



Engineering, Operations, and Technology Committee

2023 System Operations *A Year in Review*

Item 6b

January 8, 2024

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2023 System Operations A Year in Review

Subject

Update on 2023 System Operations

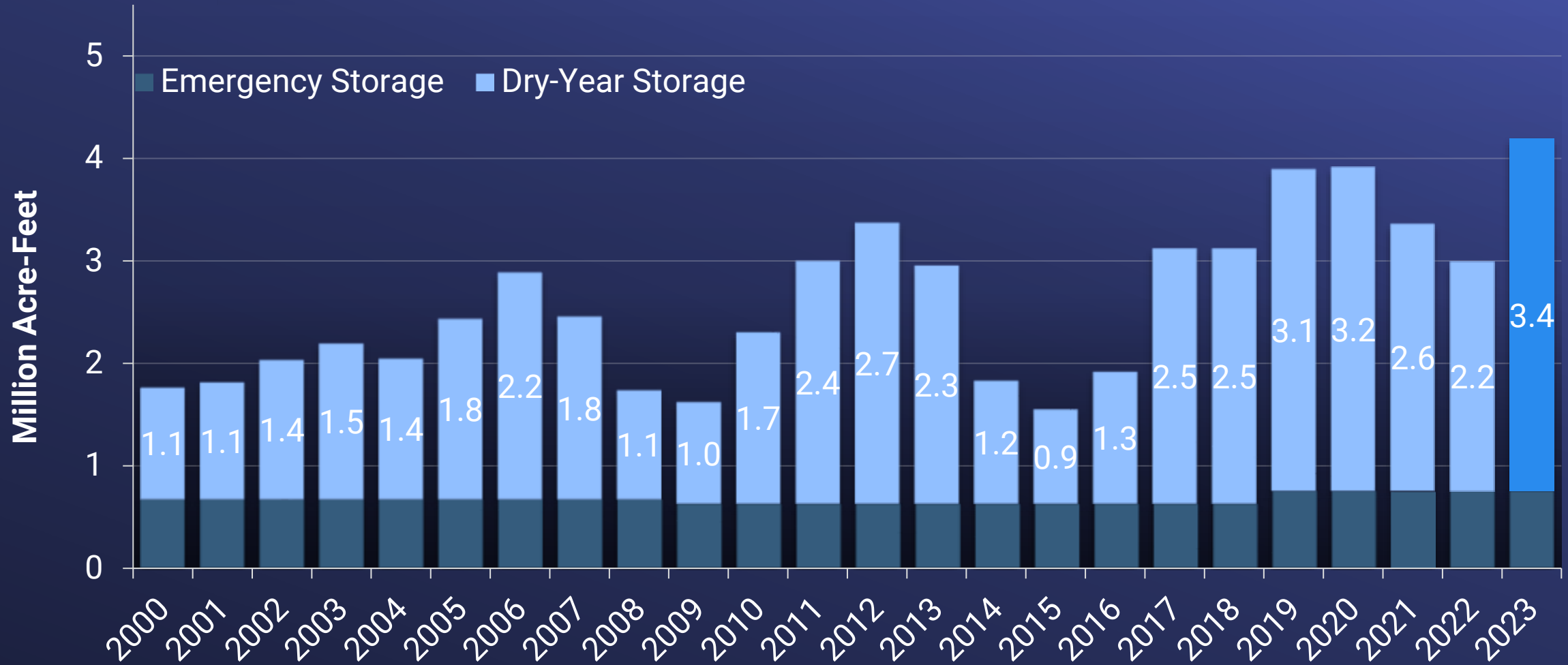
Purpose

Provide recap of 2023 operations

Next Steps

Adapt operations to 2024 conditions and provide periodic updates to the Board

Record-High Storage Projection for Metropolitan End-of-Year Balances



Note:

2023 end-of-year balance is preliminary as they are subject to DWR adjustments and USBR final accounting.

