# The Metropolitan Water District of Southern California

# Agenda

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.

**OW&S Committee**
T. Quinn, Chair
S. Faessel, Vice Chair
L. Ackerman
J. Armstrong
A. Chacon
G. Cordero
D. De Jesus
D. Erdman
L. Fong-Sakai
S. Goldberg
C. Kurtz
R. Lefevre
C. Miller
M. Petersen
G. Peterson
N. Sutley

## One Water and Stewardship Committee - Final - Revised 1

Meeting with Board of Directors *

**January 9, 2023**

**12:00 p.m.**

| Monday, January 9, 2023 Meeting Schedule |
|---|
| 09:00 a.m. Sp BOD |
| 09:30 a.m. EOT |
| 11:30 a.m. Break |
| 12:00 p.m. OWS |

**Agendas, live streaming, meeting schedules, and other board materials are available here: https://mwdh2o.legistar.com/Calendar.aspx. A listen only phone line is available at 1-877-853-5257; enter meeting ID: 831 5177 2466. Members of the public may present their comments to the Board or a Committee on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference (833) 548-0276 and enter meeting ID: 815 2066 4276.**

**MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012**

* The Metropolitan Water District's meeting of this Committee is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board who are not assigned to this Committee may participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the committee as advisory to the Board, members of the Board who are not assigned to this Committee will not vote on matters before this Committee.

## 1. Opportunity for members of the public to address the committee on matters within the committee's jurisdiction (As required by Gov. Code Section 54954.3(a))

**** CONSENT CALENDAR ITEMS -- ACTION ****

## 2. CONSENT CALENDAR OTHER ITEMS - ACTION

**a.** Approve creating the Demand Management and Conservation Programs and Priorities Subcommittee and establish a two year term. [ADDED ITEM 1/4/23] **21-1875**

## 3. CONSENT CALENDAR ITEMS - ACTION

Meeting Delayed 12:15 p.m.

**7-10** Authorize an agreement with Upper San Gabriel Valley Municipal Water District and the city of South Pasadena for a Stormwater for Direct Use Pilot Program; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA **21-1858**

**Attachments:** 01102023 OWS 7-10 Presentation
01102023 OWS 7-10 B-L

**7-11** Authorize the General Manager to: (1) secure one-year water transfers with various water districts for up $100 million from Water Supply Program and State Water Project Budget for such transfers; (2) secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers; (3) grant final decision-making authority to the General Manager subject to the terms set forth in this letter; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [SUBJECT REVISED 1/4/2023] **21-1870**

**Attachments:** 01102023 OWS 7-11 B-L
01102023 OWS 7-11 Presentation

**** END OF CONSENT CALENDAR ITEMS ****

## 4. OTHER BOARD ITEMS - ACTION

NONE

## 5. BOARD INFORMATION ITEMS

NONE

## 6. COMMITTEE ITEMS

**a.** North Yuba Forest Partnership Watershed Resilience Project; Presentation by: Willie Whittlesey, General Manager, Yuba Water Agency **21-1829**

**Attachments:** 01092023 OWS 6a Presentation

**b.** The Untapped Potential of California's Urban Water Supply; Presentation by: Heather Cooley, Director of Research of the Pacific Institute **21-1857**

**Attachments:** 01092023 OWS 6b Presentation

Meeting Delayed 12:15 p.m.

**c.** Update on State and Federal Bay-Delta Regulatory Processes **21-1825**

**Attachments:** 01092023 OWS 6c Presentation

**d.** State Water Project 2023 Statement of Charges and Annual Audit Update **21-1830**

**Attachments:** 01092023 OWS 6d Presentation

**e.** Update on Water Surplus and Drought Management and Water Shortage Emergency Condition **21-1828**

**Attachments:** 01092023 OWS 6e Report
01092023 OWS 6e Presentation

**f.** Update on Conservation **21-1855**

**Attachments:** 01092023 OWS 6f Presentation

**g.** Establish the Demand Management and Conservation Programs and Priorities Subcommittee [WITHDRAWN 1/4/2023] **21-1868**

## 7. MANAGEMENT REPORTS

**a.** Colorado River Manager's Report **21-1827**

**Attachments:** 01092023 OWS 7a Report

**b.** Bay-Delta Manager's Report **21-1826**

**Attachments:** 01092023 OWS 7b Report

**c.** Water Resource Management Manager's Report **21-1831**

**Attachments:** 01092023 OWS 7c Presentation

## 8. FOLLOW-UP ITEMS

NONE

## 9. FUTURE AGENDA ITEMS

## 10. ADJOURNMENT

Meeting Delayed 12:15 p.m.

**NOTE: This committee reviews items and makes a recommendation for final action to the full Board of Directors. Final action will be taken by the Board of Directors. Agendas for the meeting of the Board of Directors may be obtained from the Board Executive Secretary. This committee will not take any final action that is binding on the Board, even when a quorum of the Board is present.**

**Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site http://www.mwdh2o.com.**

**Requests for a disability related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.**

Meeting Delayed 12:15 p.m.

One Water and Stewardship Committee

# Authorize an agreement with Upper San Gabriel Valley Municipal Water District and the City of South Pasadena for a Stormwater for Direct Use Pilot Program Project

Item 7-10

# Stormwater for Direct Use Pilot Program

## Purpose

Capture actual costs and volumes of stormwater projects

Encourage development and monitoring of stormwater projects

Evaluate the water supply benefit

# Stormwater for Direct Use Pilot Program

## Highlights

**Board Approval**

- September 2019 - $5 million

**Program Launch**

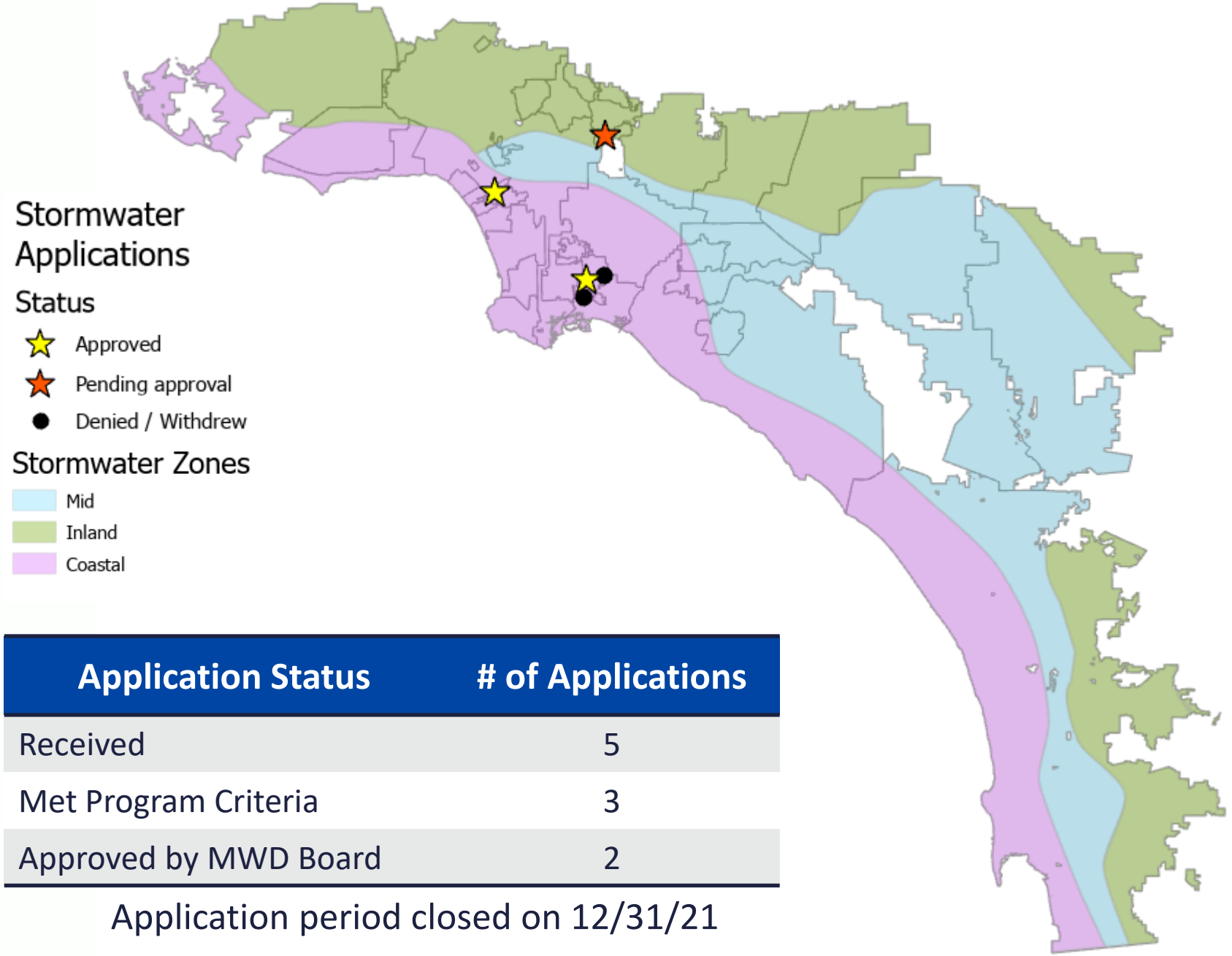
- January 2020

**Project Types**

- New Construction: Up to $500,000
- Retrofit: Up to $160,000

# Pilot Program Selection Criteria

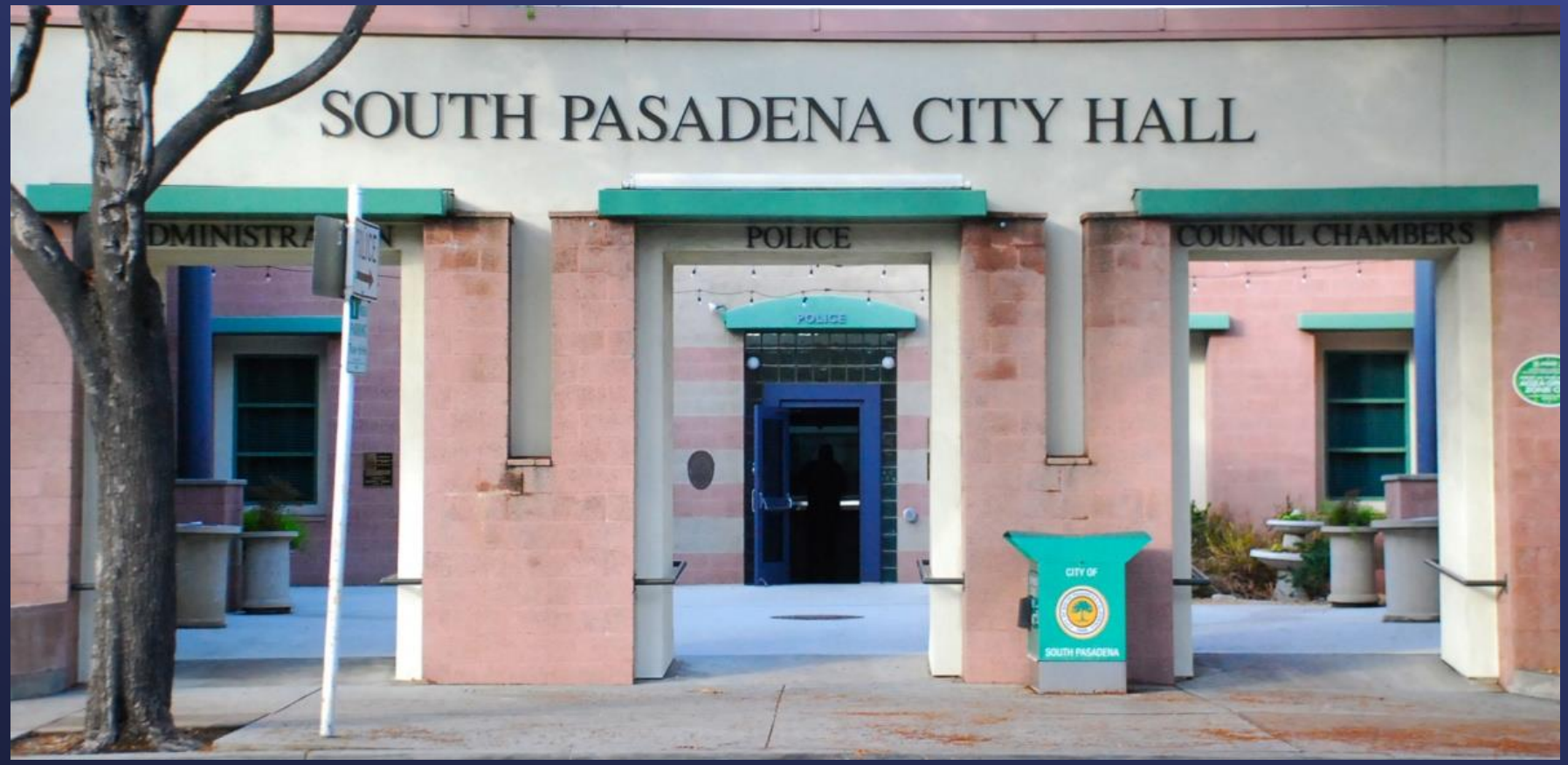
Stormwater for Direct Use Pilot Program




| Application Status | # of Applications |
|---|---|
| Received | 5 |
| Met Program Criteria | 3 |
| Approved by MWD Board | 2 |

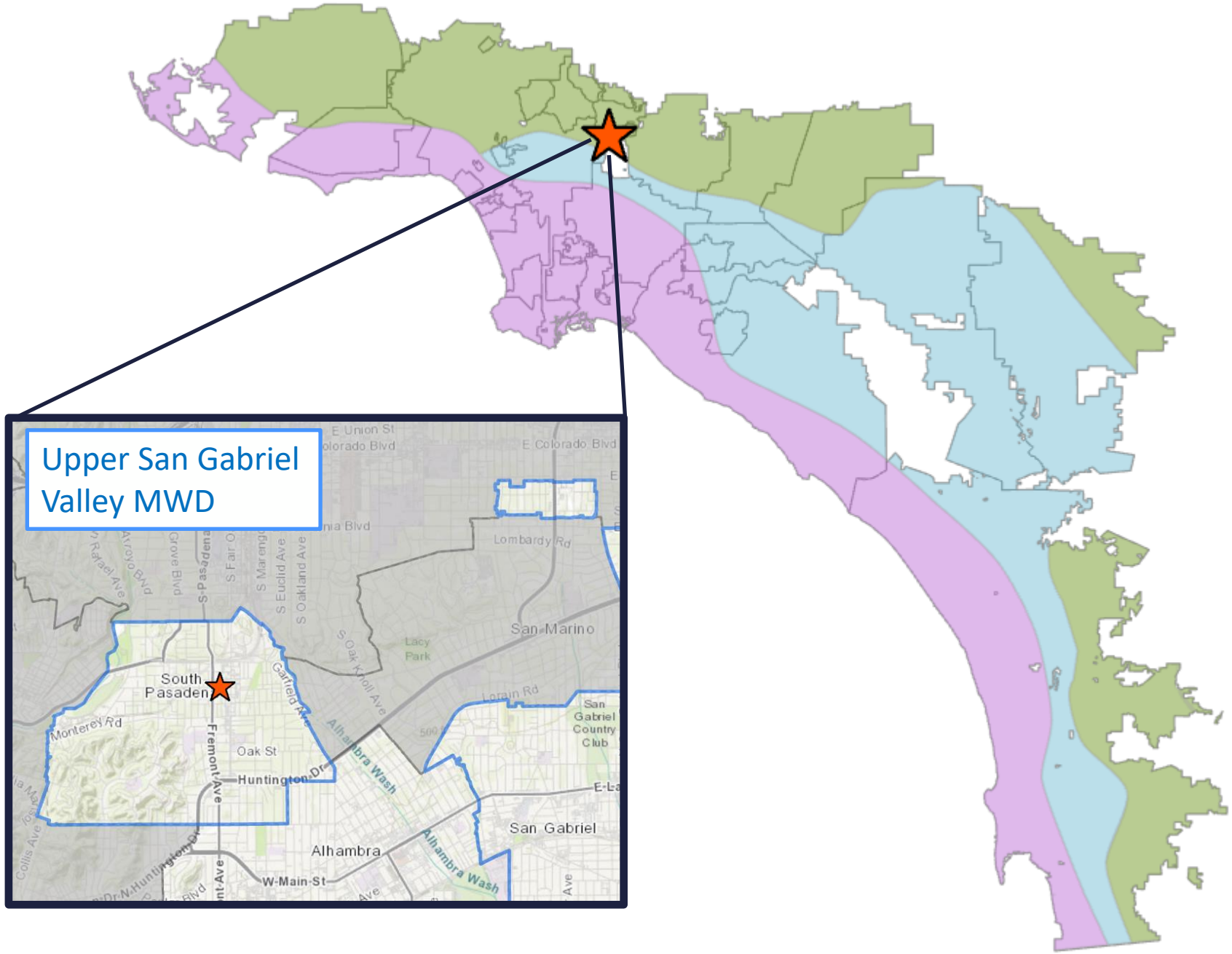
Application period closed on 12/31/21

# South Pasadena City Hall Stormwater Direct Use Project



# Project Site Map

South Pasadena City Hall
Stormwater Direct Use Project



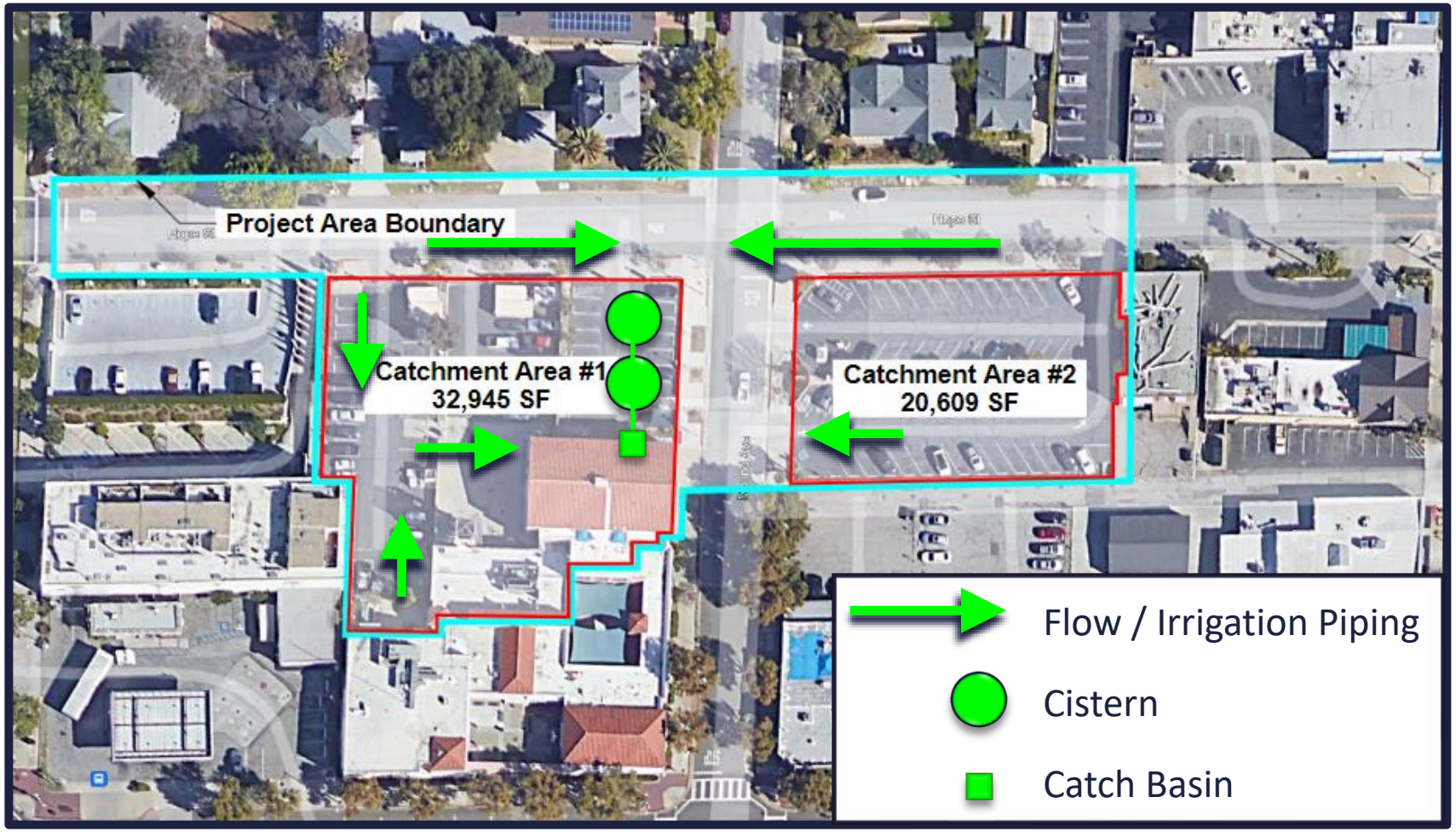
South Pasadena City Hall Stormwater Direct Use Project

## Project Details

- Captures about 1.15 AFY of stormwater from a 1.22-acre drainage area at the South Pasadena City Hall staff parking lot
- Installs new cisterns, drainage, solar powered pumps, and irrigation improvements
- Irrigates on-site and nearby landscaping
- Owned and operated by the City of South Pasadena

# Project Site Schematic

South Pasadena City Hall
Stormwater Direct Use Project



South Pasadena City Hall Stormwater Direct Use Project

# Agreement Terms

Estimated Stormwater Capture: 1.15 AFY

Performance Provisions

- Start of Operation
- Monitoring Period
- Agreement Term

$500,000 maximum contract payment

- Construction: $440,000
- Monitoring and Reporting: $60,000

# Board Options

Option #1:

- Authorize an agreement with Upper San Gabriel Valley Municipal Water District and the City of South Pasadena for a Stormwater for Direct Use Pilot Program project.

Option #2:

- Do not authorize an agreement for the Project.

# Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

- **Board of Directors**
  ***One Water and Stewardship Committee***

1/10/2023 Board Meeting

**7-10**

## Subject

Authorize an agreement with Upper San Gabriel Valley Municipal Water District and the city of South Pasadena for a Stormwater for Direct Use Pilot Program; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

## Executive Summary

Metropolitan seeks to better understand the water supply benefits of stormwater projects. This action requests authorization to enter into a Stormwater for Direct Use Pilot Program (Stormwater Pilot Program) Agreement with Upper San Gabriel Valley Municipal Water District (USGVMWD) and the city of South Pasadena (City) for the South Pasadena City Hall Stormwater Direct Use Project (Project). The Project will capture an estimated 1.15 acre-feet per year (AFY) of stormwater and offset potable water irrigation for on-site landscaping. The City will submit monitoring reports for the first three years after the start of operation. The Project will contribute towards Metropolitan's evaluation and understanding of local stormwater capture projects and their performance in providing regional water supply benefits.

## Details

### Background

Metropolitan developed the Stormwater Pilot Program to better understand the water supply benefits and assess the performance of stormwater projects. Direct-use projects capture and store rainfall and stormwater runoff on-site and use it to meet non-potable demands. The Stormwater Pilot Program encourages the development of new and retrofitting of existing, direct-use stormwater projects by providing financial incentives for construction and monitoring. The primary purpose is to collect information from several region-wide stormwater projects. The data and operational information collected will provide a better understanding of actual stormwater runoff capture volumes, costs, and project performance. The Pilot Program will help evaluate the potential water supply benefits delivered by stormwater capture projects and provides a basis for possible future funding approaches. To date, Metropolitan has committed $824,800 of funding for two projects under the Pilot Program. The Pilot Program stopped accepting applications on December 31, 2021.

### Proposed Project

The Project will capture up to 1.15 acre-feet of stormwater annually from 1.22 acres at South Pasadena City Hall. The Project will install new underground cisterns inside the existing City Hall staff parking lot and drainage improvements in the surrounding area to redirect stormwater runoff to the cisterns. Approximately 93 percent of runoff will be captured in the proposed cisterns. The Project also includes improvements and minor alterations to existing landscaping, and an irrigation system to utilize the stored stormwater for landscape irrigation with solar-powered pumps. The City will own and operate the Project and plans to start operation in August 2023.

**Attachment 1** includes the key terms of the proposed Agreement. Subject to approval in form by the General Counsel, key terms include the following requirements:

1. Meter(s) for measurement of capture and use.
2. Offset potable or reclaimed water use.

3. Have an estimated minimum design capture and use of one acre-foot per year.
4. Complete construction, install meters, and start operation within two years from agreement execution.
5. Submit three years of data collection and reporting to Metropolitan.

The Project, described in **Attachment 2**, complies with the criteria adopted by the Board on September 10, 2019, including that Metropolitan's maximum financial obligation is $500,000 for eligible expenses and three years of monitoring and reporting. Staff recommends that the Board authorize the General Manager to enter into a Pilot Program Agreement with USGVMWD and the City to provide funding for Project construction and monitoring.

## Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities.

By Minute Item 51734, dated September 10, 2019, the Board authorized $5.0 million for the Stormwater for Direct Use Pilot Program.

## California Environmental Quality Act (CEQA)

**CEQA determination for Option #1:**

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activity involves the funding, design, and installation of equipment within existing public facilities, along with the construction of minor appurtenant structures with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1 and Class 3 Categorical Exemptions (Sections 15301 and 15303 of the State CEQA Guidelines).

**CEQA determination for Option #2:**

None required

## Board Options

**Option #1**

Authorize an agreement with Upper San Gabriel Valley Municipal Water District and the city of South Pasadena for a Stormwater for Direct Use Pilot Program project.

**Fiscal Impact:** Metropolitan's maximum obligation is $500,000 for eligible Project expenses and three-year monitoring and reporting period. Spending for this project will be managed within the Demand Management Budget.

**Business Analysis:** The Project would help Metropolitan to achieve the Pilot Program goal of understanding stormwater capture project costs, benefits, and performance and their role in local supply development.

**Option #2**

Do not authorize an agreement for the Project.

**Fiscal Impact:** None

**Business Analysis:** Metropolitan would meet the goals of the Pilot Program with the two previously approved Stormwater for Direct-Use Pilot Program projects.

## Staff Recommendation

Option #1

*Brad Coffey* *1/4/2023*
*Brad Coffey* *Date*
*Manager, Water Resource Management*

*for* *Adel Hagekhalil* 1/4/2023
*General Manager* *Date*

**Attachment 1 – Term Sheet South Pasadena City Hall Stormwater Direct Use Project Stormwater for Direct Use Pilot Program**

**Attachment 2 –South Pasadena City Hall Stormwater Direct Use Project Stormwater for Direct Use Pilot Program**

Ref# wrm12686120

**Term Sheet**
**South Pasadena City Hall Stormwater Direct Use Project**
**Stormwater for Direct Use Pilot Program**

**Project Overview**

- Project Type: New construction
- Member Agency: Upper San Gabriel Valley Municipal Water District (USGVMWD)
- Sub-Agency: City of South Pasadena (South Pasadena)
- Estimated Stormwater Capture/ Potable or Recycled Water Offset: 1.15 AFY
- Drainage Area: 1.22 acres Targeted Zone: Inland
- Agreement Term: Execution Date to end of Monitoring Period
- Start of Operation Deadline: Two years from Agreement Execution Date
- Monitoring Period: Three full fiscal years following Start of Operation Date

**Project Costs**

- Estimated Total Project Capital Costs: $1.02 million
- Maximum Metropolitan Contribution: $500,000
    - Capital Costs: $440,000 (up to 50% reimbursement of eligible costs)
    - Monitoring and Reporting: $60,000 ($20,000 per report, total of three reports)
- The estimated capital costs include: (1) Installation of new underground cisterns, (2) Drainage improvements to redirect stormwater runoff to the cisterns, (3) Improvements and minor alterations to existing landscaping, and (4) Inclusion of an irrigation system with solar powered pumps. These capital costs will allow captured water to meet more than 96% of the estimated consumptive water demand of the landscaped area.
- USGVMWD is responsible for all submittals including:
    - Quarterly invoices and progress reports throughout the construction period
    - Annual monitoring report and database collection following start of operation (three-year monitoring period)
- Metropolitan will make all payments directly to South Pasadena.
- Capital incentive payments are based on actual, eligible construction costs and will be paid on a quarterly basis upon Metropolitan verification of eligibility, deliverables, and approval of invoices.
- Monitoring and reporting payments will be made upon Metropolitan review and approval of each submitted monitoring report and database collection.

