



Subcommittee on Pure Water Southern California  
and Regional Conveyance

# State Water Project Dependent Areas Drought Mitigation Update

Item 3d

January 23, 2024

# Item 3d State Water Project Dependent Areas Drought Mitigation Update

## Subject

State Water Project Dependent Areas Drought Mitigation Update

## Purpose

To provide updates on regional conveyance improvements and solutions and the integration of drought mitigation actions with CAMP4W

## Next Steps

Board report to outline implementation plan of drought mitigation actions

Board actions required to:

- Create a new CIP program to include selected drought mitigation projects
- Amend current CIP to include:
  - Sepulveda Feeder Pumping Phase 2
  - Removing network constraints

# August 2022 Board Letter – Call to Action



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

## BOARD ACTION

### • Board of Directors Water Planning and Stewardship Committee

8/16/2022 Board Meeting

7-13

#### Subject

Adopt resolution affirming Metropolitan's call to action and commitment to regional reliability for all member agencies; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

#### Executive Summary

The Metropolitan Water District of Southern California endeavors to provide an adequate and reliable supply of high-quality water to meet the region's present and future needs in an environmentally and economically responsible way. As an example from 1930, Metropolitan's first Board Chair, W.P. Whitsett, provided a guiding principle for developing regional water supply reliability: "Whatever is done should be done for the benefit of the whole, and whatever is done for the benefit of the whole should be shared by all the parts."

Nearly a century after those aspirational words, a record-breaking drought has descended on the Southwest, and Southern California's water reliability is in crisis. This year, supply from the State Water Project (SWP) was cut to 5 percent of Metropolitan's total allocation for the second consecutive year—resulting in a 3-year water supply substantially below the California Department of Water Resources' worst-case projection. These conditions starkly highlight an infrastructure and water supply vulnerability that must now be addressed. Simply put, there is not enough pipeline connectivity or operational flexibility for imported supply and existing regional storage to meet the needs of six member agencies with a combined population greater than six million.

Because of this supply shortage and limits to its infrastructure, Metropolitan cannot provide equivalent supply reliability from one corner of the service area to another. In response, Metropolitan's Board declared a water shortage emergency and imposed a water conservation program in April of this year for the six SWP-dependent agencies. The impacted agencies include Calleguas Municipal Water District, Inland Empire Utilities Agency (IEUA), Las Virgenes Municipal Water District, the City of Los Angeles, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District.

These six SWP-dependent agencies have limited connection to Metropolitan's existing infrastructure, storage, and supplies. This constraint forced them to take mandatory and painful water supply cuts from their expected SWP use by an average of 35 percent—with some facing reductions up to 73 percent. If these agencies cannot limit their use of Metropolitan's supply from the SWP, then they face stiff volumetric penalties of \$2,000 per acre-foot (AF) or the first-ever total ban on outdoor irrigation. Meanwhile, under statewide regulation, the 20 member agencies outside of this area must implement demand-reduction actions under Level 2 of their Water Shortage Contingency Plans. These actions are locally determined to achieve only a 10 to 20 percent water reduction (without volumetric penalties).