5% SWP Allocation
+ Human Health
and Safety Supply

Minimizing SWP Use as Allocation Developed

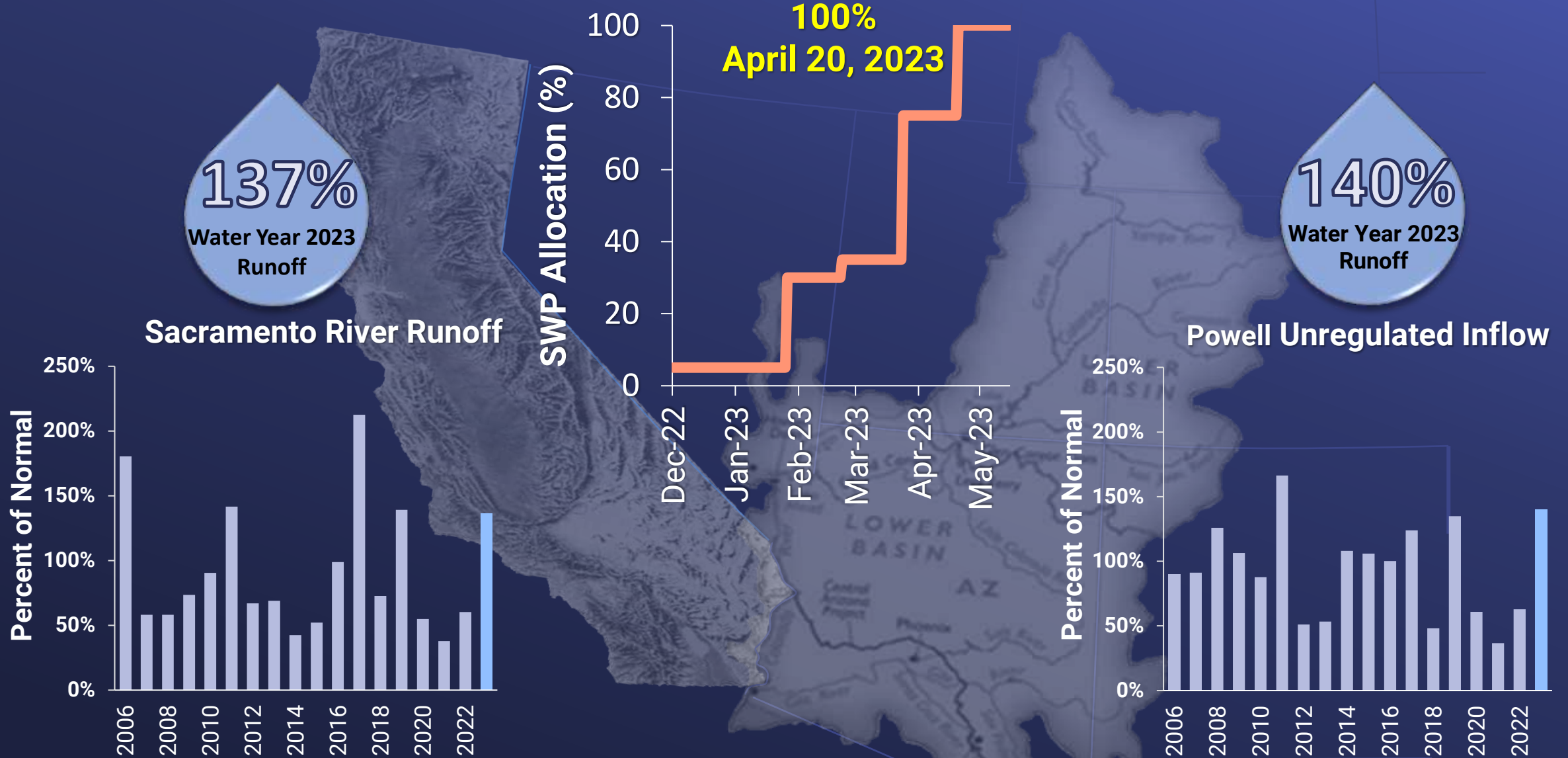
End of 2022/
Early 2023
Operations



Castaic Lake (Jan 18, 2023)