**SOUTH PASADENA CITY HALL STORMWATER DIRECT USE PROJECT**

# STORMWATER FOR DIRECT USE PILOT PROGRAM

## Overview:

The South Pasadena City Hall Stormwater Direct Use Project will capture approximately 1.15 acre-feet of stormwater from 1.22 acres of rooftop and paved parking areas at South Pasadena City Hall. Captured stormwater will be stored in cisterns and will be used to irrigate existing and new landscaping. The city of South Pasadena will own and operate the Project.

## Project Facilities:

As part of the agreement, the Project facilities include the installation of new underground cisterns inside the existing City Hall staff parking lot, plus drainage improvements in the surrounding area to redirect stormwater runoff to the cisterns. Water captured by the cisterns will be used to irrigate existing and proposed new landscaping in the parking lots and parkways along adjacent streets totaling 12,400 square feet. The Project also includes improvements and minor alterations to existing landscaping, and an irrigation system to utilize the stored stormwater for landscape irrigation with solar powered pumps.

The long-term daily modeling of the system shows that the proposed cistern will capture 1.15 AFY, or 93%, of the runoff in the Project's proposed drainage area. The consumptive water demand for this landscaped area is estimated at 1.19 AFY. Therefore, the water captured by the cisterns is more than 96% of the estimated consumptive water demand of the landscaped area.

The Project will also monitor stormwater capture and water savings by using flow meters at the inflow to the cisterns, the outflow from the cisterns, and the drawdown pipe to the sanitary sewer. In addition, the Project will monitor water levels in the cisterns to guide system operation, scheduling and drawdown, and as a quality check on the flow monitoring data. Real-time project flow and level monitoring data will be available online.

## Source of Water:

Source of water includes stormwater runoff from drains and catch basins located at the Project site location.

## Points of Connection:

Project facilities begin at the drain diversion points and end at the irrigation system interties and the nearby sanitary sewer connection.

- **Board of Directors**
  ***One Water and Stewardship Committee***

1/10/2023 Board Meeting

**7-11**

## Subject

Authorize the General Manager to: (1) secure one-year water transfers with various water districts for up to $100 million from Water Supply Program and State Water Project budgets for such transfers; (2) secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers; (3) grant final decision-making authority to the General Manager subject to the terms set forth in this letter; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

In December 2023, the Board declared a Regional Drought Emergency and, among other things, directed the General Manager to aggressively pursue all available short-term water transfer exchange opportunities. In this action, staff requests authorization for the General Manager to execute agreements required to secure water for one year, including agreements to purchase water and secure storage and conveyance agreements with the Department of Water Resources (DWR) and various water entities. Entities may include public water agencies, private water utilities and companies, water rights holders, and state and federal agencies. This authorization would apply to agreements made with entities North of Delta, South of Delta, the San Joaquin Central Valley, and Southern California. The maximum payments to acquire, deliver and store these supplies would be up to $100 million from the Water Supply Program and State Water Project budgets. Since water transfers occur on a calendar year basis, payments will be covered over two fiscal year budgets. If conditions are such that there are not enough funds available from the Water Supply Program and State Water Project budgets, funds will be taken from reserves. Staff also requests that the Board grant the General Manager final decision-making authority to determine whether to move forward with these transfers, subject to the terms and conditions set forth below.

## Details

### Background

Over the past three years, California has endured the driest years on record, resulting in the lowest deliveries from the State Water Project (SWP). Constraints of SWP supplies severely impact member agencies that are heavily dependent on these supplies to meet their demands. On the Colorado River, continued drought has dropped the system's reservoirs to record low elevations. The federal government has called for significant reductions in water diversions from the Colorado River. Metropolitan's Board has taken significant actions to help manage supplies and meet member agency demands in 2022. Water transfers are an important part of the current drought response and work well with Metropolitan's surface water storage, water supply, and demand management programs.

### 2022 Water Transfer and Supply Programs

***2022 State Water Contractors Dry-Year Water Transfers Program***

In February 2022, the Board authorized the General Manager to enter into an agreement with the State Water Contractors, Inc. (SWC) to pursue up to 100,000 acre-feet (AF) of Sacramento Valley water through the SWC Dry-Year Water Transfers Program. The SWC facilitated these water transfers. Metropolitan staff, in partnership with other contractors acting through the SWC's agreement, negotiated one-year water transfers with six sellers. The price for transferable water was $800/AF. Feather River supplies were curtailed later in the year, and that

significantly impacted the amount of supplies made available from fallowing. Metropolitan's proportionate share of dry-year transfer supplies under the program in 2022 was about 7,890 AF before losses.

***2022 North of San Joaquin Delta Transfers***

In April 2022, the Board further authorized the General Manager to secure one-year water transfers with north of the Sacramento-San Joaquin River Delta water districts for up to 75,000 AF of additional supplies and to secure storage and conveyance agreements with DWR and various water districts as needed to facilitate these transfers, including Sacramento Valley water districts and the Yuba County Water Agency (YCWA). The maximum payments to purchase these supplies was up to $60 million from the SWP Budget. The Board granted the General Manager final decision-making authority to determine whether to move forward with these transfers.

YCWA provides surface water by reoperating its reservoirs or by using pumped groundwater instead of surface water. Participants negotiate the groundwater substitution price each year based on market conditions, if YCWA chooses to make this water available. In 2022, before losses, Metropolitan purchased 16,223 AF of groundwater substitution supplies at a price of $800 per AF and 3,825 AF of reservoir supplies at a price of $447 per AF. In addition, Metropolitan exchanged about 1,647 AF (before losses) of Desert Water Agency, and Coachella Valley Water District(CVWD) allocated YCWA groundwater substitution supplies with Colorado River supplies. Metropolitan provided a payment of $353 per AF for the exchange.

***2022 SDCWA/Semitropic Partnership***

In December 2021, the Board authorized the General Manager to enter into an agreement with the San Diego County Water Authority (SDCWA) to access 4,200 AF of additional water supply and 5,000 AF per year (AFY) of contractual return capacity to the California Aqueduct from SDCWA's groundwater storage program with Semitropic Water Storage District (Semitropic). Metropolitan and SDCWA negotiated a purchase price for water delivered under this agreement at $893 per AF. This price was consistent with the price for north-of-Delta transfers authorized by the Board in April 2021. For the use of SDCWA's contractual return capacity, Metropolitan and SDCWA negotiated a price of $100 per AF.

***2022 Groundwater Storage Programs***

Metropolitan has developed a large regional storage portfolio that includes groundwater storage programs in the central valley. Storage Programs enable the capture of surplus amounts of water in normal and wet hydrologic conditions that can be used in dry years and in conditions where augmented supplies are needed to meet demands. In 2022, Metropolitan requested the maximum recovery from the Semitropic Water Banking and Exchange Program and Kern Delta Water Management Program. Metropolitan also partnered with Arvin Edison Water Storage District and Friant Division (Friant) to exchange water stored in the Arvin Edison Groundwater Storage Program (Arvin Edison).

*Semitropic Water Banking and Exchange Program.* In calendar year 2022, Metropolitan recovered about 55,000 AF at a cost of about $15.5 million. There are currently about 163,000 AF remaining in the bank.

*Arvin Edison Groundwater Storage Program.* Arvin-Edison returns water to Metropolitan through the California Aqueduct. Due to the presence of a primary drinking water contaminant (1-2-3, trichloropropane or TCP) in the Arvin-Edison groundwater basin, Metropolitan is unable to take the direct return of Program water stored in the groundwater basin at this time. In December 2021, Metropolitan entered into an exchange agreement with Arvin Edison and Friant to receive Friant surface water supplies in lieu of groundwater. Surface water was delivered to Metropolitan through the Arvin Intertie to the California Aqueduct. Metropolitan paid about $7.4 million for 23,000 AF of recovered supplies. There are currently about 119,000 AF remaining in the bank.

*Kern Delta Water Management Program.* In calendar year 2022, Metropolitan recovered about 29,000 AF and paid about $15.5 million. There are currently about 126,000 AF remaining in the bank.

**Discussion of 2023 Water Transfer Opportunities**

On December 1, 2022, DWR announced its initial 2023 SWP allocation to be 5 percent of Table A contract amounts. DWR is also provisionally allocating additional SWP supplies to meet Human Health and Safety needs. Metropolitan is not planning for a full Colorado River Aqueduct in CY 2023 due to low reservoir levels in Lake Powell and Lake Mead and dry conditions on the Colorado River. Given the continuation of unprecedented

drought and limited water supply, the Board adopted a resolution in December 2022 that called upon all member agencies to immediately enhance and intensify conservation actions to reduce the usage of Metropolitan's imported water supplies from the SWP and the Colorado River. The resolution also called for Metropolitan to aggressively pursue water transfer and exchange opportunities to help alleviate the current supply constraints.

*Delegation of Authority to General Manager for One-Year Water Transfers*

Staff recommends that the Board authorize the General Manager to secure one-year water supplies with water districts. The price for these supplies can vary depending on market conditions but would be limited to a total cost of $100 million for the transferred supplies. Metropolitan may also be responsible for documented out-of-pocket expenses, including but not limited to administrative, legal, environmental, and professional services fees. In an effort to lock in supplies early, option agreements could be developed. These agreements could include a non-refundable fee, not to exceed 10 percent of the purchase price, in exchange for the first right-of-refusal of transfer supplies. These transfers include possible storage and conveyance agreements with DWR and the water districts. The storage and conveyance agreements would be consistent with Articles 55 and 56 of Metropolitan's State Water Supply Contract. Metropolitan will be responsible for all losses, including Delta carriage water losses, associated with transfer water between the sellers' points of delivery and Metropolitan's service area. In 2022, the final conveyance loss for transfer supplies was 25 percent.

Metropolitan would use funds from the Water Supply Program budget or unused State Water Project funds. The State Water Project funds are available because staff initially budgeted for receiving a delivery of a 40 percent SWP allocation for calendar year 2023. However, it is contemplated that funds from the State Water Project could be used for potential transfer purchases in a dry or critical year as these conditions coincide with lower State Water Project deliveries and costs. Since water transfers occur on a calendar year basis, payments will be covered over two fiscal year budgets. If conditions are such that there are not enough funds available from the Water Supply Program and State Water Project budgets, funds may be taken from reserves. Staff will regularly update the Board on the progress in securing water transfers.

Participating in the transfer market would help Metropolitan meet member agency demands or preserve water stored on the State Water Project system for next year, should the critically dry pattern continue. Transfers would provide additional security for the State Water Project-dependent areas. Accordingly, staff requests that authorization be given to the General Manager to move forward with these water transfers following completion of, and based upon, any environmental reviews that may be necessary under the California Environmental Quality Act (CEQA). No commitment to any given transfer would be made by the General Manager unless and until all applicable CEQA requirements have been met. Any such commitment would be subject to and consistent with the terms and conditions set forth above.

## Policy

Metropolitan Water District Administrative Code Section 4203: Water Transfer Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

On December 13, 2022, the Board declared a Regional Drought Emergency, directed the General Manager to aggressively pursue all available short-term water transfer exchange opportunities, and called on member agencies to take specified actions.

## California Environmental Quality Act (CEQA)

**CEQA determination(s) for Option #1:**

The proposed action is not defined as a project under CEQA because it involves the tentative approval of and funding for water transfers, but does not involve a commitment to any specific transfers at this time that may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). Prior to final authorization of any water transfers by the General Manager, CEQA documentation will be prepared by the Lead Agency and reviewed and processed in accordance with CEQA and the State CEQA Guidelines.

**CEQA determination for Option #2:**

None required

## Board Options

**Option #1**

a. Authorize the General Manager to:
   (1) Secure one-year water transfers with various water districts for up to $100 million
   (2) Secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers consistent with Articles 55 and 56 of Metropolitan's State Water Project Supply Contract.

b. Grant the General Manager final decision-making authority to determine whether or not to move forward with these transfers following completion of any environmental reviews required under CEQA, subject to the terms and conditions set forth in this letter.

**Fiscal Impact:** The maximum cost would be $100 million. Available previously budgeted funds from the Water supply program and State Water Project budget will be used to fund the water transfer purchase. These funds would also be used for any additional administrative and related costs to implement the transfers. If the State Water Project allocation increases and conditions are such that there are not enough funds available, funds will be taken from reserves.

**Business Analysis:** Purchasing additional transfer supplies will improve regional water supply reliability in 2023 and help mitigate impacts should dry conditions continue. Obtaining transfer supplies in 2023 could reduce the need to allocate supplies based on health and safety.

**Option #2**

Do not authorize the General Manager to enter one-year water transfer agreements with various water districts.

**Fiscal Impact:** None

**Business Analysis:** Not authorizing one-year water transfers with various water districts could result in a lost opportunity to secure additional water supplies in 2023, potentially resulting in lower water supply reliability in 2023.

## Staff Recommendation

Option #1

Brad Coffey 1/4/2023
*Brad Coffey* *Date*
*Manager, Water Resource Management*

*for* *Adel Hagekhalil* 1/5/2023 *Date*
*General Manager*

Ref# wrm12686142

One Water and Stewardship Committee

# Water Transfers and Exchanges

Item 7-11

January 9, 2022

# Actions Authorizing Transfers and Exchanges in 2022

# Transfers and Exchanges in 2022

- SDCWA/Semitropic Transfer ~ $4.25M
  - Purchased 4,200 AF additional supply at $893/AF
  - Use of 5,000 AF of contractual return capacity at $100/AF
- Dry Year Transfer Program ~ $6.25M
  - Purchased 7,890 AF* at $800/AF
- North of Delta Transfers ~ $15.3M
  - Lower Yuba River Accord
    - Purchased 20,048 AF* supplies
      - 16,223 AF – Groundwater substitution supplies at $800/AF
      - 3,825 AF – Surface water supplies at $447/AF
    - Exchanged 1,647 AF* supplies with CVWD/DWA at $353/AF
- Arvin Edison/Friant Exchange ~ $7.4M
  - Exchanged 23,130 AF of groundwater supplies with Friant supplies at $318/AF (average)

*before conveyance losses

# 2023 Approach to Water Transfers


**North of Delta**

**South of Delta**

**San Joaquin Central Valley**

**Water Rights Holders**

**Private Water Agencies, Utilities, and Companies**

# Factors influencing the Purchase of Water

- Water Supply Conditions
  - State Water Project
    - *2023 initial SWP allocation at 5%*
  - Colorado River Supplies
    - *Low reservoir levels*
    - *CRA 7-pump flow planned in 2023*
- Water transfers will help meet demands in 2023
- SWP pump-in programs, transfer supply, and flex storage are additive to Human Health & Safety supplies
- Ability to move supplies through Delta
  - Capacity available

# 2023 Water Transfers

- Price
  - Price in negotiations
  - Authority to spend up to $100 million
- Budget
  - Propose to utilize unused Water supply program and SWP Budget funds
    - *Approach for dry and critical years*
    - *Transfer costs spread over two fiscal years*
    - *May need to use Reserve funds if conditions change and additional funds are needed.*
- Conveyance loss
  - Varies between 20% to 30% (2022 – 25% loss)

# 2023 Water Transfers

- SDCWA/Semitropic Transfer
  - In discussions with SDCWA similar to 2022
- Water Transfers
  - Estimated available water ~ 10,000AF – 60,000 AF
  - Price in negotiations
  - Impacted by curtailment
- Yuba County Water Agency
  - Assuming available supplies similar to 2022
  - Metropolitan allocated: ~ 25% (21,000 AF)*
  - Price is TBD

**subject to carriage losses*

# Board Options

## Option #1

- Authorize the General Manager to secure one-year water transfers with various water districts for up to $100 million
- Authorize the General Manager to secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers consistent with Articles 55 and 56 of the Metropolitan State Water Project Contract.
- Grant the General Manager final decision-making authority to determine to move forward with these transfers following completion of any environmental reviews required under CEQA, subject to the terms and conditions set forth in the Board letter.

Board Options

# Option #2

- Do not authorize the General Manager to enter one-year water transfer agreements with various water districts.

# Option #1

Staff Recommendation


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928


# Yuba Water Agency:
# Improving forest health and watershed resilience

Willie Whittlesey, General Manager, Yuba Water Agency
Monday, January 9, 2023

# What are we discussing today?

- About Yuba Water Agency
- Need for forest management
- Our Watershed Resilience Program
- North Yuba Forest Partnership
- Forest Resilience Bond
- Additional forest health efforts

# Yuba Water Agency's mission areas

Flood Risk Reduction

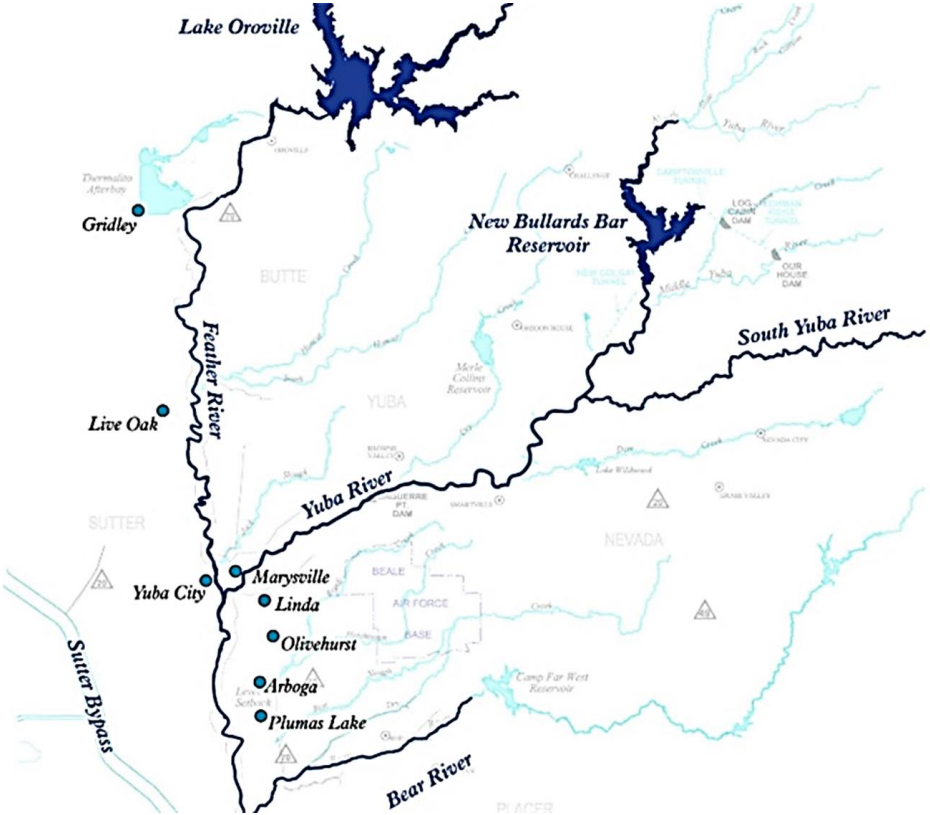
Sustainable Water Supply

Hydropower Generation

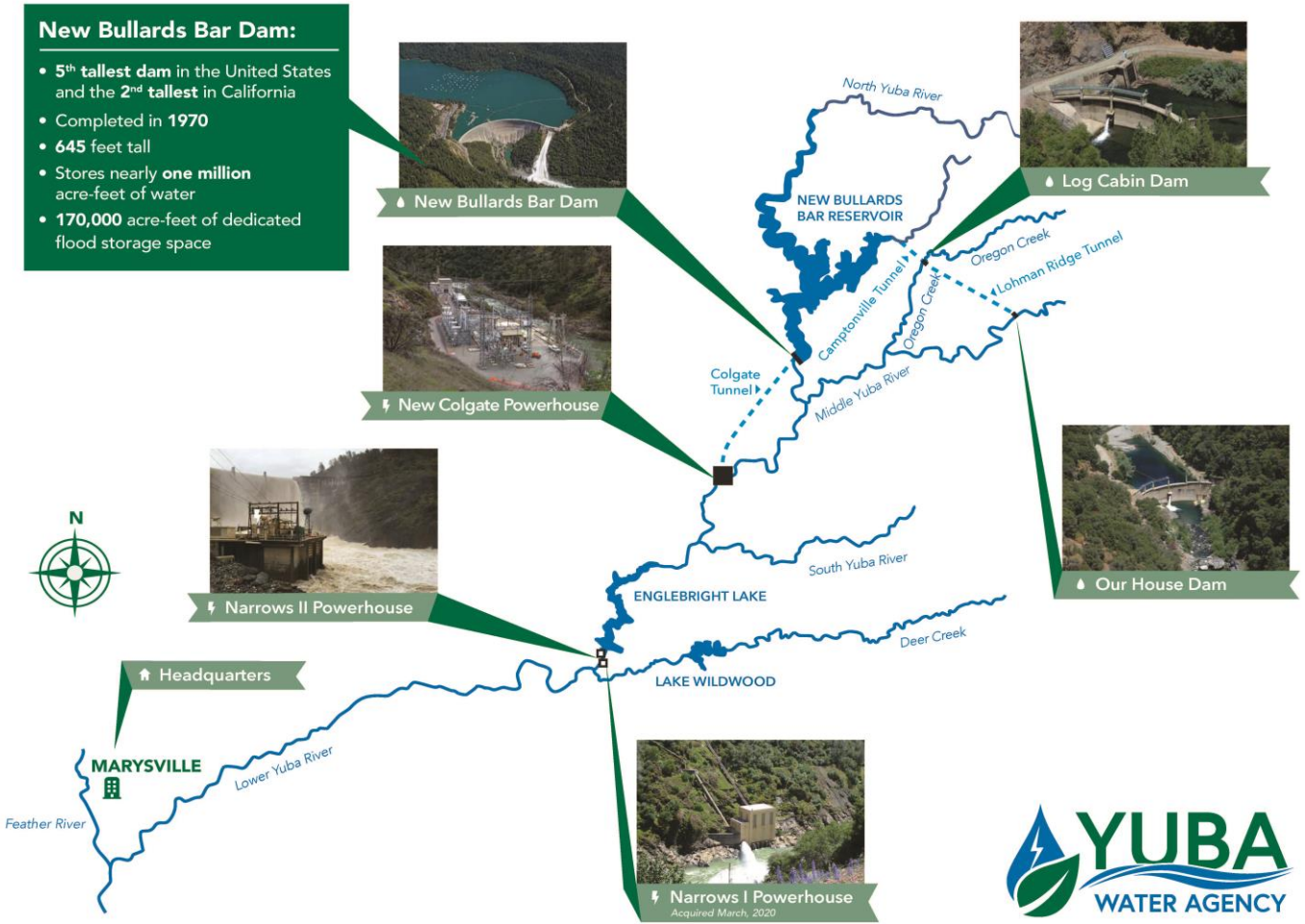
Fisheries Protection and Enhancement

Recreation at New Bullards Bar

# The Yuba River watershed




# Our facilities




How did we get here?

# Historical comparison

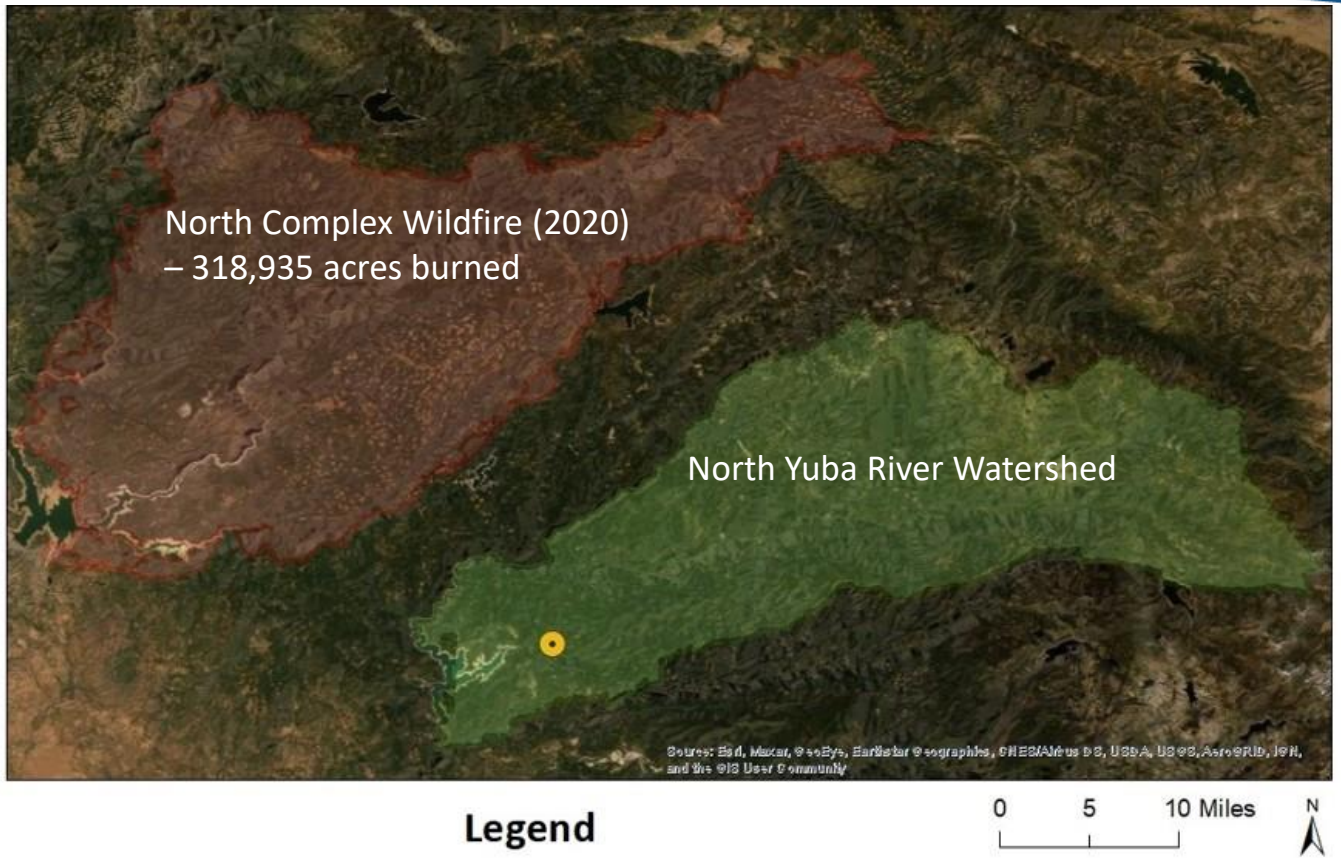
## Yosemite Valley

1899

1994

Gruell 2001

# Why do we need forest restoration?



# Benefits of forest restoration

- Reduces risk of destructive wildfire
- Protects our communities, water supply, local economies
- Improves forest health and resilience

# Yuba Water's Watershed Resilience Program

- Established by Yuba Water in 2018 to **reduce risk of catastrophic wildfire**, **protect local communities** and **safeguard water supply**
- Program builds collaborative projects within Yuba County and Yuba River watershed that support these goals

