



WP&S Committee

R. Atwater, Chair
C. Kurtz, Vice Chair
J. Abdo
L. Ackerman
G. Cordero
D. De Jesus
L. Dick
S. Goldberg
R. Lefevre
M. Luna
C. Miller
J. Morris
M. Petersen
G. Peterson
B. Pressman
R. Record

**Water Planning and Stewardship
Committee - Final - Revised 2**

Meeting with Board of Directors *

April 12, 2022

8:30 a.m.

Teleconference meetings will continue until further notice. Live streaming is available for all board and committee meetings on mwdh2o.com ([Click Here](#))

A listen only phone line is also available at 1-800-603-9516; enter code: 2176868#. Members of the public may present their comments to the Board on matters within their jurisdiction as listed on the agenda via teleconference only. To participate call (404) 400-0335 and enter Code: 9601962.

**Tuesday, April 12, 2022
Meeting Schedule**

**08:30 am - WP&S
11:30 am - Break
12:00 pm - BOD**

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))

- a. Public Hearing on the Declaration of a Water Shortage Emergency Condition [WITHDRAWN] **21-1059**

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

2. CONSENT CALENDAR OTHER ITEMS - ACTION

- A. Approval of the Minutes of the Meeting of the Water Planning and Stewardship Committee held March 7, 2022 **[21-1025](#)**

Attachments: [04112022 WPS 2A minutes.pdf](#)

3. CONSENT CALENDAR ITEMS - ACTION

- 7-10** Authorize agreement with Western Municipal Water District, Rubidoux Community Services District, West Valley Water District, and San Bernardino Valley Municipal Water District to provide Rubidoux Community Services District assistance on water deliveries; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-1002**
- Attachments:** [04122022 WPS 7-10 B-L.pdf](#)
[04122022 WPS 7-10 Presentation.pdf](#)
- 7-11** Authorize the General Manager to negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-1003**
- Attachments:** [04122022 WPS 7-11 B-L.pdf](#)
[04122022 WPS 7-11 Presentation.pdf](#)
- 7-12** Authorize the General Manager to: (1) secure one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 acre-feet of additional supplies; (2) secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers; (3) pay up to \$60 million from the State Water Project Budget for such transfers; and 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 **21-1004**
- Attachments:** [04122022 WPS 7-12 B-L .pdf](#)
[04122022 WPS 7-12 Presentation.pdf](#)
- 7-13** Appropriate \$20 million, and authorize an amendment to the 2019 Reservoir Project Agreement with the Sites Project Authority to allow participation in the Sites Reservoir Project Amendment 3 Workplan; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA **21-1005**
- Attachments:** [04122022 WPS 7-13 B-L .pdf](#)
[04122022 WPS 7-13 Presentation.pdf](#)

- 7-14** Declare Water Supply Condition; adopt supporting resolution; and authorize the General Manager to finalize a Water Supply Allocation for portions of the service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [WITHDRAWN] **21-1058**
- 7-15** Review and Express Support for the Bay-Delta Watershed Voluntary Agreements; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [WITHDRAWN] **21-1060**

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

4. OTHER BOARD ITEMS - ACTION

NONE

5. BOARD INFORMATION ITEMS

- 9-2** Information on a proposed Water Shortage Emergency Condition and Emergency Water Conservation Program to Preserve Metropolitan's Supplies in the State Water Project-Dependent Areas. [SUBJECT REVISED 4/8/2022] **21-1066**

Attachments: [04122022 WPS 9-2 B-L.pdf](#)
[04122022 WPS 9-2 Presentation.pdf](#)

6. COMMITTEE ITEMS

- a.** Update on Water Surplus and Drought Management **21-1028**
Attachments: [04122022 WPS 6a Report.pdf](#)
[04112022 WPS 6a Presentation.pdf](#)
- b.** Update on the Antelope Valley East Kern Water Agency High Desert Water Bank **21-1027**
Attachments: [04122022 WPS 6b Presentation.pdf](#)
- c.** Colorado River Tribal Partnerships **21-1026**
Attachments: [04122022 WPS 6c Presentation.pdf](#)
- d.** Review Term Sheet for the Bay Delta Watershed Voluntary Agreements [ADDED ITEM] **21-1061**
Attachments: [04122022 WPS 6d Presentation.pdf](#)

- e. Bay-Delta Policies Workshop #1 [21-1032](#)

Attachments: [04122022 WPS 6e Presentation.pdf](#)

7. MANAGEMENT REPORTS

- a. Colorado River Manager's Report [21-1029](#)

Attachments: [04112022 WPS 7a Report.pdf](#)

- b. Bay-Delta Manager's Report [21-1030](#)

Attachments: [04112022 WPS 7b Report.pdf](#)

- c. Water Resource Management Manager's Report [21-1031](#)

8. FOLLOW-UP ITEMS

NONE

9. FUTURE AGENDA ITEMS

10. ADJOURNMENT

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.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

WATER PLANNING AND STEWARDSHIP COMMITTEE

March 7, 2022

Chair Atwater called the teleconference meeting to order at 12:01p.m.

Members present: Chair Atwater, Vice Chair Kurtz, Directors Abdo, Ackerman, Cordero, De Jesus, Dick, Goldberg, Lefevre, Luna, Morris, Peterson, Pressman, and Record.

Members absent: Director Petersen.

Other Board Members present: Chairwoman Gray, Directors Blois, Dennstedt, Erdman, Faessel, Fellow, Fong-Sakai, Jung, Miller, Ramos, Smith, Sutley, Tamaribuchi, and Williams.

Committee staff present: Coffey, Hagekhalil, Munguia, Schlotterbeck, and Upadhyay

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))

Caty Wagner, Sierra Club California. Ms. Wagner spoke in opposition of the Sites Reservoir Project.

Doug Obegi, National Resources Defense Council. Mr. Obegi spoke in opposition of Sites Reservoir Project and the Bay Delta Policy.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEM – ACTION

- A. Approval of the Minutes of the Meeting of the Water Planning and Stewardship Committee held February 7, 2022

3. CONSENT CALENDAR ITEM – ACTION

None

Director Record made a motion, seconded by Director Morris to approve the consent calendar consisting of item 2A.

The vote was:

Ayes: Directors Abdo, Ackerman, Atwater, Cordero, De Jesus, Dick, Goldberg, Kurtz, Lefevre, Luna, Morris, Peterson, Pressman, and Record.

Noes: None

Abstentions: None

Absent: Director Petersen

The motion for item 2A passed by a vote of 14 ayes, 0 noes, 0 abstain, and 1 absent.

END OF CONSENT CALENDAR ITEMS

4. OTHER BOARD ITEMS – ACTION

None

5. BOARD INFORMATION ITEMS

9-3 Review of the Remaining Planning Process and Funding Needs for Sites Reservoir Project

Presented by: Randall Neudeck, Manager of Bay-Delta Programs

Mr. Neudeck's presentation provided information regarding Metropolitan's funding for the remaining three-year planning work for the proposed Sites Reservoir Project.

The following Directors provided comments or asked questions:

1. Lefevre
2. Goldberg
3. Luna
4. Cordero

Staff responded to the Directors' comments or questions.

6. COMMITTEE ITEMS

- a. Subject: Update on Water Supply and Drought Management

Presented by: Tiffany Tran, Associate Resource Specialist, Resource Planning Team

Ms. Tran provided an abbreviated oral presentation, due to time limitations. She reviewed hydrologic conditions and supply and demand balances.

- b. Subject: Update on Chino Basin Program Development and Pending Terms of Agreement with Inland Empire Utilities Agency

Presented by: Brandon J. Goshi, Manager, Resource Planning and Development Section

Mr. Goshi provided a presentation on Metropolitan's proposed participation in the Chino Basin Project to facilitate an exchange between Inland Empire Utilities Agency (IEUA) and State Water Project.

Mr. Deven Upadhyay, Assistant General Manager/COO, noted for the committee that item 6d was withdrawn, but it would be back at a future meeting. He provided brief background information on item 6c, and introduced Ms. Nina Hawk.

- c. Subject: Bay-Delta Policies Workshop #1

Presented by: Nina Hawk, Bay-Delta Initiatives Policy Manager

Ms. Hawk provided an brief overview of the Bay-Delta Initiatives Policy Update Timeline.

The following Director provided comments or asked questions:

1. Smith

- d. Subject: Update on Salmon Conservation Measures

Presented by: None

This item was withdrawn.

7. MANAGEMENT REPORTS

- a. Subject: Colorado River Manager's Report

Presented by: None.

Mr. Hasencamp was not able to provide his update due to technical issues.

b. Subject: Water Resource Management Manager's Report

Presented by: None.

Brad Coffey, Manager, Water Resources announced that he would defer his report in the interest of time.

8. FOLLOW-UP ITEMS

None

9. FUTURE AGENDA ITEMS

None.

10. ADJOURNMENT

Next meeting will be held on April 11, 2022.

Meeting adjourned at 1:00 p.m.

Richard Atwater
Chair



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

4/12/2022 Board Meeting

7-10

Subject

Authorize agreement with Western Municipal Water District, Rubidoux Community Services District, West Valley Water District, and San Bernardino Valley Municipal Water District to provide Rubidoux Community Services District assistance on water deliveries; the General Manager determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

This letter seeks authorization for an agreement with Western Municipal Water District (WMWD), Rubidoux Community Services District (Rubidoux), West Valley Water District (West Valley), and San Bernardino Valley Municipal Water District (Valley District) (the “Parties”) to assist with water deliveries. Under the proposed agreement, Metropolitan would deliver, provided there is available capacity, up to 2,000 acre-feet of water per year (AFY) to Rubidoux for use within WMWD’s service area. Metropolitan would deliver the requested water to Rubidoux through Valley District’s connection on the San Gabriel Valley Devil Canyon – Azusa Pipeline (Azusa Pipeline).

Details

Background

Metropolitan has capacity rights in the Azusa Pipeline as part of an existing exchange agreement with San Gabriel Valley Municipal Water District (San Gabriel Valley). San Gabriel Valley owns and operates the Azusa Pipeline, which delivers its State Water Project (SWP) supplies from the Devil Canyon turnout on the East Branch of the SWP. Valley District has an existing connection at Lytle Creek Station on the Azusa Pipeline. West Valley can accept SWP supplies through Valley District’s connection. Rubidoux’s location is immediately south of West Valley. West Valley has treatment facilities and infrastructure in place to deliver treated water to Rubidoux. WMWD does not currently have infrastructure in place to deliver Metropolitan’s imported water to Rubidoux.

Rubidoux obtains its water supplies from groundwater with total dissolved solids (TDS) of 530 to 540 milligrams per liter (mg/L) or parts per million (ppm). After customer use, the TDS concentration in the sewer increases to approximately 720 mg/L, which exceeds the City of Riverside’s National Pollutant Discharge Elimination System (NPDES) permit limit of 650 mg/L. Due to this issue, Rubidoux staff identified several potential water supply alternatives, including the use of imported water supplies from Metropolitan facilities.

Proposed Agreement

The Parties are requesting a long-term agreement to provide up to 2,000 AFY to assist Rubidoux in meeting the City of Riverside’s NPDES permit limit for TDS. Metropolitan would deliver the requested water to Valley District through Valley District’s connection on the Azusa Pipeline, to the extent that there is capacity in the Azusa Pipeline. Valley District would then deliver the water to West Valley. West Valley would treat the water and deliver treated water to Rubidoux. WMWD would pay Metropolitan’s full-service rate in effect at the time of the delivery of the water. The delivery is subject to the capacity charge, readiness-to-serve charge, and all volumetric water rates.

Staff recommends that the Board authorize the General Manager to enter into an agreement with the Parties consistent with the terms outlined in **Attachment 1**, including:

1. Agreement termination of December 31, 2035.
2. Maximum delivery amount is 2,000 AF per calendar year.
3. Metropolitan water deliveries under this Agreement will be used solely within WMWD's service area.
4. Deliveries are limited to Metropolitan's unused capacity in the Azusa Pipeline.

In July 2021, Metropolitan's Board authorized a similar agreement with Inland Empire Utilities Agency (IEUA), West Valley, and Valley District to provide assistance to West Valley's customers in an area overlapping IEUA's service area in the event of an emergency or planned outage, or the loss of local supply. Metropolitan staff evaluated the capacity of the Azusa Pipeline and determined that the needs of both West Valley and Rubidoux can be met.