Water Year Hydrologic Conditions: **Near-Record Breaking**



100% SWP Allocation
First time since 2006

Received 134 TAF of
Article 21 supplies

March-April Operations



Article 21 Deliveries to Diamond
Valley Lake on March 27, 2023

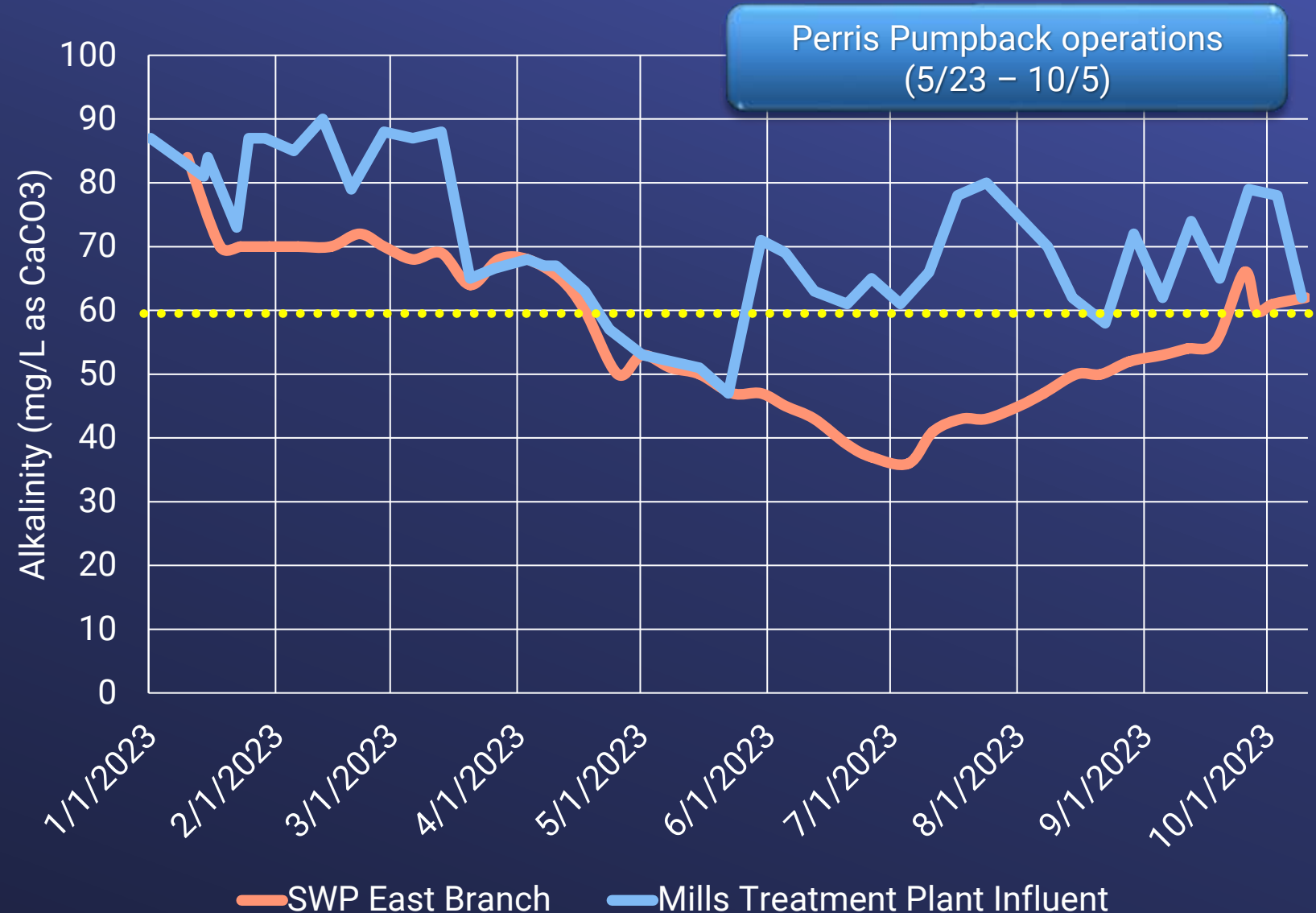
Maximizing SWP Use and Article 21 Supplies



Water Quality Challenges

Reoperated system to help manage alkalinity levels and facilitate water treatment