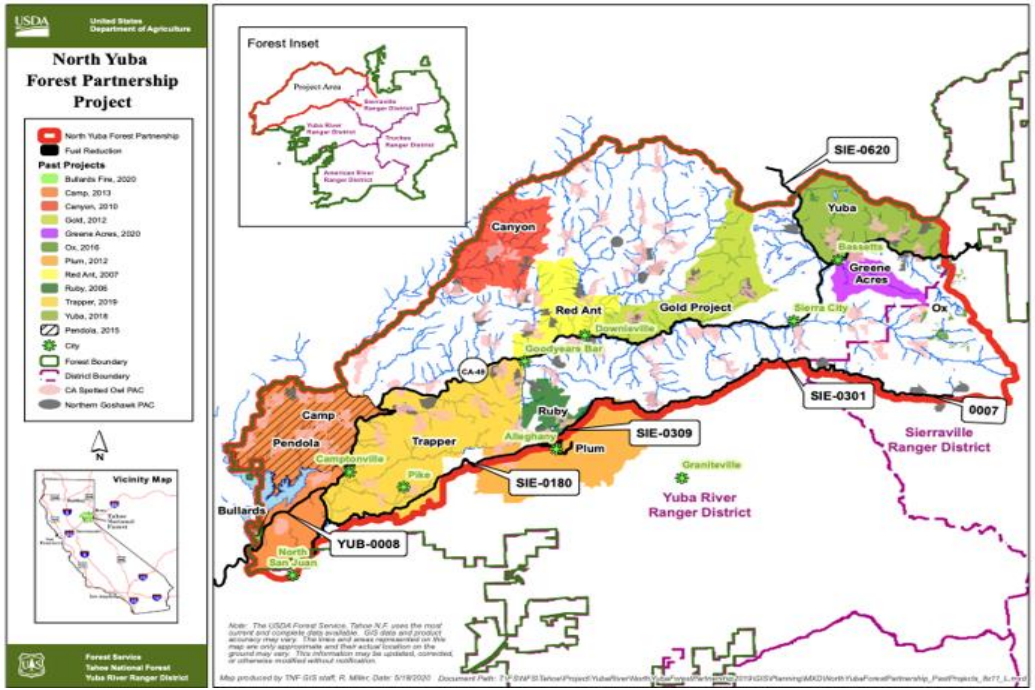
# Watershed Resilience Program by the numbers:

- Invested $10M to date and leveraged more than $78M in external funds
- Collaborating with 19 partners
- Working on 8 projects, in Yuba County and the upper watershed
- More than 7,000 acres treated so far
- More than 280,000 acres of planned restoration underway

YUBA WATER AGENCY

# North Yuba Forest Partnership

Working together to expedite forest health work across the North Yuba River watershed

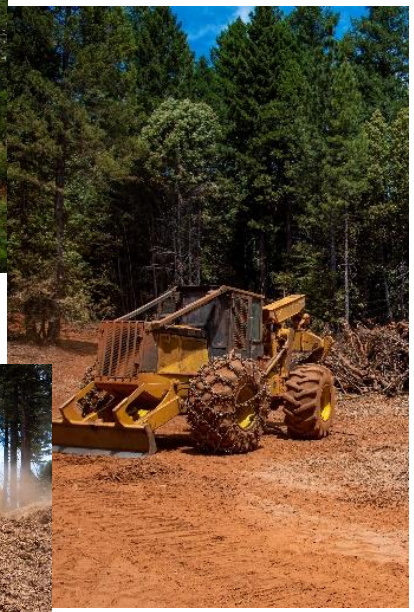


# Blue Forest Conservation and Forest Resilience Bonds


- First-ever Forest Resilience Bond piloted by Yuba Water and Blue Forest in 2018 with 15,000-acre Yuba Project
- Now, 26,000-acre Yuba 2 Project funded via second Forest Resilience Bond, began work this year
- Increasing pace and scale of our efforts

# Additional watershed resilience efforts

- Yuba Foothills Healthy Forest Project
- $4.5 million grant from Cal Fire
- Forest thinning, fuel reduction and other treatments on 5,400 acres
- Reducing wildfire risk in Yuba County foothills
- Partners: local landowners, timber companies and Plumas National Forest




# Questions?

Looking for more information?
Visit *yubawater.org*

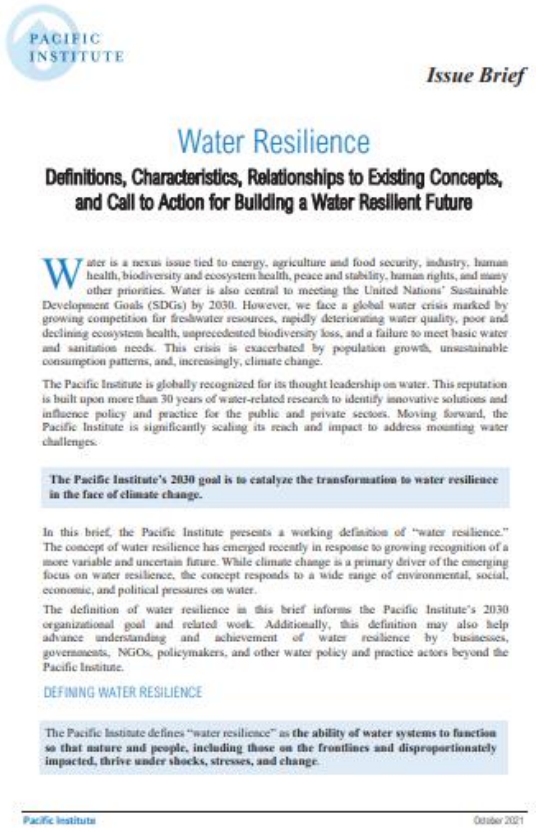
Follow us on social @yubawater
Visit our website at yubawater.org


# The Untapped Potential of California's Urban Water Supply:

Water Efficiency
Water Reuse
Stormwater Capture

# About Pacific Institute

- The Pacific Institute is an independent, non-partisan think tank based in Oakland, CA, with staff around the world.
- Our mission is to create and advance solutions to the world's most pressing water challenges.
- We adopted a 2030 organizational goal to **catalyze the transformation to water resilience in the face of climate change**.
  - Water Resilience - "The ability of water systems to function so that nature and people, including those on the frontlines and disproportionately impacted, thrive under shocks, stresses, and change."



PACIFIC INSTITUTE

*Issue Brief*

Water Resilience

**Definitions, Characteristics, Relationships to Existing Concepts, and Call to Action for Building a Water Resilient Future**

Water is a nexus issue tied to energy, agriculture and food security, industry, human health, biodiversity and ecosystem health, peace and stability, human rights, and many other priorities. Water is also central to meeting the United Nations' Sustainable Development Goals (SDGs) by 2030. However, we face a global water crisis marked by growing competition for freshwater resources, rapidly deteriorating water quality, poor and declining ecosystem health, unprecedented biodiversity loss, and a failure to meet basic water and sanitation needs. This crisis is exacerbated by population growth, unsustainable consumption patterns, and, increasingly, climate change.

The Pacific Institute is globally recognized for its thought leadership on water. This reputation is built upon more than 30 years of water-related research to identify innovative solutions and influence policy and practice for the public and private sectors. Moving forward, the Pacific Institute is significantly scaling its reach and impact to address mounting water challenges.

**The Pacific Institute's 2030 goal is to catalyze the transformation to water resilience in the face of climate change.**

In this brief, the Pacific Institute presents a working definition of "water resilience." The concept of water resilience has emerged recently in response to growing recognition of a more variable and uncertain future. While climate change is a primary driver of the emerging focus on water resilience, the concept responds to a wide range of environmental, social, economic, and political pressures on water.

The definition of water resilience in this brief informs the Pacific Institute's 2030 organizational goal and related work. Additionally, this definition may also help advance understanding and achievement of water resilience by businesses, governments, NGOs, policymakers, and other water policy and practice actors beyond the Pacific Institute.

DEFINING WATER RESILIENCE

The Pacific Institute defines "water resilience" as **the ability of water systems to function so that nature and people, including those on the frontlines and disproportionately impacted, thrive under shocks, stresses, and change**.

Pacific Institute October 2021

# Key Findings

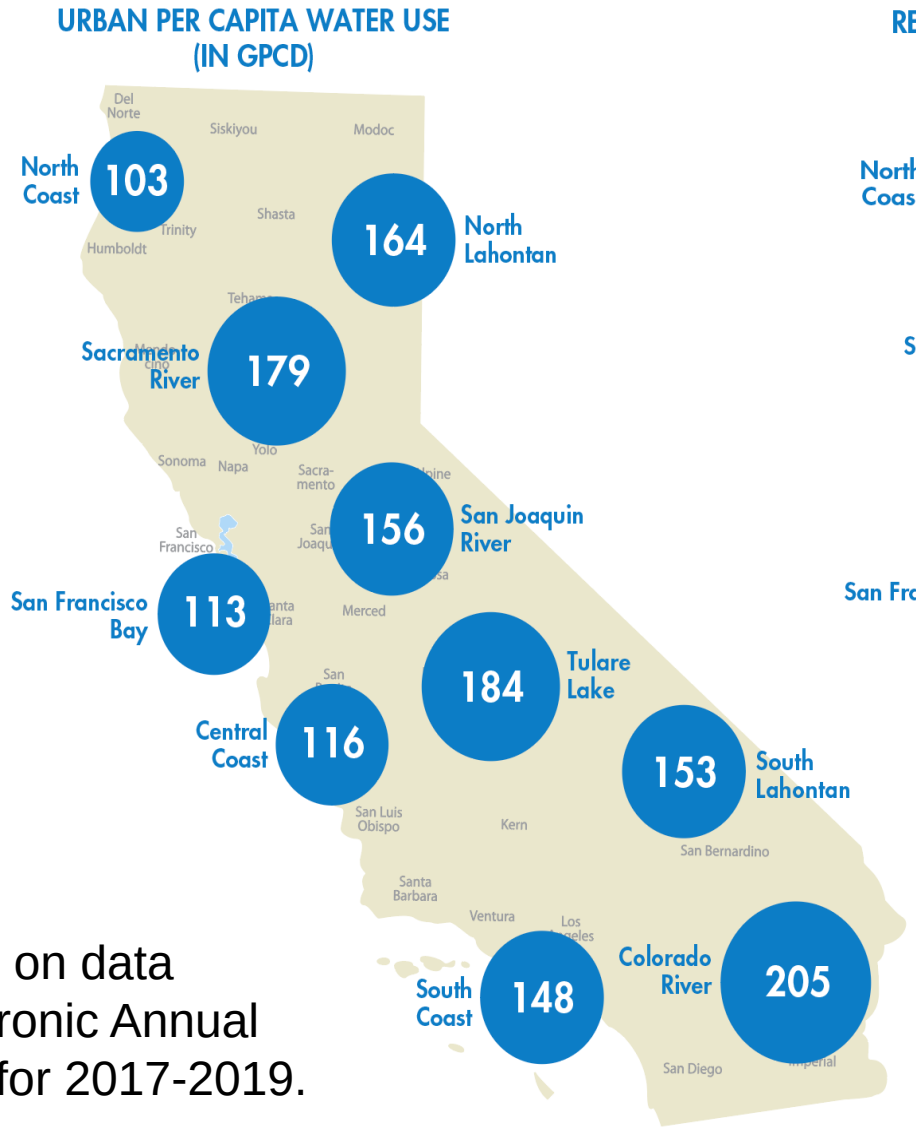
- Southern California has made laudable progress in recent years to reduce water use and augment local supplies, but more is needed to advance water resilience in the face of climate change.
- Proven water efficiency technologies and practices could reduce urban water use in the South Coast by **1.1 million to 1.7 million AFY**.
- Reuse of municipal wastewater could boost local water supplies in the South Coast by up to **1.1 million AFY**, tripling current reuse levels.
- Urban stormwater capture in areas overlying public supply aquifers could boost local water supplies in the South Coast by **260,000 AF in a dry year to 1.4 million AF in a wet year**.
- These strategies are essential for meeting water goals, as well as energy and greenhouse gas goals.

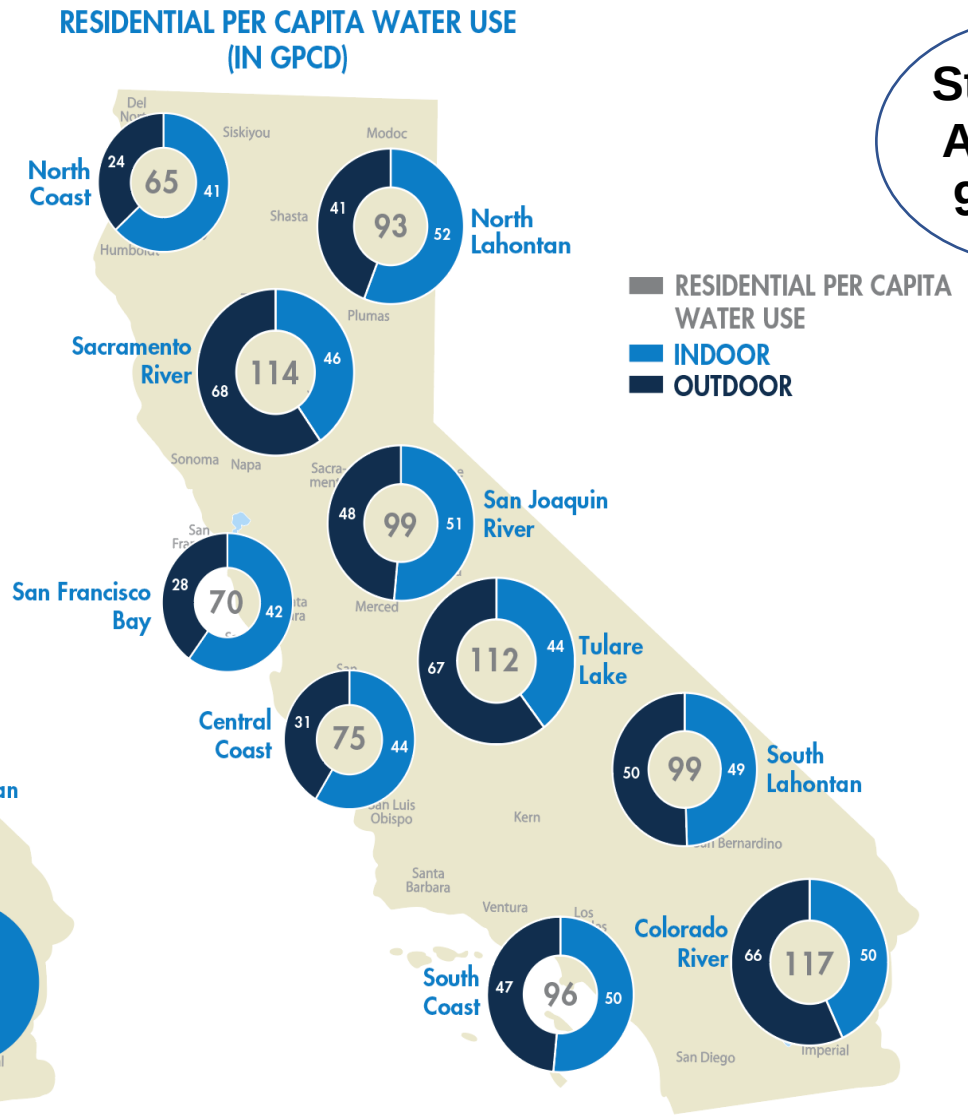
# Water Efficiency Potential: Approach

- **Current water use baseline** developed from the **Electronic Annual Reports (EARs)** submitted by water agencies for 2017 to 2019.
- Two water-savings scenarios were developed:
  - **Moderate efficiency** based on full compliance with current standards for appliances and fixtures, landscapes (MWELO), and distribution leaks (SB 555).
  - **High efficiency** based on ***available*** leading-edge technologies and practices that use less water than devices meeting current standards.

# Urban and Residential Water Use, 2017-2019

**Statewide Average: 152 gpcd**



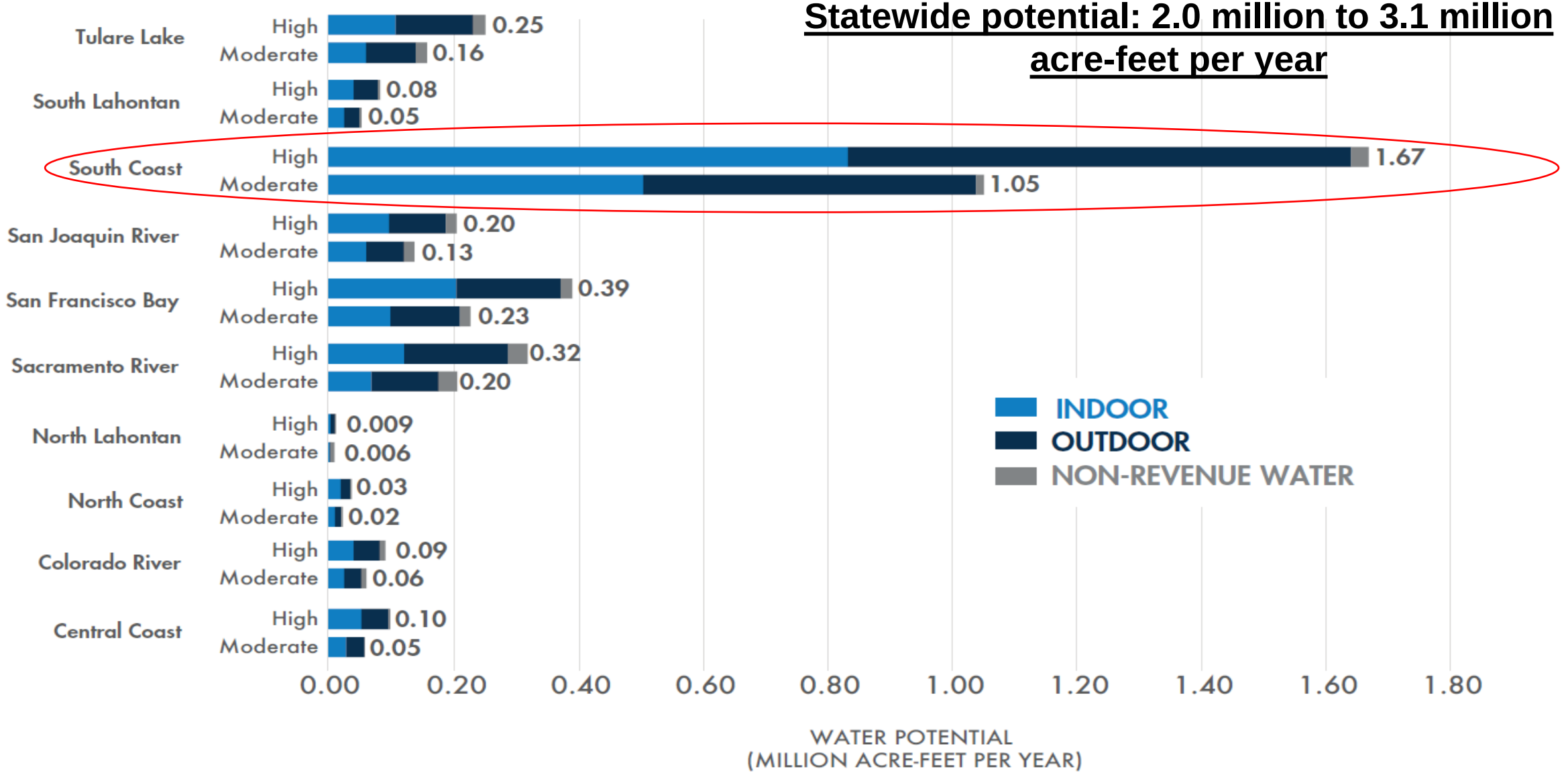




**Statewide Average: 94 gpcd**

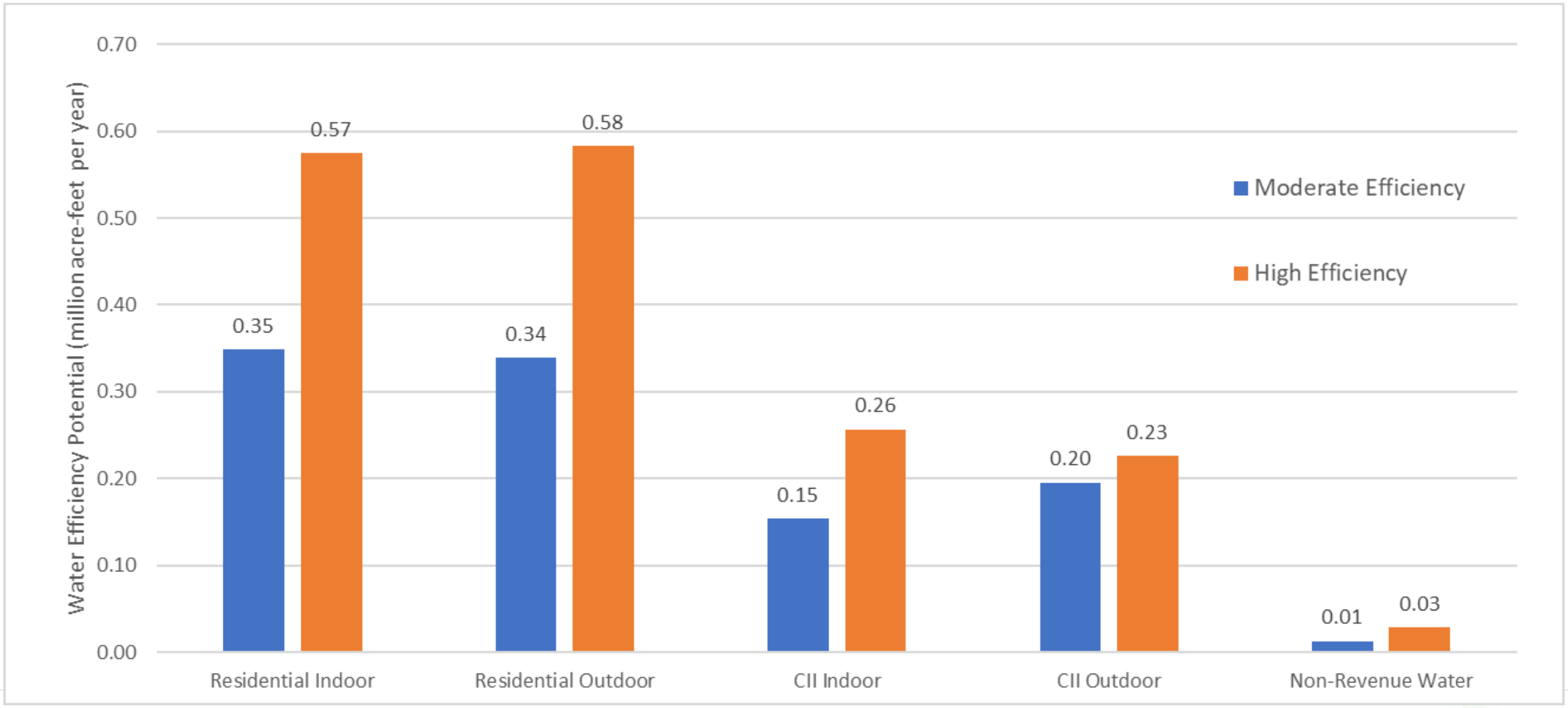
Estimates based on data reported in Electronic Annual Reports (EARs) for 2017-2019.

# Regional Water Efficiency Potential

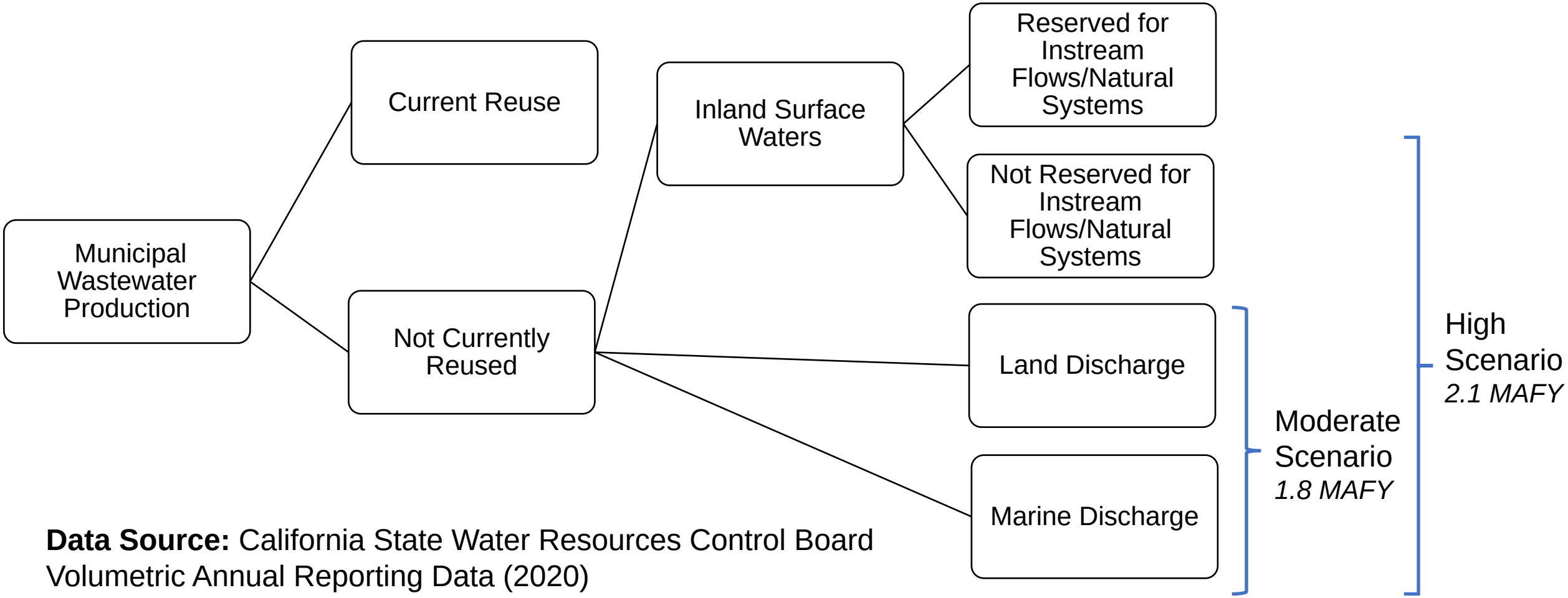
**Statewide potential: 2.0 million to 3.1 million acre-feet per year**