Policy

Metropolitan Water District Administrative Code, Division IV, Section 4209: Contracts

Metropolitan Water District Administrative Code, Division IV, Section 4401-4403: Rates; Readiness-to-Serve Charge; Capacity Charge

Metropolitan Water District Administrative Code, Division XI, Section 11104: Delegation of Responsibilities

By Minute Item 30524, dated September 17, 1974, the Board authorized a cooperative water exchange agreement to eliminate the overdraft condition in the western portion of the Main San Gabriel Basin; as part of this agreement, Metropolitan is granted conveyance rights to the unused capacity in San Gabriel Valley Municipal Water District's Devil Canyon-Azusa pipeline.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378) because the proposed action will not cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment and involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). The delivery of water is exempt from CEQA as it consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use (Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize the General Manager to enter into an agreement with Western Municipal Water District, Rubidoux Community Services District, West Valley Water District, and San Bernardino Valley Municipal Water District to provide Rubidoux assistance with water deliveries.

Fiscal Impact: None. Metropolitan would receive compensation for any delivered water under this agreement.

Business Analysis: Provides water supply reliability to an area of Metropolitan's service area that does not currently receive Metropolitan water supplies.

Option #2

Do not authorize the General Manager to enter into an agreement with Western Municipal Water District, Rubidoux Community Services District, West Valley Water District, and San Bernardino Valley Municipal Water District to provide Rubidoux assistance with water deliveries.

Fiscal Impact: None

Business Analysis: Would not provide water supply reliability to an area of Metropolitan's service area that does not currently receive Metropolitan water supplies.

Staff Recommendation

Option #1



Brad Coffey
Manager, Water Resource Management

3/30/2022

Date



Adel Hagekhalil
General Manager

4/5/2022

Date

Attachment 1 – Term Sheet for the Agreement to Provide the Rubidoux Community Services District Assistance with Water Deliveries

Ref# wrm12679762

**Term Sheet for the Agreement to Provide the Rubidoux Community Services District
Assistance with Water Deliveries**

Agreement Overview

- Parties: The Rubidoux Community Services District (Rubidoux), West Valley Water District (West Valley), Western Municipal Water District (Western), San Bernardino Valley Municipal Water District (Valley District), and The Metropolitan Water District of Southern California (Metropolitan)
- Effective Date: June 1, 2022
- Termination Date: December 31, 2035, provided that any party may cancel with 30 days written notice
- Maximum Delivery Amount: 2,000 AF per calendar year

Key Terms

- Metropolitan water deliveries under this Agreement will be used within Western's service area.
- Western will request delivery of water from Metropolitan on behalf of Rubidoux under this agreement.
- Rubidoux may request water deliveries at any time. Rubidoux will coordinate with Western on the monthly amount of water requested from Rubidoux.
- Metropolitan will deliver requested water to Valley District at Valley District's connection (Lytle Creek, Station, 1747+00) on the San Gabriel Valley Devil Canyon – Azusa Pipeline. Valley District will deliver the water to West Valley.
- West Valley will treat the water and deliver the requested amount of treated water to Rubidoux for use by Rubidoux only within Metropolitan's service area.
- The delivery of water by Metropolitan is not guaranteed and is limited to the unused capacity in the San Gabriel Valley Devil Canyon-Azusa Pipeline.
- Western will pay Metropolitan's full-service untreated rate in effect at the time of delivery. The delivery is subject to the capacity charge, readiness-to-serve charge, and all volumetric water rates in the same manner as deliveries made to Western through Metropolitan's distribution system and connections.
- Rubidoux will reimburse Western for all payments made by Western to Metropolitan under this agreement.
- Valley District or West Valley shall have no responsibility for the cost of water delivered to Valley District's connection for use within Western's service area by Rubidoux.
- Metropolitan will be responsible for any Department of Water Resources charges for the State Water Project supplies delivered to Rubidoux through Valley District's connection.



Water Planning and Stewardship Committee

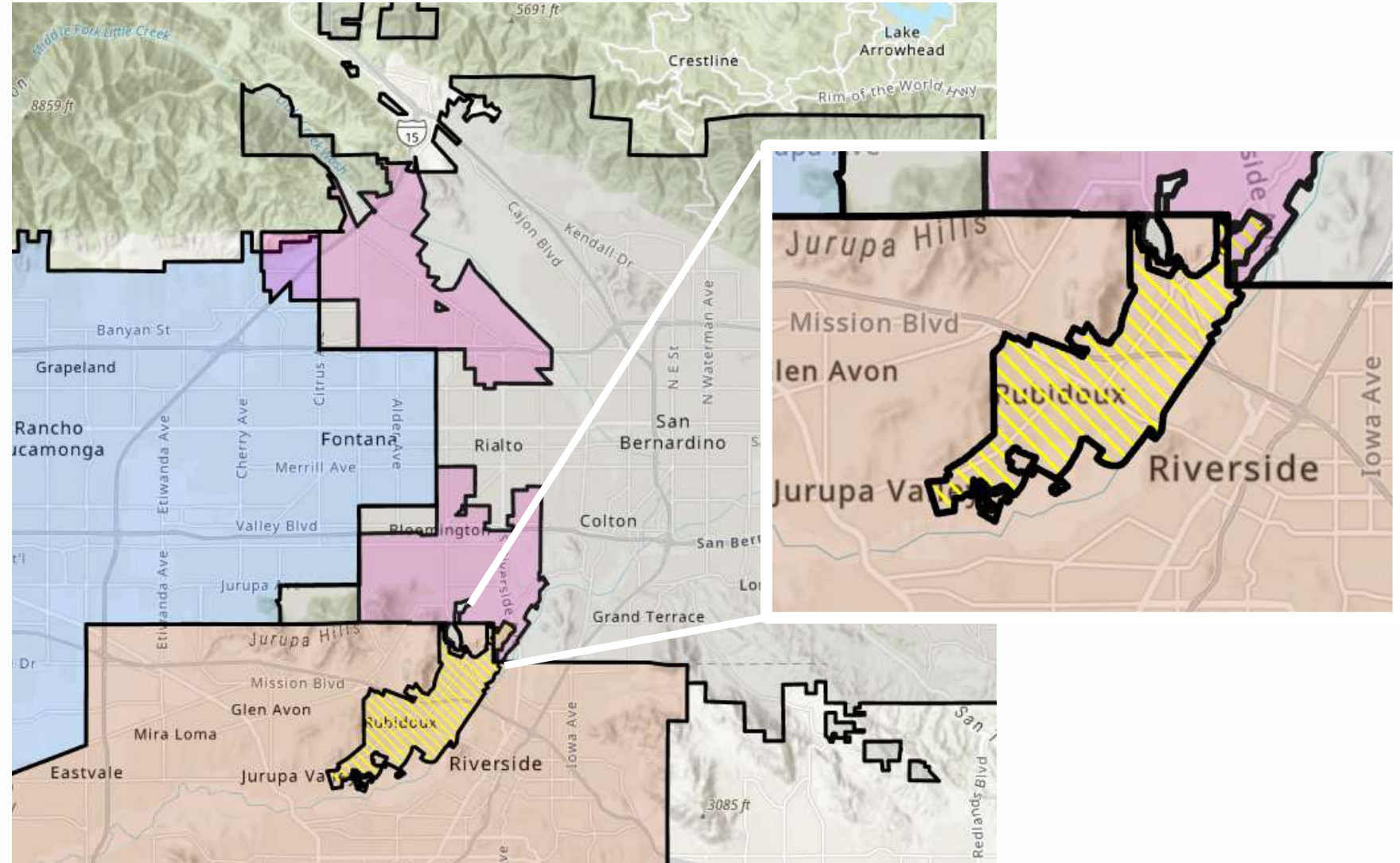
Authorize agreements with Western MWD, Rubidoux Community Services District, West Valley Water District, & San Bernardino Valley MWD to provide Rubidoux Community Services District assistance with water deliveries

Item 7-10

April 12, 2022

Background

Rubidoux Community Services District is located within Western Municipal Water District



Background

San Gabriel Devil Canyon – Azusa Pipeline

- Owned and operated by San Gabriel Valley MWD
- Delivers water from the State Water Project to Main San Gabriel Basin
- Metropolitan granted conveyance rights to the unused capacity in the pipeline in 1974

