



# State Water Project Dependent Area Solutions Update

Engineering and Operations Committee

Item 6b

January 10, 2022

# SWP Dependent Area Solutions: Overview

## Issue

Some areas are particularly vulnerable to severe drought on the SWP system: SWP Dependent Areas

## Committed to Resolve this Issue

Identifying and implementing measures to ensure all portions of the service area attain a high level of reliability against multi-year, severe droughts

### Current Drought Emergency

Actively manage through current  
severe conditions

### Future Severe Drought

Urgently prepare for the next  
severe drought

# SWP Dependent Area Solutions: Overview

## Issue

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## Committed to Resolve this Issue

Identifying and implementing measures to ensure all portions of the service area attain a high level of reliability against multi-year, severe droughts

### **What we have done**

Took incremental and continuous action in preparation to respond to drought

Got through the two driest years on record

### **What we are doing**

Continuing to take urgent action to address this potentially ongoing unprecedented drought emergency

### **What we will do**

Continue to address this drought and prepare for the next with expedited drought action planning and development

Resolve this issue in collaboration with our member and partner agencies



# What We Have Done

Took Incremental and Continuous Action to Address the Issue

- Made some big gains since the last severe drought in 2014-15
- Provided increased reliability for this current severe drought



Added new interconnections and strengthened existing infrastructure to enable DVL water to be delivered to Mills



Developed a new storage program with AVEK and began construction on facilities for increased supply availability



Rehabilitated Greg Ave. Pump Station for improved reliability of Colorado River water to the SWP Dependent Area



Implemented WSDM actions, shored up CRA delivery capabilities, continued investments in water-use efficiency and local supplies





# What We Are Doing Taking Urgent Action to Address this Current Drought Emergency



# Ongoing Extraordinary Drought Actions to Preserve SWP Supplies

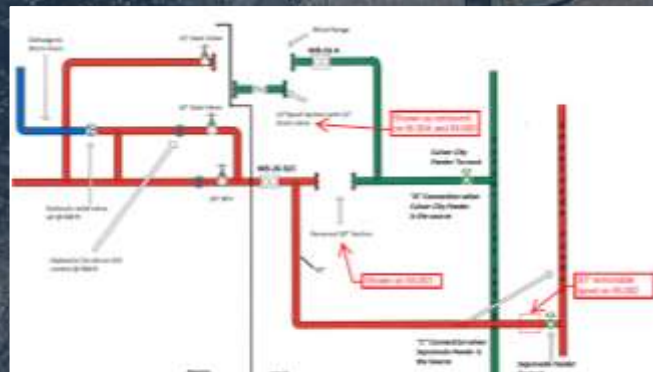


Maximizing reliability with extraordinary operational drought actions

# What We Are Doing Taking Extraordinary Operational Drought Actions



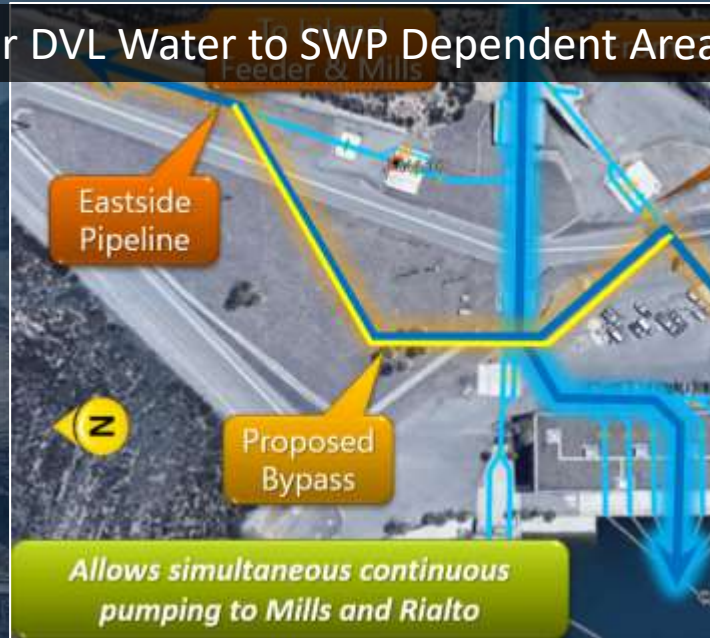
New Program to Shift from SPW to CRW Connections