# South Coast Water Efficiency Potential by Sector

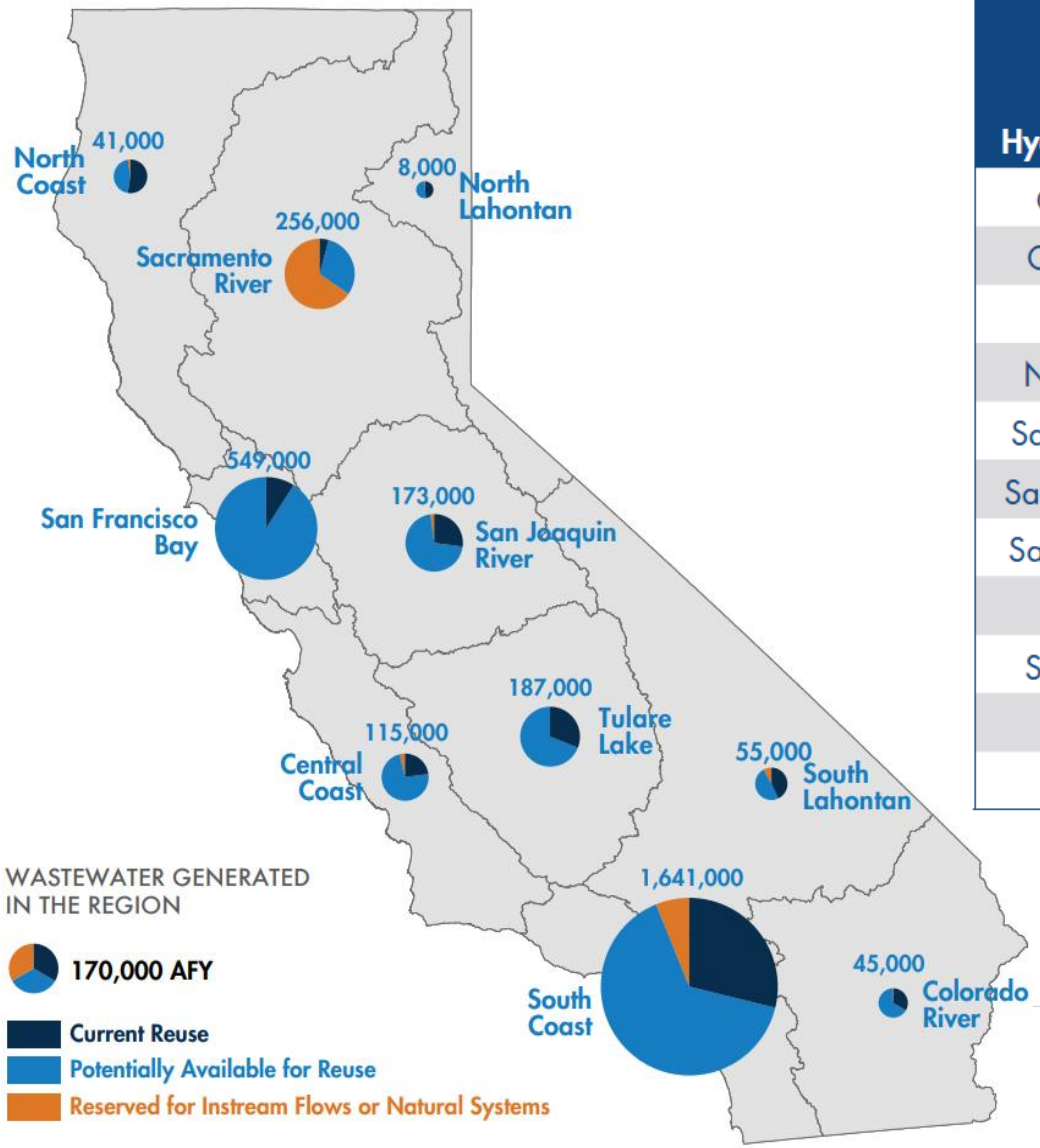


# Statewide Water Reuse Potential




**Data Source:** California State Water Resources Control Board Volumetric Annual Reporting Data (2020)

# Regional Water Reuse Potential



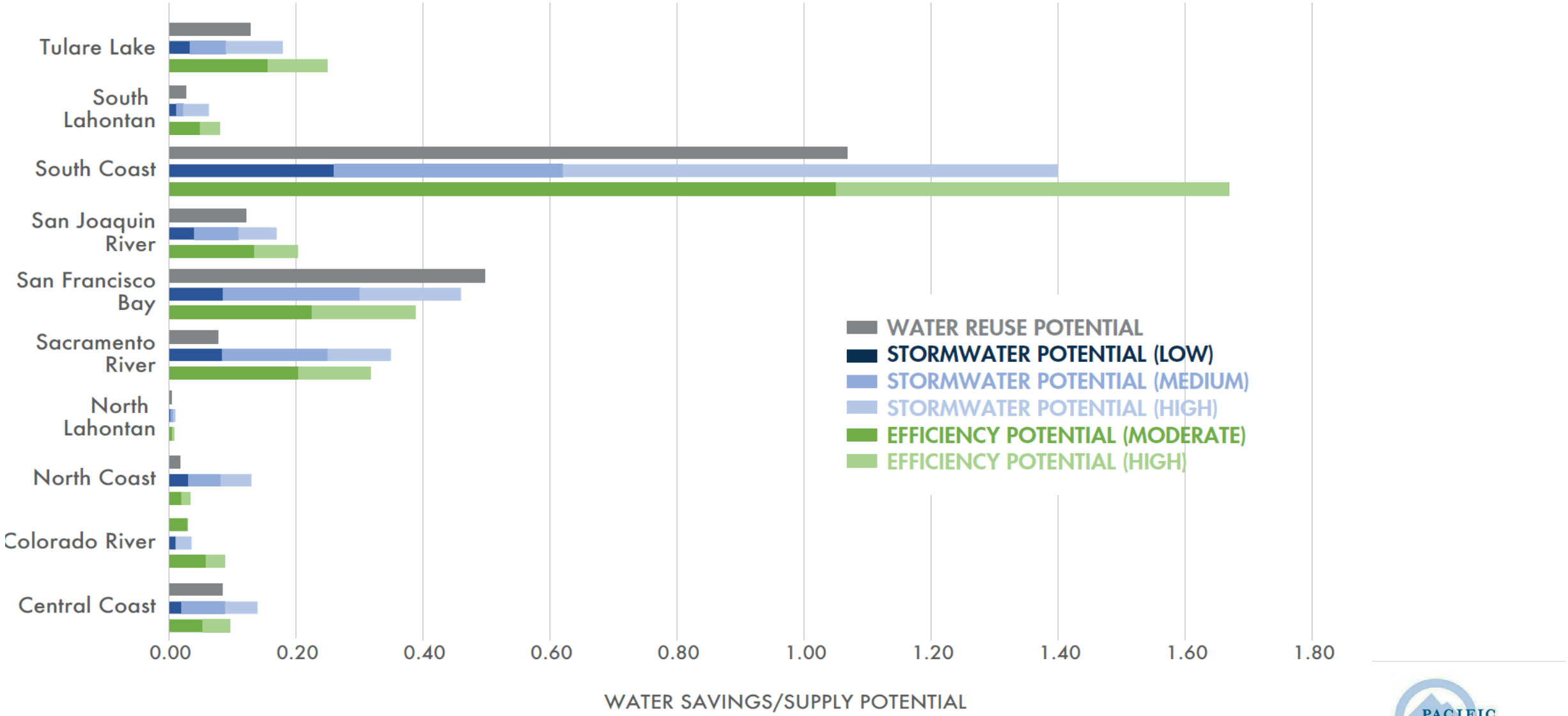

| Hydrologic Region | Currently Reused (AFY) | Effluent Reserved for Instream Flows or Natural Systems (AFY) | Potentially Available for Reuse (AFY) | TOTAL Effluent (AFY) | Currently Reused (%) |
|---|---|---|---|---|---|
| Central Coast | 26,000 | 4,000 | 84,000 | **115,000** | 23 |
| Colorado River | 15,000 | 0 | 30,000 | **45,000** | 33 |
| North Coast | 21,000 | 1,000 | 18,000 | **41,000** | 52 |
| North Lahontan | 4,000 | 0 | 4,000 | **8,000** | 48 |
| Sacramento River | 11,000 | 168,000 | 78,000 | **256,000** | 4 |
| San Francisco Bay | 49,000 | 3,000 | 497,000 | **549,000** | 9 |
| San Joaquin River | 47,000 | 4,000 | 123,000 | **173,000** | 27 |
| South Coast | 473,000 | 101,000 | 1,067,000 | **1,641,000** | 29 |
| South Lahontan | 24,000 | 4,000 | 27,000 | **55,000** | 43 |
| Tulare Lake | 58,000 | 0 | 129,000 | **187,000** | 31 |
| **TOTAL** | **729,000** | **285,000** | **2,057,000** | **3,071,000** | **24** |

# Stormwater Capture Potential by Region

| Hydrologic Region | Urban Stormwater Capture Potential (AFY) | | |
|---|---|---|---|
| | Low Precipitation | Medium Precipitation | High Precipitation |
| Central Coast | 20,000 | 89,000 | 140,000 |
| Colorado River | 11,000 | 11,000 | 36,000 |
| North Coast | 31,000 | 82,000 | 130,000 |
| North Lahontan | 3,000 | 7,000 | 10,000 |
| Sacramento River | 84,000 | 250,000 | 350,000 |
| San Francisco Bay | 85,000 | 300,000 | 460,000 |
| San Joaquin River | 40,000 | 110,000 | 170,000 |
| South Coast | 260,000 | 620,000 | 1,400,000 |
| South Lahontan | 12,000 | 23,000 | 63,000 |
| Tulare Lake | 34,000 | 90,000 | 180,000 |
| **Total** | **580,000** | **1,600,000** | **3,000,000** |

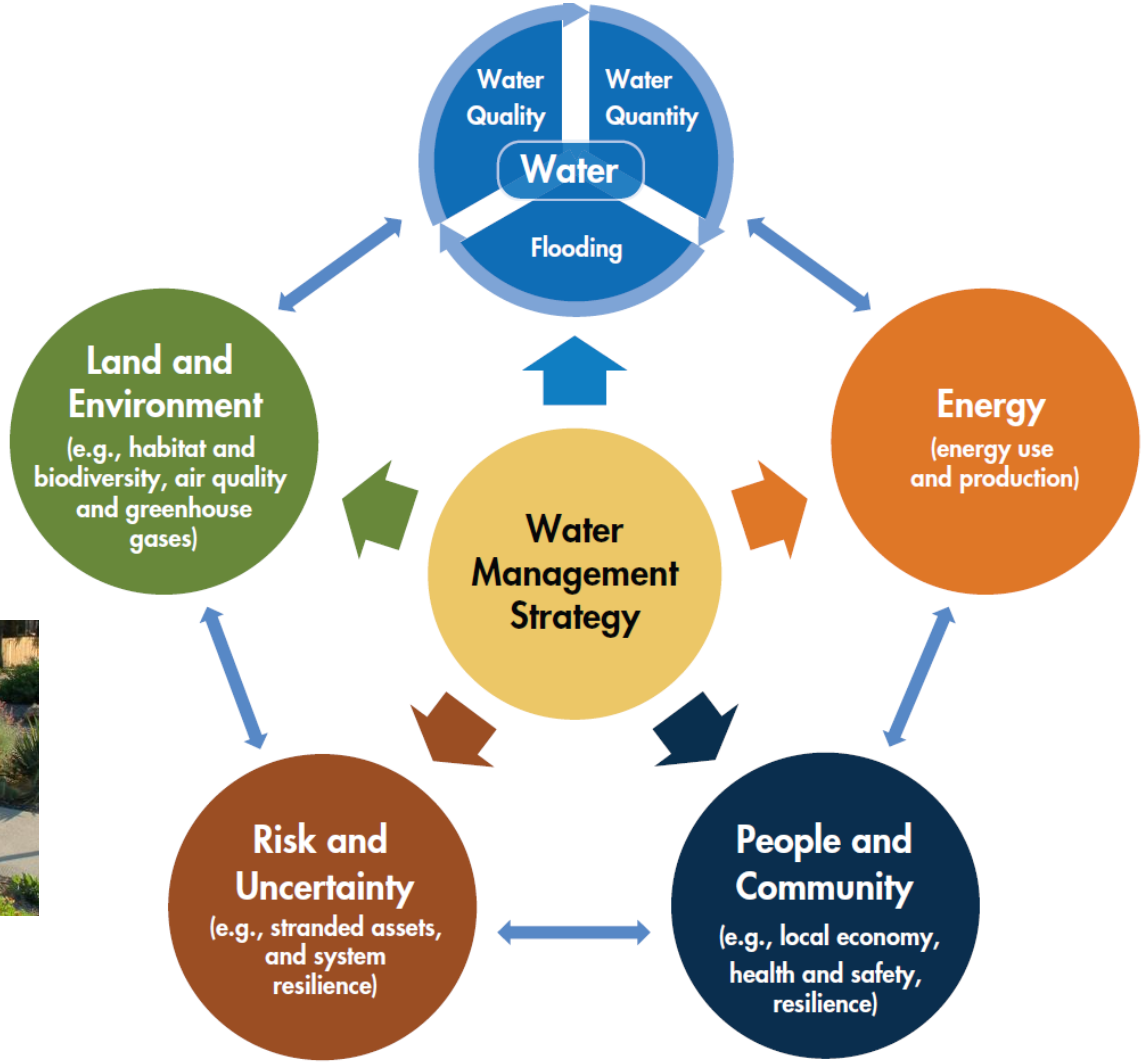
*Notes:* Numbers are rounded to two significant figures. Totals may not equal column sums due to rounding.

# Water Efficiency, Water Reuse, and Stormwater Capture Potential by Region



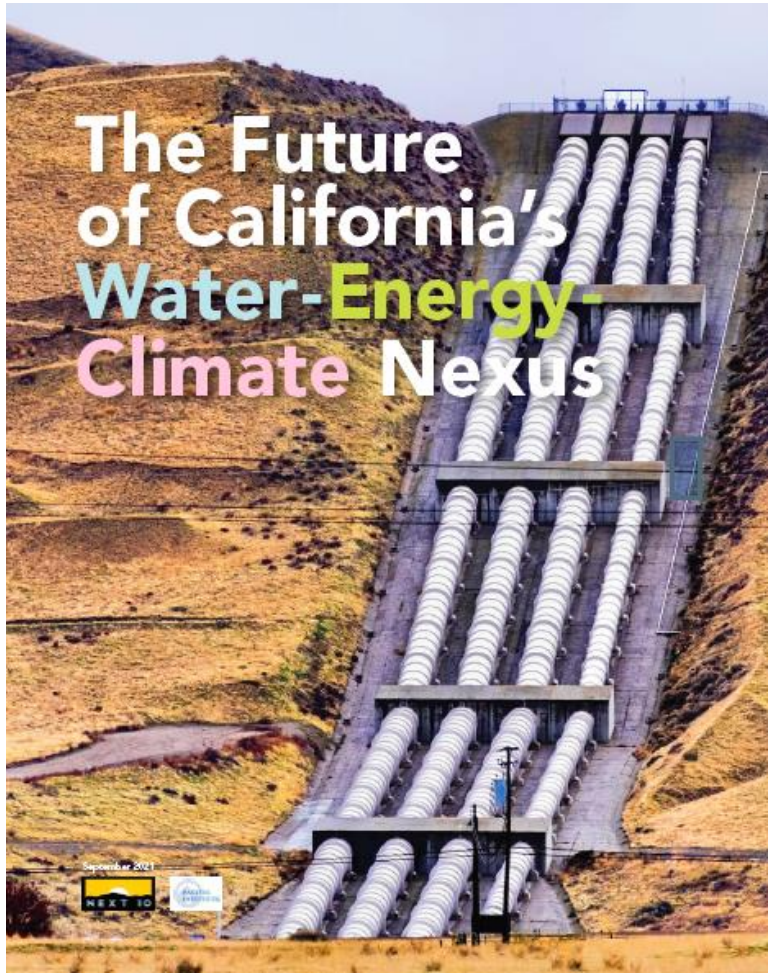

PACIFIC INSTITUTE

# These strategies provide co-benefits, making them more economically viable.




*Source: Diringer et al. 2019, Pacific Institute*

# California's Water-Energy-Climate Nexus

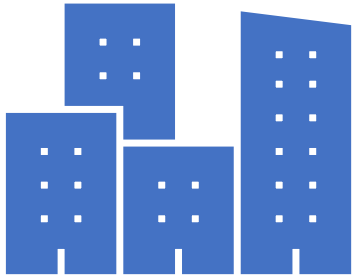



- Saving water saves energy and reduces greenhouse gas emissions.
- Replacing imported water with water reuse and stormwater capture would reduce energy use and greenhouse gas emissions.
- Energy recovery at wastewater facilities would also reduce greenhouse gas emissions.

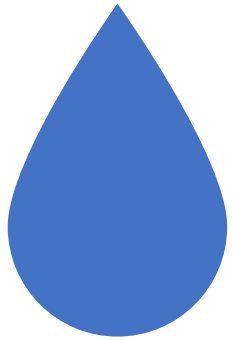
# Key Findings

- Southern California has made laudable progress in recent years to reduce water use and augment local supplies, but more is needed to advance water resilience in the face of climate change.
- Proven water efficiency technologies and practices could reduce urban water use in the South Coast by **1.1 million to 1.7 million AFY**.
- Reuse of municipal wastewater could boost local water supplies in the South Coast by up to **1.1 million AFY**, tripling current reuse levels.
- Urban stormwater capture in areas overlying public supply aquifers could boost local water supplies in the South Coast by **260,000 AF in a dry year to 1.4 million AF in a wet year**.
- These strategies are essential for meeting water goals, as well as energy and greenhouse gas goals.

# What can Metropolitan Water District of Southern California do to help realize this potential?



Urban water efficiency



Water reuse and stormwater capture

# Urban Water Efficiency

- Increase funding for water-efficiency and water-loss control programs to levels consistent with other water-supply investments.
- Continue expansion of targeted programs for underserved communities, including through partnerships with energy IOUs.
- Leverage recent drought EO to support a ban on non-functional turf and conversion to California Friendly gardens.
- Expand partnerships with private sector to co-fund efficiency programs.

# Water Reuse and Stormwater Capture

- Prioritize multi-benefit recycled water and stormwater capture projects to galvanize support and leverage funding.
- Right-size investments by incorporating efficiency and demographic changes in local and regional recycled water assessments.
- Assess opportunities to support onsite reuse for residential and non-residential properties.

Heather Cooley
Director of Research, Pacific Institute

www.pacinst.org

@PacificInstitut

One Water and Stewardship Committee

# Bay-Delta Regulatory Update

Item 6c

January 9, 2023

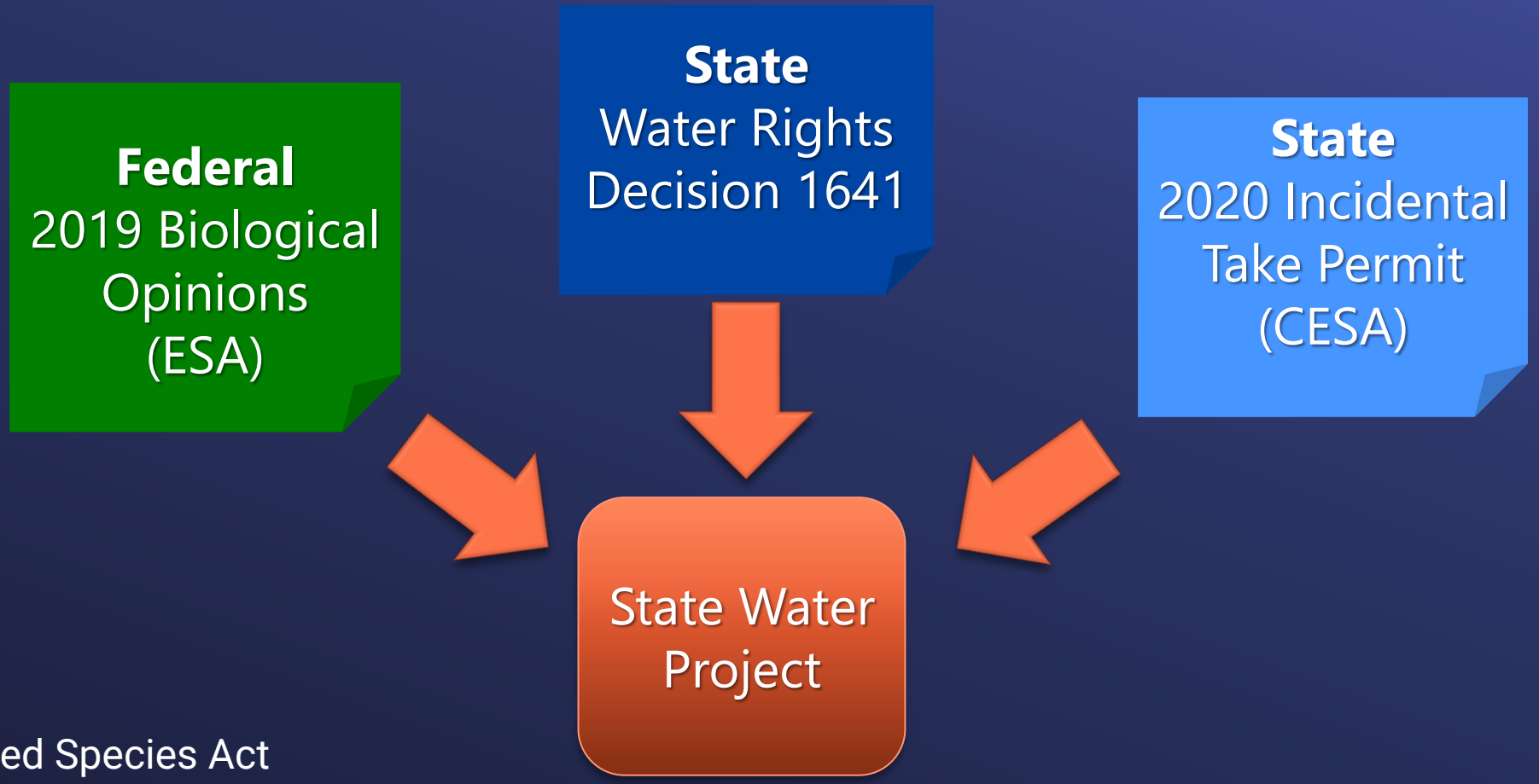
# Bay-Delta Regulatory Update

## Agenda

- Overview and Current Operations
- Long-Term Operations
- Voluntary Agreements

# Regulatory Overview

# Background: Regulatory Overview
## Key Permits and Standards Governing Project Operations




ESA = Endangered Species Act
CESA = California Endangered Species Act

Shasta Reservoir Temperature Management

Shasta Reservoir Temperature Management

# Bay-Delta Regulatory Framework

Summer Flow

Winter/Spring X2

Summer/Fall Habitat Actions

Summer/Fall Habitat Actions

Export/Inflow Ratio

Agriculture/Urban Salinity

Fish and Wildlife Flows

Cross Channel Gates

Cross Channel Gates

Old and Middle River Reverse Flows

Old and Middle River Reverse Flows

Inflow/Export Ratio

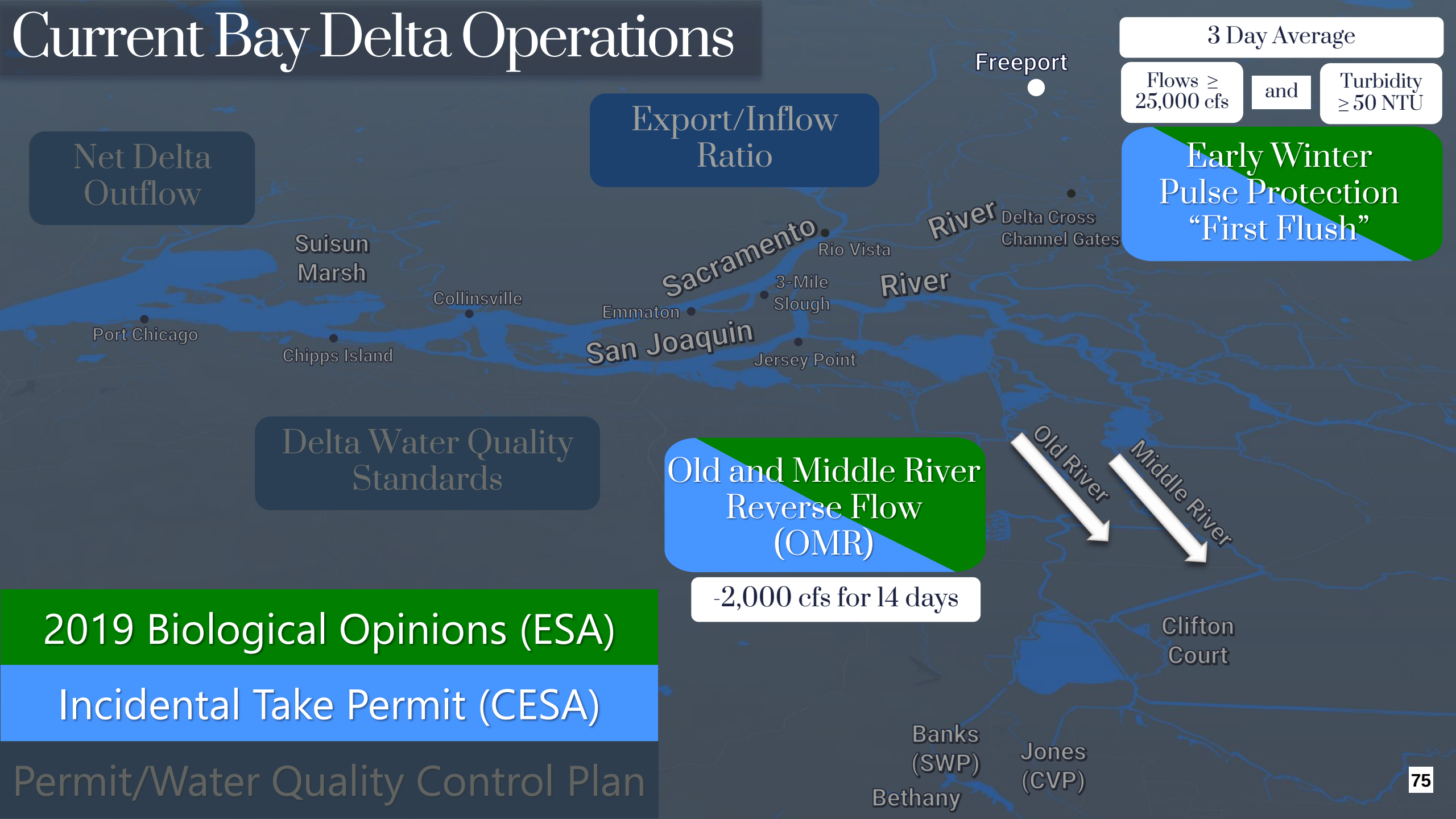
San Joaquin River Inflow/Export Ratio

2019 Biological Opinions (ESA)

Incidental Take Permit (CESA)

Permit/Water Quality Control Plan

# Current Bay Delta Operations




Net Delta Outflow

Export/Inflow Ratio

3 Day Average

Flows ≥ 25,000 cfs and Turbidity ≥ 50 NTU

Early Winter Pulse Protection "First Flush"

Delta Water Quality Standards

Old and Middle River Reverse Flow (OMR)

-2,000 cfs for 14 days

2019 Biological Opinions (ESA)

Incidental Take Permit (CESA)