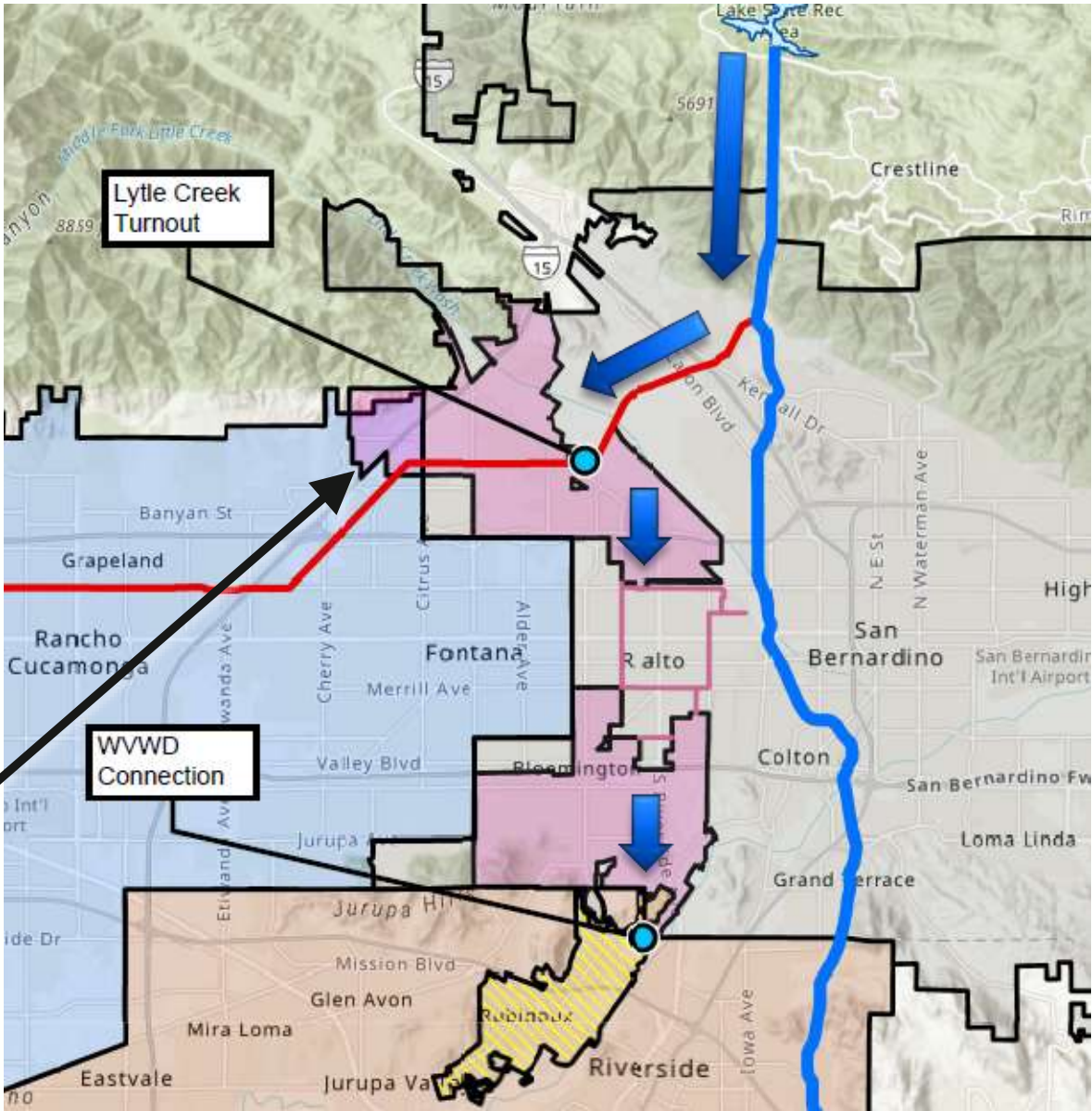


Background

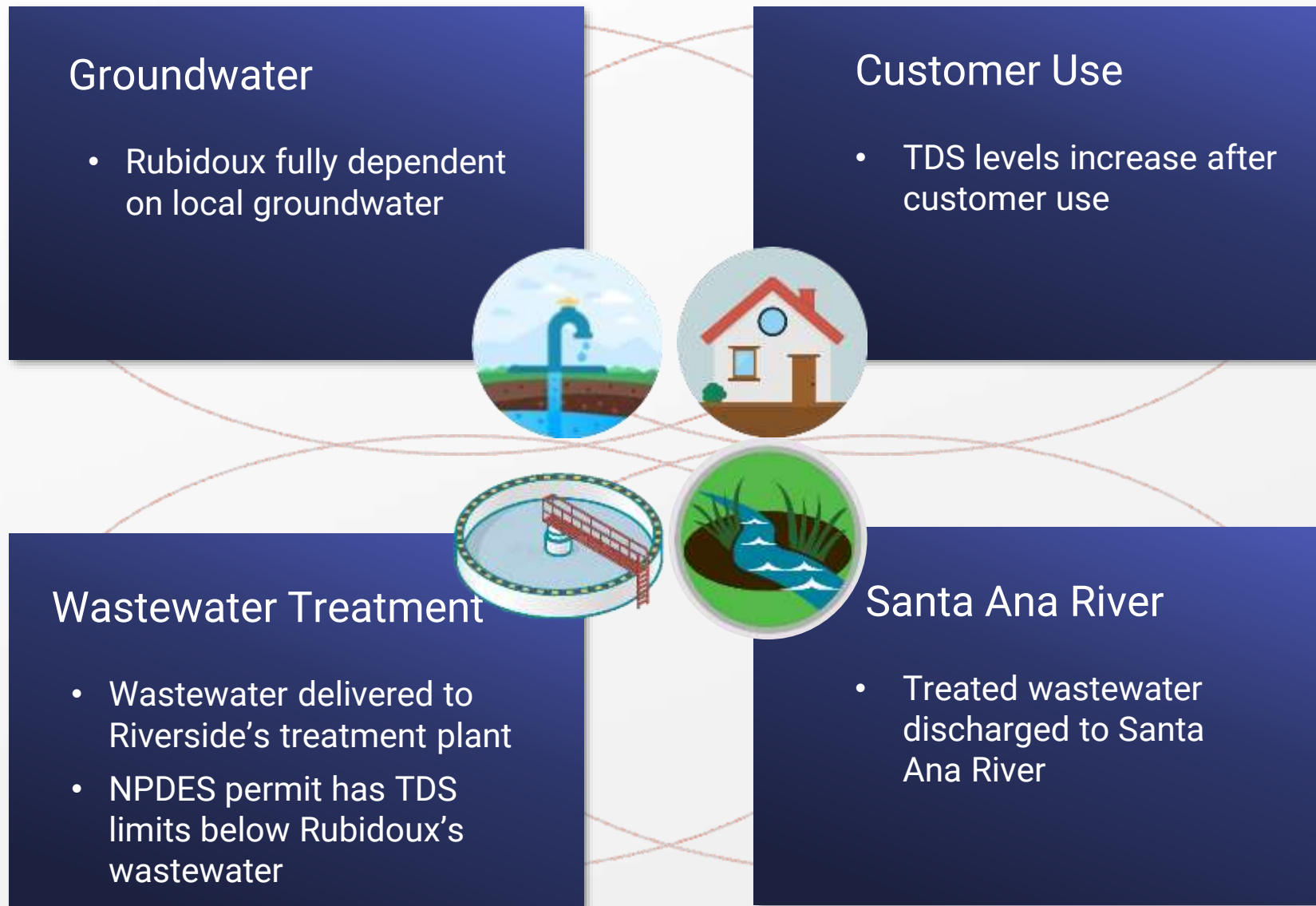
Water conveyance is through the Azusa Pipeline



July 2021: Delivery agreement for West Valley & IEUA



Need for Proposed Agreement

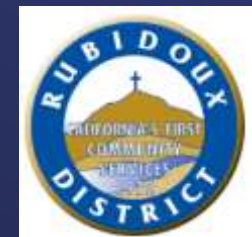


Proposed Agreement

to provide water deliveries
to Rubidoux Community
Services District

Parties

- Metropolitan Water District of Southern California
- Western Municipal Water District
- Rubidoux Community Services District
- West Valley Water District
- San Bernardino Valley Municipal Water District



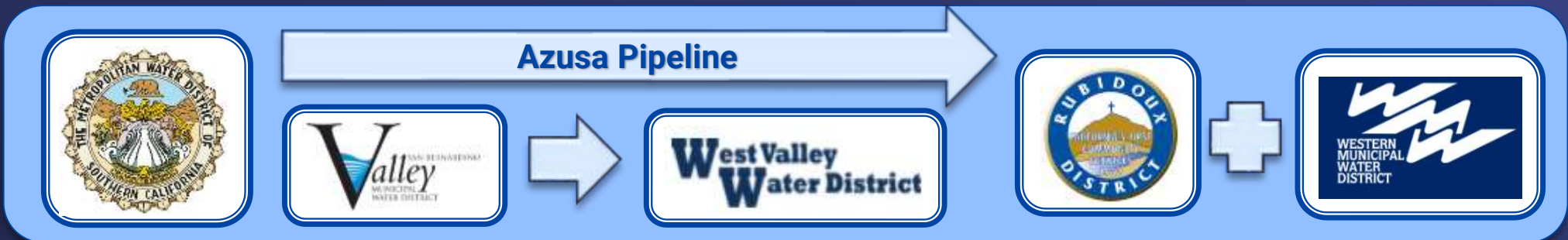
Proposed Agreement

to provide water deliveries
to Rubidoux Community
Services District

Agreement Terms

- Maximum Delivery Amount of 2,000 AFY
- Terminates December 31, 2035; Could renew with new SWP Contract
- Water deliveries to be used within Western's service area
- The delivery of water by Metropolitan is not guaranteed and is limited to the unused capacity in the Azusa Pipeline
- Western will pay Metropolitan's full service untreated water rate in effect at the time of the delivery, including Capacity Charge and Readiness-to-Serve Charge

How it Works



Summary

Metropolitan has facilities in place to help Rubidoux by partnering with WMWD, West Valley, and Valley District



Rubidoux is within WMWD's service area



Rubidoux is fully dependent on groundwater



TDS in Rubidoux's wastewater exceeds NPDES permit



Rubidoux requests imported supplies to blend with groundwater



WMWD's infrastructure does not serve Rubidoux



Metropolitan can provide deliveries through the Azusa Pipeline

Option #1

- Authorize the General Manager to enter into an agreement with WMWD, Rubidoux, West Valley, and Valley District to provide Rubidoux assistance with water deliveries.

Option #2

- Do not authorize the General Manager to enter into an agreement with WMWD, Rubidoux, West Valley, and Valley District to provide Rubidoux assistance with water deliveries.

Board Options

Option #1

Staff
Recommendations





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

4/12/2022 Board Meeting

7-11

Subject

Authorize the General Manager to negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

California's Proposition 1 in 2014 allocated \$7.5 billion for water system investments, with \$2.7 billion dedicated to the implementation of the Water Storage Investment Program (WSIP). The California Water Commission (CWC) selected eight projects to conditionally fund under the WSIP based on their associated public benefits. Inland Empire Utilities Agency's (IEUA) Chino Basin Program (CBP) is among the conditionally funded projects within Metropolitan's region. The CBP is an innovative advanced wastewater treatment, storage, water exchange, and reliability program. The CBP would exchange advanced treated recycled water stored in the Chino Basin for an equivalent amount of State Water Project (SWP) supply to provide additional flow to improve fisheries in the Feather River.

Under the proposed program, IEUA would invest in local infrastructure to produce and store 375,000 acre-feet (AF) advanced treated wastewater over 25 years. This stored water would be exchanged for an equivalent portion of Metropolitan's SWP Table A allocation. The exchanged SWP supplies would be used for additional flows in the Feather River, providing benefit to the Chinook salmon and the surrounding ecosystem. The CBP would improve water reliability within the Chino Basin, provide environmental benefits to the Feather River in critical and dry years, and increase aquifer storage and recovery within the region.

The CBP requires that SWP supplies are exchanged to provide the environmental fishery flows in the Feather River. Because IEUA does not hold a participation right in the SWP, IEUA seeks Metropolitan's participation in the CBP as its facilitating State Water Project contractor. As such, Metropolitan would agree to facilitate the exchange of an equivalent portion of its SWP Table A allocation for stored Chino Basin groundwater in certain call years. Metropolitan's SWP Table A allocation would not be called in critical dry years.

An agreement between Metropolitan and IEUA will be required to formalize the relationship and responsibilities of each agency for this exchange and to protect Metropolitan's interests. This letter details the draft terms for this exchange. The draft terms cover the exchange quantities, operations, costs, and additional benefits provided for participation in the CBP. The MWD/IEUA Exchange Agreement is one of multiple agreements that will be necessary to facilitate the CBP.

Details

Background

In November 2014, California voters approved The Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1). This state water bond provides \$7.5 billion for investment in the state's water system, dedicating \$2.7 billion specifically for investment in water storage projects through the WSIP. The California Water Commission (CWC) is responsible for administering the WSIP, and the bond funds have been continuously appropriated for that purpose. The WSIP provides funding based on a project's public benefits, which can include flood control, ecosystem improvement, water quality improvement, or emergency response and recreation. In July 2018, the CWC determined eight projects eligible for conditional WSIP funding, which combined would

increase California's water storage capacity by 4.3 million AF and provide for the public benefits identified by the WSIP. Among the projects selected for conditional WSIP funding is the CBP, proposed by the IEUA, a member agency of Metropolitan. The CBP's original conditional WSIP funding was \$206.9 million. It has since been increased twice for an inflation adjustment, with the latest funding amount totaling \$215.2 million. In June 2021 and March 2022, Metropolitan staff presented updates on the Prop 1 WSIP projects and an overview of the CB to the Board. Additionally, in 2021 Metropolitan provided a letter of intent to continue collaborating with IEUA as its potential facilitating SWP contractor.

Chino Basin Program Overview

The CBP is an innovative advanced wastewater treatment, storage, water exchange and reliability program. Under the CBP, IEUA would construct an advanced water treatment facility to treat up to 15,000 AF of wastewater per year. After treatment, the recycled water would be stored in the Chino Basin groundwater basin using distribution facilities and injection wells constructed as part of the CBP. The CBP would also include the construction of distribution facilities to pump and deliver extracted groundwater to Metropolitan's distribution system and to IEUA's member agencies.

IEUA would agree to store up to 375,000 AF of advanced treated recycled water in the Chino Basin over a 25-year period. This stored water allows for a water exchange agreement with the state. The exchange would provide a water supply for pulse flows released from Oroville Reservoir into the Feather River for the benefit of both Chinook salmon and the surrounding ecosystem. IEUA and the state would agree to exchange an equivalent amount of stored water to be delivered to Metropolitan and its service area for an equivalent amount of Metropolitan's SWP Table A allocation. That exchanged SWP supply is the physical water supply that would be used for the pulse flows released from Oroville Reservoir into the Feather River.

In a call year, IEUA would extract stored groundwater from the Chino Basin and deliver it to Metropolitan's distribution system directly or by in-lieu pumping to meet IEUA service area demands to substitute for the exchanged SWP Table A allocation. Thus, Metropolitan and its service area would remain whole in terms of water supply. The exchange would only occur during years when the Department of Water Resources (DWR) determines that SWP operations and SWP contractor supplies would not be at risk. As such, the state would not request an exchange in critical dry years.

The state could request an annual exchange, for up to three consecutive years, provided there is sufficient groundwater stored in the Chino Basin and both IEUA and Metropolitan agree to an exchange. After the 25-year term, the stored water remains under IEUA's ownership and could be used to satisfy local supply. The program also includes an emergency use provision, where up to 40,000 AF of stored Chino Basin water could be borrowed by Metropolitan for use within its service area.

Metropolitan's Role as a Facilitating State Water Contractor

The CBP requires that SWP supplies stored in Lake Oroville are exchanged and used to provide pulse flows in the Feather River. Because IEUA is not an SWP contractor, IEUA requested Metropolitan's participation in the CBP. Metropolitan would agree to facilitate the exchange of SWP supplies and stored water in the Chino Basin and participate in necessary related agreements. There are several associated agreements needed to facilitate the program, some of which Metropolitan will be party to. Agreement terms will be negotiated to ensure Metropolitan will not be negatively impacted by its participation. The CBP will provide for environmental, local, and regional benefits for multiple parties, including Metropolitan, and is being developed under a tenet of "No Harm," meaning that its development and operation cannot adversely affect any of the parties or participants in the program. This tenet extends to the SWP and its contractors, to Metropolitan and its service area, and to IEUA and its member local agencies.

Draft Terms for the MWD/IEUA Exchange Agreement

A direct agreement between Metropolitan and IEUA will formalize each agency's roles and responsibilities. Draft terms for the agreement have been developed for review and consideration by the Board and will guide staff in finalizing the MWD/IEUA Exchange Agreement.

The draft terms of the agreement can be organized into four overarching categories: Exchange Quantities, Operations, Cost, and Additional Benefits. A summary of the objectives of the terms for each of the categories is provided below. Detailed agreement term language can be found in **Attachment 1**.

Exchange Quantities

These terms specify the exchange quantities and the breakdown of how stored groundwater will be delivered to the Metropolitan service area via in-lieu and pump in.

Operations

These terms cover a number of CBP operational considerations between IEUA and Metropolitan. Notably, it includes a limitation on when an exchange year can be initiated (e. g. no call in critical dry years or when Metropolitan has an operational constraint). A CBP Operating Committee will also be established to coordinate IEUA/MWD activities, including generating an annual operating plan, detailing operation and maintenance requirements, water quality monitoring, and reporting, among other items. These terms also indicate Metropolitan's ability to withhold call year decisions should IEUA be unable to perform.