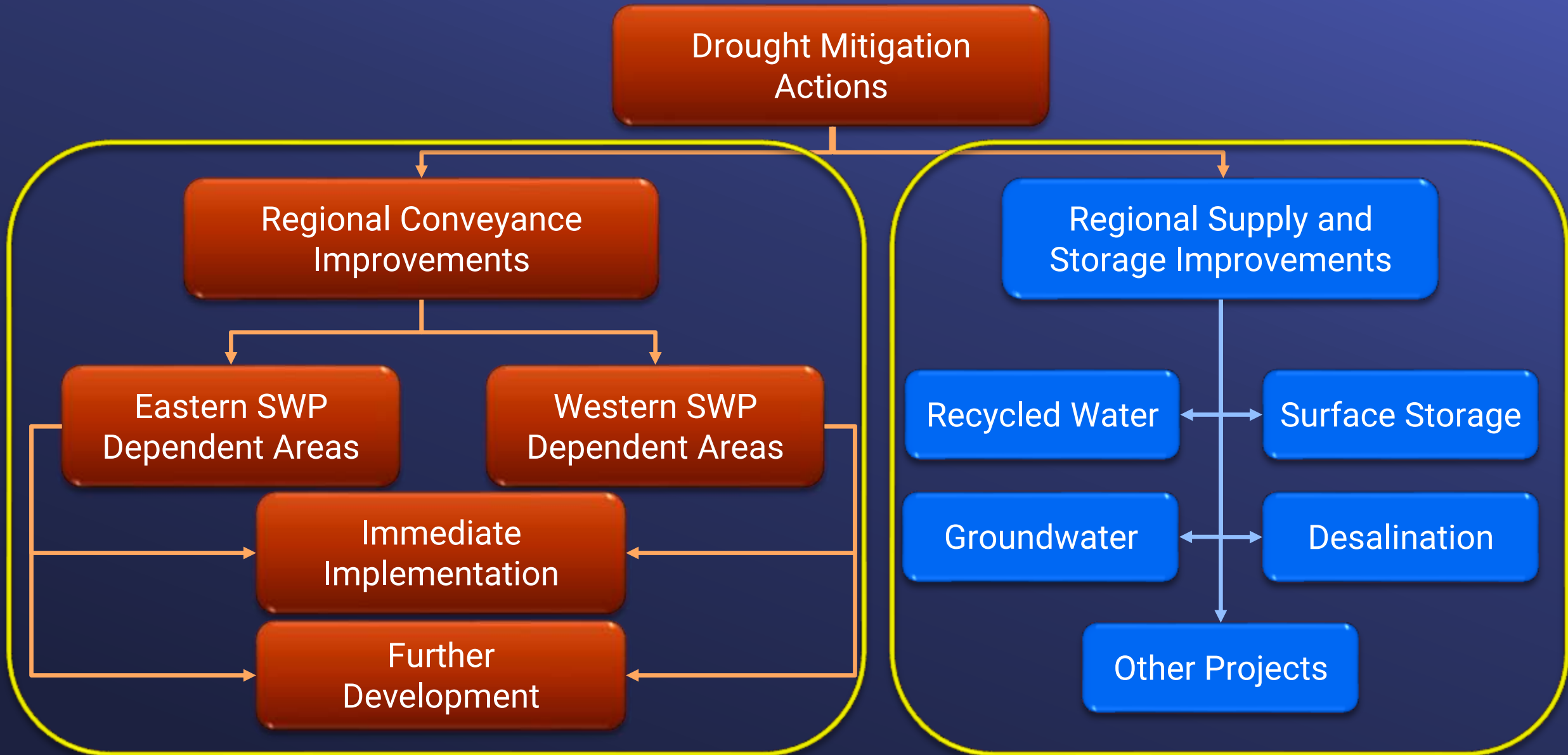
This disparity is unacceptable to Metropolitan and its member agencies. By adopting the proposed Resolution in Attachment 1, the Board would prioritize a policy to provide 100 percent and equitable reliability to all member agencies. Metropolitan would thus commit to taking all necessary actions to give the SWP-dependent member agencies a level of infrastructure and water supply reliability equivalent to that of Metropolitan's other member agencies. Equitable access will be achieved through the expedited and prioritized implementation of a balanced set of projects and programs that improve existing infrastructure, imported and local supplies, and demand management.

## Call to Action

*Metropolitan commits to ensuring equitable access to supply and storage assets by building infrastructure, increasing local supply availability, expanding partnerships, and advancing water use efficiency.*

- *All member agencies must receive equivalent water supply reliability through an interconnected and robust system of supplies, storage, and programs.*
- *Metropolitan will reconfigure and expand its existing portfolio and infrastructure to provide sufficient access to the integrated system of water sources, conveyance and distribution, storage, and programs to achieve equivalent levels of reliability to all member agencies.*
- *Metropolitan will eliminate disparate water supply reliability through a One Water integrated planning and implementation approach to manage finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.<sup>23</sup>*