Low Alkalinity Water from Snowmelt

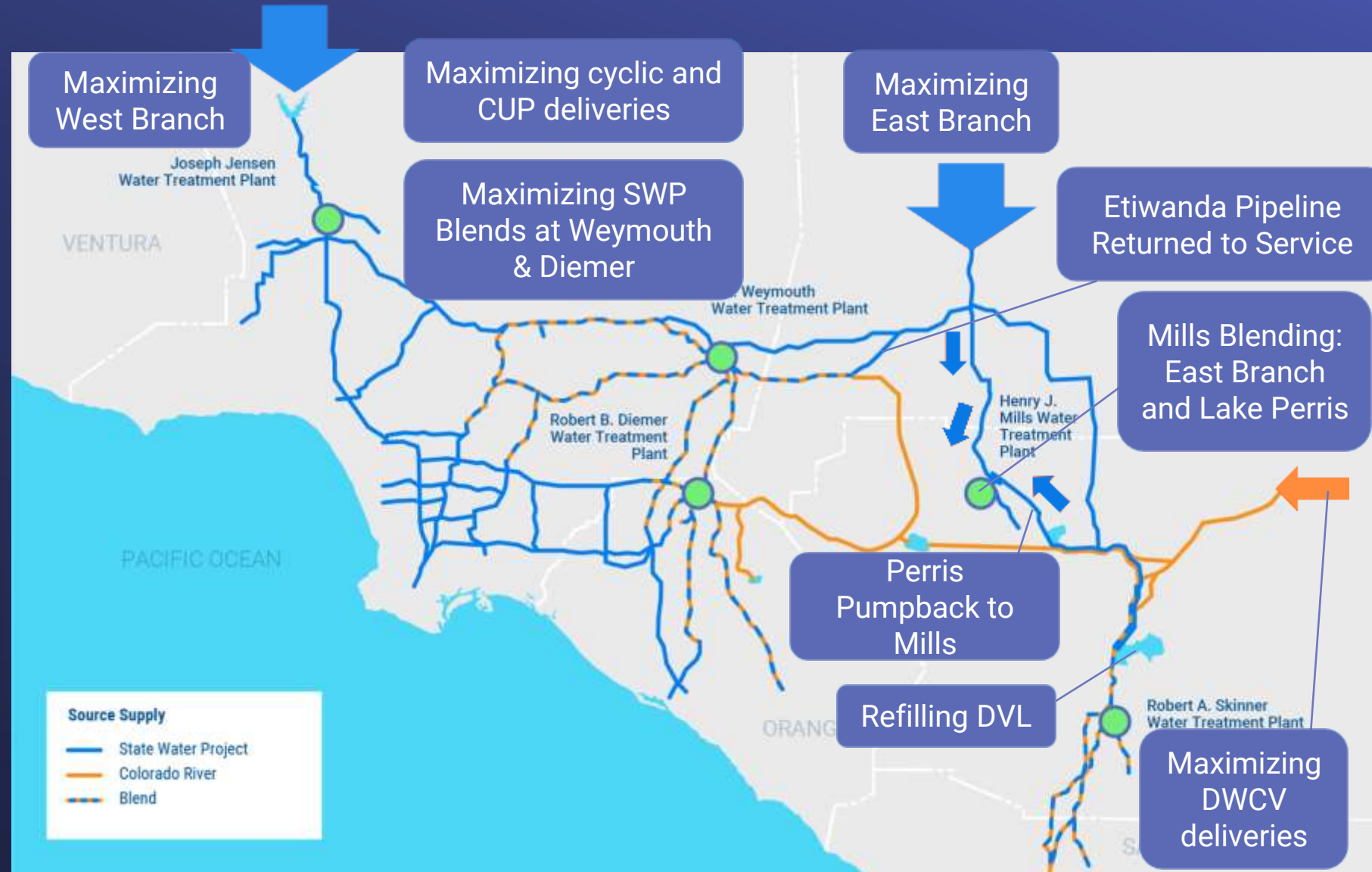


Maximizing SWP Use with Low Alkalinity

May-August Operations



East Branch of California Aqueduct



Cyanobacteria Blooms Summer 2023



DVL Marina – July 3

Managing Multiple Blooms in Reservoirs

Diamond Valley Lake

- Rapidly developed bloom producing cyanotoxins impacting recreational water use only
- Followed State voluntary guidance for monitoring and posted recreational advisory notices