Cost

Metropolitan currently has no obligation to invest in the facilities required for the exchange. These terms include the take or pay contract commitment for IEUA and its member agencies. Additionally, the draft terms confirm that any net costs or credits resulting from the variable operation and maintenance costs on the SWP would be between IEUA and DWR, and not the responsibility of Metropolitan.

Additional Benefits

The CBP provides additional system flexibility within Metropolitan's service area. Specific terms of these supplemental benefits are covered under this category. This includes an ability to borrow up to 40,000 AF for emergency use and potential predelivery of stored groundwater against future performance requirements, as coordinated by the CBP Operating Committee.

Next Steps

Staff recommends that the Board, upon review and consideration of the draft terms for the MWD/IEUA Exchange Agreement, authorize the General Manager to negotiate an agreement with IEUA consistent with the draft terms. The General Manager would not execute this agreement separately from the full set of agreements contemplated. IEUA will continue working with Metropolitan and other necessary parties to develop the full set of agreements needed for the CBP. Staff will return for Board approval of all agreements to which Metropolitan is a party, including approval of final MWD/IEUA Exchange Agreement terms. The CWC is expected to award final WSIP funding for the CBP in Fall 2023.

Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By the 1999 Strategic Plan Policy Principles, Metropolitan is a regional provider of water for its service area and a steward of regional infrastructure.

By the General Manager's Business Plan for FYs 2020/21 and 2021/22, one of Metropolitan's strategic priorities is to promote sustainability.

By Minute Item 42287, dated February 11, 1997, the Board adopted a set of policy principles on water recycling.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378) because the proposed action will not cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment and involves continuing administrative activities such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, where it can be seen with certainty that there is no possibility that the proposed action in

question may have a significant effect on the environment, the proposed action is not subject to the provisions of CEQA (Section 15061(b)(3) of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize the General Manager to negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement.

Fiscal Impact: None

Business Analysis: Participation in the CBP will improve regional reliability and system flexibility within MWD's service area, as well as critical dry-year reliability.

Option #2

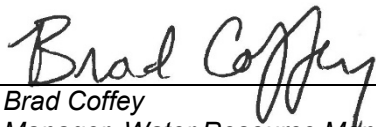
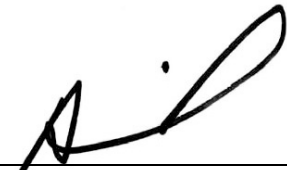
Do not authorize the General Manager to negotiate an agreement consistent with Metropolitan/IEUA Exchange Agreement draft terms.

Fiscal Impact: None

Business Analysis: This option would impact Metropolitan's ability to participate in the CBP and limit the opportunity to provide additional regional reliability.

Staff Recommendation

Option #1

 Brad Coffey Manager, Water Resource Management	4/4/2022 Date
 Adel Hagekhalil General Manager	4/6/2022 Date

Attachment 1 – Term Sheet for Water Storage and Investment Program (WSIP) Environmental Water Exchange between Metropolitan Water District of Southern California (Metropolitan) and Inland Empire Utilities Agency (IEUA)

Ref# wrm12685364

Attachment 1**Term Sheet for Water Storage and Investment Program (WSIP) Environmental Water Exchange
between Metropolitan Water District of Southern California (Metropolitan)
and Inland Empire Utilities Agency (IEUA)****Exchange Quantities**

1. WSIP is a water storage investment program funded by the California Water Commission (CWC) through Proposition 1 and Inland Empire Utilities Agency (IEUA).
2. The water exchange will total 375,000 acre-feet (AF) of water in increments (40,000 AF per call year maximum) over a 25-year agreement term.
3. IEUA will facilitate the production and storage of 375,000 AF of advanced treated recycled water supply in the Chino Groundwater Basin.
4. IEUA will deliver stored groundwater into the Metropolitan service area during call years. In exchange, Metropolitan will provide the State with water supply to facilitate the release of water from Oroville for ecosystem-improvement purposes (pulse flows).
5. When water is released from Lake Oroville for pulse flows, Metropolitan will receive an exchange of water from IEUA from water stored in the Chino Basin.
6. IEUA shall coordinate up to 40,000 AF of local production through a combination of in-lieu means (30,000 AF of capacity) and direct pumping into Metropolitan's Rialto Pipeline (10,000 AF of capacity).
7. This IEUA production fulfills IEUA's obligation under the exchange agreement.

Operations

8. The Environmental Water Exchange shall not negatively impact the water supply or system operations of the State Water Project (SWP), Metropolitan, or its member agencies.
9. Metropolitan will work in good faith to develop the operating terms and conditions and agreement with the State to facilitate the exchange.
10. California Department of Water Resources (DWR) will identify the annual capacity available for pulse flows. California Department of Fish and Wildlife (CDFW) will limit calls to below normal and dry years. DWR will preapprove the potential volume of pulse flows in any potential call year. If called by CDFW, the pulse flow release from Lake Oroville will occur in the Spring, with the water exchange between Metropolitan and IEUA taking place as agreed upon in the CBP Operating Committee.
11. Metropolitan has the ability to decline any annual call when IEUA is unable to show availability of exchange water, when Metropolitan operations limit the ability to receive exchange supplies from IEUA or when the exchange will negatively impact Metropolitan or its member agencies. Such actions shall be brought to the CBP Operating Committee for discussion.
12. A schedule for local performance and completing water exchanges will be established in the operating plan and administered by the CBP Operating Committee.
13. Pump-in/in-lieu deliveries shall be metered to account for all deliveries.
14. Pump-in water will need to comply with Metropolitan's present and future pump-in water quality and system protection requirements.

15. A “CBP Operating Committee” will be established to coordinate IEUA and Metropolitan activities. The CBP Operating Committee will generate an annual operating plan in anticipation of a call year. The operating plan will consider the amount of call water, a performance schedule, the in-lieu/pump-in split, operations and maintenance requirements, water quality monitoring, accounting, reporting, and performance certification/reconciliation.
16. Metropolitan shall have the right to withhold subsequent call year ‘go’ decisions should IEUA be unable to perform in a given year until such required performance is achieved.
17. Metropolitan will support future efforts by IEUA to obtain federal funding to offset program costs.
18. Metropolitan will work collaboratively and in a timely fashion with IEUA to explore additional benefits including opportunities for long-term storage programs in the Chino Basin.

Cost

19. Metropolitan has no obligation to invest in the facilities required for the exchange.
20. IEUA will enter into a take or pay contract committing to pay the supply rate for the potential in-lieu delivery from the CBP (30 TAF). In non-call years, IEUA would get credited that amount toward their Metropolitan water purchases. In call years, Metropolitan would refund the supply rate charges to IEUA for the certified amount of in-lieu delivery from the CBP as part of the annual reconciliation process.
21. Pulse flow releases from Lake Oroville and subsequent reduction in Table A deliveries to Metropolitan from SWP facilities will affect schedules and quantities of SWP hydropower generation and pump load requirements. IEUA and Metropolitan will work with DWR to implement equitable accounting and reimbursement procedures to the satisfaction of all parties to account for any resulting changes in the variable operation and maintenance, power and replacement (OMP&R) component of Transportation Charges as designated in SWP water supply contracts. This accounting will include consideration of real-time energy market considerations and be based on application of best practices for management of the SWP energy portfolio by DWR. Net costs or credits will be exchanged between IEUA and DWR by separate agreement and are not a responsibility of Metropolitan.

Additional Benefits

22. Metropolitan can borrow up to 40,000 AF of stored water from WSIP, consistent with the IEUA/CWC agreement. This benefit is intended to provide flexibility to Metropolitan. IEUA will be made whole for direct costs resulting from such borrowing. Execution and payback of the borrowed water shall occur by the end of the agreement and be coordinated through the CBP Operating Committee.
23. Predelivery of water against future performance requirements will be allowed by mutual agreement and coordinated/administered by the CBP Operating Committee. In-lieu vs. pump-in strategies will be determined by CBP Operating Committee.



Water Planning and Stewardship Committee

Negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement

Item 7-11

April 12, 2022

Previous Board Briefings



June 2021

- Staff presented an update on Prop 1 WSIP projects and an overview of the Chino Basin Program
 - Metropolitan provided a letter of intent

March 2022

- Staff presented an update on the Chino Basin Program and pending terms of agreement with IEUA

Categories of the Metropolitan/ IEUA Exchange Agreement Draft Terms



Exchange Quantities

Specify exchange quantities, breakdown of how groundwater will be delivered (in-lieu, pump in)



Operations

Limitation on call years, CBP Operating Committee to coordinate IEUA/MWD activities



Cost

Details take or pay contract commitment, no MWD financial obligation for investment currently



Additional Benefits

Provides system flexibility within MWD service area;
Emergency use provision

Key Terms - Exchange Quantities



- IEUA will facilitate the production and storage of advanced treated recycled water supply in the Chino Groundwater Basin
- IEUA to deliver stored groundwater into Metropolitan service area during call years
 - Combination of in-lieu means and direct pumping into Metropolitan's Rialto pipeline

Key Terms - Operations



- Exchange shall not negatively impact water supply or system operations of SWP, Metropolitan, or its member agencies
- MWD has ability to decline any annual call when:
 - Exchange water from IEUA is unavailable
 - Internal operations limit the ability to receive exchange supplies from IEUA
 - Exchange will negatively impact MWD or member agencies
- CBP Operating Committee will be established to coordinate IEUA and MWD activities

Key Terms - Cost



- Metropolitan has no obligation to invest in facilities required for exchange
- IEUA will enter a take or pay contract with Metropolitan
 - Commits to pay the supply rate for the potential in-lieu delivery from CBP
 - Establishes a baseline for in-lieu performance
- Any increase in SWP costs resulting from the CBP changes will be resolved between IEUA and DWR by separate agreement and are not a responsibility of Metropolitan

Key Terms - Additional Benefits



- Metropolitan can borrow up to 40 TAF of stored water
 - Intended to provide flexibility to Metropolitan; IEUA will be made whole for direct costs from borrowing
- Predelivery of water against future performance requirements
 - Will be allowed by mutual agreement

Next Steps

- IEUA to continue working with Metropolitan and other parties to develop full set of agreements needed for CBP
- Staff will return for Board approval of all agreements Metropolitan is party to, including approval of final MWD/IEUA Exchange Agreement Terms
- CWC expected to award final WSIP funding for CBP in Fall 2023

Board Actions

Option 1

- Authorize the General Manager to negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement

Option 2

- Do not authorize the General Manager to negotiate an agreement consistent with MWD/IEUA Exchange Agreement draft terms

Staff Recommendation

Option I





● **Board of Directors**
Water Planning and Stewardship Committee

4/12/2022 Board Meeting

7-12

Subject

Authorize the General Manager to: (1) secure one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 acre-feet of additional supplies; (2) secure storage and conveyance agreements with the Department of Water Resources and various water districts to facilitate these transfers; (3) pay up to \$60 million from the State Water Project Budget for such transfers; and 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

Staff requests authorization to allow 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 acre-feet (AF) of additional supplies and to secure storage and conveyance agreements with the Department of Water Resources (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 would be up to \$60 million from the State Water Project Budget. 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

The water transfer market has changed significantly over the last twenty-five years. The market shifted considerably from when water transfers were marketed almost exclusively to urban water districts. More recently, agricultural water districts shifted to high-value permanent crops that require water in dry years to maintain the farmer's investment. To further complicate the water transfer market, increased regulations limit the transfer window and available capacity to move the supplies. In normal and wet years, transfer prices may be lower, but there is little, if any, capacity to move these supplies. Additionally, buyers must take certain risks by agreeing to purchase transfer water before knowing the scope of conveyance losses that may occur as the water travels across the Delta. In the drier years, there is plenty of capacity to move transfer supplies through the system, but there is not much supply available for purchase, and prices are higher. In 2014 and 2015, some transfer prices rose above \$1,500/AF. Dry conditions in 2022 ensure that capacity to move transfer supplies is available, but prices do not appear to have reached the heights of the previous drought cycle.

Demand for water transfers leads to both cooperation and competition among parties. A water district that develops a more flexible water resource mix and the capability to respond to changed conditions can perform better in this new environment. 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. As shown in this month's Water Surplus and Drought Management Report, Metropolitan requires drought actions to meet all member agency demands in 2022. Participating in the transfer market this year 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 into 2023. Transfers would provide additional security for the regions within Metropolitan's service area that rely more heavily on State Water Project supplies. Staff is requesting the Board

grant final decision-making authority to the General Manager to determine whether to move forward with water transfers as outlined below.