Permit/Water Quality Control Plan

# Regulation of Water Operations

## Alignment is Foundational

**State**
Water Quality Control Plan

Voluntary Agreements

**Federal**
Biological Opinions (ESA)

**State**
Incidental Take Permit (CESA)

# Reinitiation of Consultation
# Long-Term Operation of the CVP and SWP

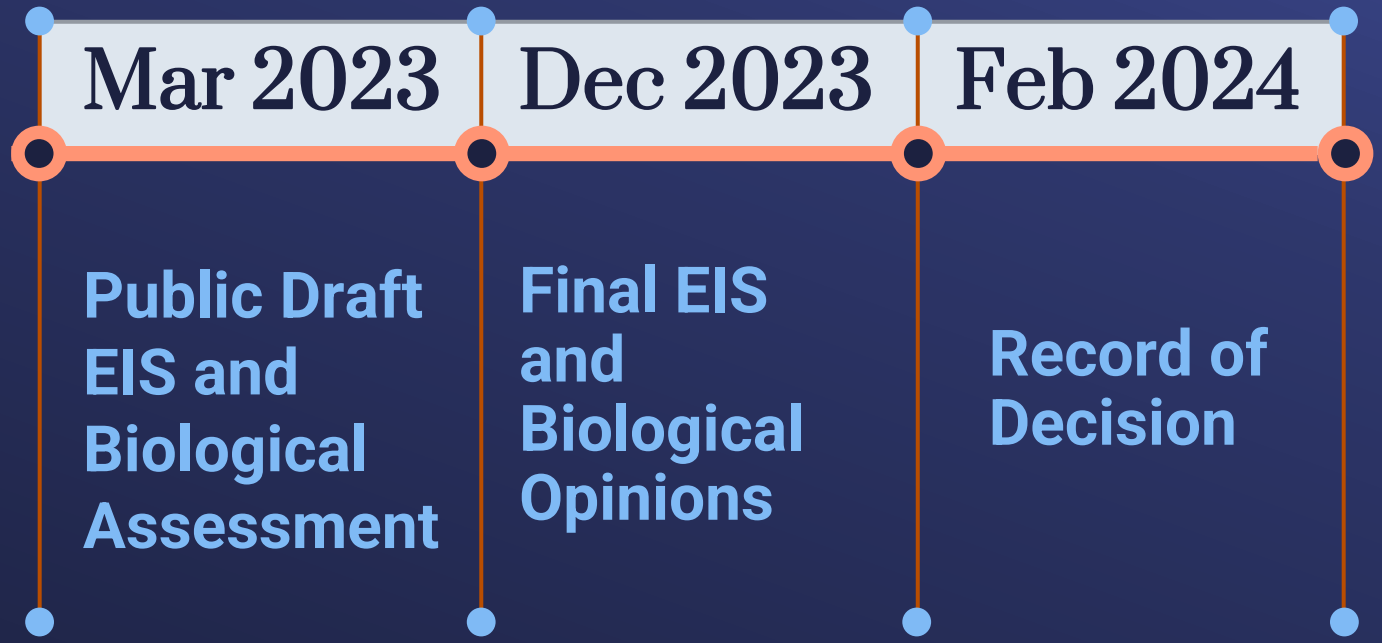
# Timeline to Date

## Reinitiation of Consultation on Long-Term Operations

*Tentative and subject to change

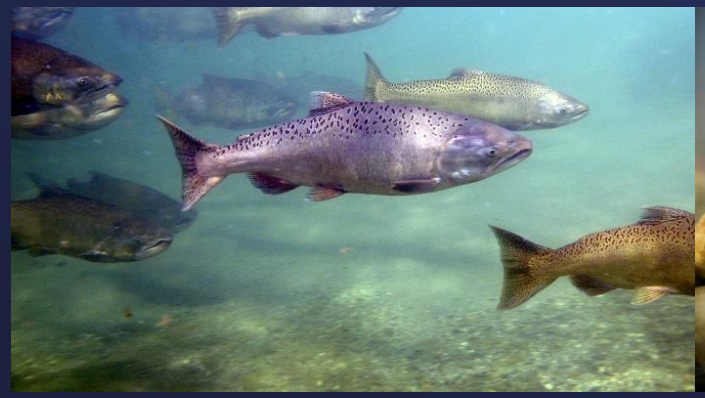
# Remaining Milestones*

## Reinitiation of Consultation on Long-Term Operations



# Key Areas of Interest

- Consistency between State and Federal Permits
- Appropriate attribution of CVP and SWP obligations
- Incorporation of Voluntary Agreement commitments

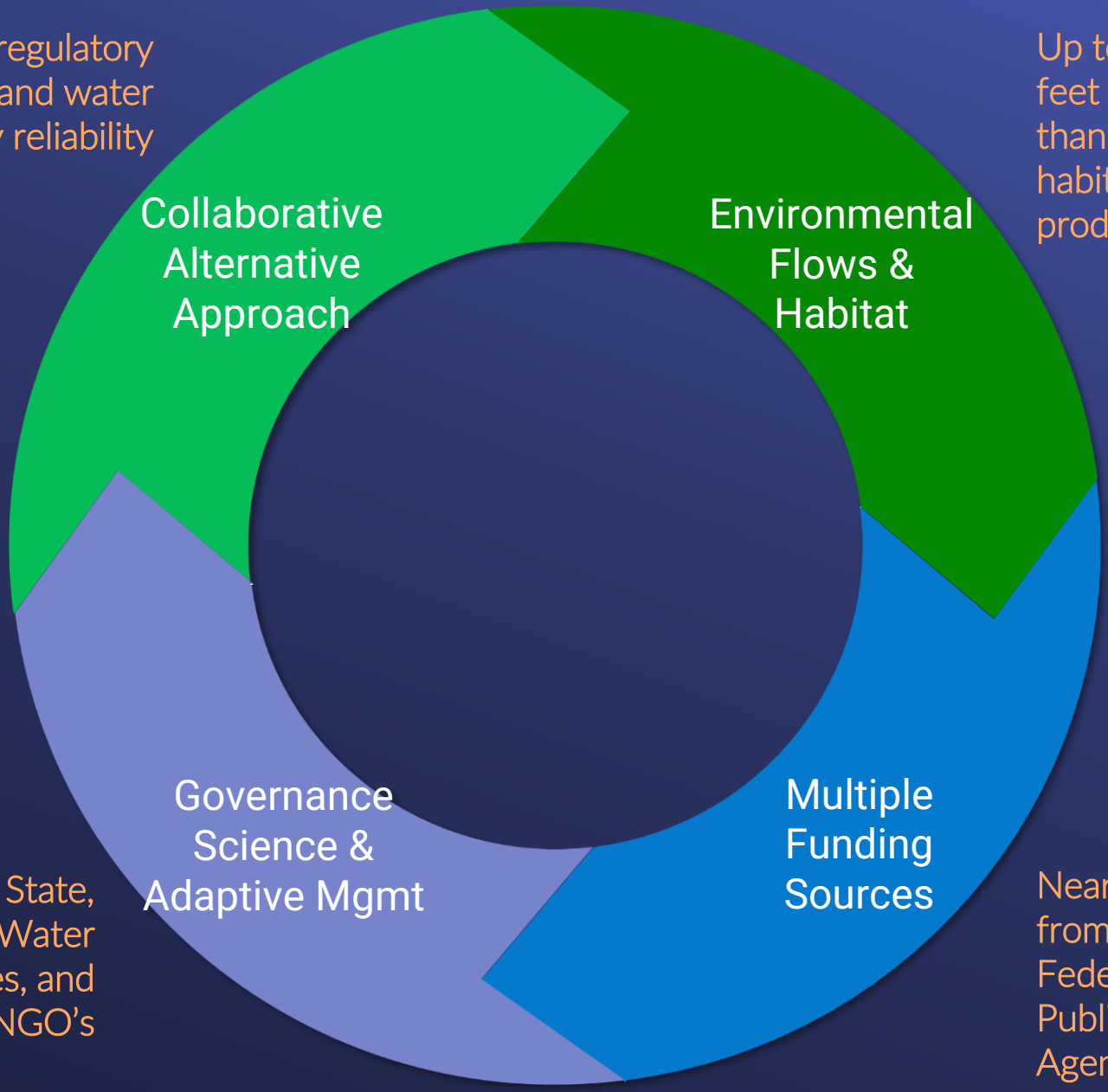


Reinitiation of Consultation on the Long-Term Operation of the CVP and SWP

# Voluntary Agreements

Voluntary Agreements Summary

# Watershed Wide Approach




Provides regulatory certainty and water supply reliability

Up to 825,000 acre-feet of water and more than 45,000 acres of habitat/food production

Multiple State, Federal, Water Agencies, and NGO's

Nearly $3 billion from State, Federal, and Public Water Agencies

# Voluntary Agreements
## Nine Additional Signatories Since March 2022

### March 2022 Initial Signatories

- California Natural Resources Agency
- California Environmental Protection Agency
- Department of Water Resources
- Department of Fish and Wildlife
- U.S. Bureau of Reclamation
  California Great Basin Region
- State Water Contractors
- Metropolitan Water District
- Kern County Water Agency
- Westlands Water District
- Glenn-Colusa Irrigation District
- Yuba Water Agency
- Regional Water Authority
- Western Canal Water District
- River Garden Farms
- Garden Highway Mutual Water Company
- Sutter Mutual Water Company

### Additional Signatories

August 2022

- East Bay Municipal Utility District
- Friant Water Authority
- San Luis Delta Mendota Water Agency
- Tehama – Colusa Canal Authority
- Solano County Water Agency

September 2022

- Contra Costa Water District

November 2022

- San Francisco Public Utilities Commission
- Turlock Irrigation District
- Modesto Irrigation District

*Tentative and subject to change

# Voluntary Agreement Timeline*

VA Participants

State Water Board

Q1 2022 | Q2 2022 | Q3 2022 | Q4 2022 | Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023

MOU Signed

Continued VA Development

Draft Scientific Basis Report & Workshop

State Board Staff Update

State Board Public Engagement

Final VA Package

State Board Consideration

State Board Decision

# Bay-Delta Regulatory Update

## Summary and Lookahead

- Voluntary Agreements (ongoing)
- Long-Term Operations (ongoing)
- Staff Regulatory Update Q3 2023
- Takeaway – Regulatory Alignment is Key

**Federal** Biological Opinions (ESA)

**State** Incidental Take Permit (CESA)

**State** Water Quality Control Plan

Voluntary Agreements


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

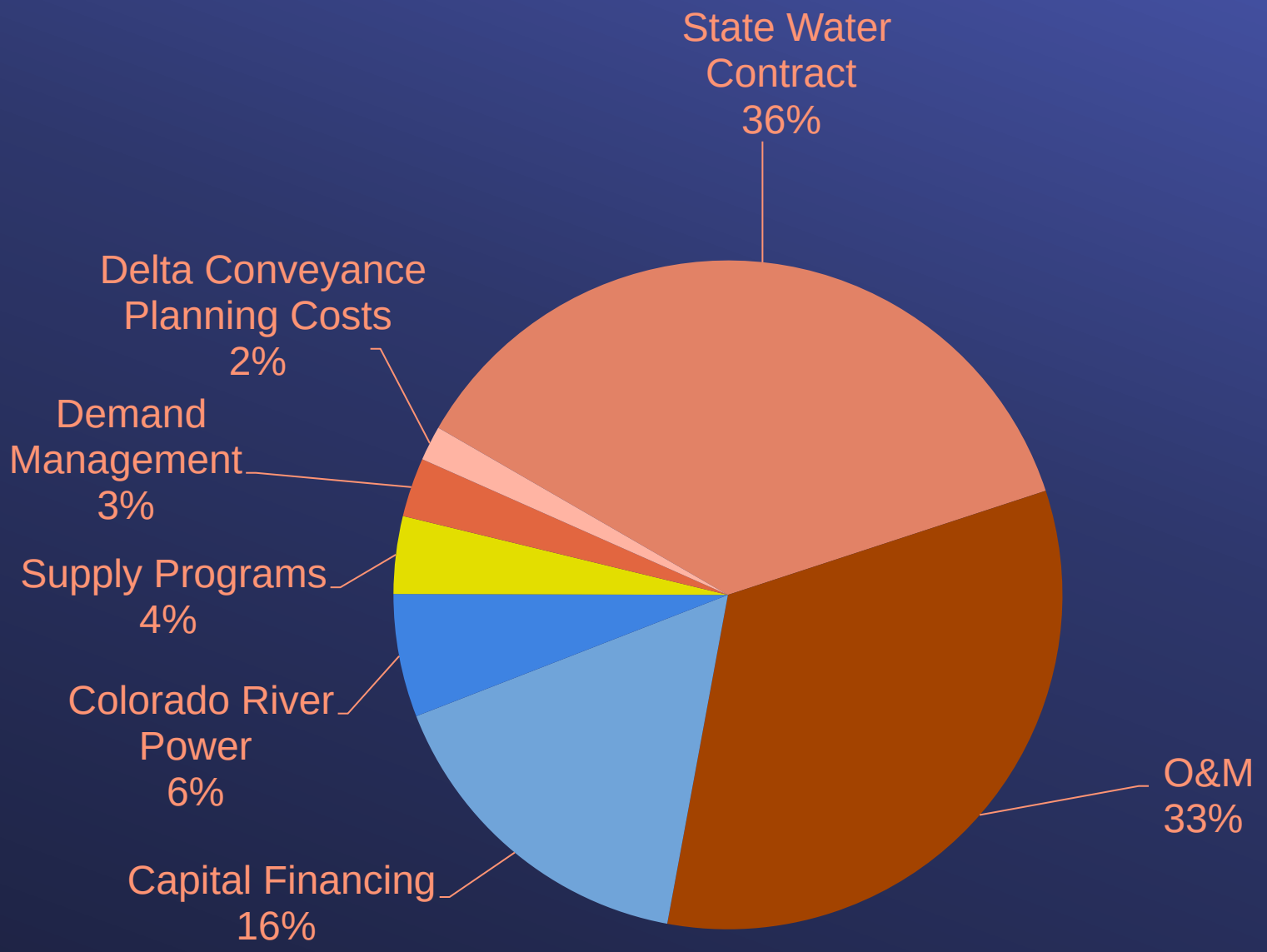
One Water and Stewardship Committee

# Report of Metropolitan's State Water Project 2023 Statement of Charges and Audit

Item 6d

January 9, 2023

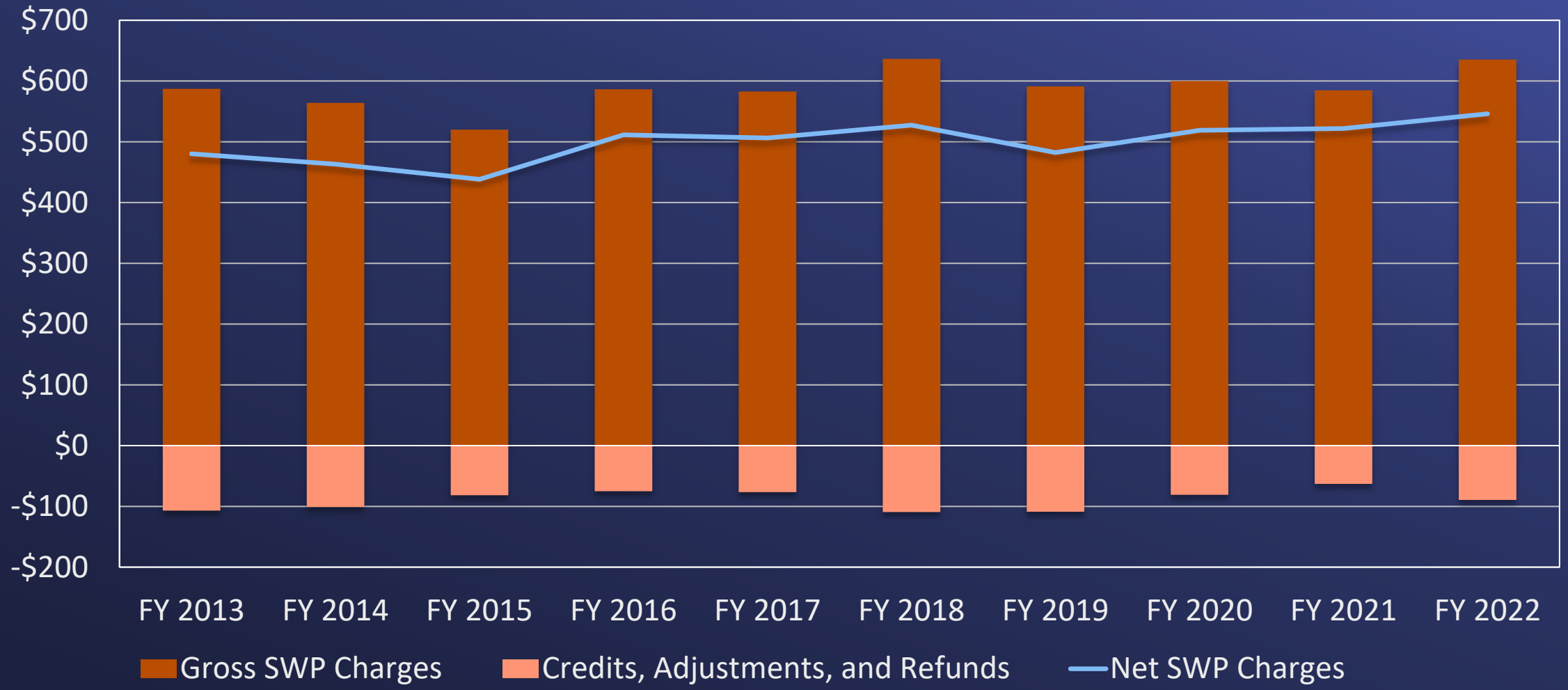
# State Water Project is Metropolitan's Single Largest Budget Expenditure at $652 Million FY 2022/23



# Budget and Projected Charges FY 2022/23

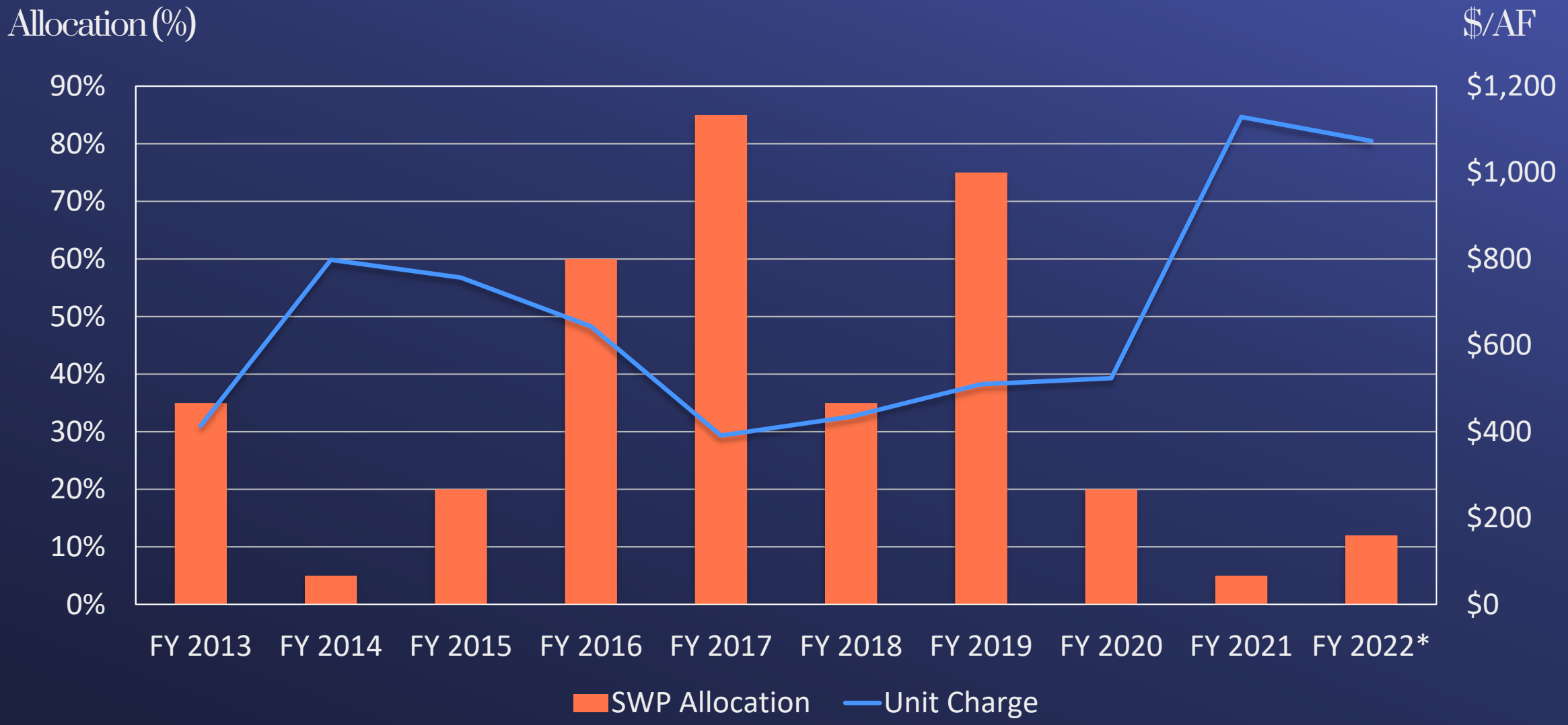
- Through November fiscal year projected charges, including variable, are $93 million under budget
  - Net variable power is $133 million under budget
  - Transportation Minimum Operations, Maintenance, Power, & Replacement is $39 million over budget

# Net Charges Stable over Last 10 years
## Fiscal Year Summary
($'s in millions)




*Excludes Delta Conveyance Project

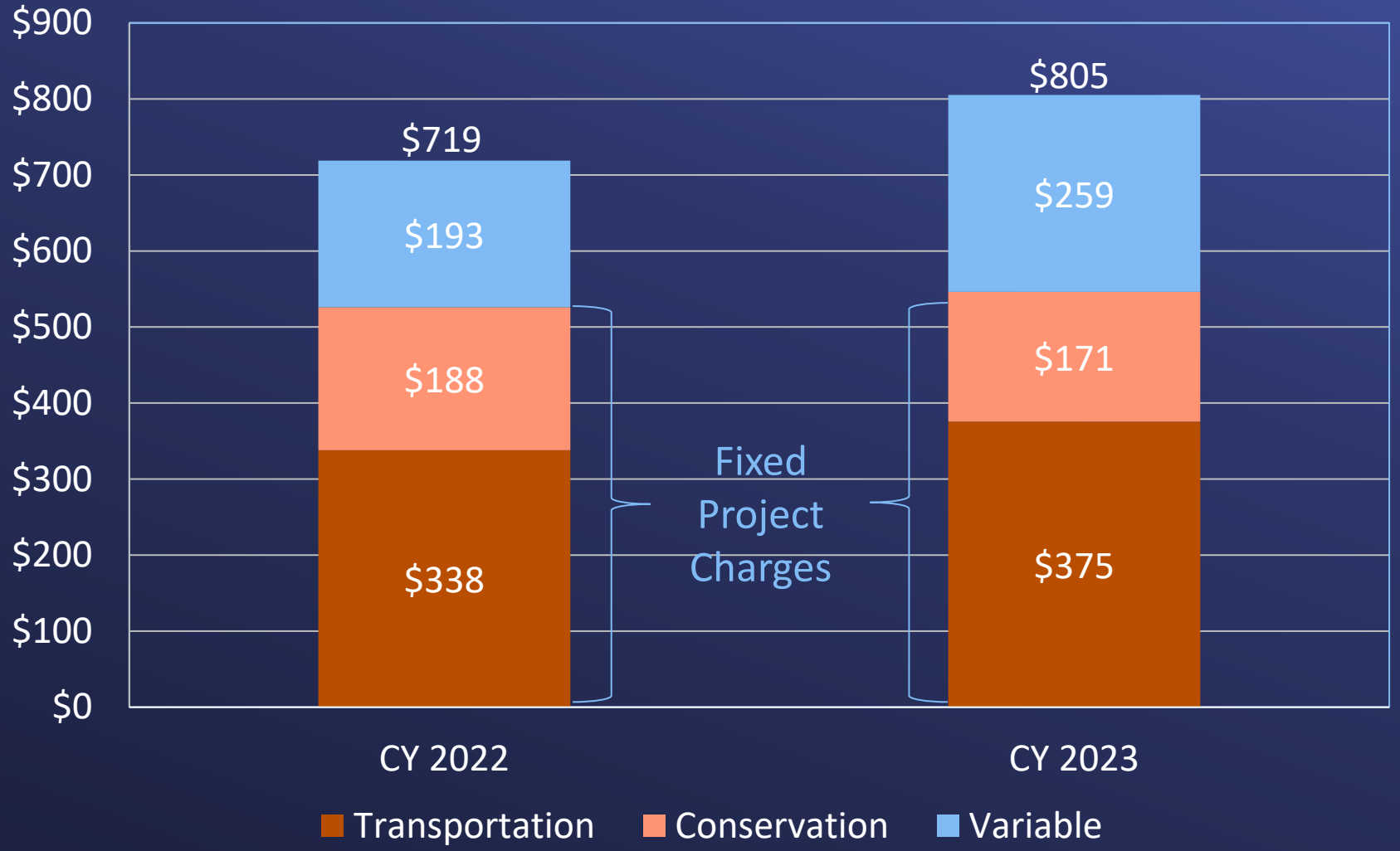
# Metropolitan's State Water Project Allocation and Unit Charge Fiscal Year




* Includes Table A Equivalent of Human Health & Safety Allocation

# SWP Statement of Charges Comparison Calendar Year

($'s in millions)




*Excludes Delta Conveyance Project

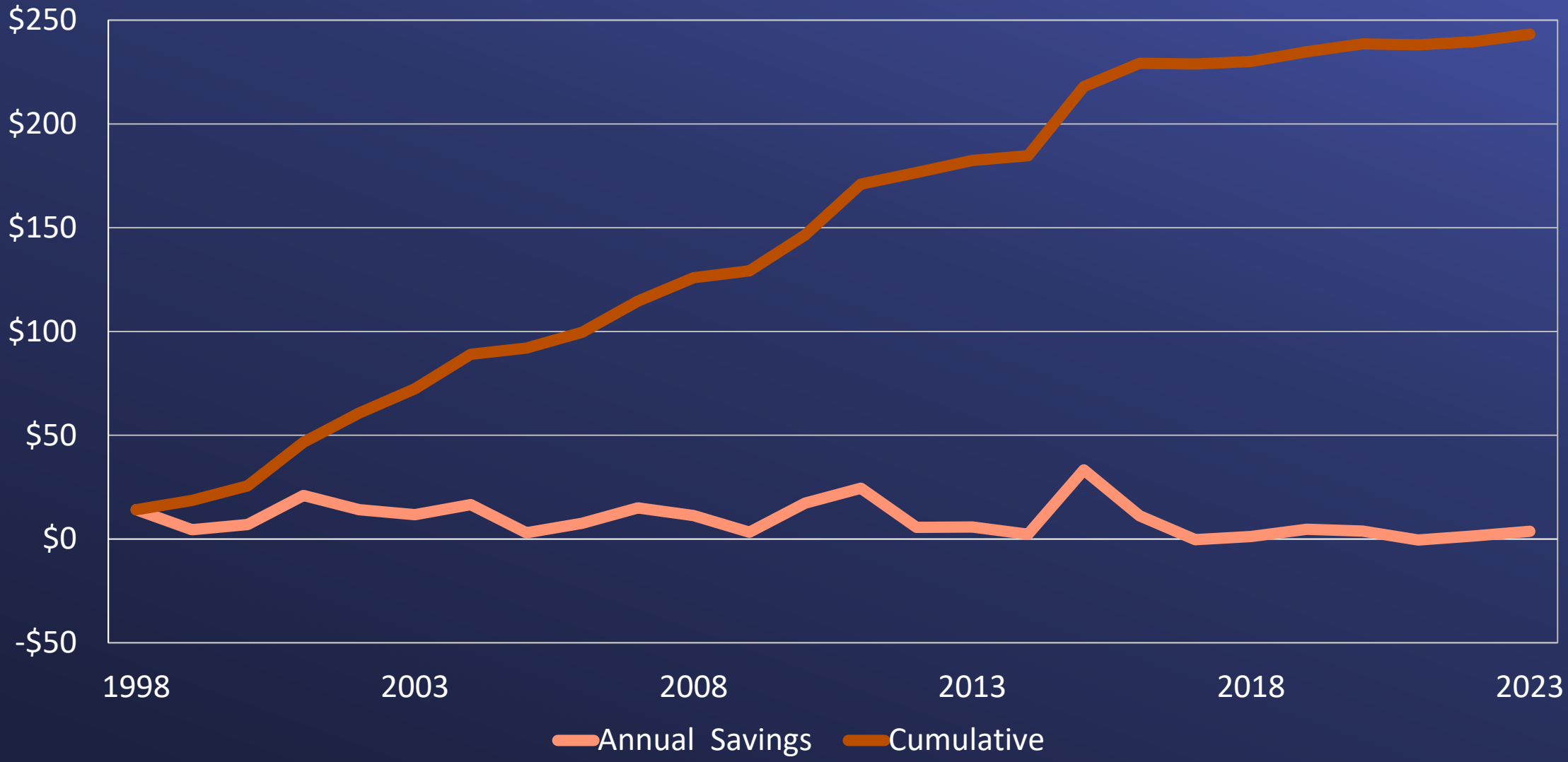
# Audit Results

# Statement of Charges Audit Report CY 2023

- Since 1972, a consultant has reviewed MWD annual charges
  - Consultant:  Richardson and Company
- Specialized contractual audit
- Provide an opinion on MWD charges
- Summary and detailed reports available

# Audit Results in Substantial Savings Over Time

($'s in millions)



# Audit Findings

| Findings | Number of Findings | Net Dollar Value |
|---|---|---|
| Resolved this Year | 9 | $3.7M |
| Unresolved*** | 84** | $227M* |

* Includes $170M Water System Revenue Bond Surcharge estimation under discussion with DWR

** Includes 14 new findings with a net value of $16.1M

*** Includes 20 findings where impact is not quantifiable

# Water System Revenue Bond Surcharge Finding

- Charge on the statement of charges
- Calculation errors
- Department of Water Resources initiated Cost-Debt Reconciliation project
- Auditors and SWP contractors continuing to work with DWR on reconciliation details


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

# • Water Surplus and Drought Management Update *Conditions as of 12/31/2022*

## Summary

This report provides a preliminary accounting for water supply, demand, and storage conditions for calendar year (CY) 2023 as of December 31, 2022. This report also tracks the hydrologic conditions for water year (WY) 2022-2023.