Lake Skinner

- Managed taste & odor (geosmin) event





Exposed section of CRA

Emergency Preparedness and Response

- Activated Emergency Operations Center at Level 3
 - Reduced Colorado River Aqueduct pump flow
 - Suspended deliveries to DWCV storage
- Across the system:
 - Assessed dams & reservoirs
 - Performed aerial & ground patrols following storm
- No major impact to Metropolitan's facilities

Tropical Storm
Hilary
August 2023

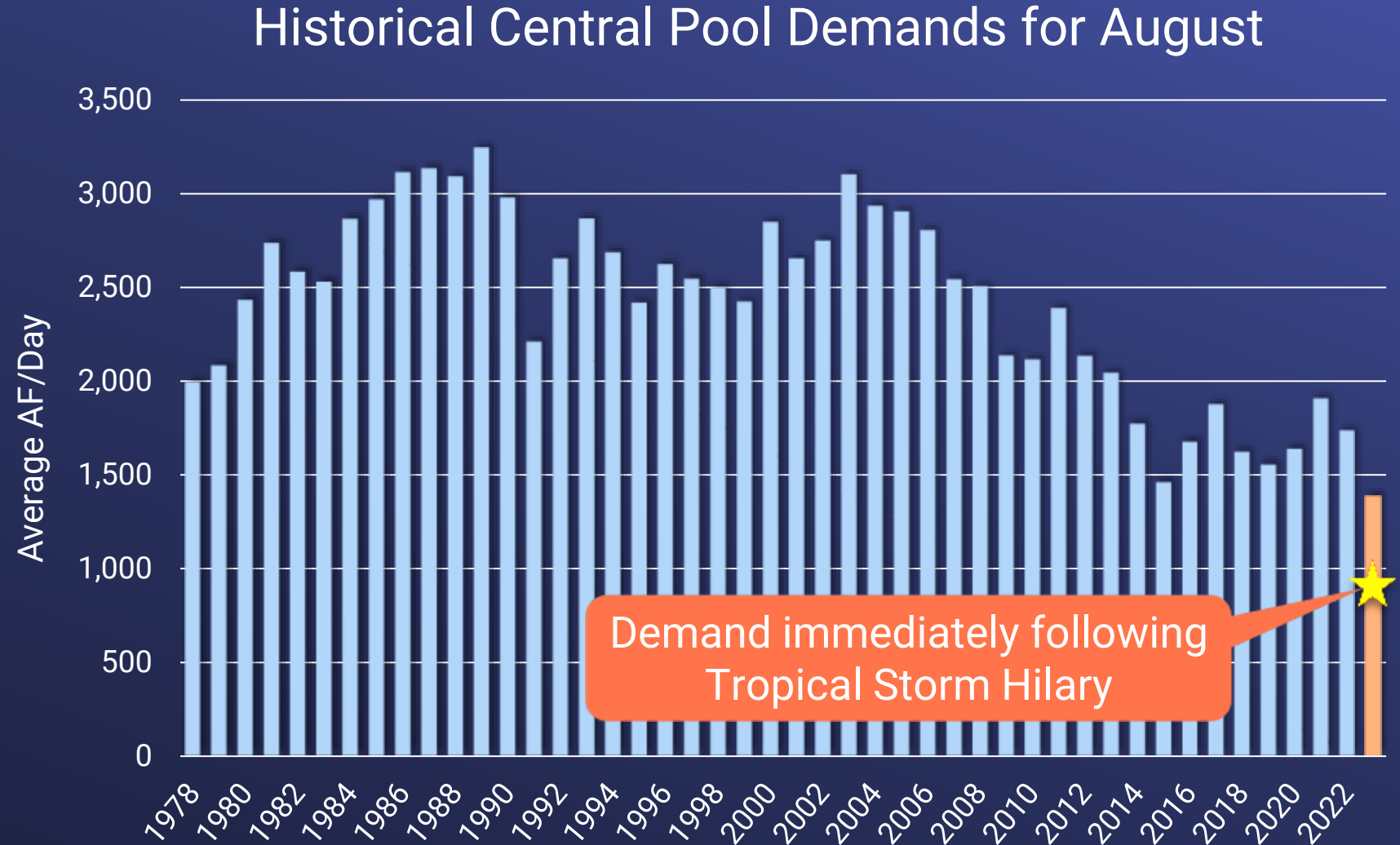


*Photo by Nicholas Weiss