Discussion

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 pay up to \$500,000 in administrative costs to pursue up to 100,000 AF of Sacramento Valley water through the 2022 State Water Contractors Dry Year Water Transfers Program. The SWC is serving as the participating contractors' facilitator in pursuing these water transfers. These funds cover the administrative, environmental, and other regulatory costs associated with developing the transfers. Metropolitan staff, in partnership with other contractors acting through the SWC's agreement, are negotiating one-year water transfers with sellers. The participants have not negotiated a final price for transferable water, but staff expects the price to range from \$700 to \$800/AF. If drought conditions curtail supplies to the Feather River service area, the amount of water available to transfer will be substantially less. A curtailment would significantly impact the amount of supplies made available from fallowing. Staff is currently estimating around 40,000 AF would be available from the program, which would be allocated based on Metropolitan's proportional Table A amount.

Yuba County Water Agency

In 2007, the Board authorized an agreement with DWR to purchase water supplies from the YCWA. Under the agreement and later board-authorized amendments, YCWA transfers water to participating State Water Contractors and the San Luis Mendota Water Authority. YCWA provides surface water by reoperating its reservoirs or by using pumped groundwater instead of surface water. The reservoir supplies are priced at up to \$447/AF. Participants negotiate the groundwater substitution price each year based on market conditions, if YCWA chooses to make this water available. Staff estimates that the price for the groundwater substitution supplies would be similar to the Dry Year Transfer Program. Staff estimates Metropolitan could receive 10,000 to 40,000 AF.

Other Sellers

Apart from the Dry Year Transfer Program and the YCWA transfers, other sellers are approaching Metropolitan. At this time, it is unclear if successful negotiations with these separate parties will occur. However, the requested authority would allow the General Manager to negotiate and execute agreements with these separate parties, subject to the terms listed below.

One-Year Water Transfer General Manager Delegation

Staff recommends that the Board authorize the General Manager to secure one-year water transfers with water districts for up to 75,000 AF of additional supplies. The price for these transfers can vary depending on market conditions but would be limited to a total cost of \$60 million. Assuming Metropolitan acquires 75,000 AF, the average cost would be limited to \$800/AF. Metropolitan may also be responsible for documented out-of-pocket expenses, including but not limited to administrative, legal, environmental, and engineering consultants' fees. Finalizing these transfers also includes possible storage and conveyance agreements with DWR and the water districts. These 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. The losses are expected to range from 20 percent to 30 percent. In 2021, the final conveyance loss for transfer supplies was 25 percent.

Metropolitan's maximum cost would be \$60 million, and would use funds available from the State Water Project Budget. These State Water Project funds are available because staff initially budgeted for receiving a delivery of a 50 percent SWP allocation for calendar year 2022. However, it was always 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.

DWR's operational projections show sufficient capacity at Banks pumping plant to convey any transfer water to Metropolitan due to the low SWP allocation. Any water transfers would help improve water supply reliability in 2022 and 2023. These water transfers are key in providing water to Metropolitan's State Water Project-dependent areas. Accordingly, staff requests that authorization be given to the General Manager to determine whether or not 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

By Minute Item 52581, November 9, 2021, the Board recognized a statewide drought emergency, declared specified emergency conditions within the Metropolitan service area, and directed specified actions.

California Environmental Quality Act (CEQA)

CEQA determination 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:
 - (a) Secure one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 AF of additional supplies.
 - (b) Secure storage and conveyance agreements with the Department of Water Resources and various water districts north of the Sacramento-San Joaquin River Delta to facilitate these transfers consistent with Articles 55 and 56 of Metropolitan's State Water Project Supply Contract.
 - (c) Pay up to \$60 million from the State Water Project Budget for such transfers.
- 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: Assuming Metropolitan purchases 75,000 AF at a price of \$800/AF, the cost would be \$60 million. The State Water Project Budget will be used to fund the water transfer purchase. Funds are available in the State Water Project Budget due to the low State Water Project allocation. Metropolitan staff currently estimates a more likely transfer amount of up to 50,000 AF, with a price range from \$358 to \$750/AF, which would result in an estimated cost of \$30 million. Staff is requesting authorization for the higher amount to provide Metropolitan flexibility in obtaining all available water transfer supplies, if needed. These funds would also be used for any additional administrative and related costs to implement the transfers.

Business Analysis: Purchasing additional transfer supplies will improve regional water supply reliability in 2022 and help mitigate impacts should dry conditions extend into 2023. Obtaining transfer supplies in 2022 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 north of the Sacramento-San Joaquin River Delta.

Fiscal Impact: None

Business Analysis: Not authorizing one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta could result in a lost opportunity to secure additional water supplies in 2022, potentially resulting in lower water supply reliability in 2022 or 2023.

Staff Recommendation

Option #1



Brad Coffey
Manager, Water Resource Management

3/24/2022

Date



Adel Hagekhalil
General Manager

3/29/2022

Date

Ref# wrm12688897



Water Planning and Stewardship Committee

2022 North of Delta Water Transfers

Item 7-12
April 12, 2022

North of Delta Water Transfers



Reservoir Reoperation



Groundwater Substitution



Crop Idling / Fallowing

North of Delta Water Transfers



* Supplies may be made available through November if capacity is available

Factors Influencing Decision to Purchase Water



- **Water Supply Conditions**
 - Current 5% SWP Allocation
 - 2023 initial SWP allocation projected to be very low
 - Water transfers will meet demands in 2022 or SWP surface water carryover supplies 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

2022 North of Delta Water Transfers



- **Price**
 - Price in negotiations
 - Authority to spend up to \$60 million
 - Using \$60 million on 75,000 AF would result on an average cost of \$800/AF
- **Budget**
 - Propose to utilize unused funds in the SWP Budget
 - *Approach for dry and critical years*
 - SWP Budget projected to be \$90 million under budget
- **Conveyance loss**
 - Varies between 20% to 30% (2021 – 25% loss)

2022 North of Delta Water Transfers



- **SWC Dry Year Water Transfers**

- Estimated available water: ~ 10,000 – 20,000 AF
- Metropolitan allocated: ~ 50% (5,000 – 10,000 AF)*
- Price in negotiations
- Impacted by curtailment

- **Yuba County Water Agency**

- Estimated available water: ~ 158,000 AF
- Metropolitan allocated: ~ 25% (38,000 AF)*
- Surface water price: \$358 - \$447/AF
- Groundwater substitution price: \$800/AF

**subject to carriage losses*

Board Options

Option #1

- Authorize the General Manager to secure one-year water transfers with water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 acre-feet of additional supplies.
- Authorize the General Manager to secure storage and conveyance agreements with the Department of Water Resources and various water districts north of the Sacramento-San Joaquin River Delta to facilitate these transfers consistent with Articles 55 and 56 of the Metropolitan State Water Project Contract.
- Pay up to \$60 million from the State Water Project Budget for such transfers.
- 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 the Board letter.

Board Options

Option #2

- Do not authorize the General Manager to enter one-year water transfer agreements with various north of the Sacramento-San Joaquin River Delta water districts.

Option #1

Staff Recommendation





● **Board of Directors**
Water Planning and Stewardship Committee

4/12/2022 Board Meeting

7-13

Subject

Appropriate \$20 million and authorize an amendment to the 2019 Reservoir Project Agreement with the Sites Project Authority to allow participation in the Sites Reservoir Project Amendment 3 Workplan; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Executive Summary

This Board letter requests authorization for Metropolitan to participate in and fund completion of the planning, permitting, and environmental review effort of the proposed multi-benefit Sites Reservoir Project (Project) over the next three years.

In 2017, 2019, and 2020, the Metropolitan Board (Board) authorized participation in the planning and environmental review/permitting effort for the proposed Project, which would be located in the Sacramento Valley in northern California, and appropriated \$1,500,000, \$4,212,500, and \$5,000,000, respectively. In 2021, the Sites Project Authority proposed a workplan and budget for funding the remaining three-year planning effort through 2024.

The 2021 workplan, referred to as the Amendment 3 Workplan, will focus on finalizing the environmental planning documents, project construction/operation permits, and a coordinated operations plan with the federal and state water projects. The Amendment 3 Workplan would be implemented through an amendment to the 2019 Reservoir Project Agreement (**Attachment 4**) previously executed by Metropolitan and other project participants. The overall participant budget for this Amendment 3 Workplan is \$142,863,000, which includes funding from the state of California, the United States Bureau of Reclamation (USBR), and 23 public water agencies.

For Metropolitan to continue its participation and reserve 311,700 acre-feet (AF) of storage rights, which is equivalent to approximately 50,000 AF of annual water supply reservoir releases, the additional planning cost share would total \$20 million. This cost-share amount is payable over a three-year period, \$5 million in calendar year (CY) 2022, \$7 million in CY 2023, and \$8 million in CY 2024. The obligation of the proposed Project participants to make the second and third installments is conditioned upon the Sites Project Authority and the Sites Reservoir Committee members each annually reapproving the Amendment 3 Workplan by an affirmative vote of at least 75 percent.

Continued participation in planning, permitting, and environmental review of the proposed Project will preserve the opportunity to work with the participants to jointly improve water supplies for both northern and southern California, enhance critical habitat and flows for native fish species, reduce the impacts of the frequent wet and dry hydrologic swings, and develop key analyses of project feasibility. The proposed Project is identified as one of only two priority surface water reservoir projects in the Governor's Water Resilience Portfolio and is one of the first multi-benefit reservoirs in California that would have dedicated water storage and yield to be used for fishery enhancement, instream flow releases in drier periods, and improved habitat for native species.

Metropolitan's agreement to participate in funding for the Amendment 3 Workplan does not commit Metropolitan to the proposed Project implementation.

Details

History

The proposed Project first emerged as part of a second stage of the State Water Project (SWP) proposed in the 1980s, which included multiple water-related projects in northern California. In 1996, the proposed Project was further analyzed by the California Department of Water Resources (DWR) and the USBR as part of the state and federal water cooperative effort called the CALFED Bay-Delta process. The CALFED environmental planning process resulted in a Programmatic Record of Decision that recommended implementation of the proposed Project as a component of the Preferred Program Alternative. In 2010, the Sites Project Authority was formed as a joint powers authority to continue moving forward with development of the proposed Project. There are 31 agencies participating in the planning phases of the proposed Project, including the state of California and the USBR. In 2020, the proposed Project was identified as a priority in the Governor's Water Resilience Portfolio.

Project Location

The proposed Project would be located in rural Glenn and Colusa counties, 60 miles north of Sacramento and about 10 miles west of the town of Maxwell in northern California (**Attachment 1**). The proposed Project location is separated from the greater Sacramento Valley by a foothill range to the east, making it suitable for off-stream storage of water from the Sacramento River.

Project Description

The proposed Project is currently being analyzed as a 1.3 million to 1.5 million AF off-stream surface water storage reservoir that would divert unregulated high-flow water from the Sacramento River. The proposed Project would require the construction of two dams up to 310 feet high and nine smaller saddle dams. Water to be stored in the proposed Project would be conveyed through existing intakes on the Sacramento River at Red Bluff Pumping Plant and Glenn-Colusa Diversion Dam. Water from these diversions would be conveyed through the existing Tehama-Colusa and the Glenn-Colusa canals to the proposed Project (**Attachment 2**). Combined, the diversions could deliver as much as 3,900 cubic feet per second of water from the Sacramento River to the proposed Project. Water diversions would only occur when conditions exist that are: (1) protective of aquatic resources; (2) after all other downstream senior water rights and conditions are met; and (3) only when excess flow conditions exist in the Delta. Water discharged from the proposed Project would flow through the existing Tehama-Colusa Canal, then into the Colusa Basin Drain before reaching the Sacramento River or the Upper Yolo Bypass. Project participants would divert their share of the water as it moves through the Tehama-Colusa Canal and river system, including Central Valley Project and SWP participating agencies south of the Delta. Dedicated environmental storage funded with state Proposition 1 monies would also utilize this system to convey supplies to enhance fishery flows, habitat, and water quality.

Key Benefits

For the Metropolitan service area, key benefits include improving drought-year supply reliability, securing additional sources for SWP dependent areas, providing low-salinity groundwater recharge, reducing risk of declining groundwater storage in the service area, and assisting in the Board's water quality blending salinity objective. Other key benefits of the proposed Project include providing:

- Off-Stream, Fish-Friendly Storage. The proposed Project would provide storage off-stream of the Sacramento River using existing modern-screened fish intakes designed to minimize fish losses and not block fish migration or spawning.
- California's Largest Dedicated Ecosystem Storage. Current methods of allocating water to support ecosystem health rely on minimum flow standards. The proposed Project will be one of the first reservoirs in California that will have dedicated ecosystem water and storage to enable more flexible and effective water management during dry times. This ecosystem water will be used to enhance instream fishery flows, water temperatures for spawning, pulse flows for out-migrating fish, riparian/floodplain habitat, water quality, and other environmental purposes.
- Climate Change Resiliency to Shrinking Snowpack. The proposed Project is envisioned as a climate change adaptation measure to manage the shrinking snowpack, to capture and manage the increased flood

flows for use in dry times, to enhance upstream Sacramento River water temperature management for migrating salmon, and to augment flows for fishery protection. In 2021, if the proposed Project had been in operation, it is estimated that there could be close to one million AF of additional water supplies, previously stored during wet periods, available for release over a two to three-year period to farms, cities, and the environment.