# Proposed Drought Mitigation Actions Portfolio





# Regional Conveyance Improvements Under Implementation

Project	Capacity	Estimated Cost	Planned Board Action	Anticipated Completion	Status
Wadsworth Bypass	Up to 120 cfs 87 TAF	\$23 M	N/A	2025	In construction
Inland Feeder-Rialto Pipeline Intertie		\$23 M	N/A	2025	In construction
IF/ Badlands Tunnel Surge Protection Facility		\$26 M	N/A	2025	In construction
Foothill Pump Station Intertie		\$26 M	Fall 2024	2026/27	In final design (two-stage construction)
Sepulveda Feeder Pumping Project - Phase 1	Up to 60 cfs* 42 TAF	\$120 M	Fall 2024	2026	Progressive design-build contract awarded
Shift of Burbank B-5 Supply to B-5A	Up to 7 cfs 5 TAF	\$7 M	Mid 2024	2026	Feasibility study completed
TVMWD Miramar Pumpback Upgrade	Up to 30 cfs 21 TAF	\$10M**	Early 2025**	2027/28**	Feasibility study

\* Capacity includes 30 cfs pump station capacity and 30 cfs water savings that would otherwise be delivered into the common pool to maintain water quality

\*\* New Information as of December 2023

# Bypass Line Construction at Wadsworth Pump Plant



Pouring of Mass Concrete at 96" Pipe Tie-in



New Vault Structure

# Proposed Regional Conveyance Solutions for Further Development

- Hybrid approach to combine raw and treated water alternatives
- Lower-bound solution provides flow capacity to meet equitable access/reliability commitment
  - Ensure SWPDA agencies have access to available flow
  - Prevent geographic-specific allocations
- Upper-bound solution provides flow capacity to enhance regional reliability
  - Allow SWPDA agencies access to new supply sources
  - Improve flexibility and resilience by allowing both surplus and drought operations
  - Meet estimated high-period demand during SWP supply shortage



# Hybrid Solution – Lower Bound Supply by Individual Project

AVEK Conveyance to the West Branch

Jensen WTP (Existing)

Sepulveda Feeder Pumping Phase 1 (In Progress)

Sepulveda Feeder Pumping Phase 2

Greg Avenue Pump Station (Existing)

Total Flow	Total Volume
415+ CFS	415+ TAF



Project	Est. Capital Cost	Est. Completion Date
Sepulveda Feeder Pumping Phase 2	\$300M	2032
AVEK Conveyance to the West Branch	\$190M	2035



# Hybrid Solution – Upper Bound Supply by Individual Project

Total Flow	Total Volume
590+ CFS	590+ TAF



Project	Est. Capital Cost	Est. Completion Date
Sepulveda Feeder Pumping Phase 2	\$300M	2032
E/W Raw Water Conveyance Line	\$6,200M	2040

# Summary of Conveyance Options

System Flexibility Options	Projects	Potential Sources of Supply	Supply To SWPDA* (cfs)	Estimated Cost (\$M)
1	Sepulveda Pump Project Phase 2 & AVEK to West Branch	CRA, DVL from Common Pool; PureWater (via Weymouth); AVEK	415+	\$490
2	Sepulveda Pump Project Phase 2 & East-West Conveyance (Raw)	CRA, DVL from Common Pool; PureWater; AVEK; Operation Next	590+	\$6,500