Currently, the estimated amount of imported supply available to help meet demand, prior to withdrawing water from storage is 1.13 million acre-feet (MAF) for CY 2023. The State Water Project (SWP) portion is 291 thousand acre-feet (TAF), which includes the initial SWP Table A allocation of five percent and 195 TAF of human health and safety (HH&S) water from the Department of Water Resources (DWR). Any HH&S supply Metropolitan receives must be returned to DWR in a future year. The initial Colorado River supply is 843 TAF. This reflects the United States Bureau of Reclamation's (USBR) initially approved higher priority water usage that will likely change as the year progresses. Water usage by the higher priority water users impacts Metropolitan's supply. Through the priority system, water not used by the higher priority water users becomes available as supply to Metropolitan. USBR will release its daily water use forecasts early this year which will be reflected in subsequent WSDM reports. However, Metropolitan's supply may change throughout the year as hydrologic conditions develop.

The demand on Metropolitan is currently estimated to be 1.71 MAF for CY 2023. Since supply is less than demand, Metropolitan's current supply/demand gap is estimated to be 574 TAF. Operational decisions to protect Metropolitan's future Colorado River Aqueduct (CRA) diversions, potential conservation mandates from USBR, and future water obligations and potential contributions, as shown in **Attachment 2**, may limit access and availability to Metropolitan's dry-year storage accounts for CY 2023. To mitigate need to draw upon storage in CY 2023, Metropolitan's Board of Directors declared a Regional Drought Emergency for all of Southern California on December 13, 2022, and called upon water agencies to immediately reduce their use of all imported supplies from both the SWP and the Colorado River.

The Emergency Water Conservation Program (EWCP) in 2022 was effective in reducing demand and in ensuring water use did not exceed available supply. As shown in **Attachment 3**, the SWP Dependent Area member agencies achieved the 2022 EWCP objective and used three percent less SWP supply than the 2022 volumetric limit. To manage demands with the continued limited SWP supply in 2023, the EWCP will continue through June 2023 for the SWP Dependent Area with new volumetric limits. Any unused water from 2022 will be redistributed to the SWP Dependent area for use in 2023.

Should drought conditions persist or worsen in the coming months, Metropolitan's Board of Directors will consider implementing a regional Water Supply Allocation Plan (WSAP) for all member agencies beginning fiscal year 2023-2024. Under this plan, the Board may determine a regional shortage, establish a shortage level, and implement a surcharge for water use above a member agency's annual allocation. In preparation for a possible WSAP, staff will hold a series of coordination meetings with member agencies in the upcoming months.

It is early in the year and a wide range of supply and demand balances remain possible. As shown in **Attachment 4**, constructing plausible scenarios with different supply and demand assumptions helps broaden the understanding of plausible, but uncertain, future conditions that can unfold. Regardless of the conditions that may materialize in the next two years, Metropolitan will continue to adhere to the WSDM Plan to capture surplus amount of water in normal to wet conditions and use stored water and drought actions in drought conditions.

## Purpose

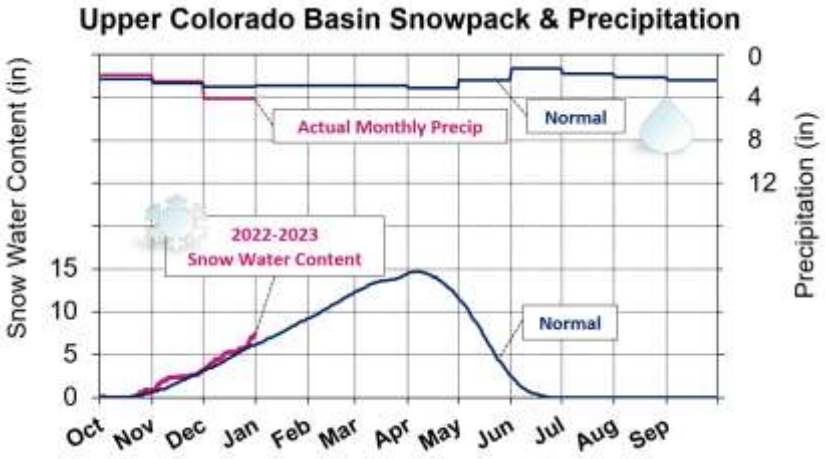
Informational

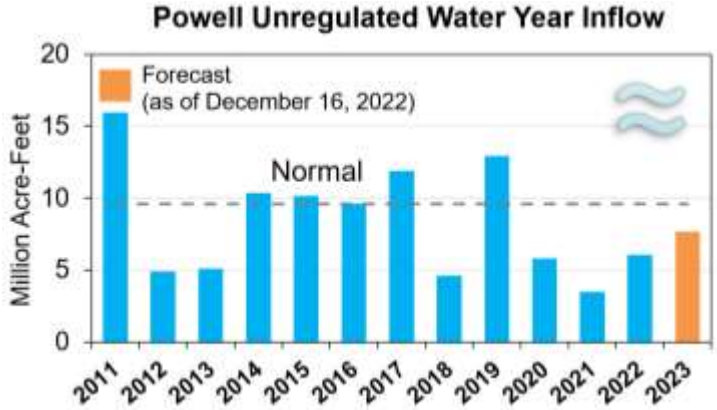
## Attachments

Attachment 1: Projected 2023 WSDM Storage Detail (5 percent SWP Table A allocation)
Attachment 2: Future Contributions and Obligations and Cyclic Programs
Attachment 3: Emergency Water Conservation Program Performance
Attachment 4: Future Supply and Demand Gaps

## Detailed Report

This Water Surplus and Drought Management (WSDM) report provides the preliminary water supply and demand estimates for CY 2023 and developing hydrologic conditions for WY 2022-2023.




### *Upper Colorado River Basin*

- ❄ Above normal snowpack water content for this date (7.4 inches or 121% of normal for this date). Snow data early in the season may not provide a valid measure of conditions.
- ♦ Above normal precipitation to date (8.5 inches or 106% of normal for this date).
- ≈ Runoff into Lake Powell for WY 2023 is forecasted at 80% of normal.

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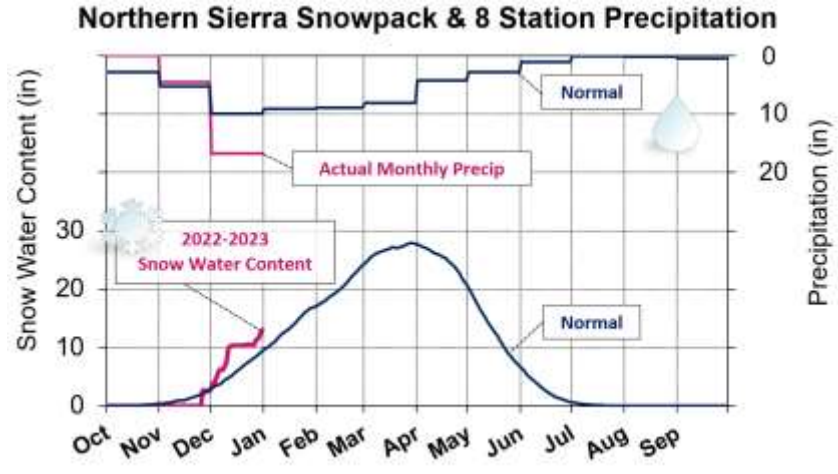
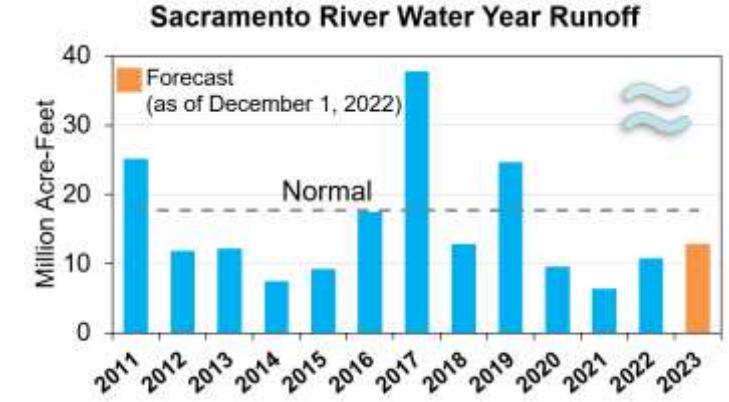


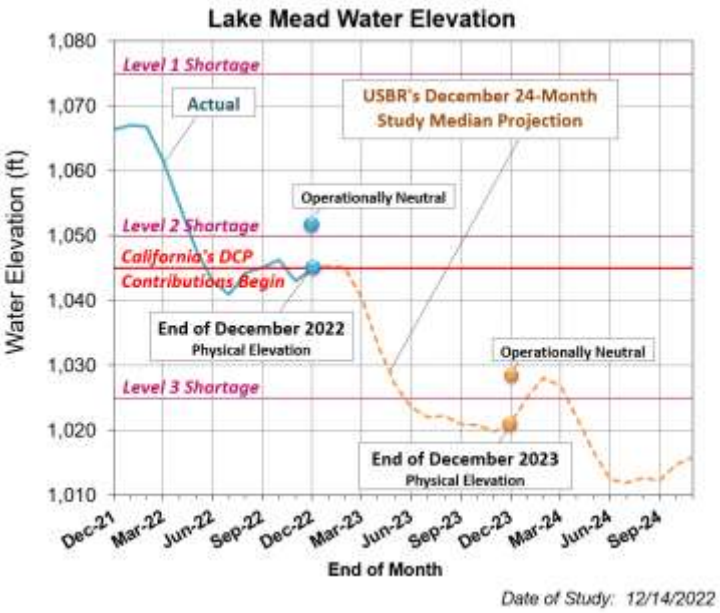




### *Sacramento River Basin*

- ❄ Above normal snowpack water content for this date (13.0 inches or 136% of normal for this date). Snow data early in the season may not provide a valid measure of conditions.
- ♦ Above normal precipitation to date (21.5 inches or 116% of normal for this date).
- ≈ Runoff into the Sacramento River for WY 2023 is forecasted at 73% of normal.

| CRA Supplies | Acre-Feet |
|---|---|
| *Basic Apportionment* | *550,000* |
| *IID/ MWD Conservation Program* | *105,000* |
| *PVID Fallowing Program* | *38,000* |
| *Exchange w/ SDCWA (IID/Canal Lining)* | *278,000* |
| *Exchange w/ USBR (San Luis Rey Tribe)* | *16,000* |
| *Lower Colorado Water Supply Project* | *9,000* |
| *Bard Seasonal Fallowing Program* | *6,000* |
| *Quechan Diversion Forbearance* | *6,000* |
| *Quechan Seasonal Fallowing Program* | *3,000* |
| *Higher Priority Water Use Adjustment* | *-169,000* |
| **Total CRA Supplies [1,2]** | **843,000** |

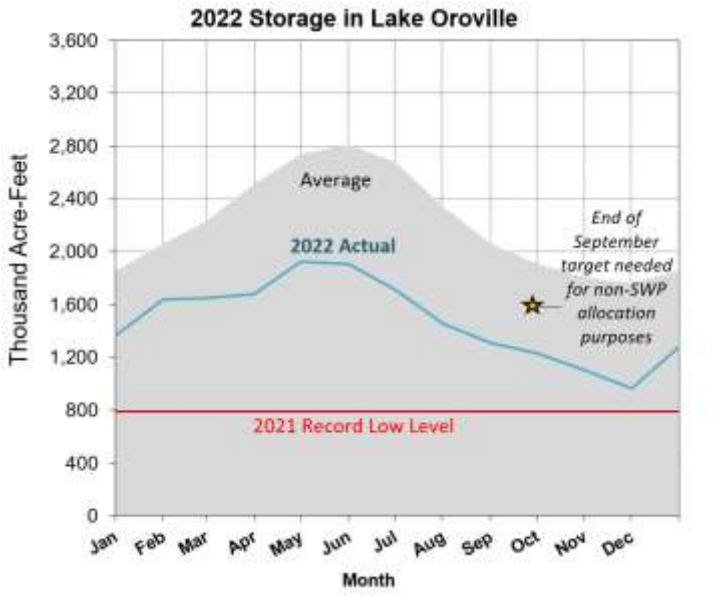
[1] Per USBR-approved water order (12/16/22).
[2] Total may not sum due to rounding.




- Lake Mead storage is currently 7.31 MAF or elevation 1,044.8 feet (28 percent of total capacity).
- The Lower Basin is at a Level 2a shortage in CY 2023. Under a Level 2a shortage, Metropolitan will not be impacted. However, due to the critical conditions on the Colorado River, USBR has called on the Basin states to develop additional conservation to protect critical elevations in Lakes Powell and Mead. Metropolitan and other California water agencies that rely on Colorado River supplies have committed to reduce water use by up to 400,000 acre-feet each year beginning in 2023 through 2026.
- Metropolitan may use ICS to meet future DCP contributions; additional use of ICS to meet service area demand remains uncertain.

| SWP Supplies | Acre-Feet |
|---|---|
| *Table A (5% SWP allocation)* | *96,000* |
| *Port Hueneme [1]* | *0* |
| *Human Health & Safety Supply* | *195,000* |
| **Total SWP Supplies [2]** | **291,000** |
| **Total Supplies (CRA + SWP) (Prior to storage actions)** | **1,134,000** |

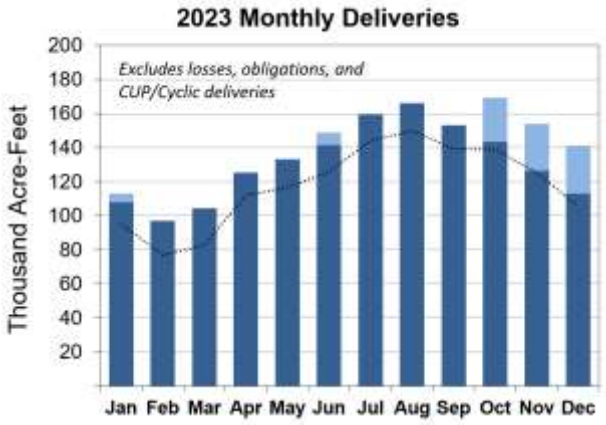
[1] Rounded to the nearest thousand.
[2] Total may not sum due to rounding.




- In addition to the 5 percent Table A allocation, DWR is providing water for Contractors' unmet Human Health and Safety needs (HH&S) in CY 2023. DWR expects Contractors receiving HH&S water to take mandatory conservation measures and return any HH&S water to the SWP in a future year. DWR has approved 195 TAF of HH&S supply for Metropolitan.
- Lake Oroville is currently at 1.27 MAF (36 percent of total capacity) or 69 percent of historical average as of the date of this report.

| Current Demand | Acre-Feet |
|---|---|
| *Member Agency Consumptive* [1] | *1,581,000* |
| *Member Agency Replenishment* | *46,000* |
| *Coachella Valley Water District Agreement* | *15,000* |
| *Return to Imperial Irrigation District* [2] | *0* |
| *Exchange w/ San Luis Rey Tribe* | *16,000* |
| *System and Storage Losses* | *50,000* |
| *Cyclic Deliveries* | *0* |
| **Total Demands** [3] | **1,708,000** |

[1] Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
[2] Per USBR-approved water order (12/16/22).
[3] Total may not sum due to rounding.

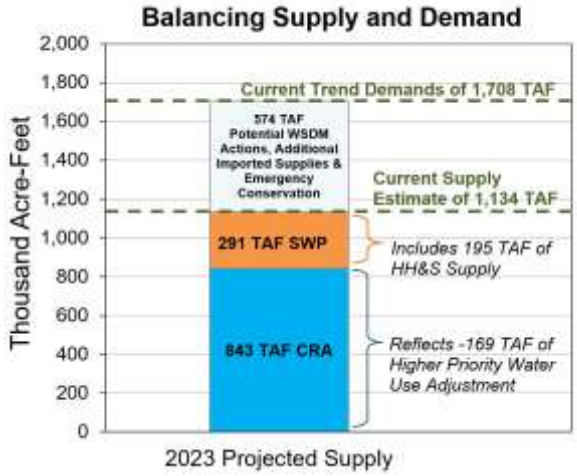



Even with ongoing conservation efforts, demands are projected to be higher than the 5-year average due to continued dry conditions and reduced local supplies.


## MANAGING REGIONAL SUPPLY AND DEMAND

| Supply/Demand Balance | Acre-Feet |
|---|---|
| *Total Supplies* | *1,134,000* |
| *Total Demands* | *1,708,000* |
| **Current Balance Estimate** [1] | **-574,000** |

[1] Total may not sum due to rounding.




### Dry-Year WSDM Strategies/Actions

The following WSDM actions are being pursued or are underway to satisfy the estimated supply/demand gap in 2023, enhance Metropolitan's capability of delivering supplies to the SWP Dependent Areas, and reduce storage withdrawals in 2023. Should conditions warrant, surplus supplies will be stored in a manner to achieve equitable reliability across the region.

- Actively pursuing additional transfer supplies.
- Receive deliveries of HH&S supply from DWR to help meet demands of SWP Dependent Area.
- Balance use of available imported supplies from both the SWP and Colorado River.
- Continue coordination with our partners to maximize supply development.
- Continue to allocate available SWP supplies for EWCP.
- Continue to utilize and manage storage assets to satisfy current and future year demands.
- Incorporate new drought actions into existing suite of WSDM actions.

# 2023 WSDM Storage Detail

| WSDM Storage | 1/1/2023 Estimated Storage Levels [1] | CY 2023 Take Capacity [2] | 2023 Total Storage Capacity |
|---|---|---|---|
| **Colorado River Aqueduct Delivery System** | **1,198,000** | **TBD** | **1,657,000** |
| Lake Mead ICS | 1,198,000 | TBD [3] | 1,657,000 |
| **State Water Project System** | **484,000** | **96,000** | **1,879,000** |
| MWD SWP Carryover [4] | 22,000 | 22,000 | 350,000 |
| DWCV SWP Carryover [4] | | | |
| MWD Articles 14(b) and 12(e) | 0 | 0 | N/A |
| Castaic and Perris DWR Flex Storage | 3,000 | 3,000 | 219,000 |
| Arvin Edison Storage Program | 120,000 | 0 | 350,000 |
| Semitropic Storage Program | 163,000 | 45,000 | 350,000 |
| Kern Delta Storage Program | 130,000 | 26,000 | 250,000 |
| Mojave Storage Program | 19,000 | 0 | 330,000 |
| AVEK Storage Program | 27,000 | 0 | 30,000 |
| **In-Region Supplies and WSDM Actions** | **699,000** | **330,000** | **1,246,000** |
| Diamond Valley Lake | 494,000 | 237,000 | 810,000 |
| Lake Mathews and Lake Skinner | 194,000 | 82,000 | 226,000 |
| Conjunctive Use Programs (CUP) [5] | 11,000 | 11,000 | 210,000 |
| **Other Programs** | **664,000** | **25,000** | **1,181,000** |
| Other Emergency Storage | 381,000 | 0 | 381,000 |
| DWCV Advanced Delivery Account | 283,000 | 25,000 | 800,000 |
| **Total** | **3,045,000** | **451,000** | **5,963,000** |
| Emergency | 750,000 | 0 | 750,000 |
| **Total WSDM Storage (AF)** [6] | **2,295,000** | **451,000** | **5,213,000** |

[1] Preliminary start of year balances, subject to DWR adjustments and USBR final accounting in May 2023.

[2] Take capacity assumed under a five percent SWP Table A Allocation. Storage program losses included where applicable.

[3] Take capacity will be based on planned maintenance activities, current CRA supply estimate, and operational decisions to protect Metropolitan's future CRA diversions. Although capacity is currently available, Metropolitan is planning to limit its take of ICS in 2023.

[4] Total storage capacity varies year to year based on prior year remaining balance added to current year contractual limits.

[5] Total of all CUP programs including IEUA/TVMWD (Chino Basin); Long Beach (Central Basin); Long Beach (Lakewood); Foothill (Raymond and Monk Hill); MWDOC (Orange County Basin); Three Valleys (Live Oak); Three Valleys (Upper Claremont); and Western.

[6] Total WSDM Storage level subject to change based on accounting adjustments.

# Future Contributions and Obligations and Cyclic Programs

## Table 1: Future Obligations

| | Future Returns [1] |
|---|---|
| Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID | 254,000 [2] |
| Storage and Interstate Release Agreement with Southern Nevada Water Authority | 330,000 [3] |
| Coachella Valley Water District Agreement | 210,000 [4] |
| DWR Flex Storage | 216,000 [5] |
| 2022 Reverse Cyclic | 25,000 [6] |
| 2022 Human Health & Safety | 134,000 [7] |
| **Total (AF)** | **1,169,000** |

[1] Rounded to the nearest thousand. Subject to change based on accounting adjustments.

[2] Reduced by 8,000 AF from last month's report to account for 2022 evaporation loss. IID can request return in any year, conditional on agreement terms.

[3] Up to 30,000 AF per year.

[4] Obligation to be met by the end of 2026.

[5] Flexible storage withdrawals from Castaic Lake and Lake Perris must be returned within five calendar years. Metropolitan is required to return 170,000 AF by 2026 for withdrawals in 2021. Metropolitan is required to return 46,000 AF by 2027 for withdrawals in 2022.

[6] Deferred delivery from Calleguas Municipal Water District, Upper San Gabriel Valley Municipal Water District, and Three Valleys Municipal Water District. Metropolitan will deliver water to the member agencies by 2027.

[7] Metropolitan's CY 2022 Human Health & Safety deliveries. This water must be returned by 2027.

## Table 2: Potential Magnitude of California's Drought Contingency Plan Contribution

| | 2023 | 2024 | 2025 | 2026 |
|---|---|---|---|---|
| Likelihood of Required California Drought Contingency Plan Contribution [1] | 0% | 64% | 71% | 70% |
| Average Metropolitan DCP Contribution When Contributions Are Required (AF) | 0 | 258,000 | 279,000 | 281,000 |

[1] Results from USBR's December 2022 Colorado River Mid-Term Modeling System (CRMMS) model run.

## Table 3: Cyclic Program Activity

| CY | Starting Balance (AF) | CY Actions (AF) | | | | Ending Balance (AF) |
|---|---|---|---|---|---|---|
| | | Cyclic Pre-Delivery | Cyclic Cost-Offset Pre-Delivery | Total Pre-Delivery | Sale Out of Cyclic | |
| 2019 | 51,000 | 147,000 | 19,000 | 166,000 | 91,000 | 126,000 |
| 2020 | 126,000 | 2,000 | 0 | 2,000 | 50,000 | 79,000 |
| 2021 | 79,000 | 0 | 0 | 0 | 28,000 | 51,000 |
| 2022 | 51,000 | 0 | 0 | 0 | 27,000 | 24,000 |
| 2023 [1] | 24,000 | 0 | 0 | 0 | 24,000 | 0 |

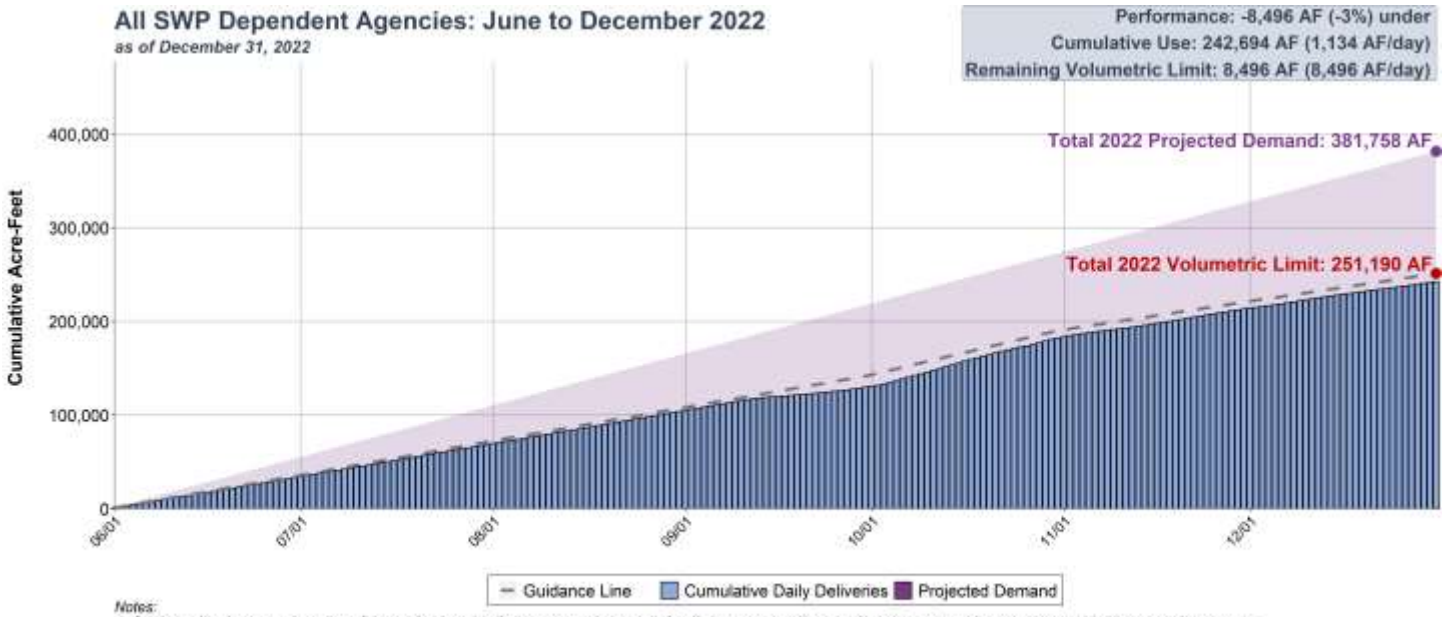
[1] Projected Cyclic program activity for the year. Subject to change.

## Table 4: Reverse Cyclic Program Activity

| CY | Starting Balance (AF) | CY Actions (AF) | | Ending Balance (AF) |
|---|---|---|---|---|
| | | Purchase of Deferred Delivery | Reverse Cyclic Deliveries | |
| 2022 | 0 | 25,000 [1] | 0 | 25,000 |

[1] Deferred delivery from Calleguas Municipal Water District, Upper San Gabriel Valley Municipal Water District, and Three Valleys Municipal Water District. Metropolitan will deliver water to the member agencies no later than five full calendar years from the date of purchase.

# Emergency Water Conservation Program Performance




*Notes:*
1. *Guidance line is a representation of the total volumetric limit on a cumulative daily basis. It assumes a linear path, unless a monthly pattern is provided by a member agency.*
2. *Performance is the acre-foot and corresponding percent deviation from the guidance line, per as of date.*
3. *For Path 2 agencies, monthly penalties paid will be credited if actual total water use is below the total volumetric limit at the end of the seven-month period.*
4. *Tracking of cumulative daily deliveries only include those agencies planning to receive SWP supplies June - December 2022.*
5. *Projected demand as of April 26, 2022.*

***Disclaimer: Data presented is preliminary and subject to change based on monthly reconciled billing data.***

# Future Supply and Demand Gaps

**(Estimate as of December 2022)**

Metropolitan's Water Surplus and Drought Management Plan provides a framework for managing Metropolitan's resources in periods of surplus and shortage. To guide the WSDM actions, Metropolitan constructs plausible scenarios with different supply and demand assumptions. The table below shows the projected range of plausible end-of-year supply and demand balances for CY 2023 and 2024. These ranges provide a bookend for the wide range of supply and demand balances that can unfold.