- Enhance Statewide Depleted Groundwater Basins. The state estimates that approximately 50 percent of the water that could be used to replenish California's groundwater will need to come out of the Sacramento River. The proposed Project is well suited to staging and conveying water to areas where groundwater depletion is producing undesirable effects.
- Local Flood Control and Recreational Opportunities. The proposed Project will enhance flood control protection for small communities prone to flooding near the reservoir project and expand recreational opportunities in northern California.
- Diversion Only During High-Flow Events. The proposed Project will enhance the ability to store unregulated flows during high precipitation events and release those water supplies for environmental and water supply purposes during dry water years.
- Significant Local and Statewide Support. The proposed Project has significant local, statewide, and bipartisan support from more than 175 organizations, agencies, businesses, and elected officials.

Tribal, Environmental, and Local Stakeholder Outreach

Sites Project Authority has been conducting an extensive outreach process to meet with local stakeholders, including environmental, salmon fishing, and tribal interests. During the past 18 months, over 40 meetings and workshops have been conducted to communicate and listen to additional input. This includes reaching out to over a dozen Native American tribes. The Sites Project team has also been holding monthly meetings with two local tribes (Yoche Dehe Wintun Nation and the Colusa Indian Community Council) with a known historical connection to the proposed Project area. In addition, the USBR has consulted with federally recognized tribes. The proposed Project does not occur in an area that would affect tribal hunting or water rights, nor is the alternative on tribal trust lands.

These listening sessions and public input have been used by the Sites Project Authority to substantially modify the proposed Project facilities and operations to be more protective of the environment and reduce local impacts.

Sites Project Authority Members

The Sites Project Authority was formed under California law in 2010 as a joint powers authority and currently consists of 11 public agencies: Colusa County, Glenn County, Tehama-Colusa Canal Authority, Colusa County Water District, Glenn-Colusa Irrigation District, Reclamation District 108, Westside Water District, Sacramento County Water Agency/City of Sacramento, Placer County Water Agency/City of Roseville, Western Canal Water District, and Maxwell Irrigation District. DWR and USBR also participate on the Sites Project Authority as non-voting members.

For decision-making purposes, approval of at least 75 percent of the total weighted vote of both the Sites Project Authority and the Sites Reservoir Committee members is required for any material change actions, including changes to budget, schedule, and workplan. For non-material changes, an affirmative vote of at least a majority of the total weighted vote is required.

Current Participating Project Partners

Currently, there are 31 agencies participating in the proposed Project, including the state of California and the USBR, with 23 agencies reserving water supply storage in the reservoir. In 2021, Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District joined in funding the planning effort. A full list of participating agencies is attached (**Attachment 5**). Metropolitan is currently a member of the Sites Reservoir Committee, which has certain decision-making authority in carrying out the budget and workplan.

Participating agencies are currently in the process of reviewing the Amendment 3 Workplan with their governing boards to consider approving participation and funding. The Sites Project Authority is also in discussions with other water agencies that have expressed an interest in participating in the proposed Project.

Project Environmental Documentation

An initial feasibility study and Administrative Draft Environmental Impact Report (EIR) were completed in 2013 by DWR. A Public Draft EIR/ Environmental Impact Statement (EIS) for the proposed Project was released by the Sites Project Authority (state lead agency) and the USBR (federal lead agency) in August 2017.

However, with the completion of a value-planning process in 2019, a Revised Draft EIR and Supplemental EIS were initiated due to modifications that included a smaller proposed Project footprint and operational changes to enhance environmental flows. The Revised Draft EIR and Supplemental EIS were released in November 2021, with a Final EIR/EIS scheduled for completion in fall 2022. The formal Notice of Determination and Record of Decision are scheduled for late 2022 or early 2023.

Responses to Common Questions About Potential Environmental Impacts

In November 2021, the Sites Project Authority released a fact sheet responding to common questions about the potential environmental impacts of the proposed Project (**Attachment 7**). In addition, the Revised Draft EIR/Supplemental Draft EIS includes more details related to the analysis of the proposed Project's potential impacts on a range of environmental resource areas.

In general, the proposed Project is an off-stream facility that does not dam a major river system or block fish migration or spawning. The proposed Project diverts water only during high-flow events. In addition, after discussions with state and federal fishery agencies, local stakeholders, environmental and Native American interests, the proposed Project operations were modified to be more protective of the environment. These modifications reduced the proposed Project diversions from the Sacramento River substantially, by almost 50 percent, as compared to the criteria proposed in 2017.

Storing water in Sites Reservoir during high-flow wet periods is part of the statewide strategy for adapting to changing climate conditions and to return much-needed flexibility to enhance environmental and water user needs.

Project Yield

The current operations model estimates the annual water yield of the proposed Project at approximately 207,000 to 260,000 AF per year. This model utilizes upstream Sacramento River flow and fishery regulatory criteria to protect instream river flows and water temperatures for salmon and other native species. Additional modeling analyses will continue to be conducted as further refinements are made to proposed Project operations.

Implementation of the proposed Delta Conveyance Project could allow for greater yields south of the Delta due to potential savings in Delta carriage water losses and south Delta regulatory restrictions. In 2021, if the proposed Project had been in operation, it is estimated that there would be close to one million AF of additional water supplies, previously stored during wet periods, and available for release over a two to three-year period to farms, cities, and the environment.

For Metropolitan, that additional storage in 2021 would amount to an approximate 230,000 AF share, which could have been used to secure water for our SWP exclusive areas, provide low-salinity supplies to reduce salt impacts and recharge our region's groundwater basins, and assist in meeting the Board's 500 mg/L water quality blending salinity objective.

Final Project formulation and annual operations will determine how the reservoir storage and yield will be divided between meeting water supply and environmental improvements funded by state Proposition 1 grant and federal Water Infrastructure Investment for the Nation (WIIN) Act appropriations.

Effect of Potential Climate Change Impacts

California's climate has always featured wide swings between drought and flood events. Storing water in natural snowpack reservoirs in the winter, which is slowly released through snowmelt into California's river system during the hotter spring/summer months, is critical to our economy and natural ecosystem. In a warming world,

the snowpack will become even more volatile, melting faster with more precipitation falling as rain. River flows will increase during the winter, causing more flooding, and less during the spring/summer months.

If the current climate change projections are right, the increasing temperature will require additional reservoirs to capture the more volatile runoff. Sites Reservoir helps provide more flexibility to water supply and fishery agencies to mitigate these climate change impacts. In addition, as climate temperatures increase, the effectiveness of the reservoir increase, both from a water supply and environmental flow perspective.

Operations and Coordination with Other Regional Reservoirs

The proposed Project is designed to divert water from the Sacramento River through existing state-of-the-art fish screens, only when actual flows on the Sacramento River exceed that needed by more senior water right holders, the Delta is in excess conditions, and based on stringent criteria to protect aquatic resources. Releases from the reservoir will be based on environmental needs, water user participant requests, and regulatory permit conditions.

The proposed Project's unique location, south of Lake Shasta and Lake Oroville but north of the Delta, allows it to enhance the environmental, water quality, flood control, recreational, and water supply functions those existing reservoirs serve. Sites Reservoir allows the state and federal fishery agencies and water supply operators more flexibility to adapt to changing river, climate, Delta flow, and water quality conditions.

As an example, the proposed Project could be operated in coordination with Lake Shasta to preserve and enhance cold water for endangered salmon in the Sacramento River. The proposed Project could also contribute to the increased fresh-water flow into the Delta during drier periods to assist with salinity management of this critical estuary. The proposed Project would not compete for the water resources stored in these state and federal facilities but would increase the total amount of managed water in storage. With the uncertainty associated with California's varying snowmelt runoff in the next century, having Sites Reservoir will enhance the conservation of our critical statewide water supplies.

Proposed Participant Budget and Metropolitan Cost Share

The proposed participant budget for the Amendment 3 Workplan is \$142,863,000, which includes:

Revenue Source	2022	2023	2024	TOTAL
State (Proposition 1)	\$ 18,300,000	--	--	\$ 18,300,000
Federal (WIIN Act)	\$ 10,000,000	\$ 20,000,000	\$ 20,000,000	\$ 50,000,000
Water User Participants	\$ 16,762,000	\$ 23,467,000	\$ 26,819,000	\$ 67,048,000
Sites Joint Powers Authority	\$ 505,000	\$ 505,000	\$ 505,000	\$ 1,515,000
Carryover Funds	\$ 6,000,000	--	--	\$ 6,000,000
TOTAL	\$ 51,567,000	\$ 43,972,000	\$ 47,324,000	\$ 142,863,000
Metropolitan Share	\$ 5,000,000	\$ 7,000,000	\$ 8,000,000	\$ 20,000,000

Costs associated with the proposed Project planning activities currently are being allocated to each water user participant based on its share of an assumed project yield of approximately 168,000 AF, which does not include the state or federal shares. The total assumed project yield for all participants is 234,000 AF. At present, Metropolitan holds 50,000 AF of participation rights in the proposed Project, which equates to 29.8 percent. Thus, Metropolitan's cost share for this next phase of planning activities would total \$20 million. This cost share would be paid over a three-year period, \$5 million in CY 2022, \$7 million in CY 2023, and \$8 million in CY 2024. Subsequently, costs associated with the proposed Project would be allocated based on each participant's share of the ultimate storage capacity approved for construction. As before, participation in this planning phase does not commit Metropolitan to participate in the construction phase of the proposed Project.

The obligation of the Project participants under the 2019 Reservoir Project Agreement and Third Amendment (**Attachments 3 and 4**) to make the second installment and third installment is conditioned upon the Sites Project

Authority and the Sites Reservoir Committee members each annually reapproving the Amendment 3 Workplan by an affirmative vote of at least 75 percent.

The final amount of water supplies available to Metropolitan and other participants from the proposed Project, if it is implemented, and the unit costs will depend on state and federal participation levels, the total dollar amount that Metropolitan and others elect to contribute through future phases, and the final costs and yield for the proposed Project.

Estimated Overall Project Cost

In 2019, the Sites Project Authority and participating agencies conducted a value-planning effort to minimize potential Project costs and impacts. That effort resulted in an improved Project that reduced costs from \$5.2 billion to approximately \$3.9 billion (in 2021 dollars). Cost savings came primarily from the removal of the proposed 13.5-mile Delevan Diversion pipelines and intake facility on the Sacramento River. The annual costs for operations, maintenance, and power are estimated at \$83 million to \$100 million annually. The estimated average cost per AF of yield ranges from \$700 to \$900 per AF at the reservoir. For Metropolitan, it is estimated that an additional \$300 to 400 per AF would be added to the yield cost to take care of conveyance losses in the Delta, SWP pumping costs, and Metropolitan water treatment costs. Efforts are underway by the Sites Project Authority to continue refining the proposed Project cost estimates as potential additional state and federal funding becomes available.

State and Federal Investment Funding

In 2017, the Sites Project Authority applied for state Proposition 1 grant funding to the California Water Commission. Proposition 1 included \$2.7 billion for new storage projects. In 2018, the California Water Commission approved \$816 million in state investment to advance the proposed Project, the largest grant award given to any project requesting Proposition 1 support. The state's Proposition 1 investment was increased in 2020 to \$836 million, and in 2022 to \$875 million. To date, the state has released approximately \$40 million to the proposed Project for completion of the environmental documentation and permit process. This state investment will pay for a portion of the reservoir cost, and in return, the state will receive flood control and recreation benefits as well as a portion of the water and storage produced by the proposed Project to be dedicated to environmental benefits in the watershed and Delta. On the federal side, the proposed Project has been awarded \$104 million in WIIN Act grants by the US Environmental Protection Agency (EPA). In addition, the proposed Project was awarded a \$449 million US Department of Agriculture loan that can be used to build the intertie between the Glen-Colusa Irrigation District and Tehama-Colusa Irrigation District canals to assist in water operations for the Project and its partners. The Sites Project Authority has been invited to apply for an EPA Water Infrastructure Finance and Innovation Act (WIFIA) loan in the amount of 49 percent of the total project cost (currently estimated to be \$2.2 billion). When executed, this low cost and flexible source of financing is estimated to reduce annual debt service payments by approximately 10 percent compared to without WIFIA.