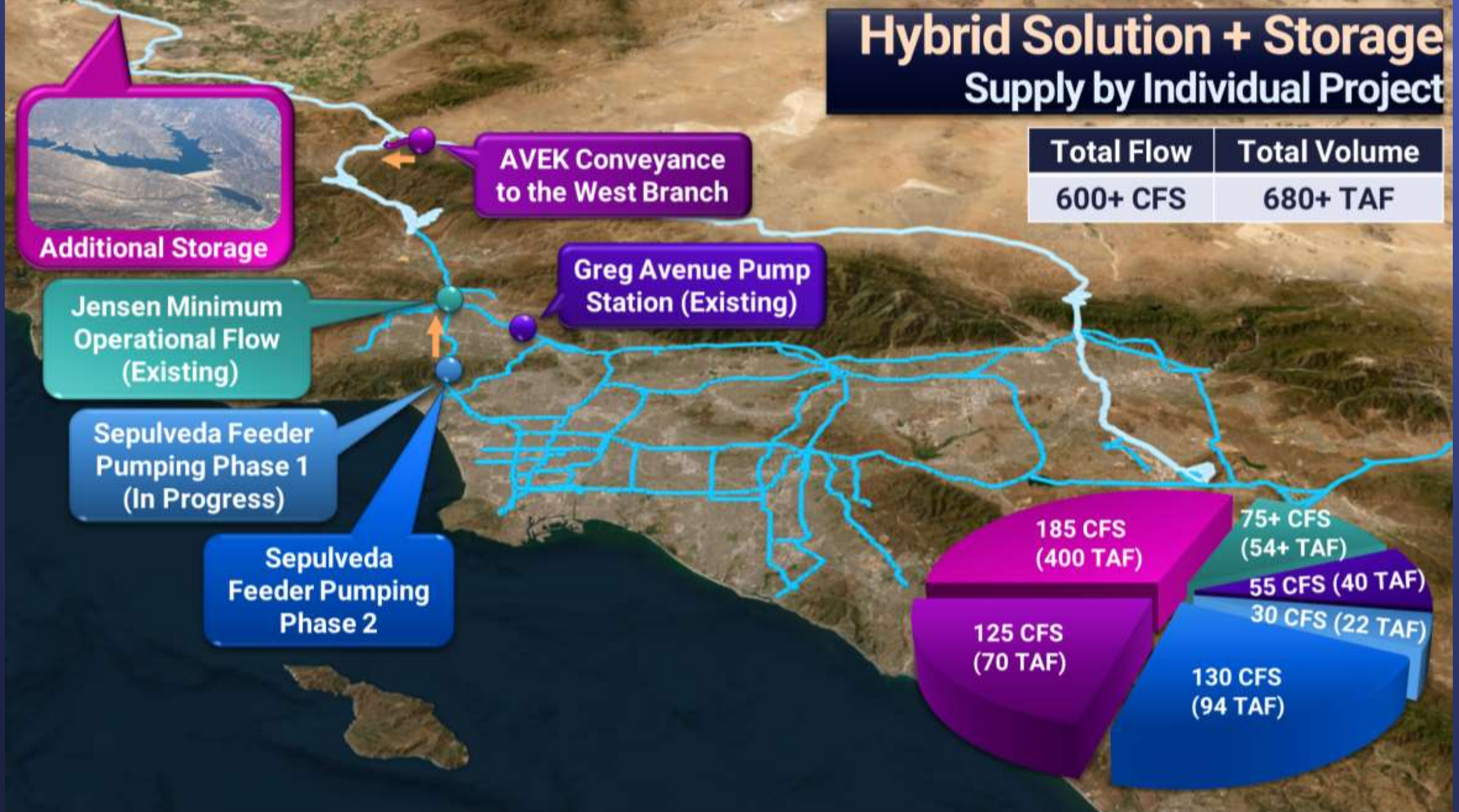
\*Includes 160+ cfs baseline supply from Greg Avenue Pump Station (55 cfs), Sepulveda Feeder Pump Project Phase 1 (30 cfs) and Jensen (75+ cfs)