To reflect a reasonable range of future outcomes, the low supply is coupled with high demand as one bookend and the high supply is coupled with the low demand for the other bookend. In 2023, the shortage for the service area can be ~520 TAF with a five percent SWP Table A allocation and Human Health and Safety (HH&S) supply, low Colorado River supply, and high demands. As for the other bookend, the surplus can be as high as ~725 TAF with a 70 percent SWP Table A allocation, high Colorado River supply, and low demands. For 2024, the range of supply and demand balances can range from a shortage of ~920 TAF to a surplus of ~865 TAF. Regardless of the conditions that may materialize in the next two years, Metropolitan will continue to adhere to the WSDM Plan to capture surplus amount of water in normal to wet conditions and use stored water and drought actions in drought conditions.

| | 2023 (TAF) | | 2024 (TAF) | |
|---|---|---|---|---|
| **Item** | **Low Supply/High Demand** | **High Supply/Low Demand** | **Low Supply/High Demand** | **High Supply/Low Demand** |
| SWP [1] | +300 | +1,340 | +300 | +1,340 |
| Colorado River [2] | +960 | +1,005 | +660 | +985 |
| Demand on Metropolitan [3] | -1,700 | -1,400 | -1,800 | -1,200 |
| Additional Obligations [4] | -80 | -220 | -80 | -260 |
| **Supply/Demand Balance [5]** | **(-520)** | **725** | **(-920)** | **865** |

[1] SWP supplies are based on a low of 5% Table A allocation + HH&S to a high of 70% Table A allocation.

[2] Colorado River supplies are based on estimated transfers, exchanges, higher priority water use, and DCP contributions.

[3] Demand on Metropolitan reflect the total of replenishment and consumptive demand.

[4] Additional obligations include system losses, repayment of HH&S, etc.

[5] The supply demand balances should not be interpreted as an absolute range as they were determined by explicit assumptions to represent reasonable outcomes. The actual supply and demand balance, shown in the WSDM report, may fall outside of this range as information becomes available for specific components throughout the year.

One Water and Stewardship Committee

# Update on WSDM and Water Shortage Emergency Condition

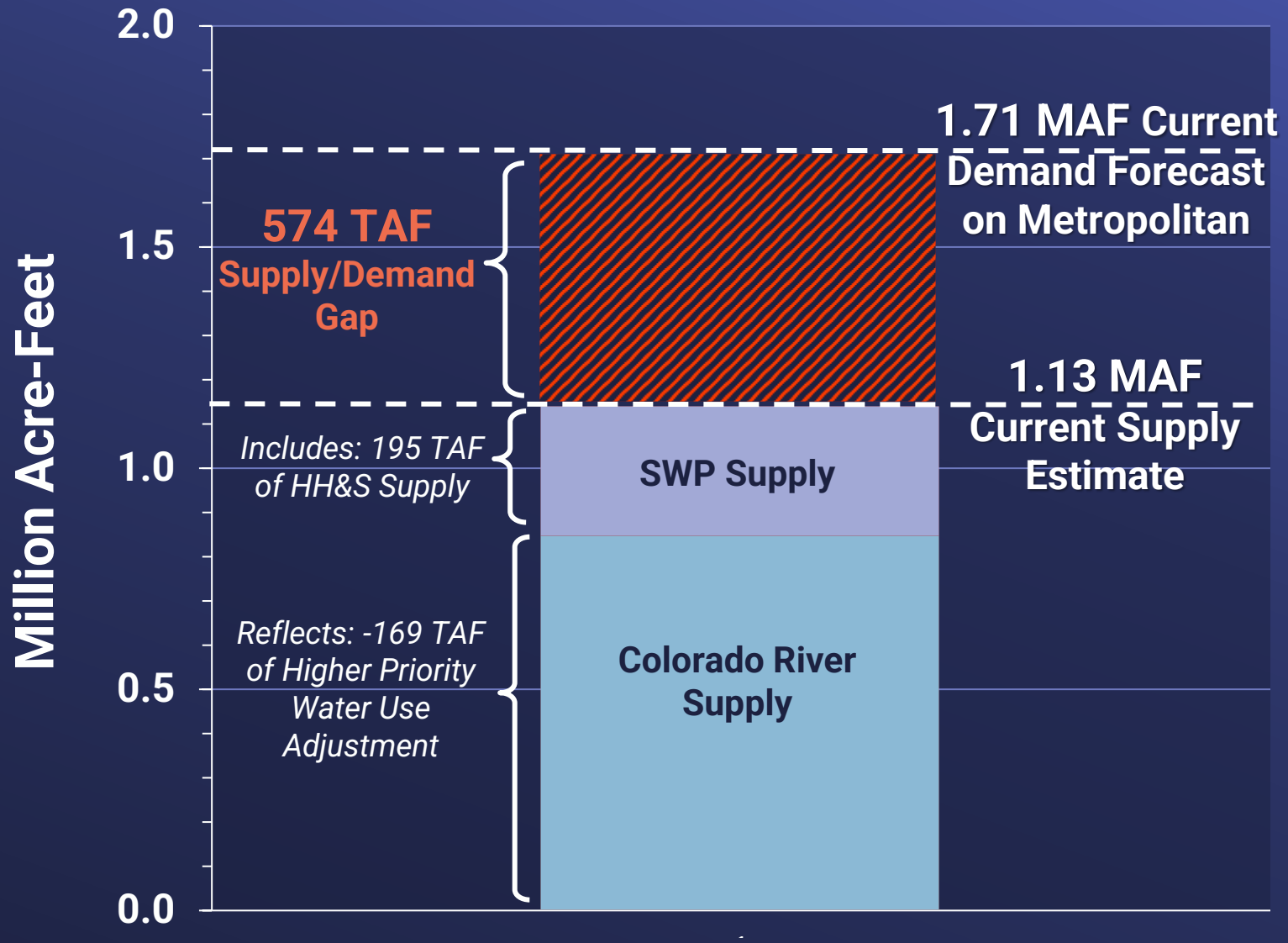
Item 6e

January 9, 2023

# WSDM Update

# 2023 WSDM Supply Demand Balance

## Regional View



# WSDM Update

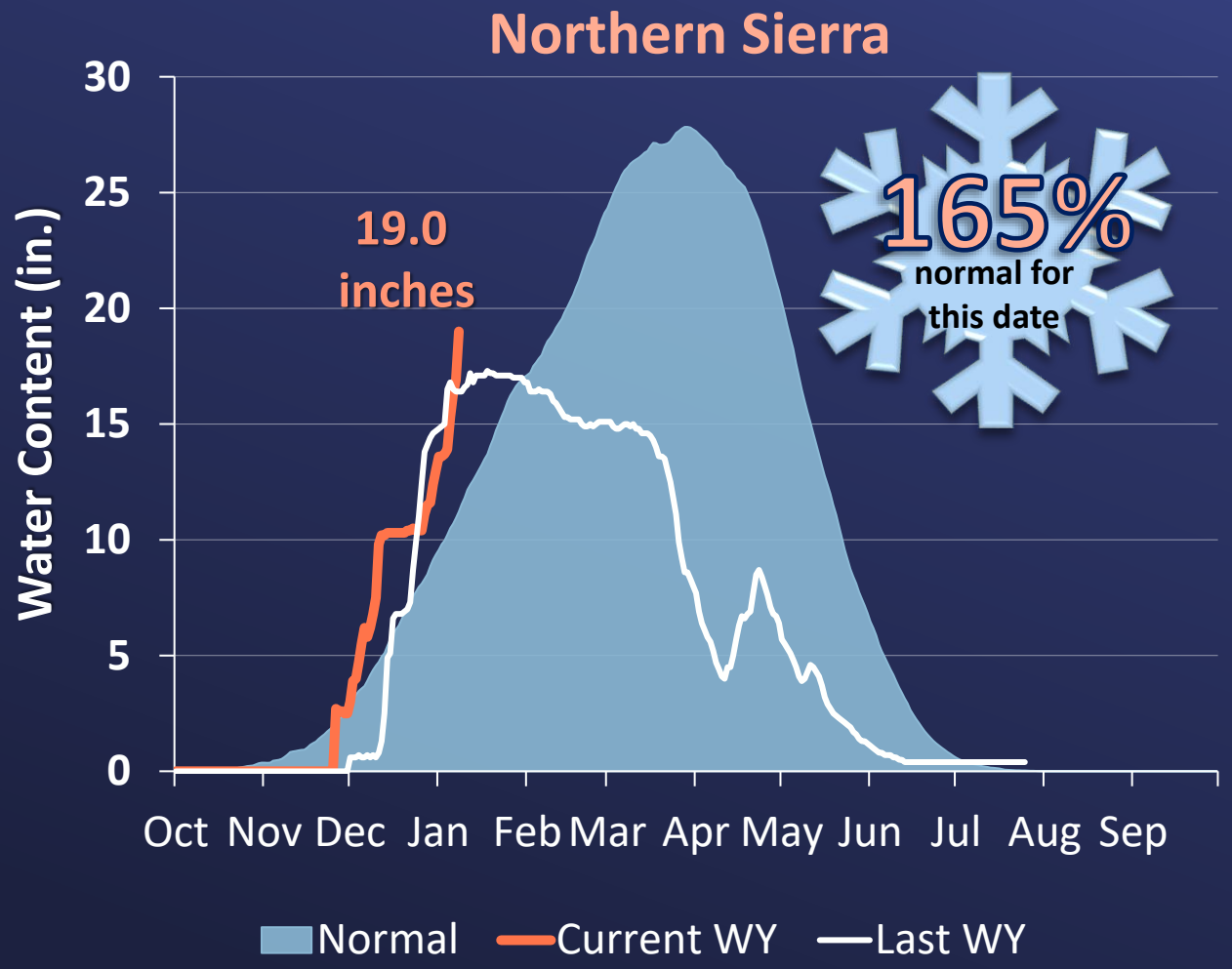
## Components of WSDM Strategy

- Actively pursuing additional transfer supplies
- Receive deliveries of HH&S supply from DWR to help meet demands of SWP Dependent Area
- Balance use of available imported supplies from both the SWP and Colorado River
- Continue coordination with our partners to maximize supply development
- Continue to allocate available SWP supplies for EWCP
- Continue to utilize storage assets to satisfy current and future year demands
- Incorporate new drought actions into existing suite of WSDM actions

# Hydrologic Conditions

# Northern Sierra Snowpack Above Normal

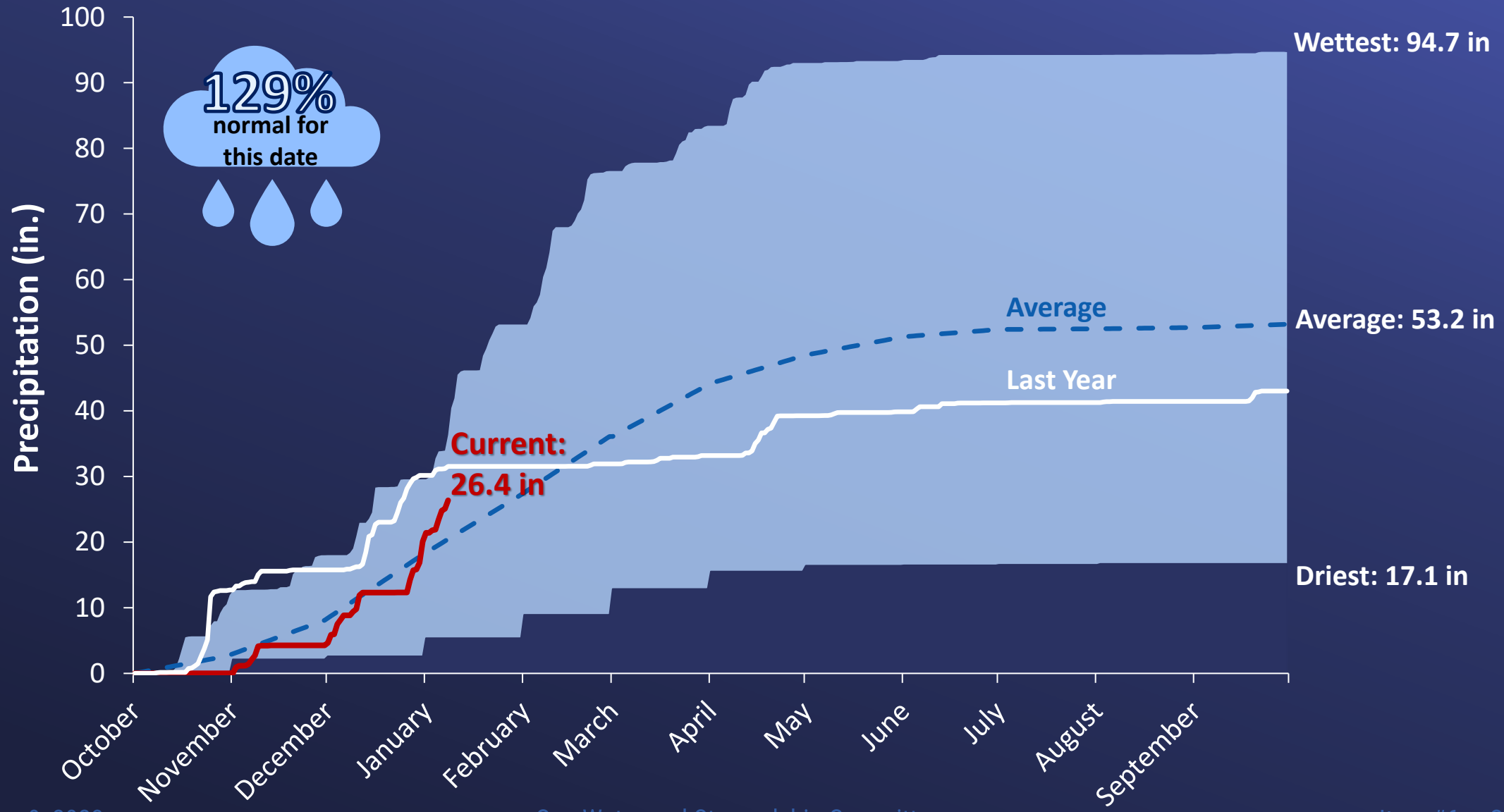
As of 01/08/2023




*Credit: California Department of Water Resources*

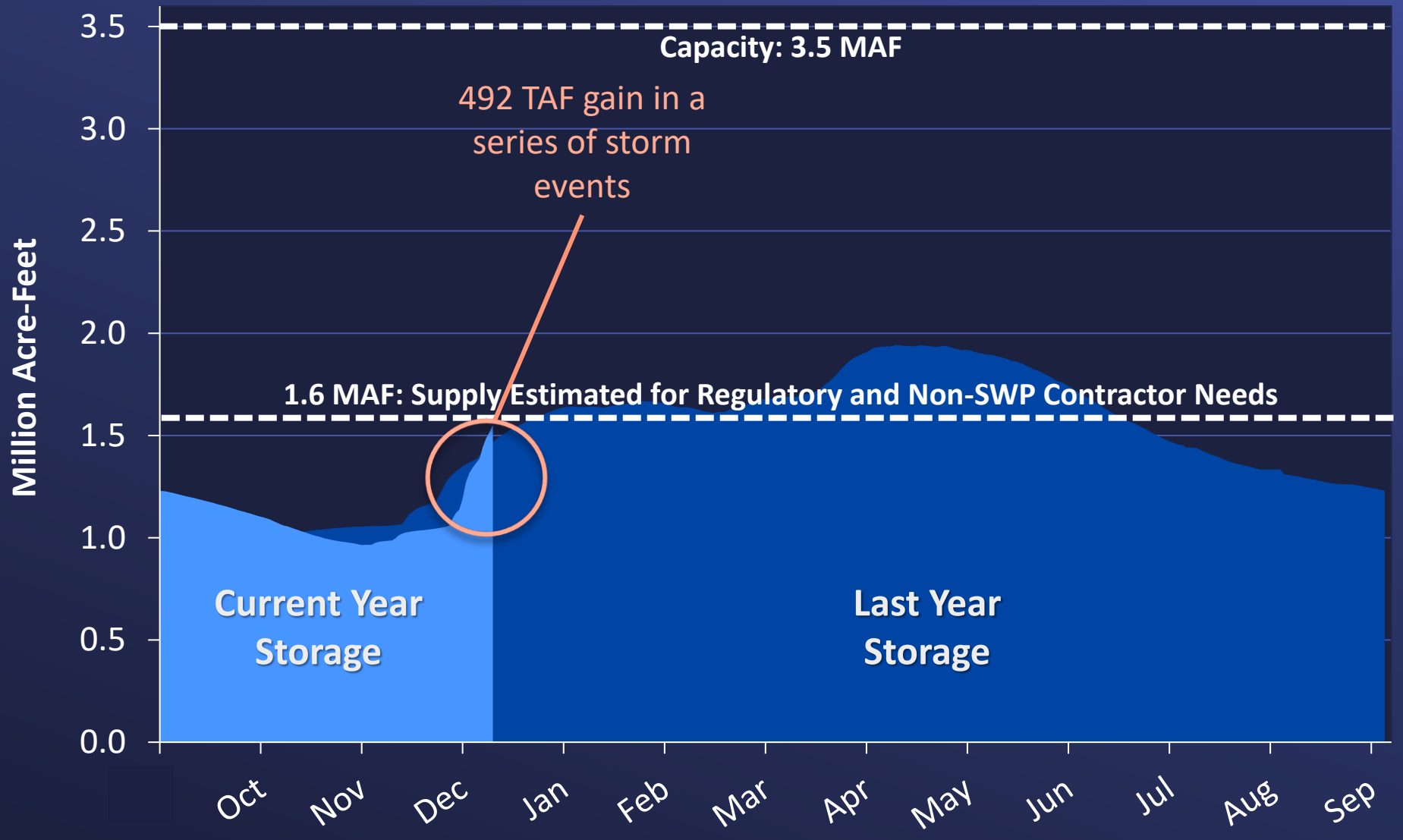
# Northern Sierra Precipitation: 8-Station Index