Schedule

The proposed key milestones to be completed over the next three years include:

- Mar 2022 – Section 7 Biological Assessment for the US Fish & Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)
- Mar 2022 – CDFW Incidental Take Permit issued for Operations and Construction
- Oct 2022 – Final Revised EIR and Supplemental EIS issued
- Oct 2022 – Section 106 – National Historic Preservation Act Final Programmatic Agreement
- Dec 2022 – Federal ESA – Receive Biological Opinions from USFWS & NMFS
- Dec 2022 – Execute State (DWR) and Federal (USBR) Coordinated Operations Agreements
- Apr 2023 – Section 408 US Army Corps of Engineers Levee & Flood Permit and Central Valley Flood Protection Board Encroachment Permit issued
- Jun 2023 – Section 401 and 404 US EPA Clean Water Act Permit issued
- Jun 2023 – Section 1602 CDFW Streambed Alteration Agreement issued
- Oct 2023 – State Water Resources Control Board Water Right Permit issued
- Dec 2023 – 30 percent engineering design completed

- Nov 2023 – Proposition 1 Water Storage Investment Program final award from California Water Commission

Final engineering design for the project is scheduled to be completed by 2026, with reservoir construction completed by 2030 (**Attachment 6**).

Previous Metropolitan Board Authorizations

In April 2017, the Board authorized appropriation of \$1.5 million and participation in the Phase 1 Sites Reservoir Project Agreement. The \$35 million budget for the 2017/18 Workplan includes funding from the state of California, USBR, and public water agencies.

On February 12, 2019, the Board authorized appropriation of \$4,212,500, and participation in the 2019 Reservoir Project Agreement (**Attachment 3**) through December 31, 2019. The budget for the 2019 agreement was approximately \$15 million.

On October 12, 2020, the Board authorized appropriation of \$5 million and participation in the Phase 2 Workplan and the Second Amendment to the 2019 Reservoir Project Agreement. The budget for the Phase 2 Workplan was \$31.75 million, and included funding from the state of California, USBR, and public water agencies.

Policy

By Minute Item 45753, dated May 11, 2004, the Board adopted refined Bay-Delta finance and cost allocation policy principles for communication with the California Bay-Delta Authority and interested parties, as set forth in the letter signed by the Chief Executive Officer on April 20, 2004.

By Minute Item 46637, dated April 11, 2006, the Board adopted the policy principles regarding long-term actions for the Sacramento-San Joaquin River Delta as described in the revised letter signed by the General Manager on April 4, 2006.

By Minute Item 47135, dated June 12, 2007, the Board supported, in principle, the proposed Delta Action Plan, as set forth in the letter signed by the General Manager on May 25, 2007.

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines), and involves only feasibility or planning studies for possible future actions which the Board has not approved, adopted or funded (Section 15262 of the State CEQA Guidelines). In addition, the proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines because the proposed action involves basic data collection and research activities which do not result in a serious or major disturbance to an environmental resource, which may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

- a. Authorize the General Manager to sign the Third Amendment to the 2019 Reservoir Project Agreement with the Sites Project Authority and other participants for participation in the Amendment 3 Workplan process for an amount not to exceed \$20,000,000; and
- b. Appropriate \$20,000,000 for the Amendment 3 Workplan based on reserving 311,700 acre-feet of storage rights, which is equivalent to approximately 50,000 AF of annual water supply reservoir releases.

Fiscal Impact: \$20,000,000; This cost share would be paid over a three-year period, \$5 million in CY 2022, \$7 million in CY 2023, and \$8 million in CY 2024. CY 2023 and 2024 funding is included in the Proposed Biennial Budget for FYs 2022/23 and 2023/24. CY 2022 funding is unbudgeted, but the additional costs will be offset by lower State Water Contract power costs as a result of the low SWP allocation.

Business Analysis: Allows active participation in the development of the Project, its benefits, and associated operations plan that could impact SWP supplies. Maintains option for reserving priority status in participating in future Project implementation.

Option #2

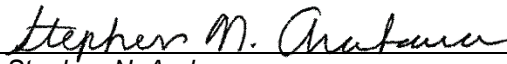
Do not authorize the General Manager to sign the Third Amendment to the 2019 Reservoir Project Agreement with the Sites Project Authority for participation in the Amendment 3 Workplan.


Fiscal Impact: None

Business Analysis: Vacates the option to participate in the benefits of the Project.

Staff Recommendation

Option #1

 3/24/2022
 Stephen N. Arakawa
 Manager, Bay-Delta Initiatives Date

 3/30/2022
 Adel Hagekhalil
 General Manager Date

Attachment 1 – Sites Reservoir Location Map

Attachment 2 – Sites Reservoir Facilities Map

Attachment 3 – 2019 Reservoir Project Agreement

Attachment 4 – Third Amendment to the 2019 Reservoir Project Agreement

Attachment 5 – Sites Reservoir Project Participants

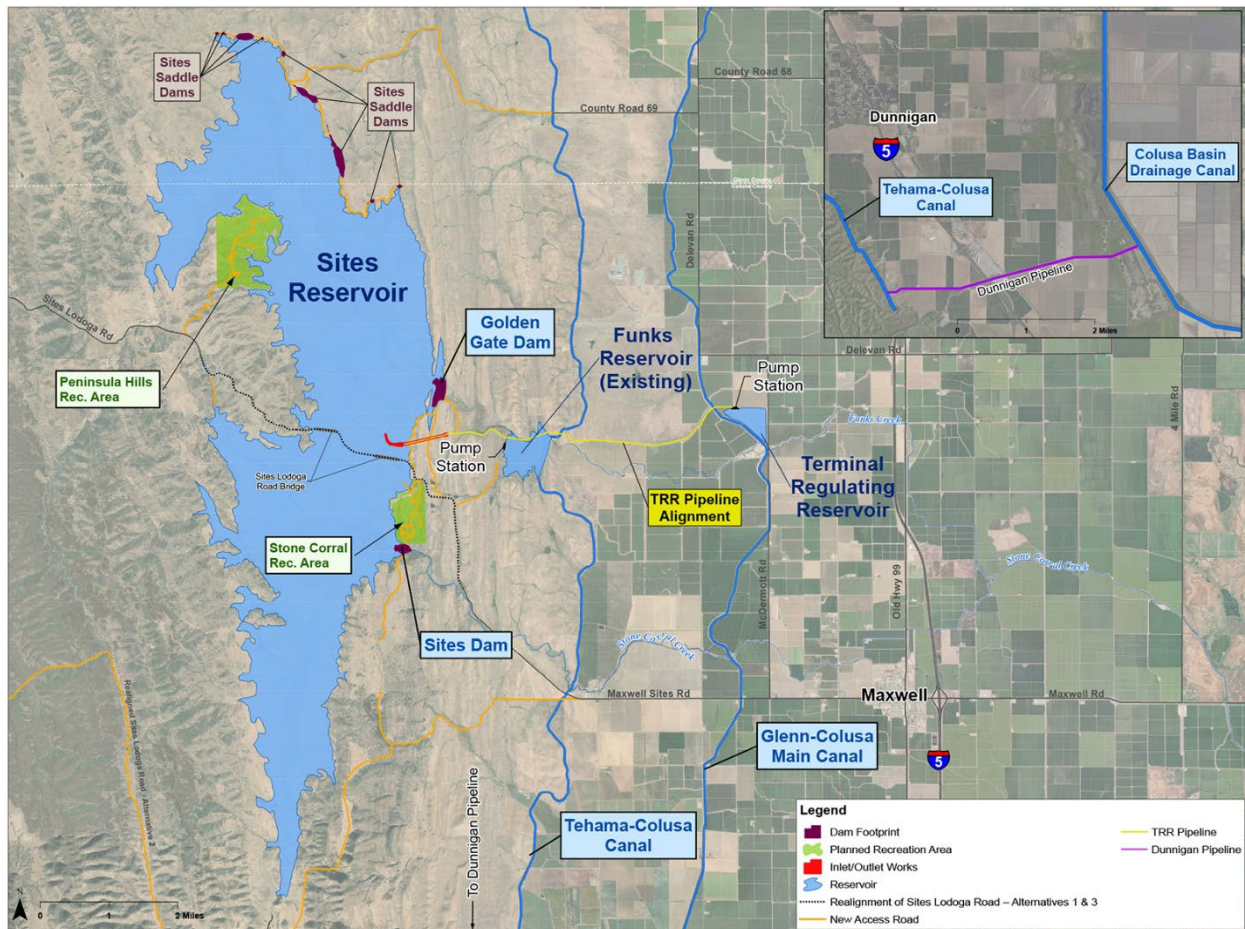
Attachment 6 – Sites Reservoir Schedule

Attachment 7 – Sites Reservoir RDEIR-SDEIR Common Questions & Responses

Sites Reservoir – Location Map



Sites Reservoir Project – Facilities Map



SITES PROJECT AUTHORITY

2019 RESERVOIR PROJECT AGREEMENT

DATED AS OF APRIL 1, 2019

BY AND AMONG

SITES PROJECT AUTHORITY

AND

THE PROJECT AGREEMENT MEMBERS LISTED HEREIN

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THIS 2019 RESERVOIR PROJECT AGREEMENT is made effective as of April 1, 2019, by and among (a) the Sites Project Authority (the “Authority”) and (b) certain Members and/or Non-Member Participating Parties, listed on the attached **Exhibit A** and is made with reference to the following facts:

RECITALS

A. Various public agencies in the Sacramento River Watershed created the Authority in 2010. Various public agencies in the Sacramento River Watershed, including certain Project Agreement Members, previously entered into the Fourth Amended and Restated Sites Project Authority Joint Exercise of Powers Agreement, dated November 21, 2016, pursuant to which they are developing the Sites Reservoir Project, which is contained in the CalFed Bay-Delta program Programmatic Record of Decision, August 28, 2000. The Joint Powers Agreement provides a mechanism for “Project Agreements” (as defined in the Joint Powers Agreement) to undertake specific work activities for the development of the Sites Reservoir Project. On September 17, 2018, the Authority’s Board of Directors also adopted Bylaws for Phase 2 of the Sites Reservoir Project, which also address Project Agreements and their management through Reservoir Project Committees.

B. On April 11, 2016, certain Authority Members of the Authority entered into the PHASE 1 RESERVOIR PROJECT AGREEMENT which was amended and restated as of November 21, 2016.

C. The Authority and certain Project Agreement Members have undertaken a process to negotiate a 2019 Reservoir Project Agreement to undertake specific work activities.

D. The Project Agreement Members wish to continue development of the Project pursuant to a Work Plan approved by the Authority on November 19, 2018 and the Reservoir Project Committee on November 16, 2018 and a summary of which is described in **Exhibit B** attached hereto. The Project will be undertaken in the name of the Authority and in accordance with the Authority’s stated Mission as set forth in the fourth Recital of the Joint Powers Agreement. The Project Agreement Members are entering into this Project Agreement to satisfy the requirements of Article VI of the Joint Powers Agreement.

E. All members of the Authority have also been given the opportunity to enter into this Project Agreement. The form of this Project Agreement was determined to be consistent with the Joint Powers Agreement and the Bylaws and approved by the Authority’s Board of Directors on September 17, 2018.

F. The Authority and the Project Agreement Members acknowledge that one of the Authority’s goals, in addition to providing environmental benefits, is to develop and make both a water supply and storage capacity available to water purveyors and landowners within the Sacramento River watershed, and in other areas of California, who are willing to purchase either or both a water supply and storage capacity from the Sites Reservoir Project, and that the Project Agreement Members should have a preference to the water supply or storage capacity.

G. The Authority and the Project Agreement Members acknowledge that the approval and execution of this Project Agreement does not commit the Authority, the Project Agreement Members or any other party to any definite course of action regarding the Sites Reservoir Project. As

set forth in Section 6(a) of this Project Agreement, there are no assurances that the Sites Reservoir Project will be constructed. One of the prerequisites that would need to be fulfilled before the Sites Reservoir Project could be constructed is the completion of environmental review under the California Environmental Quality Act (“CEQA”). As part of this environmental review, the Authority, as the lead agency that is conducting the review, reserves all of its rights, responsibilities, obligations, powers, and discretion under the provisions of CEQA to: (i) evaluate the environmental impacts of the Sites Reservoir Project; (ii) deny and disapprove the Sites Reservoir Project if the environmental review reveals significant environmental impacts that cannot feasibly be mitigated; (iii) adopt feasible mitigation measures and/or an alternative to the Sites Reservoir Project to avoid or lessen significant environmental impacts; or (iv) determine that any significant environmental impacts that cannot feasibly be mitigated are outweighed by the economic, social or other benefits of the Sites Reservoir Project.

AGREEMENT

THEREFORE, in consideration of the facts recited above and of the covenants, terms and conditions set forth herein, the parties agree as follows:

Section 1 Definitions

“Authority” means the Sites Project Authority, a joint exercise of powers agency created pursuant to the Joint Powers Agreement.

“Authority Members” means the members of the Authority executing the Joint Powers Agreement, as such members may change from time-to-time in accordance with Section 3.3, Section 7.12 and Section 7.2 of the Joint Power Agreement.