# Hybrid Solution + Storage

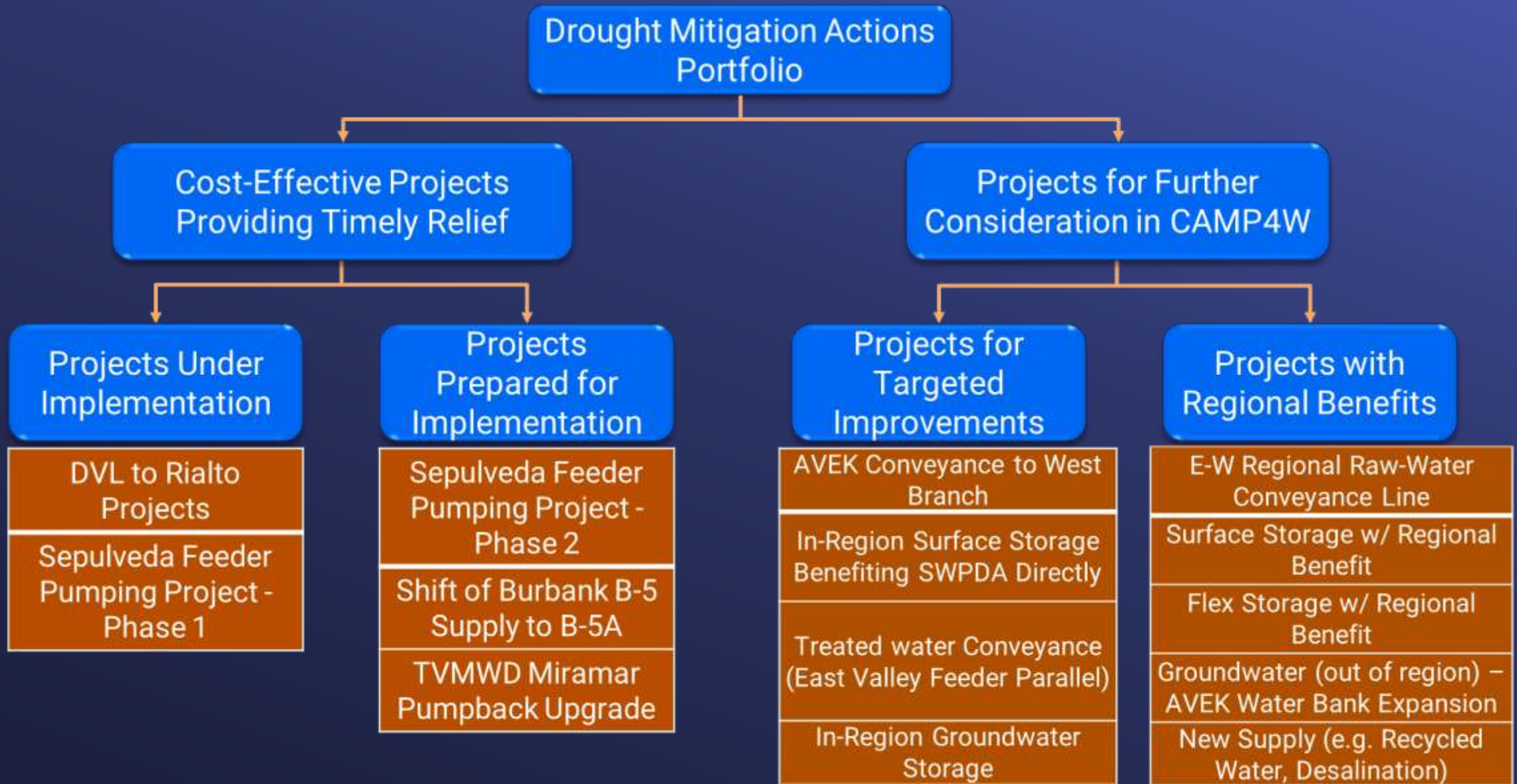
## Supply by Individual Project

Total Flow	Total Volume
600+ CFS	680+ TAF





# Drought Mitigation Portfolio Implementation Plan



# Drought Mitigation Actions Portfolio

## Cost-Effective Projects Providing Timely Relief (for Implementation)

### Projects Under Implementation

Project Title	Completion
DVL to Rialto Delivery	2026/2027
Sepulveda Feeder Pumping Phase 1	2026