CRA 8-Pump Flow



Designing New Interconnections to Deliver DVL Water to SWP Dependent Area



# What We Are Doing

Taking Action on New Infrastructure Investments to Deliver Other Sources of Water

News for Immediate Release\_\_

## Metropolitan Board Takes Actions to Alleviate Drought

New investments, partnerships increase reliability during challenging times

Dec. 14, 2021



# What We Are Doing Taking Action on Water Exchanges



Water Purchase and Use of Capacity at Semitropic

News for Immediate Release

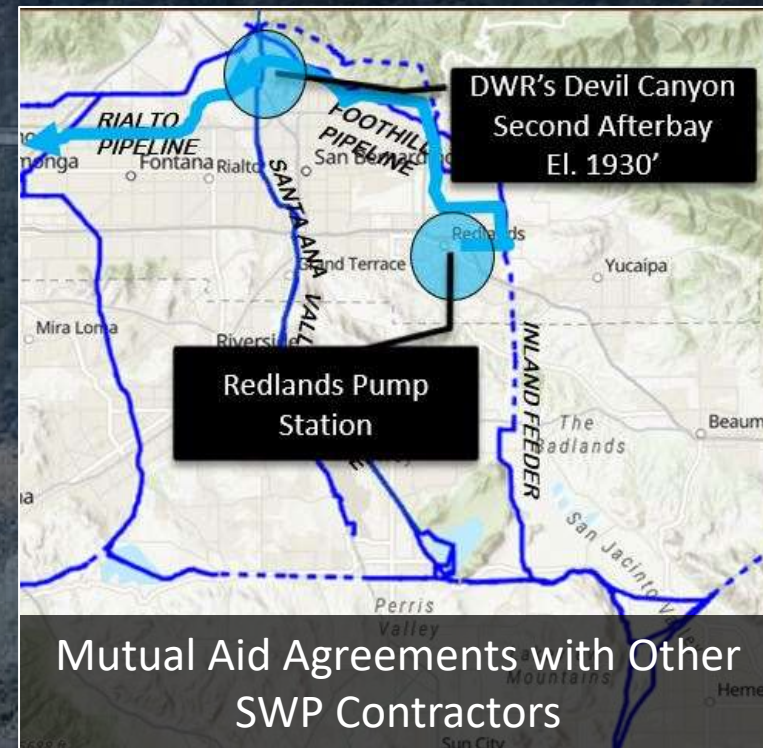
## Agencies Partner to Boost Water Supplies for Southern California

Metropolitan-Water Authority agreement responds to governor's call for drought actions

Dec. 1, 2021



Friant Exchange



Mutual Aid Agreements with Other SWP Contractors



News for Immediate Release\_\_

# Metropolitan Declares Drought Emergency

Metropolitan Board of Directors calls for increased conservation and expands water efficiency programs

Nov. 9, 2021

## What We Are Doing Taking Strategic WSDM and Water Management Actions

- Water saving has health benefits too.** Image: A blender. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com
- Rev up water savings.** Image: A motorcycle. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com
- Take the plunge with a water-efficient toilet.** Image: A toilet with a yellow water-saving device. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com
- Bail on drought, save water.** Image: A clipboard with a pen. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com
- Take water saving by the horns.** Image: A washing machine. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com
- Water Saving (Drought remix)** Image: A DJ turntable. Text: Drought requires bold action. Save more water now. For water-saving tips and rebates be water wise.com