Equipment Operator on Aqueduct Maintenance Team*

Record Low August Demands

Tropical Storm Impact

2023 August summer demand is lower than average February winter demands prior to 2014

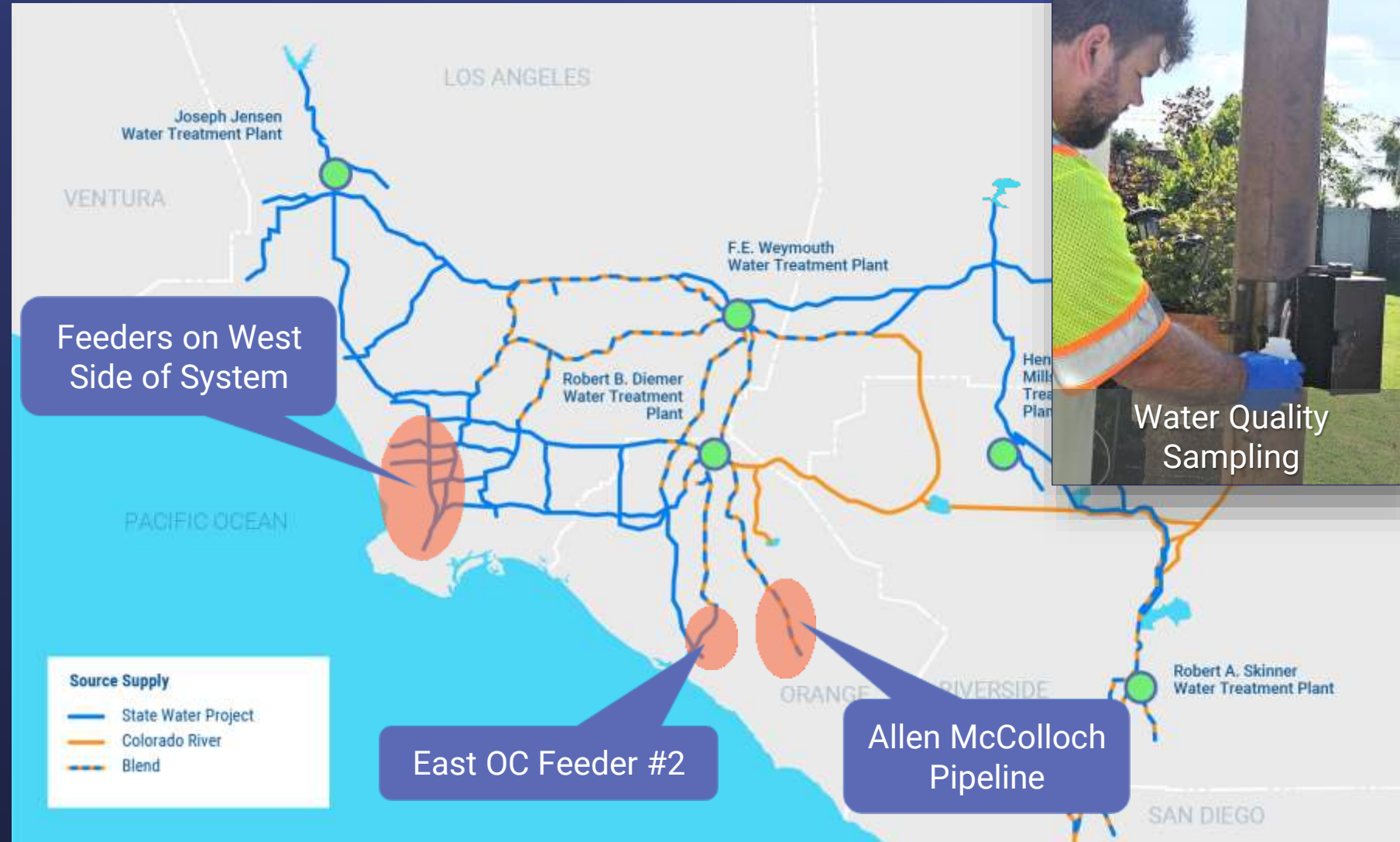


Managing Nitrification Across Los Angeles and Orange Counties

Nitrification Event



Extensive coordination with member and retail agencies



Water Quality Sampling

Significant Damage Sustained at Downstream Whitewater Groundwater Replenishment Facility