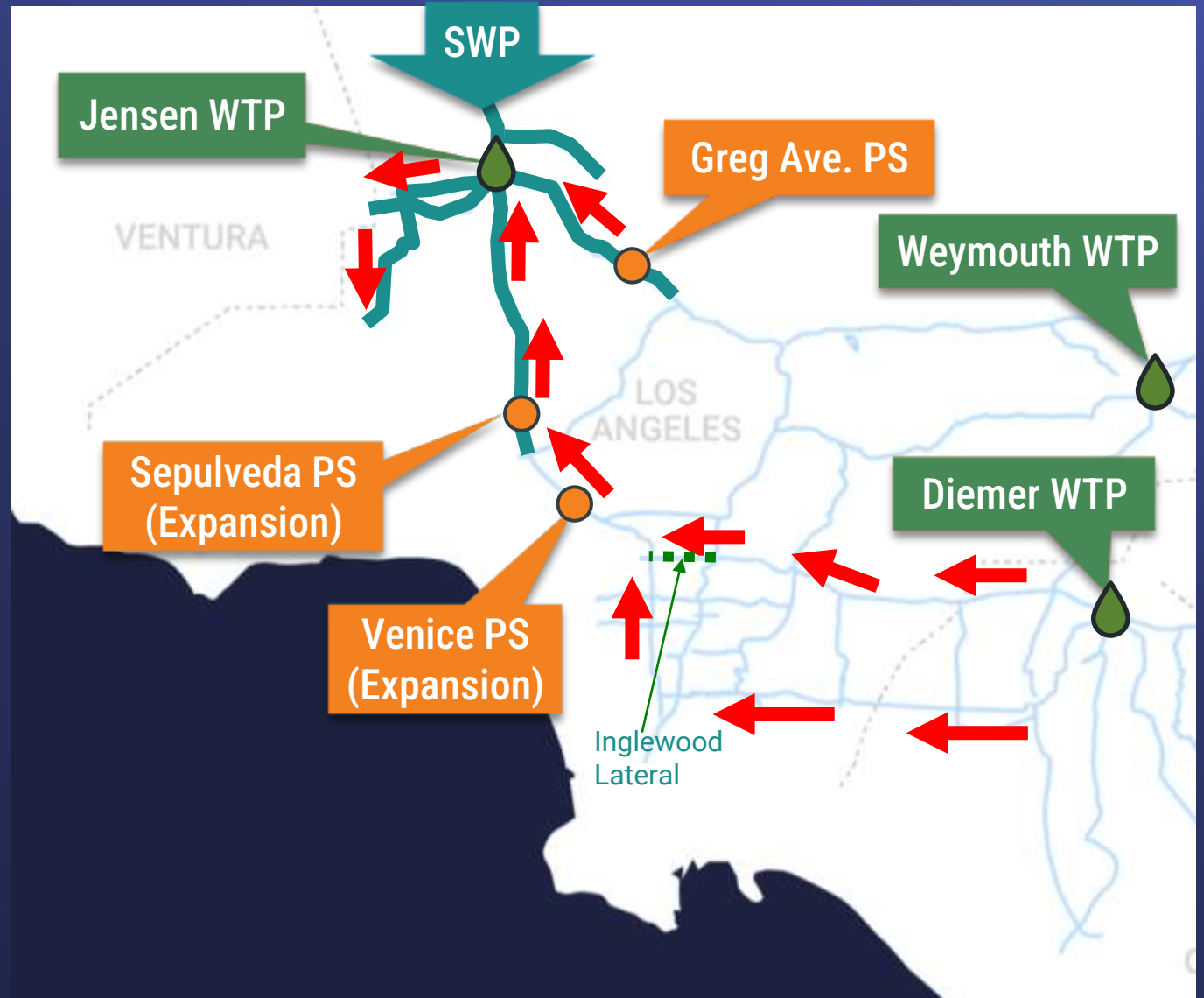
### Projects Prepared for Implementation

Project Title	Completion
Burbank B-5 to B-5A Shift	2026
TVMWD Miramar Pumpback Upgrades	2027/2028
Sepulveda Feeder Pumping Phase 2	2032



# Sepulveda Feeder Pumping Phase 2

- Enhance SWPDA drought resilience
- Prerequisites
  - Complete Phase 1 (30 cfs)
  - Complete PCCP relining of North Sepulveda Feeder
  - Upgrade Inglewood Lateral
- Urgency to start conceptual design to sync with Phase 1 final design process
  - Future implementation pending on CAMP4W evaluation