# What We Will Do

Continue to Address this Drought and Prepare for the Next

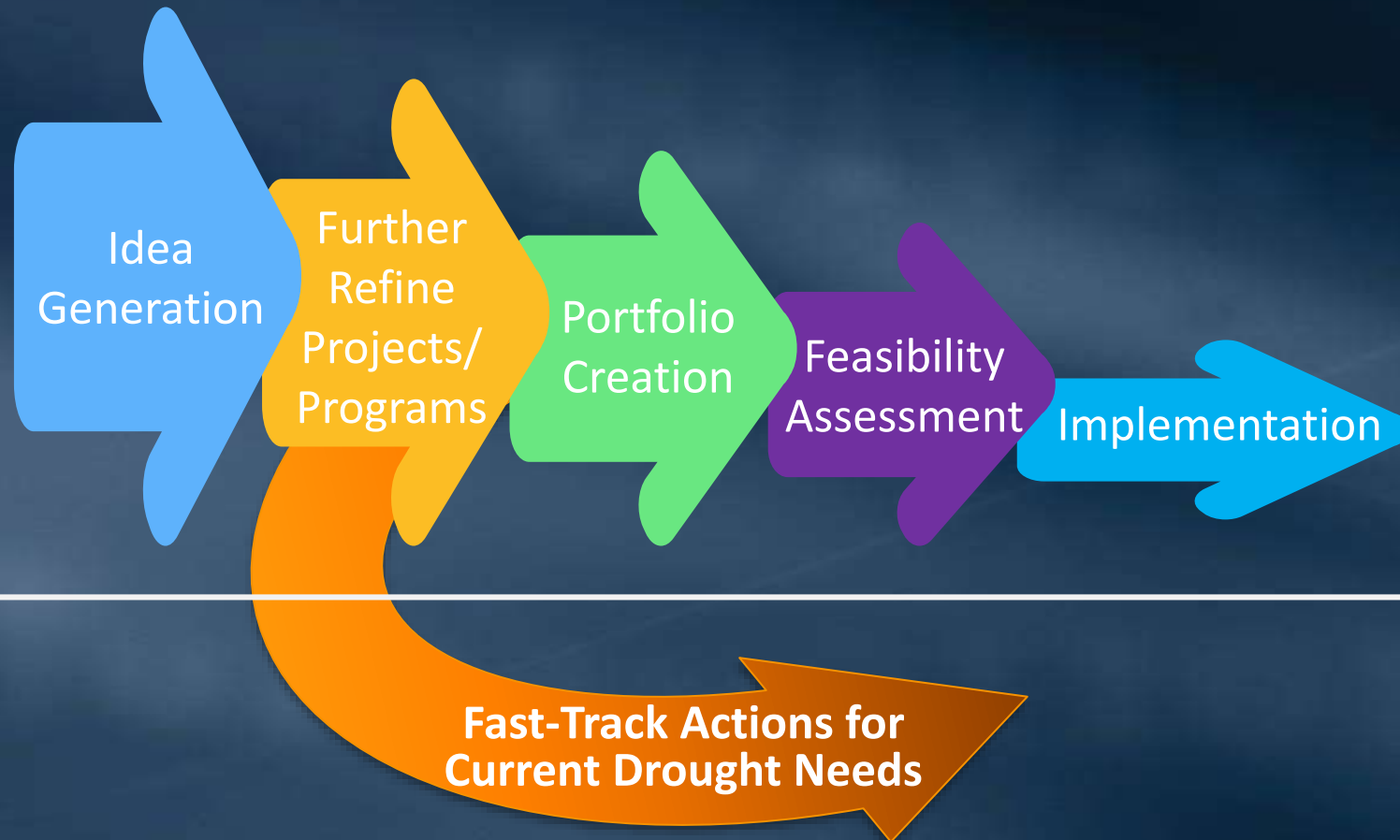
“ *Identify and implement measures to ensure all portions of the service area attain a high level of reliability against multi-year, severe droughts. Measures include, but are not limited to, system improvements, local water supply development, new water storage opportunities, and water efficiency gains*  
— November 2021 Resolution of the Board of Directors of MWD ”