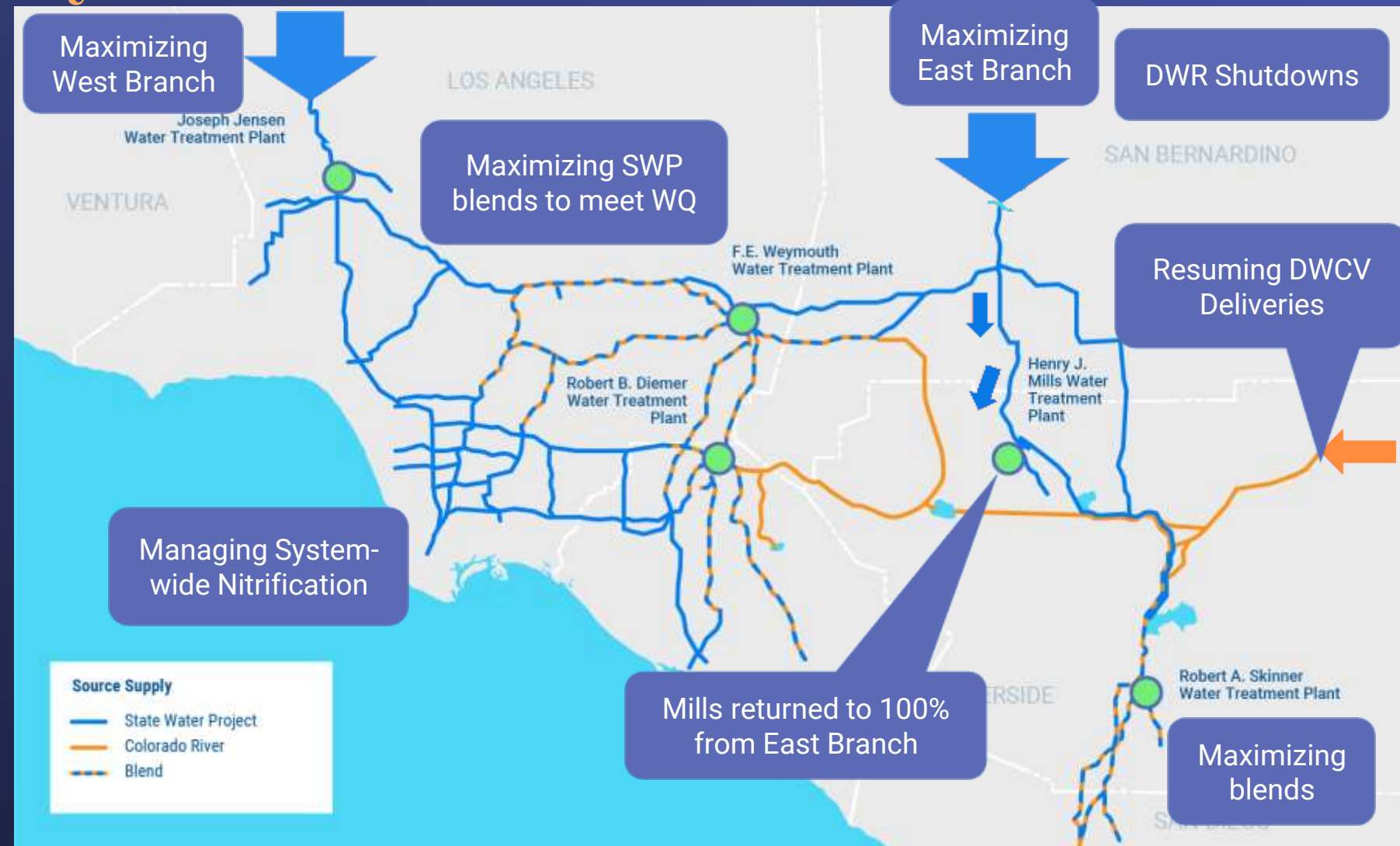


September-December Operations



Colorado River Aqueduct

Maximizing SWP Supplies while Balancing System Constraints



Ensuring Continued System Reliability



Middle Feeder



Lake Mathews Forebay Tower Gate



Sepulveda Feeder



Second Lower Feeder



Colorado River Aqueduct



Orange County Feeder

Key Shutdowns in 2023

Sepulveda Feeder

Inspect PCCP via PipeDiver
Feb. 6 – 12, 2023

Middle Feeder

Inspect pipeline and replace valves
Apr. 17-24, 2023

Etiwanda Pipeline

Repair lining
Sep. 26, 2022 – Jul. 29, 2023

Lakeview Pipeline

Remove bulkheads at Perris
Facility and inspect pipeline
Apr. 28 – May 5, 2023

Compton Lateral

Performed leak repair
Sep. 7 – 16, 2023

Second Lower Feeder

Rehabilitate PCCP
Jan. 10 – May 12, 2023

Orange County Feeder

Reline pipeline
Sep. 18, 2022 - Jul 12, 2023

Lake Mathews Facility, et al.

Replace damaged slide
gate on forebay tower
Mar. 13 – 24, 2023

Colorado River Aqueduct