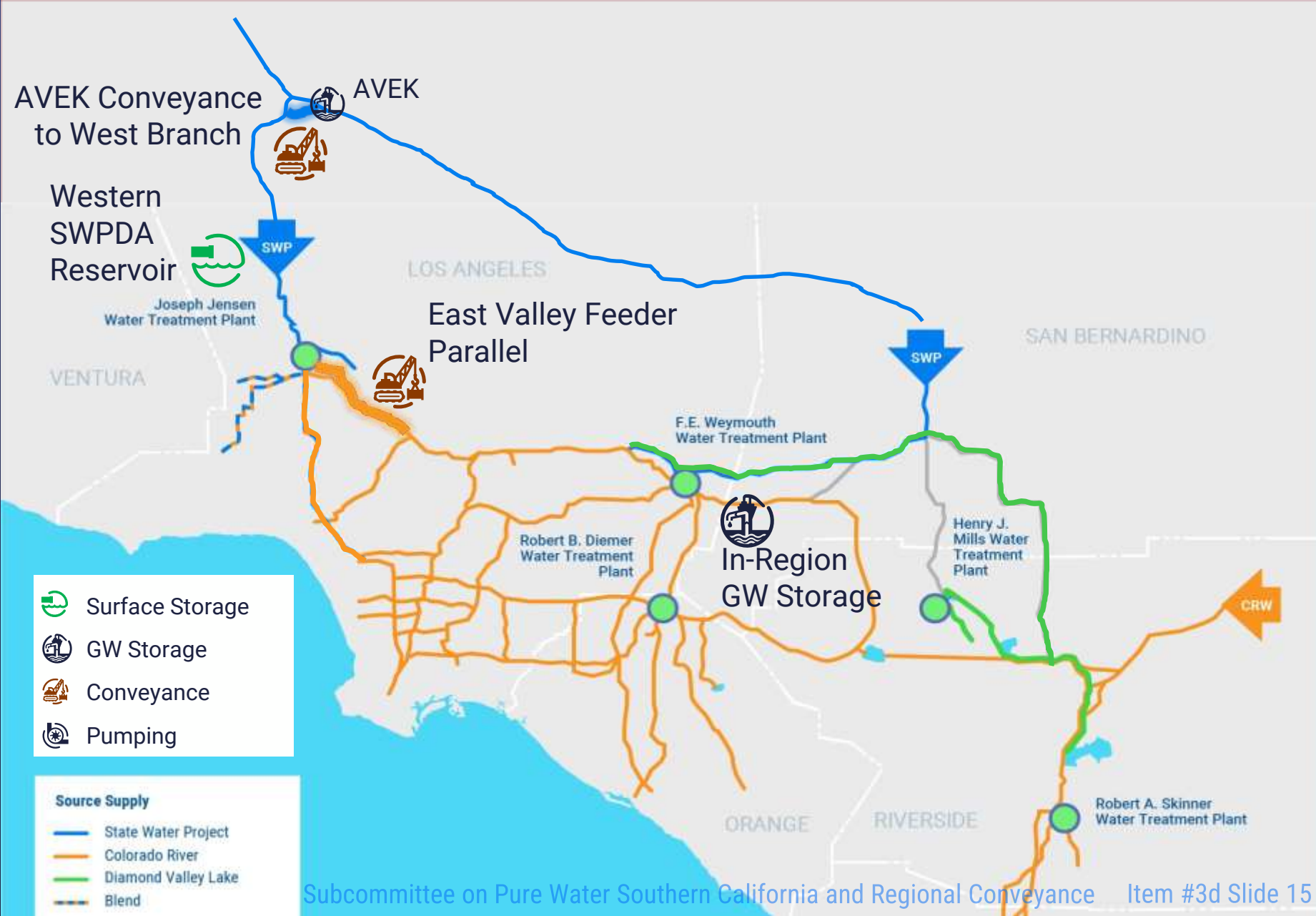




# Drought Mitigation Actions Portfolio Projects for Further Consideration

## Projects for Targeted Improvements

Project Title	Category
AVEK to West Branch	Conveyance
East Valley Feeder Parallel Pipeline	Conveyance
Western SWPDA Reservoir	Surface Storage
In-Region Groundwater Storage	Groundwater Storage