# Drought Action Planning and Development

Accelerated Actions for the Near- and Long-Term



**Future  
Severe  
Drought**

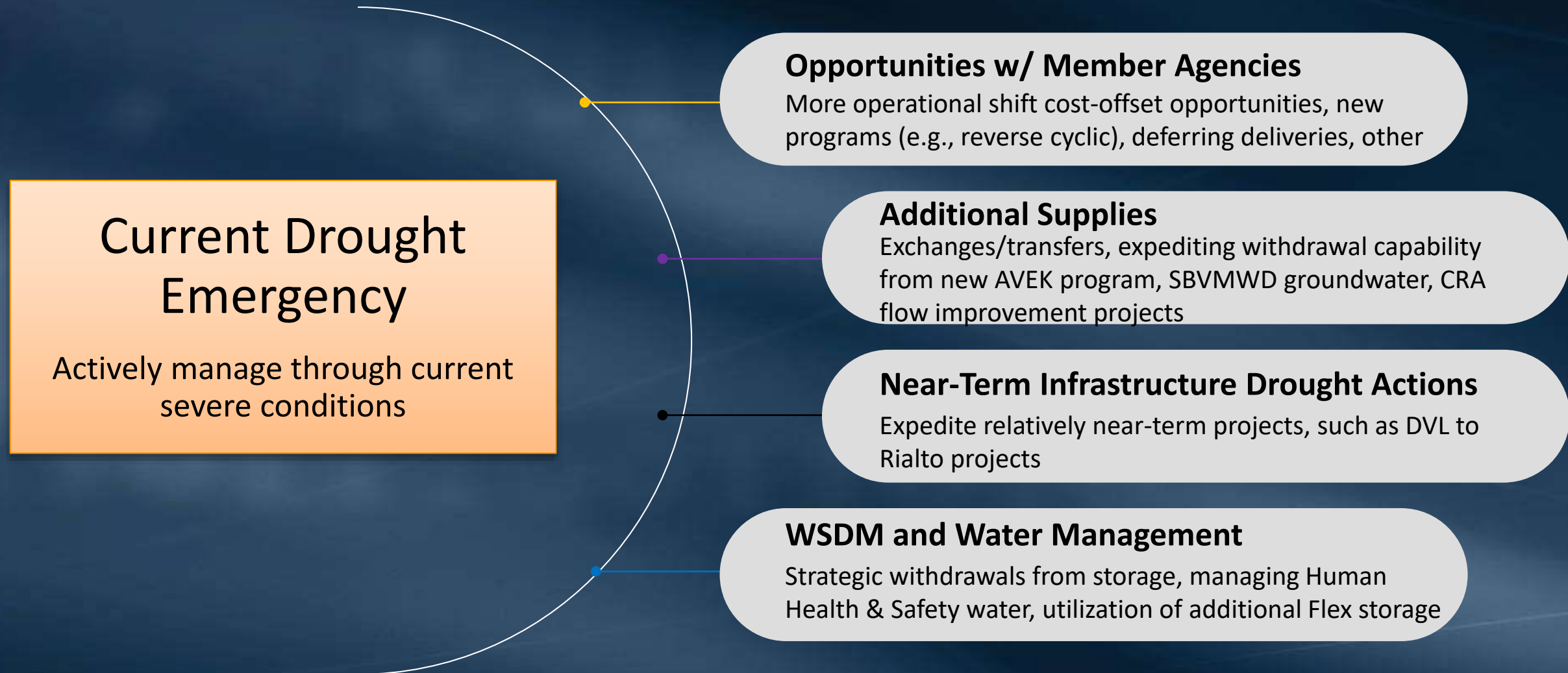
**Current  
Drought  
Emergency**

Collaborative Process with Member and Partner Agencies



# Drought Action Planning and Development

Addressing Potential Severe Drought Extending into 2022+

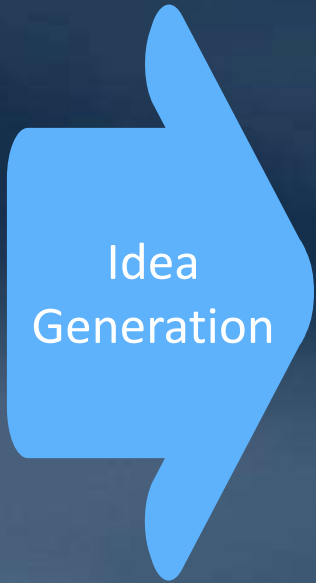


# Future Severe Drought

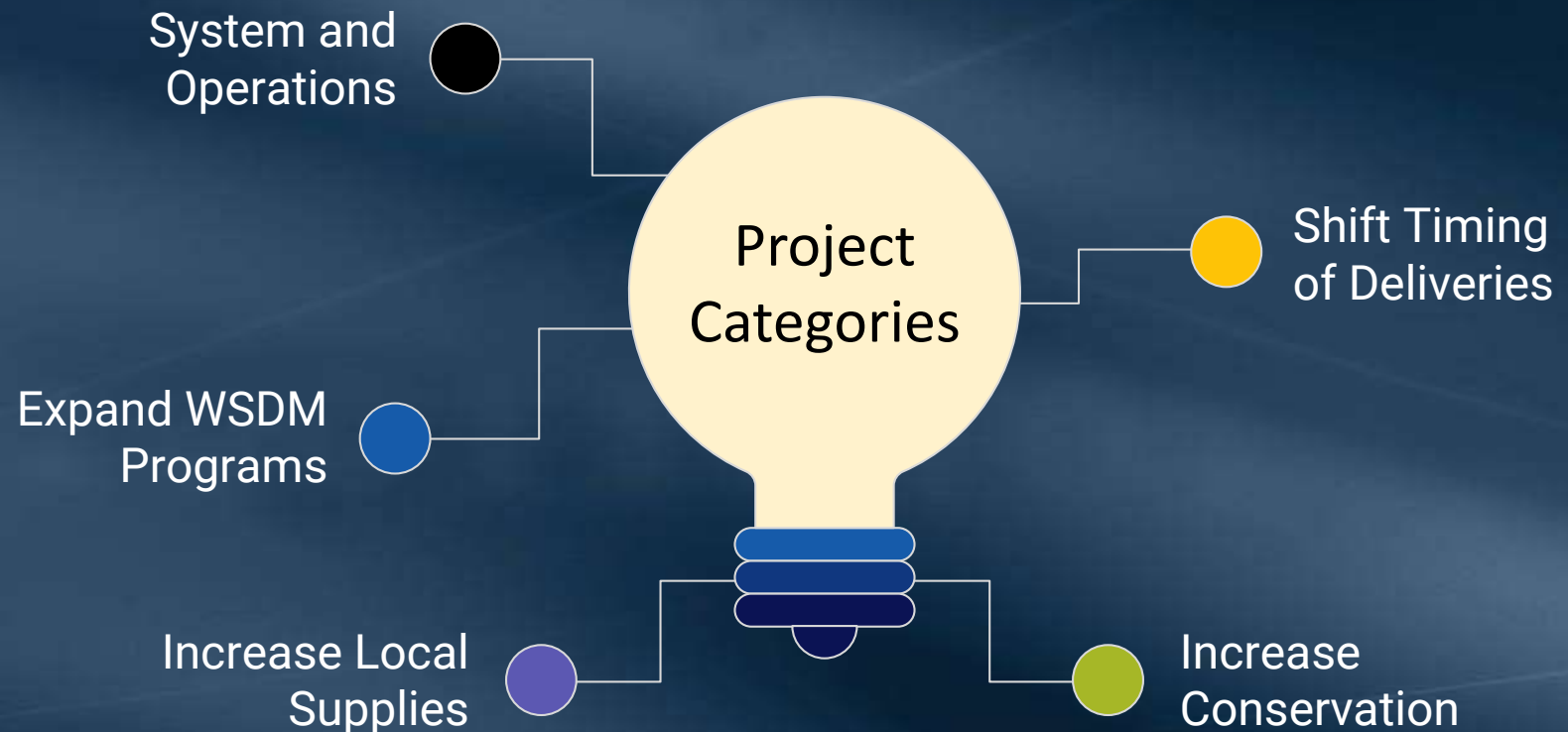


# Drought Action Planning and Development

## Proactively Ramped Up Drought Action Planning



- Generated 130+ creative ideas
- About 50 ideas selected for further study and potential development
- Various project/program types and timing



# Drought Action Planning and Development

Continue to Expedite Planning for Mid- and Long-Term Actions



Example Elements	Fatal flaws?
	Yield/size, cost, online date
	Operational needs
	System impacts, member agency impacts, water quality requirements



# Potential Long-Term Project: Greg Avenue Pump Station Expansion

- Greg Avenue Pump Station currently providing up to 55 cfs of CRW to the West Valley area
- Reconnaissance-level studies completed to expand the pump station:
  - Hydraulics/surge protection
  - Pipeline capacity
  - Preliminary facility sizing
  - System operations constraints
- Feasibility study funds required to investigate in greater detail





# Greg Avenue Pump Station Expansion Could Require Significant Infrastructure Modifications

- Doubling the pumping capacity requires more detailed investigations, including:
  - Possible parallel piping: upstream and downstream portions of the 48" diameter East Valley Feeder through Burbank, Sun Valley, and San Fernando
  - Increased surge protection capability
  - Various options: additional parallel piping vs. additional booster pump; power service, additional equipment, space availability
  - Coordination with Jensen Plant minimum flow operations, especially during low demand months






# Potential Long-Term Project: New Pump Stations at Sepulveda PCS and Venice



- Deliver CRW to the West Valley area from the Central Pool
- Supplement Greg Ave Pump Station deliveries
- Reconnaissance-level studies completed to expand the pump station:
  - Hydraulics/surge protection
  - Pipeline capacity
  - Preliminary facility sizing
  - System operations constraints
- Feasibility study funds required to investigate in greater detail