As of 01/08/2023

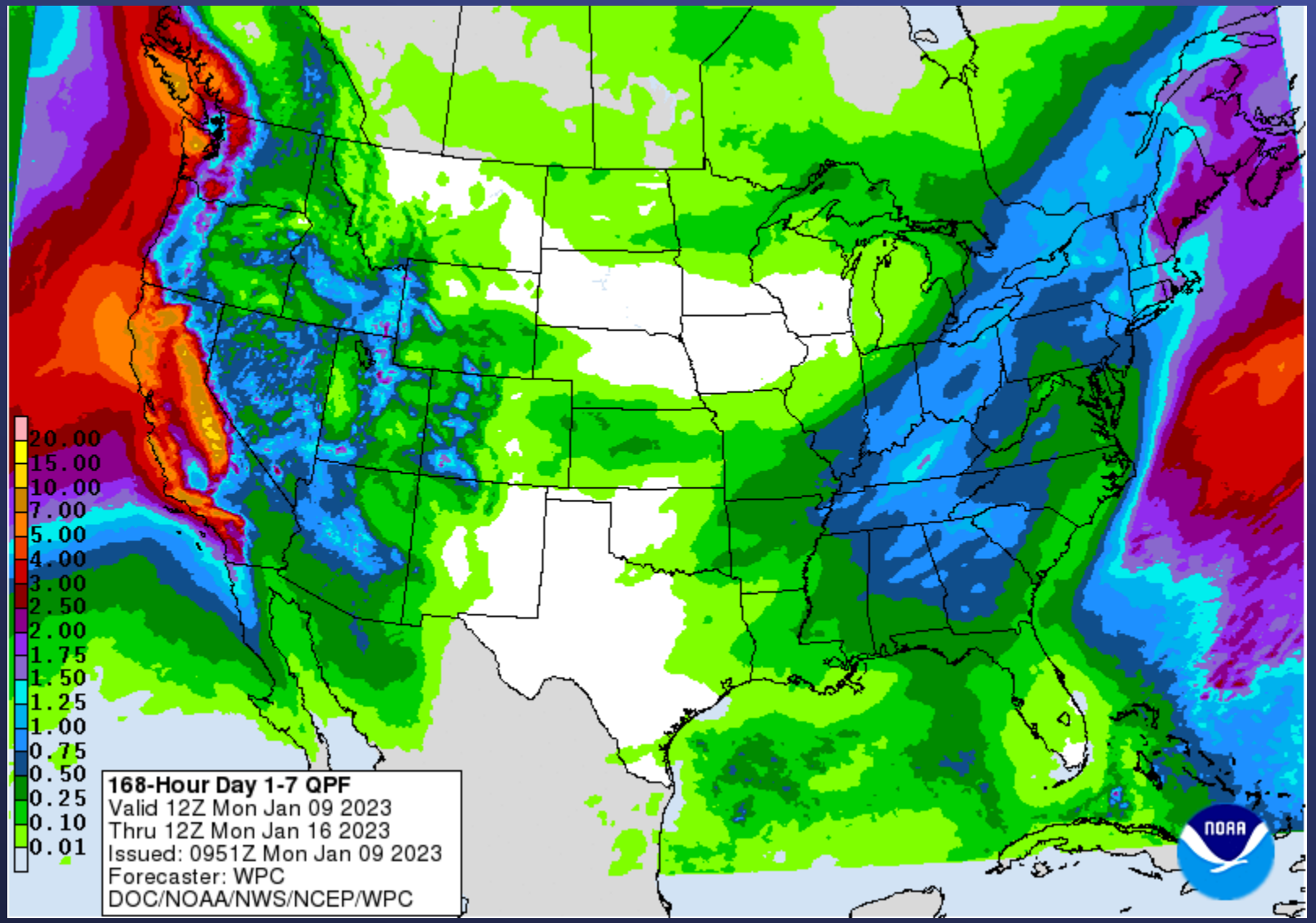


# Lake Oroville Storage Levels

As of 01/08/2023

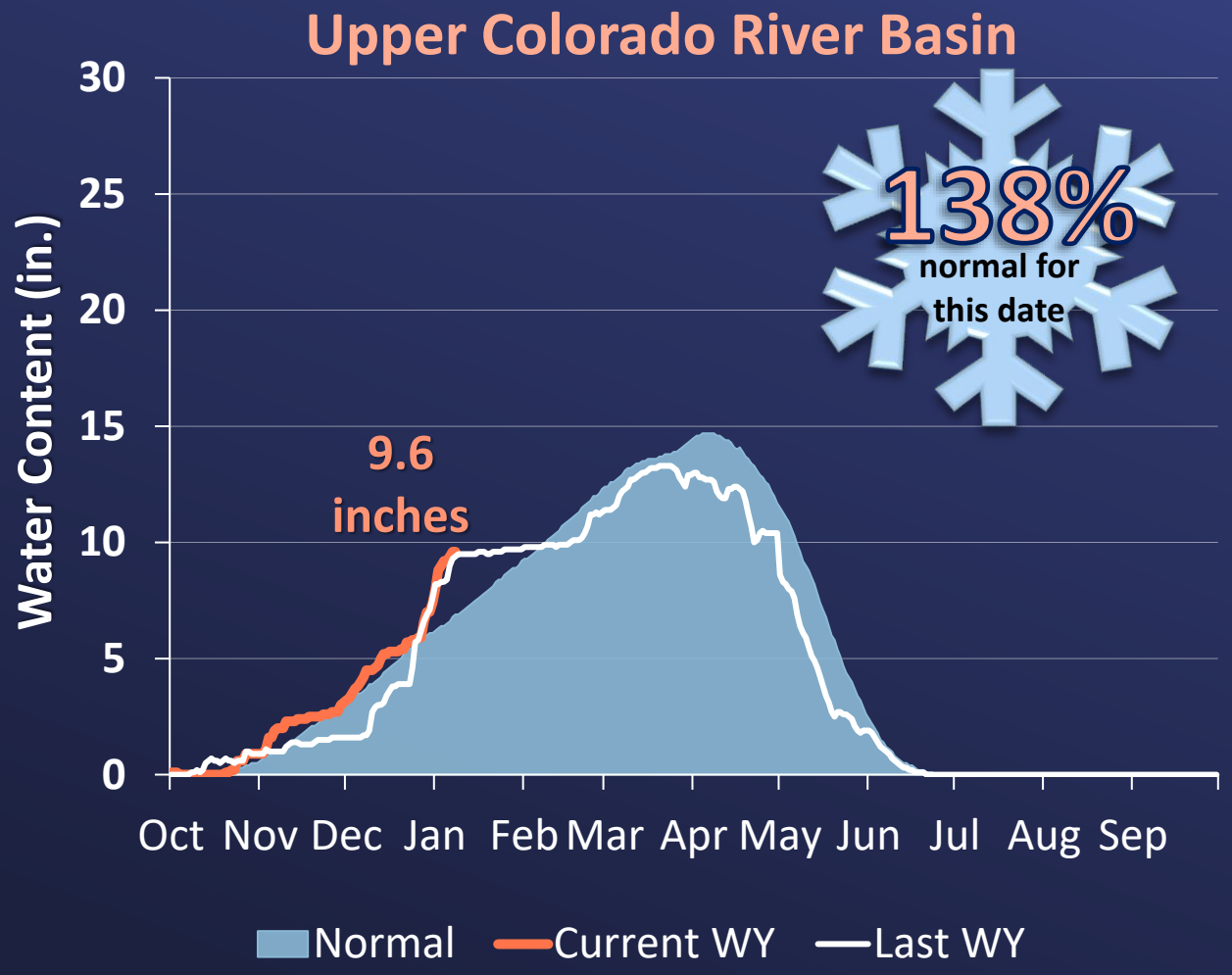


# Weakening La Niña Ushers in Atmospheric Rivers



# Above Normal Snowpack for Upper Colorado River Basin

As of 01/08/2023

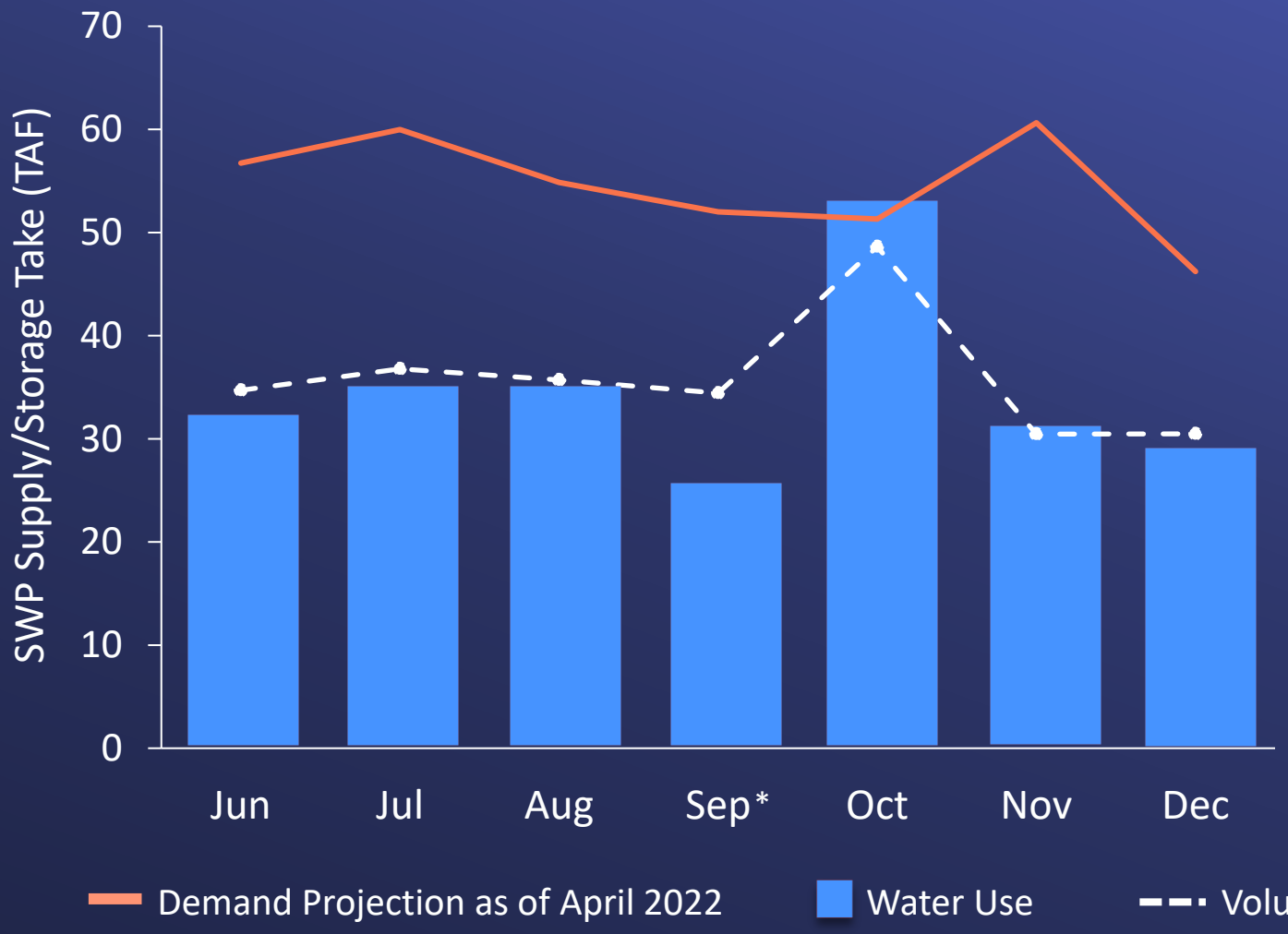



*Credit: KUTV*

# Emergency Water Conservation Program (EWCP) Update

# Emergency Water Conservation Program

## 2022 SWP Dependent Area Monthly Demands on Metropolitan

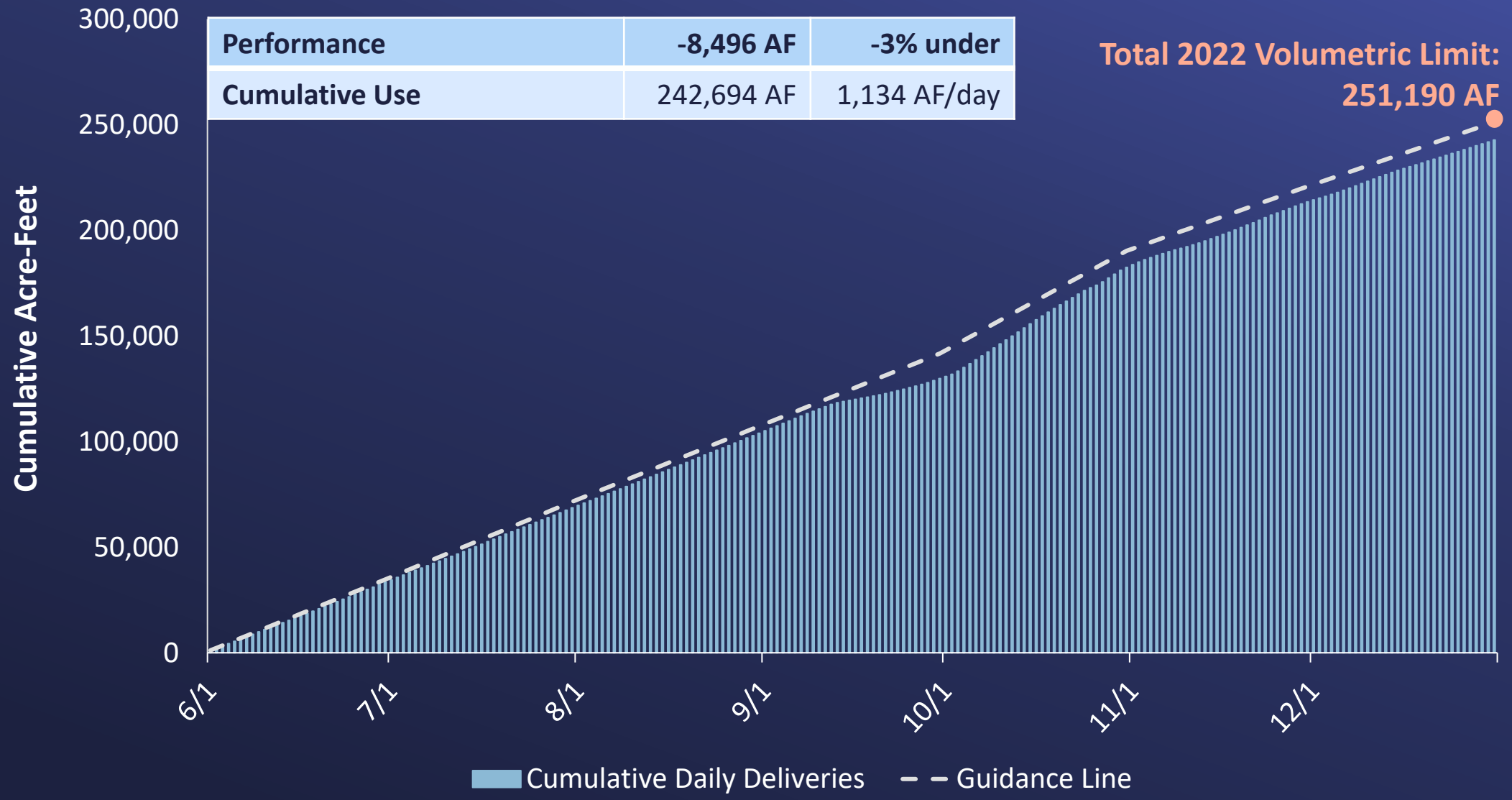



**Reduced demands in September stemmed from high turbidity in Castaic Lake and operational decisions by member agencies to reduce deliveries from Metropolitan*

# All SWP Dependent Agencies Water Use Tracking: Jun. to Dec. 2022

## As of 12/31/2022

| | | |
|---|---|---|
| **Performance** | **-8,496 AF** | **-3% under** |
| **Cumulative Use** | 242,694 AF | 1,134 AF/day |



# EWCP Update

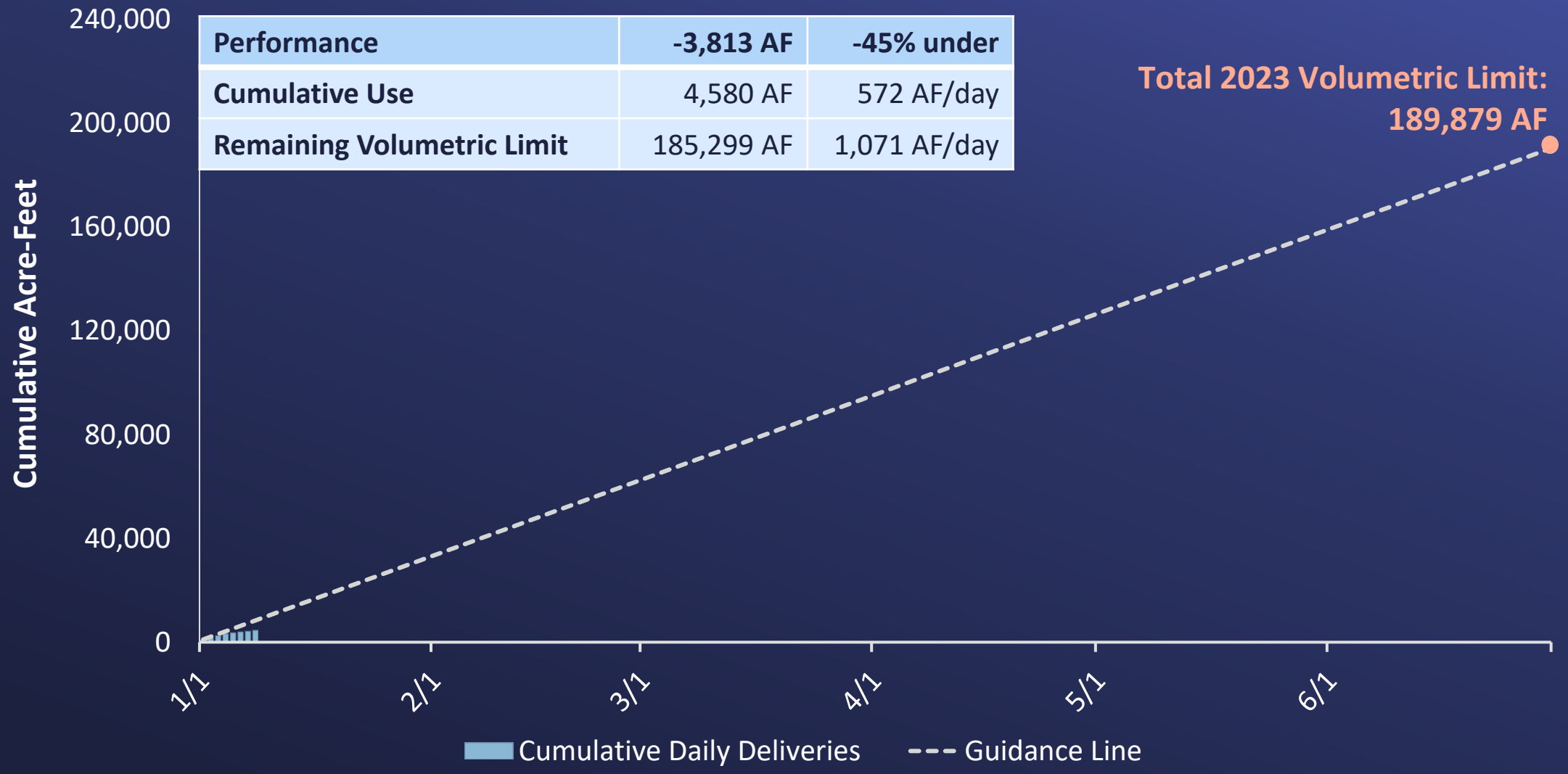
## 2023 EWCP

- In April 2022, Board approved EWCP framework for June 1, 2022 through June 30, 2023
- New volumetric limits developed for January through June 2023
  - More uncertainty on availability of supplies at the beginning of the year due to developing hydrologic conditions
  - Available supplies and volumetric limits will be updated once a month to reflect any changes in supplies
- If EWCP needed to continue through end of the year, Board approval will be sought in April 2023

# All SWP Dependent Agencies Water Use Tracking: Jan. to Jun. 2023

As of 01/08/2023

| | | |
|---|---|---|
| **Performance** | **-3,813 AF** | **-45% under** |
| **Cumulative Use** | 4,580 AF | 572 AF/day |
| **Remaining Volumetric Limit** | 185,299 AF | 1,071 AF/day |



# Water Supply Allocation Plan (WSAP) Update

# WSAP Update

## Preparation for Potential 2023 Implementation

- Implementation of regionwide WSAP in July 2023 if drought conditions persist
  - Continue to monitor current hydrologic conditions and outlook for both the state and the Colorado River
- Overview of WSAP presented to Member Agencies on December 2, 2022
- Coordination meetings scheduled with Member Agencies to prepare for potential 2023 implementation
  - Next WSAP coordination meeting: January 18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# Conservation Program Update

Item 6f

January 9, 2023

# Current Conservation Program Expenditures

## FYs 2022/23 & 2023/24 (1)

| | Paid(2) | Committed(3) |
|---|---|---|
| Regional Devices | $4.5M | $4.2M |
| Member Agency Administered | $5.3M | $6.5M |
| Turf Replacement | $6.7M | $32.3M |
| Advertising | $3.6M | $3.4M |
| Other | $0.8M | $1.3M |
| **TOTAL** | **$20.9M** | **$47.7M** |

(1) The Conservation Program biennial expenditure authorization is $86M.

(2) As of 7/1/2022 –11/30/2022. Financial reporting has changed from modified accrual to cash basis. This resulted in $9.2M of expenditures that were accrued last year but paid in cash this fiscal year.

(3) Committed dollars as of December 10, 2022.

# Conservation Program: Reserved Grant Funds

| | MWD Committed | Total Grant Awards | Reserved Grant Funds |
|---|---|---|---|
| **Regional Devices** | $4.2M | $2.5M | $2.4M |
| **Member Agency Administered** | $5.3M | - | - |
| **Turf Replacement** | $32.3M | $4.0M | $1.8M |
| **Advertising** | $3.4M | - | - |
| **Other** | $1.3M | - | - |
| **TOTALS** | **$47.7M** | **$6.5M** | **$4.2M** |

Grants awarded by Department of Water Resources and United States Bureau of Reclamation for device direct installation activities & turf replacement projects

# Current Conservation Program Activity

## FYs 2022/23 & 2023/24 [1]

**Turf Replacement Rebates:**

November: 1,119,294 $ft^2$ removed

**FY2022/23-FY2023/24: 3,092,477 $ft^2$ removed**

**Toilets:**

November: 2,734 units rebated

**FY2022/23-FY2023/24: 13,658 units rebated**

**Smart Controllers:**

November: 1,247 units rebated

**FY2022/23-FY2023/24: 4,106 units rebated**

**Lifetime Water Savings to be achieved by all rebates in November 2022: 5,701 AF**

FY2022/23-FY2023/24: 20,483 AF lifetime water savings


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## • Colorado River Management Report

## Summary

This report provides a summary of activities related to management of Metropolitan's Colorado River resources for the month of December 2022.

## Purpose

Informational

## Detailed Report

**2007Interim Guidelines Supplemental Environmental Impact Statement**

The U.S. Bureau of Reclamation (Reclamation) published a notice of intent (NOI) to prepare a supplemental environmental impact statement (SEIS) for the 2007 Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead. The deadline to provide public comments on the scope of the SEIS was December 20. Metropolitan submitted a comment letter and joined a comment letter with Southern Nevada Water Authority and Central Arizona Water Conservation District. Metropolitan's letter requested that the preferred alternative protect stored Intentionally Created Surplus (ICS); provide for public health, safety, and welfare storage and deliveries; and apply any reductions in water deliveries needed to protect dam infrastructure at Glen Canyon Dam and Hoover Dam equitably on all users of Colorado River water, if reductions become necessary. Metropolitan's letter also indicated that the preferred alternative should include Upper Division State actions that help to assure sufficient water gets to Lake Powell to protect infrastructure safety, and water deliveries and hydropower generation. Those actions may include a combination of releases from Colorado River Storage Project Act units and conservation in the Upper Basin.

The NOI anticipates three primary alternatives will be considered. The No Action Alternative, Reservoir Operations Modification Alternative to be developed by Reclamation as a set of actions and measures adopted pursuant to Secretarial authority under applicable federal law, and the Framework Agreement Alternative. The Framework Agreement Alternative would be a consensus-based set of actions that builds on the existing framework for Colorado River Operations, including commitments included in the 2019 Drought Contingency Plan (DCP). Metropolitan supports the development of the Framework Agreement Alternative. If successful, a consensus-based alternative would build on the approach the Colorado River Basin States took in developing the alternative that became the basis for the 2007 Interim Guidelines Record of Decision and more recently when the Basin States, Tribes and Section 5 Contractors in California worked together to develop the DCP. Metropolitan staff will work with the Basin State representatives during January 2023 to develop the Framework Agreement Alternative. The NOI anticipates a draft SEIS will be available for public review in Spring 2023 and that the final SEIS is anticipated to be available with a Record of Decision in late Summer 2023.

**Colorado River Water Users Association Annual Conference**

With a sold-out venue, the much-anticipated Colorado River Water Users Association held its annual conference in Las Vegas during December 14-16. Most of the speakers at the conference highlighted ongoing dry conditions facing the Colorado River Basin and emphasized the need for increased conservation to protect Lake Powell and Lake Mead. A lot of discussion and information was shared regarding Reclamation's NOI to Prepare an SEIS for the 2007 Interim Guidelines throughout the three-day event. Metropolitan's Colorado River Resources Policy Manager, Shanti Rosset, joined others on a panel and showcased Pure Water Southern California as an option for collaborative solutions. Staff also met with various partners such as other members and staff from the Imperial Irrigation District, Coachella Valley Water District, Palo Verde Irrigation District, Gila River Indian Community, Quechan Tribe, and representatives from Mexico.

**Metropolitan Submits Revised Colorado River Water Order**

In December, Metropolitan submitted a revised water order for 2022 requesting delivery of up to 90,000 acre-feet of ICS to keep the Colorado River Aqueduct full through the end of the year. The delivery of ICS will be deducted from Metropolitan's beginning of the year balance of 1.27 million acre-feet of ICS stored in Lake Mead. In its revised water order, Metropolitan also agreed to forebear water conserved by Coachella Valley Water District as part of the 500 Plus Plan to add additional water to Lake Mead this year.

- **Bay-Delta Management Report**

## Summary

This report provides a summary of activities related to the Bay-Delta for December 2022.

## Purpose

Informational

## Detailed Report

**Long-Term Delta Actions**

Delta Conveyance

The public comment period for the Delta Conveyance Project (DCP) Draft Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) closed on Friday, December 16. The California Department of Water Resources (DWR) released the Draft EIR for public review and comment on July 27, 2022. No decisions will be made until the conclusion of the environmental review process, after consideration of and responses to public comments submitted on the Draft EIR and issuing a Final EIR. At that time, DWR will determine whether to approve the proposed project, an alternative, or no project.

On December 16, the U.S. Army Corps of Engineers (USACE) released the public Draft Environmental Impact Statement (Draft EIS) for the DCP (SPK-2019-00899, Public Notice of Public Review of the Draft Environmental Impact Statement (DEIS) for the Delta Conveyance Project, Sacramento, San Joaquin, Contra Costa, and Alameda Counties, CA > Sacramento District > Sacramento District Regulatory Public Notices (army.mil). The public comment period runs from December 16, 2022, to February 14, 2023. The USACE will hold three public meetings to receive comments from the public on the project and the draft document. The public meetings will be held virtually on Tuesday, January 10, 2023, from 9 a.m. to 11 a.m., Thursday, January 12, 2023, from 5:30 p.m. to 7:30 p.m., and Wednesday, January 18, 2023, from 12 p.m. to 2 p.m. Affected federal, state, regional, and local agencies, Native American tribes, other interested private organizations, and the public are invited to participate.

Joint Powers Authorities

During the regularly scheduled Board of Directors meeting on December 15, the Delta Conveyance Design and Construction Authority Board of Directors approved to extend a resolution authorizing virtual Board and Committee meetings pursuant to AB 361.

The December 15 regularly scheduled Delta Conveyance Finance Authority meeting was cancelled.

Sites Reservoir

In their December Joint meetings, the Sites Project Authority Board and the Sites Reservoir Committee approved the actions for the 2023-2024 Proposed Sites Reservoir Test Pits, Fault Studies and Quarry Studies (Project), adopted the CEQA Initial Study/Mitigated Negative Declaration, adopted the associated Mitigation, Monitoring and Reporting Program document, and approved the Project.

**Near-Term Delta Actions**

Regulatory Activities

On October 7, 2022, the US Fish and Wildlife Service issued a proposed rule to list the San Francisco Bay-Delta distinct population segment of longfin smelt as an endangered species under the federal Endangered Species Act. Staff reviewed the proposed rule and worked with the State Water Contractors to develop and submit comments

on December 6. Joint comments were submitted by the State Water Contractors and San Luis & Delta Mendota Water Authority.

Staff continued to participate in the collaborative science groups called for in the 2019 Biological Opinions (BiOp) for the State Water Project (SWP) and Central Valley Project, and in the 2020 Incidental Take Permit (ITP) for long-term operation of the SWP. In December, staff worked with DWR, the Delta Science Program, and California Department of Fish and Wildlife to conduct an expert elicitation with researchers and state and local agency technical experts on contaminants in the San Francisco Estuary. The first round of the expert elicitation is evaluating potential negative effects such as increased or mobilized contaminants from management actions in the BiOp and ITP that may be implemented in the 2023 water year.

Ecosystem Restoration

The Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project, or Big Notch Project, is a joint state and federal project between DWR and the U.S. Bureau of Reclamation. The project is a 30,000-acre floodplain habitat restoration and fish passage project in the Yolo Bypass that will provide essential benefits to native fish species, including threatened and endangered Chinook salmon, steelhead, and sturgeon. The Big Notch Project provides a critical point of entry back into the Sacramento River, allowing fish migrating upstream through the Yolo Bypass to continue their migration, and provides access to the Yolo Basin floodplain rearing habitat through the operable Big Notch gates for juvenile salmon and steelhead moving downstream to the Pacific Ocean. The Big Notch project construction is proceeding ahead of schedule. The intake channel is excavated and rocked, and the transport channel is excavated. Weather permitting, concrete is being poured this month. Focus will shift to construction of the head works structure and pedestrian bridge during the winter. Construction completion is scheduled for November 30, 2023, and may be completed sooner if the weather allows.

**Quarterly Bay-Delta Science Update**

Metropolitan's Bay-Delta Science Program is directed at supporting strong science for protecting the Bay-Delta environment, driving better management decisions, and supporting effective regulations. The following summary of Bay-Delta Science activities provides key highlights for the period October 1 to December 31, 2022.

Staff will continue to provide this report on a quarterly basis in the Bay Delta Management Report.

**Bay-Delta Science Update, October - December 2022**

| Science Objective | Accomplishments |
|---|---|
| **Collaborative Science** | Staff continued participating in the Collaborative Science and Adaptive Management Program with state and federal agencies, water agencies and the non-governmental organization environmental community. Key progress this quarter focused on efforts to facilitate recovery planning for Delta smelt and salmon.<br><br>Reorienting to Salmonid Recovery Project – Staff efforts focused on completing Phase 2 of the project which included organizing and conducting three half-day workshops with different interest groups to identify how social, cultural, economic, and ecological interests related to salmonid recovery will be quantified and measured. The values identified in the workshops will feed into Phase 3 of the project, which begins at the end of December, and includes a structured decision-making process to identify, develop, model, and prioritize different actions to recover salmonids.<br><br>Staff gave a presentation on the Reorienting to Salmonid Recovery Project to the Imported Water Committee in November that included a review of the project goals and progress to date.<br><br>Delta Smelt Structured Decision Making Project – Staff continued to participate on the technical work group to conduct review and discussion of initial modeling results evaluating |

| Science Objective | Accomplishments |
|---|---|
| | the effects of potential Delta smelt management actions, and develop portfolios of actions for analysis. |
| **Science Investigations** | Staff continued to collaborate with university researchers, science experts and state and federal agencies to carry out science studies. Staff co-authored two scientific publications in peer-reviewed journals reporting on recent studies.<br><br>Staff co-authored a scientific paper in the *Environmental Pollution* journal reporting a study evaluating the bioavailability of pesticides in juvenile Chinook salmon habitat in the Sacramento River watershed. The study was funded by a Prop 1 grant with cost-share from Metropolitan. The published study found that Chinook salmon exposed to contaminants found in floodplain habitats exhibited dysregulated metabolic processes and reduced swimming behavior with elevated temperature. Results suggest that floodplain habitats being developed to support salmon may need to account for contaminant effects, especially at higher temperatures.<br><br>Staff also co-authored a scientific paper in the *San Francisco Estuary and Watershed Science* journal, reporting on fish surveys conducted in 2019 and 2020 in ocean tributaries north of the San Francisco Estuary to look for longfin smelt larvae. The survey results confirm historic surveys detecting the presence of longfin smelt and confirming that the smaller estuaries are used actively but intermittently by longfin smelt. |
| **Innovation** | Staff worked with researchers from UC Davis to conduct the Delta Smelt Pilot Propagation study. The study is using impoundments on Bouldin Island to conduct a proof-of-concept study by placing hatchery Delta smelt in enclosures in the impoundments and monitoring their condition. The results for the first deployment of hatchery Delta smelt are promising, and the Delta smelt are still doing well after three weeks, suggesting that culture in larger impoundments is feasible with limited management during the winter. Future work will include repeating the experiment in January to verify the results and inform further studies in the next few years. |
| **Delta Science Community** | Staff participated in Delta Science Program sponsored workshops to inform the development of a Delta region specific harmful algal bloom monitoring strategy, and to build relationships between collaborative science groups, Delta communities, and social science communities of practice to improve research, access to environmental data, community value, and decision making. |

One Water & Stewardship Committee

# Water Resource Manager Update

Item 7c

January 9, 2023

WRM Manager Update

# State Water Project Contract Extension Amendment

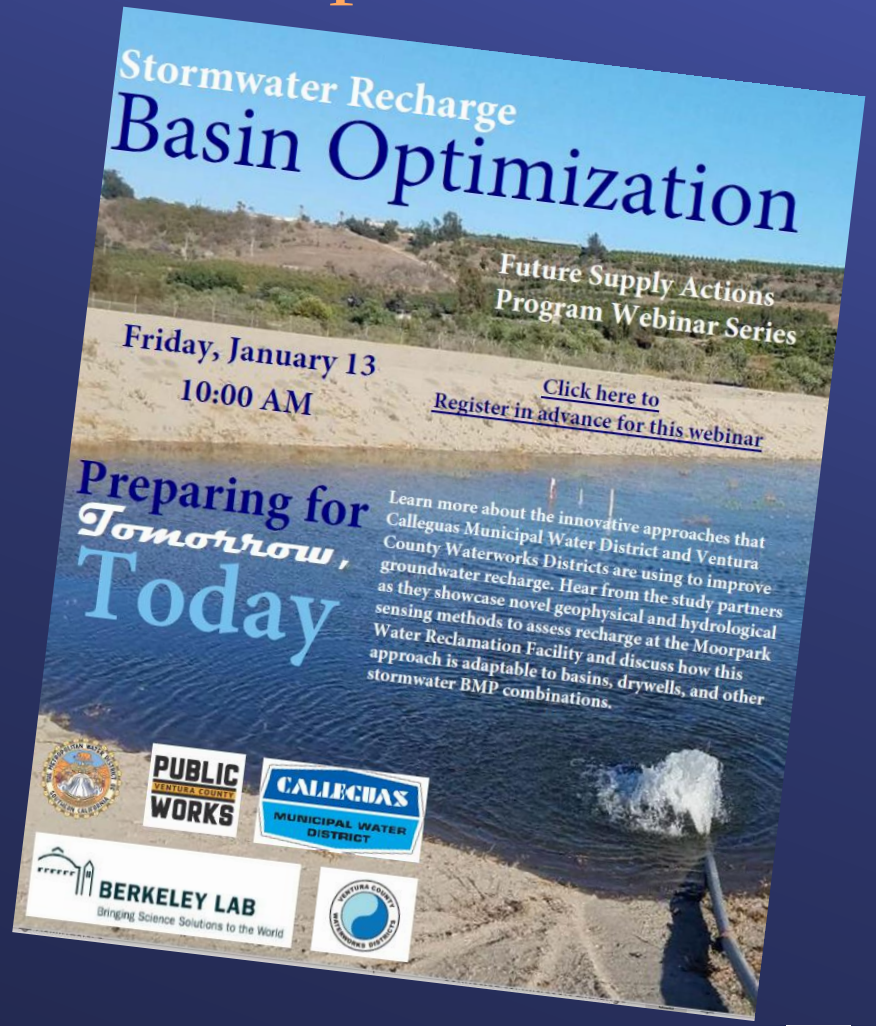
- Secure additional 50 years of water supply from the SWP
- Lowers annual debt service payments for the SWP
- Approved by Public Water agencies and contract effective Jan. 1, 2023

# Future Supply Actions Program Webinar

## Stormwater Recharge Basin Optimization

- Jan. 13, 2023 webinar
- Featuring work by Calleguas MWD and Ventura County Waterworks Districts

- Register here

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