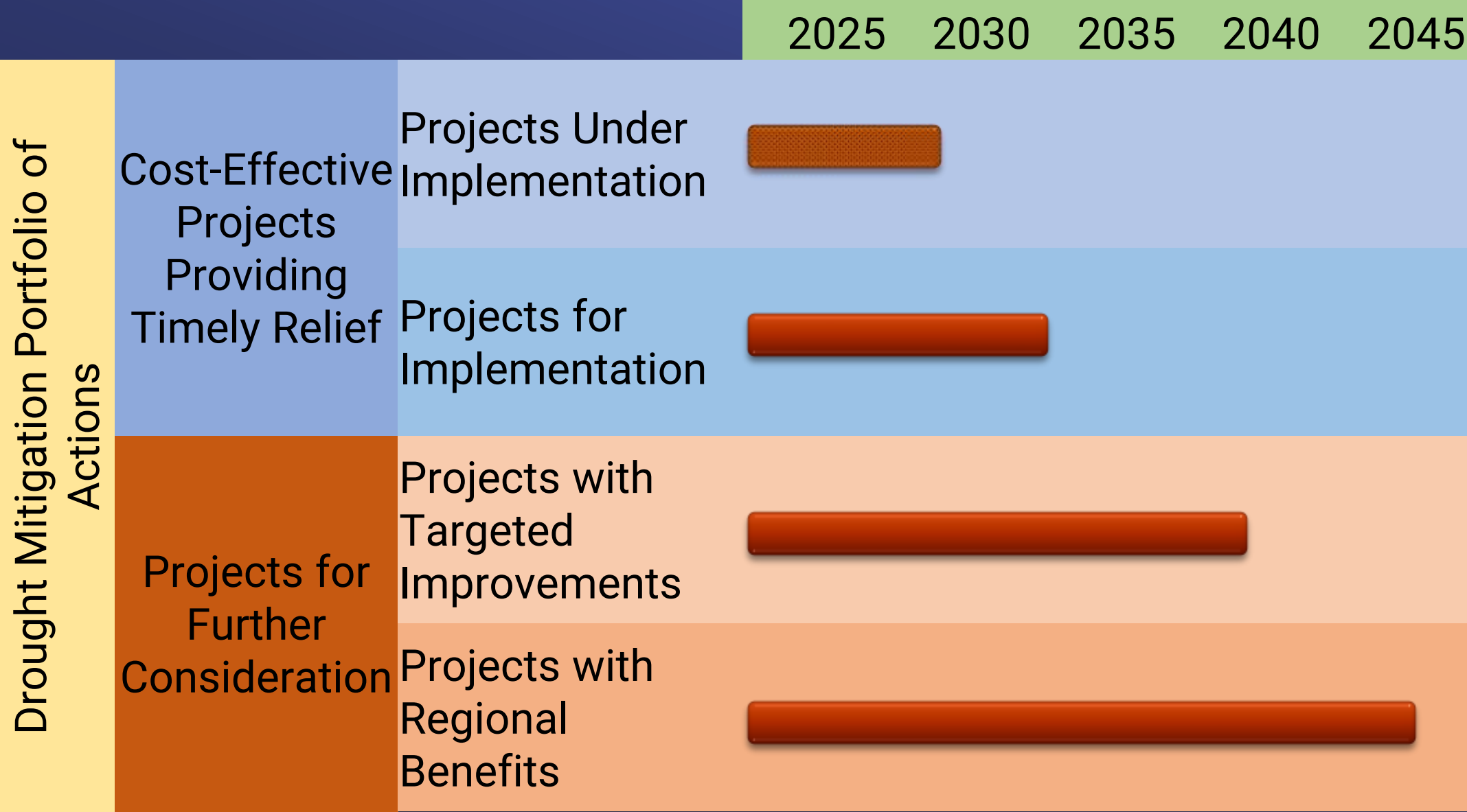
# Drought Mitigation Actions Portfolio Projects for Further Consideration

## Projects with Regional Benefits

Project Title	Category
E-W Regional Raw-Water Conveyance Line	Conveyance
SWP Storage - East San Joaquin Valley	Surface Storage
Flexible Storage (State & Federal Programs)	Surface Storage
AVEK Water Bank Expansion	Groundwater Storage
Recycled Water, Desalination	Local Supply



# Portfolio Implementation Estimated Timeline





# Planned Board Informational Items & Action - Implement Drought Mitigation Actions Portfolio

- Informational Item to the Engineering, Operations, and Technology Committee (February 2024)
  - Drought Mitigation Actions Implementation Plan
  - Integration of Drought Mitigation Actions in CAMP4W
- Action Item to the Engineering, Operations, and Technology Committee (March 2024)
  - Create a new CIP program for drought mitigation projects
  - Amend current CIP to include:
    - Sepulveda Feeder Pumping Phase 2 (160 cfs ultimate capacity)
    - Removing network constraints (e.g., Inglewood Lateral upgrade)

# CIP Adjustments for Drought Mitigation Actions Portfolio

- Move projects under implementation to the new CIP program for better tracking of efforts and progress
  - DVL/Rialto delivery projects
  - Sepulveda Feeder Pumping Phase 1
- Add projects prepared for implementation to CIP
  - Burbank B-5 to B-5A Shift
  - TVMWD Miramar Pumpback Upgrade
  - Sepulveda Feeder Pumping Phase 2 (conceptual design)
- Allocate funding in CIP expenditure plan for continued development of Regional E-W Conveyance projects (pending CAM4W evaluation for implementation)
- Continue developing projects on the portfolio to provide attributes for CAMP4W evaluation and potential inclusion in future CIP