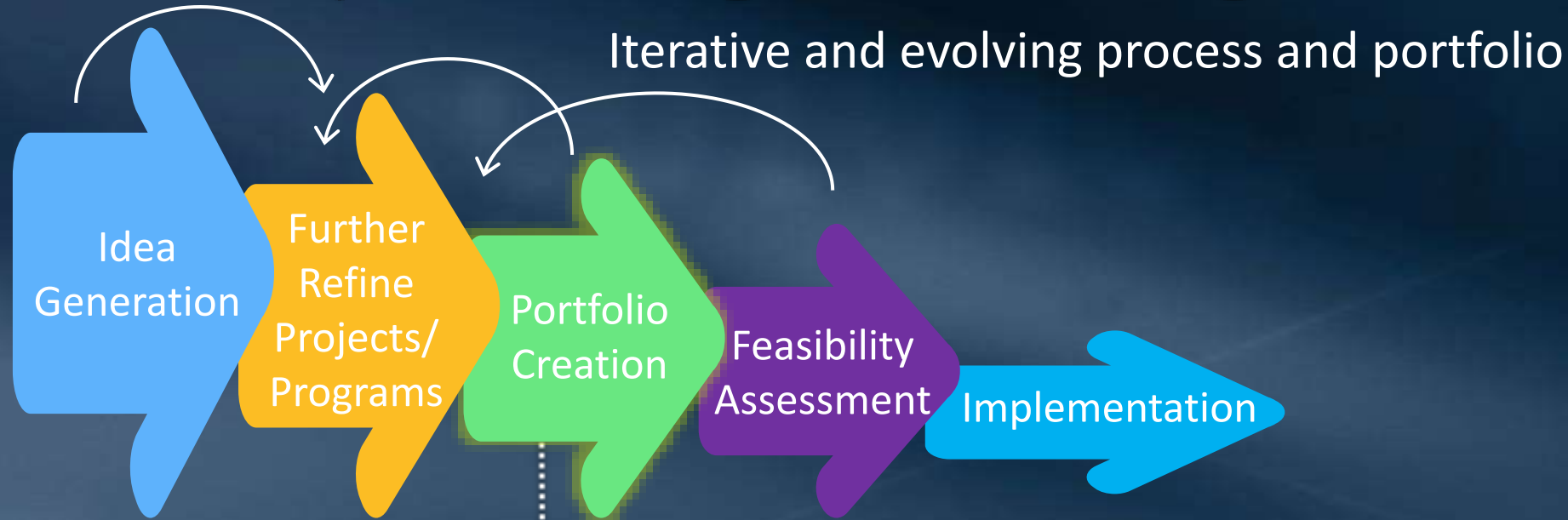


## New Pump Stations at Sepulveda PCS and Venice PCS Could Require Significant Infrastructure Modifications

- Pumping 50 to 100 cfs requires more detailed investigations, including:
  - Sepulveda Feeder relining north of Venice PCS
  - Surge protection options at the pump stations
  - Onsite power availability to supply the new pump stations
  - Refinement of pump station layouts
  - Constructability of new pump station at Sepulveda Canyon Facility
  - Coordination with Jensen Plant minimum flow operations, especially during low demand months

# Drought Action Planning and Development

Continue to Expedite Planning for Mid- and Long-Term Actions



**Iterative  
Planning Effort**

High-level evaluation of facilities/programs to manage through the next series of consecutive low SWP allocation years

Understanding of individual projects/programs and of the collection of actions as a whole



# Drought Action Planning and Development

## Severe Drought Assessment and Portfolio Creation

Potential needs during a multi-year, severe drought sequence (low SWP allocations)

