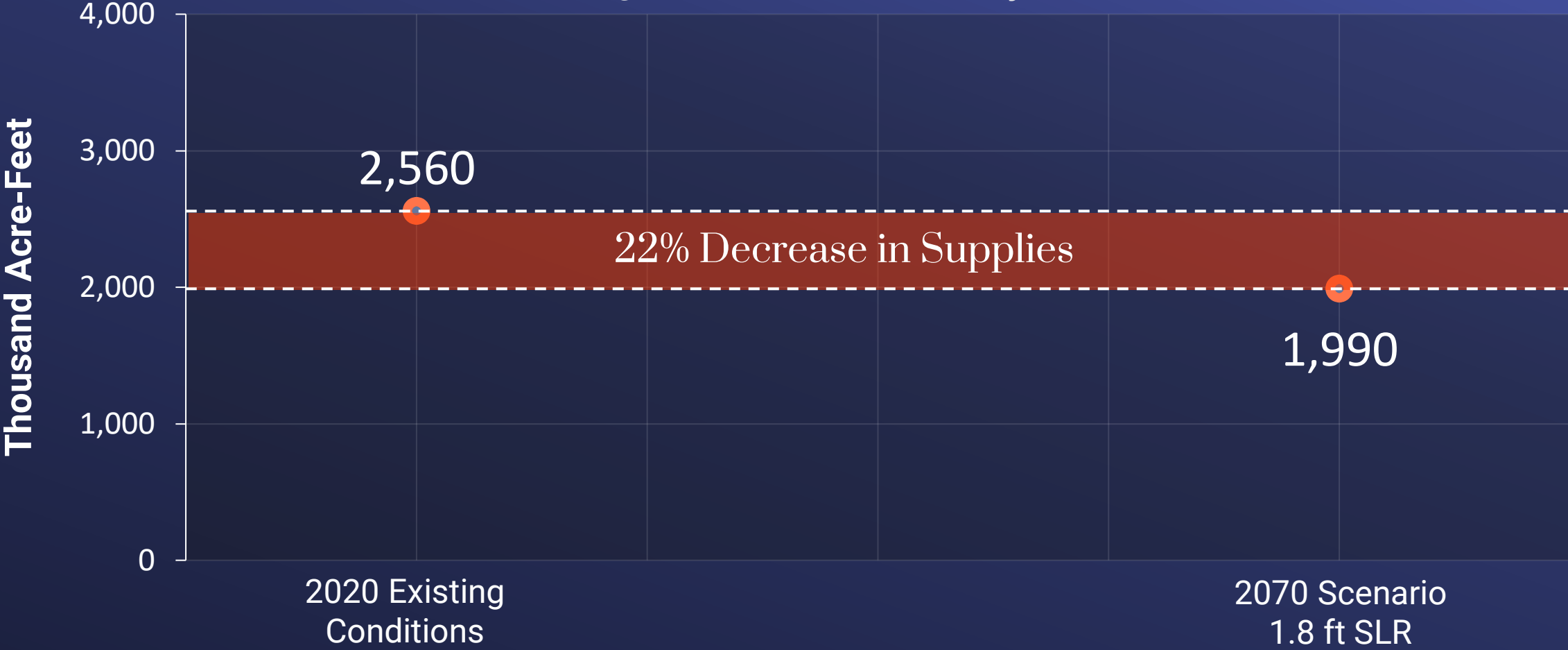


Photo Credit: DWR

Key Takeaway Next Steps

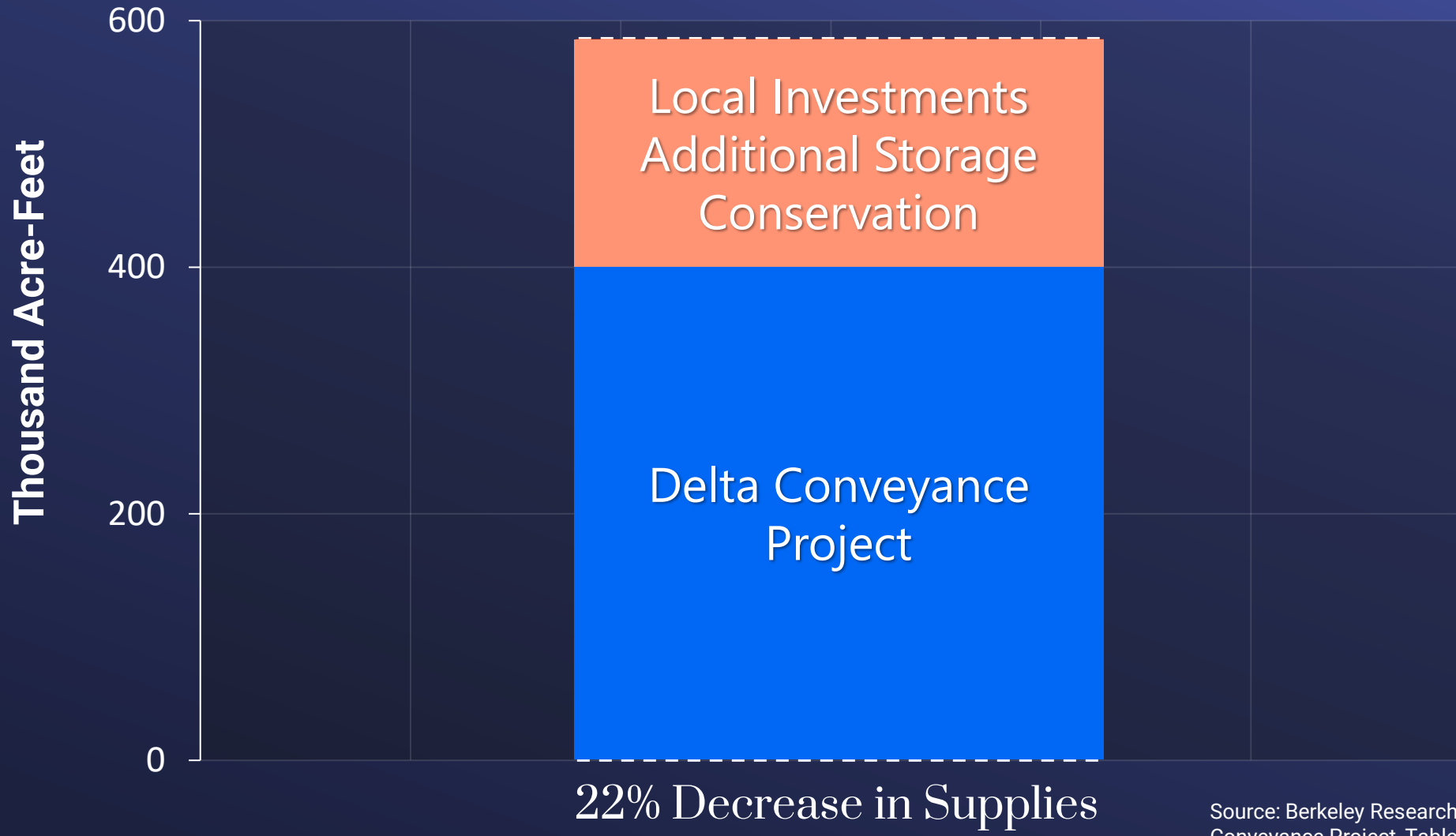
Continued Decline Due to Climate Change

Average Annual State Water Project Deliveries



Source: Berkeley Research Group, Benefit-Cost Analysis of the Delta Conveyance Project, Table 2, Existing Conditions and Main Scenario.

Maintaining SWP Reliability and Resilience Requires a Multi-Faceted Approach



Source: Berkeley Research Group, Benefit-Cost Analysis of the Delta Conveyance Project, Table 2, Existing Conditions and Main Scenario

Next Steps: Conveyance for the SWP

Delta Conveyance Project – MWD Updates and Deliberation for Continued Planning Efforts