Perform CIP and O&M activities
Jan. 31 – Feb. 24, 2023



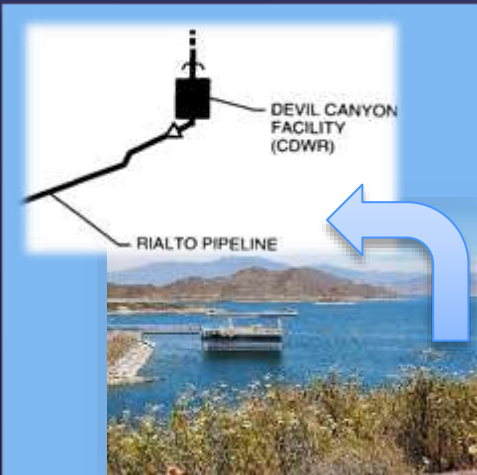
Metropolitan's 2023 Storage Actions: ~1.2 MAF Increase



Notes:

- 1) Dashed lines indicate 2023 starting storage balances.
- 2) Ending storage balances are projections (as of December 12, 2023) & will vary based on actual conditions.
- 3) In-region storage includes emergency storage.
- 4) Storage buckets are not drawn to scale.

Preparing for future droughts



DVL to Rialto



AVEK
High Desert
Water Bank



Regional Storage
Programs



PUREWATER
SOUTHERN CALIFORNIA

Success through Teamwork



Planning



Leading



Engineering



Constructing



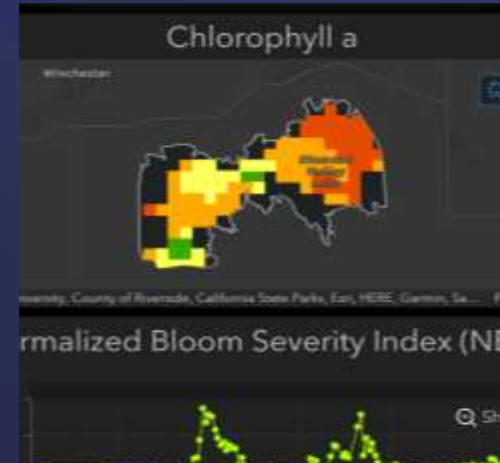
Operating



Maintaining



Partnering



Innovating

What will 2024 bring?



December 12, 2023

Metropolitan staff is prepared for drought to surplus conditions and will continue working to improve the reliability of the region today, tomorrow, and long into the future.