Scenario



Initial Assessment

What more may be needed and potential options to get there

Options



Portfolio





Ability to meet demands with existing actions/resources

High-level evaluation of drought action alternatives and portfolio creation

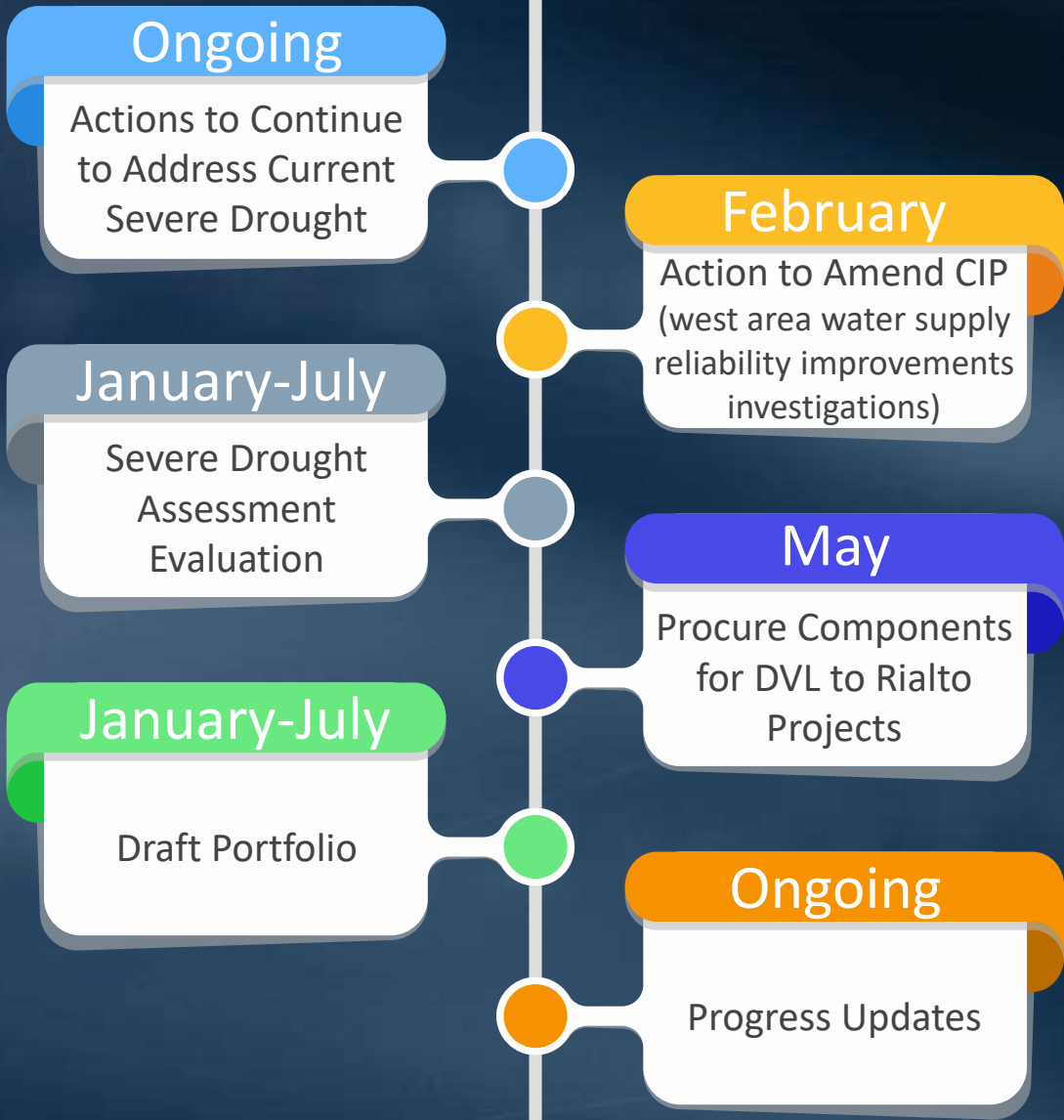
# Drought Action Planning and Development

## Evaluating a Variety of Options in Creating a Portfolio

Examples:

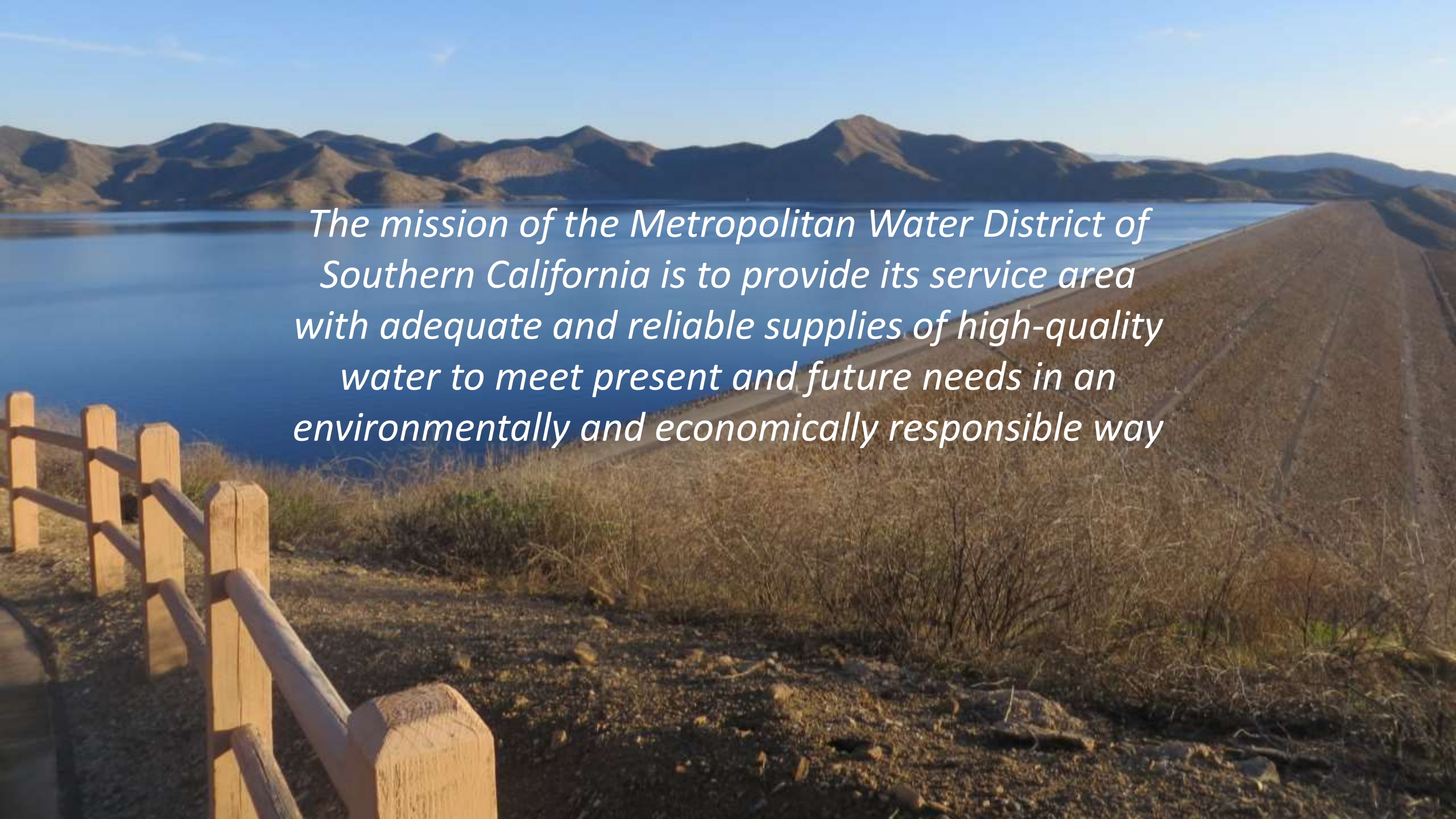
	Storage	Groundwater, surface reservoirs	AVEK High Desert Water Bank New surface water reservoir(s) Expansion of existing storage Additional Castaic Flex storage
	Exchanges	Partnerships and agreements for additional water supply	Semitropic Banking increased takes Friant/Arvin-Edison water exchange SBVMWD water exchanges
	Pumping	Reverse flow to deliver other sources of supply	DVL to Rialto (new interconnections) Venice/Sepulveda new pump stations Greg Avenue Pump Station expansion
	Programs	In-region programs with Member Agencies	More Operational Shift Cost-Offset opportunities Reverse Cyclic/ deferred deliveries/ groundwater utilization





# 6-Month Outlook

Continue to take urgent actions for this and future droughts, including collaboratively creating a high-level drought action portfolio

A scenic landscape featuring a large, calm reservoir in the middle ground. In the background, a range of brown, hilly mountains stretches across the horizon under a clear blue sky. The foreground is dominated by a wooden post-and-rail fence on the left side, leading the eye towards the water. The ground is covered with dry, brownish vegetation and rocks. The overall lighting suggests a bright, sunny day.

*The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way*