“Board” means the Board of Directors of the Authority.

“Bylaws” means the Bylaws for Phase 2 of the Sites Reservoir Project adopted by the Authority on September 17, 2018, as such Bylaws may be amended or supplemented from time-to-time in accordance therewith.

“Committee” means the Reservoir Project Committee described in Section 3 of this Project Agreement.

“Fiscal Year” means the fiscal year of the Authority, which currently begins on January 1 of each calendar year and ends on December 31 of each calendar year, or such other twelve month period which may be designated by the Authority as its Fiscal Year.

“Joint Power Agreement” means the Fourth Amended and Restated Sites Project Authority Joint Exercise of Powers Agreement, dated November 21, 2016, as such agreement may be amended or supplemented from time-to-time in accordance therewith.

“Law” means Articles 1 through 4 (commencing with Section 6500), Chapter 5, Division 7, Title 1 of the California Government Code, as amended or supplemented from time-to-time.

“Material Change Item” shall have the meaning ascribed thereto in the Bylaws.

“Participation Percentage” means the Participation Percentages as set forth in **Exhibit A** hereto, as such Participation Percentages may be modified in accordance herewith.

“2019 Budget” means the 2019 Budget approved by the Committee on November 16, 2018 and the Authority on November 19, 2018, as such 2019 Budget may be amended or supplemented from time-to-time in accordance with the Joint Powers Agreement, this Project Agreement and the Bylaws.

“Project” or “Sites Reservoir Project” means the Sites Reservoir Project as described in **Exhibit B** hereto, as modified from time-to-time in accordance therewith.

“Project Agreement” means this Project Agreement, dated as of April 1, 2019, by and among the Authority and the Project Agreement Members listed on **Exhibit A** from time-to-time, as such Project Agreement may be amended or supplemented from time-to-time in accordance herewith.

“Project Agreement Members” means (a) the Authority Members listed in the attached **Exhibit A**, (b) the Non-Member Participating Parties listed in the attached **Exhibit A** and (c) additional Authority Members or Non-Member Participating Parties who execute this Project Agreement from time-to-time pursuant to Section 10 hereof.

“Work Plan” means the activities described in **Exhibit B** hereto as such description may be amended or supplemented from time-to-time.

Section 2 Purpose

The purpose of this Project Agreement is to permit the Authority and the Project Agreement Members to continue development of the Project in the name of the Authority consistent with the Joint Powers Agreement. The activities undertaken to carry out the purposes of this Project Agreement shall be those, and only those, authorized by the Authority and the Committee in accordance with this Project Agreement, the Joint Powers Agreement and the Bylaws. Without limiting in any way the scope of the activities that may be undertaken under this Project Agreement, such activities shall include funding the Authority’s costs undertaken to carry out the directions of the Committee. Notwithstanding any other provision of this Project Agreement, no activity undertaken pursuant to this Project Agreement shall conflict with the terms of the Joint Powers Agreement or the Bylaws, nor shall this Project Agreement be construed in any way as creating an entity or combination of entities that is separate and apart from the Authority.

Section 3 Reservoir Project Committee

(a) Committee Membership. The business of the Project Agreement Members under this Project Agreement shall be conducted by a Committee consisting of one member appointed by each Project Agreement Member. Appointment of each member of the Committee shall be by action of the governing body of the Project Agreement Member appointing such member, and shall be effective upon the appointment date as communicated in writing to the Authority. Project Agreement Members may also appoint one or more alternate Committee members, which alternate(s) shall assume the duties of the Committee member in case of absence or unavailability of such member. Project Agreement Members may also appoint an alternate Committee member from a different Project Agreement Member for convenience in attending Committee meetings, who may

cast votes for such Project Committee Members, provided that no person shall represent more than five other Project Committee Members and more than 20% of the weighted vote as provided in Subsection 3(g) at any given meeting; provided however, that if the appointing Project Committee Member is an officer of the Committee, the appointed alternate Committee member shall not assume the capacity of such officer position. In order to serve as an alternate Committee member, a written evidence of such designation shall be filed with the Committee Secretary. Each member and alternate member shall serve on the Committee from the date of appointment by the governing body of the Project Agreement Member he/she represents and at the pleasure of such governing body.

(b) Officers. The Committee shall select from among its members a Chairperson, who shall annually act as presiding officer, and a Vice Chairperson, to serve in the absence of the Chairperson. There also shall be selected a Secretary, who may, but need not be, a member of the Committee and a Treasurer. All elected officers shall be elected and remain in office at the pleasure of the Committee, upon the affirmative vote of at least a majority of the total weighted vote as provided at Subsection 3(g);

(c) Treasurer. The Authority Treasurer shall serve as the Committee's Treasurer and shall act as the Committee's liaison to the Authority's General Manager and Authority Board on financial matters affecting the Committee. The Treasurer shall prepare and provide regular financial reports to the Committee as determined by the Committee. The Treasurer shall not be required to be a member of the Board of Directors of the Authority.

(d) General Manager. The Authority's General Manager shall (1) serve as the Project Director responsible for advancing the Sites Reservoir Project, (2) be a non-voting member of the Committee, (3) ensure coordination of activities between the Authority and Committee, (4) convene, on an as needed basis, legal representatives from the Project Agreement Members and Authority Members to advise the General Manager on legal matters that will be reported to the Committee and Authority on a timely basis, and (5) coordinate the activities between the Committee and both the United States Bureau of Reclamation and Department of Water Resources.

(e) Meetings. The Chairperson of the Committee or a majority of a quorum of the members of the Committee are authorized to call meetings of the Committee as necessary and appropriate to conduct its business under this Project Agreement. All such meetings shall be open to the public and subject to the requirements set forth in the Ralph M. Brown Act (Government Code Sections 54950 et seq.).

(f) Quorum. A majority of the Committee members based on the weighted vote provided in Subsection 3(g) shall constitute a quorum of the Committee.

(g) Voting. Notwithstanding any provisions of the Bylaws that might be construed otherwise, for purposes of this Project Agreement, the voting rights of each Project Agreement Member shall be determined as follows:

(i) an equal number of voting shares for each Project Agreement Member as defined in **Exhibit A**, that being for each Project Agreement Member, 1 divided by the total number of Project Agreement Members, multiplied by 50; plus

- (ii) an additional number of voting shares for each Project Agreement Member equal to its respective Participation Percentage described in **Exhibit A**, multiplied by 50, using the version of **Exhibit A** in effect at the time the Committee votes.

The resulting weighted total of all voting shares shall equal 100. An Example of this weighted voting incorporating the formulas for determining participating percentages is attached at **Exhibit A**.

(h) Decision-making Thresholds. In accordance with Section 5.8 of the Bylaws, for purposes of this Project Agreement, approval by the Committee for material and non-material changes shall be as follows: for actions other than Material Change Items, action of the Committee shall be taken upon the affirmative vote of at least a majority of the total weighted vote as provided in Subsection 3(g); for Material Change Items, action shall be taken upon the affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g).

(i) Delegation of Authority/Powers and Limitations Thereon. Subject to the direction of the governing bodies of the Project Agreement Members, the Committee shall undertake all actions necessary for carrying out this Project Agreement, including but not limited to setting policy for the Project Agreement Members acting under this Project Agreement with respect to the Project; recommending actions to be undertaken in the name of the Authority under this Project Agreement; determining the basis for calculation of the Participation Percentages for each fiscal year, and the timing required for payments of obligations hereunder; authorizing expenditure of funds collected under this Project Agreement within the parameters of the Work Plan and budget; and such other actions as shall be reasonably necessary or convenient to carry out the purposes of this Project Agreement. This Section 3(i) is subject to any and all limitations set forth in the Joint Powers Agreement and Bylaws, including but not limited to, any action that constitutes a material change as defined at Section 12.3 of the Bylaws requiring the approval of both the Committee and the Authority Board, and actions specified in Section 10 of the Bylaws which remain exclusively with the Authority Board.

Section 4 Funding

(a) Budget. The Committee shall, in cooperation with the Authority's Board, provide and approve both a Fiscal Year operating budget and reestablish a Phase 2 budget target, annually or more frequently as needed. On November 19, 2018, the Board approved the Fiscal Year 2019 operating budget. The Work Plan, including annual budget, dated November 19, 2018, is attached at Exhibit B, along with the budget approval process and requirements. The Project Agreement Members shall contribute their respective pro-rata share of the budgeted sums in accordance with Section 5 of this Project Agreement; provided, however, that in no event shall the amount paid by a Project Agreement Member exceed \$60 per acre-foot without the approval of such Project Agreement Member.

(b) Fiscal Responsibilities. Exhibit B specifies the Authority's requirements regarding the fiscal responsibilities of the Committee.

(c) Allocation of Project Agreement Expenses. The Project Agreement Members agree that all expenses incurred by them and/or by the Authority under this Project Agreement are the costs of the Project Agreement Members and not of the Authority or the Project Agreement Members of the Authority that do not execute this Project Agreement, and shall be paid by the Project Agreement Members; provided, however, that this Section shall not preclude the Project

Agreement Members from accepting voluntary contributions and/or Authority Board's pre-approval of in-kind services from other Authority Members, or Project Agreement Members, and applying such contributions to the purposes hereof. The Project Agreement Members further agree to pay that share of any Authority costs reasonably determined by the Authority's Board to have been incurred by the Authority to administer this Project Agreement. Before the Authority's costs of administering this Project Agreement become payable, the Authority will provide its calculation of such costs to the Committee, which will have the right to audit those costs and provide comments on the calculation to the Authority Board. The Authority Board shall consider the Committee's comments, if any, including the results of any such audit, in a public meeting before the Authority Board approves a final invoice for such costs.

Section 5 Participation Percentages

Subject to Section 4(a), each Project Agreement Member shall pay that share of costs for activities undertaken pursuant to this Project Agreement, whether undertaken in the name of the Authority or otherwise, equal to such Project Agreement Member Participation Percentage as established in this Section 5. The initial Participation Percentages of the Project Agreement Member are set forth in the attached **Exhibit A**. These initial Participation Percentages are for the purpose of establishing the Reservoir Project Agreement Members respective responsibilities for costs under this Project Agreement and other amounts contained in the approved Fiscal Year budget and Phase 2 budget target, which is defined as the "Reservoir Total" on **Exhibit B**. The Participation Percentages of each Project Agreement Member will be modified by the Committee from time to time as the result of the admission of a new Project Agreement Member to this Project Agreement or the withdrawal of a Project Agreement Member, and **Exhibit A** shall be amended to reflect all such changes. Such amended **Exhibit A** shall, upon approval by the Committee, be attached hereto and upon attachment, shall supersede all prior versions of **Exhibit A** without the requirement of further amendment of this Project Agreement.

Section 6 Future Development of the Sites Reservoir Project

(a) The Project Agreement Members acknowledge that the Sites Reservoir Project is still in the conceptual stage and there are no assurances that the Sites Reservoir Project will be constructed or that any water supplies will be developed as a result of this Project Agreement. **Exhibit B** includes a partial list of some of the risks and uncertainties that underlie the lack of assurances. The Project Agreement Members therefore recognize that they are not acquiring any interest in the Sites Reservoir Project other than their interest in the specific permitting, design, engineering and other materials that will be in the Work Plan Project as described in **Exhibit B**, and that the Project Agreement Members are not acquiring under this Project Agreement any interest in any future water supply or access to any other services from the Sites Reservoir Project except as provided hereunder.

(b) Without limiting the foregoing, any Project Agreement Member that elects to continue participating in the development, financing, and construction of the Sites Reservoir Project to the time when the Authority offers contracts for a water supply or other services, will be afforded a first right, equal to that Project Agreement Member's Participation Percentage, to contract for a share of any water supply that is developed, and for storage capacity that may be available from, the Sites Reservoir Project. In any successor phase agreements, Project Agreement Members who are parties to this Project Agreement that submitted a proposal to participate before February 15, 2019, shall be granted rights to contract for a share of any water supply that is developed, and for storage capacity

that may be available from the Sites Reservoir Project prior to the rights of those becoming parties to this Project Agreement after that date. The Authority and the Project Agreement Members will cooperate on the drafting of provisions in the water supply contract that will allow a Project Agreement Member or other eligible entity that commits to purchase a Sites Reservoir Project water supply to transfer water that the entity may not need from time to time on terms and conditions acceptable to the such Project Agreement Member.

Section 7 Indemnity and Contribution

(a) Each Project Agreement Member, including Authority Members acting in their capacity as Project Agreement Members, shall indemnify, defend and hold the Authority, Authority Members and other Project Agreement Members and their directors, trustees, officers, employees, and agents harmless from and against any liability, cause of action or damage (including, without limitation, reasonable attorneys' fees) arising out of the performance of this Project Agreement multiplied by each Project Agreement Member's Participation Percentage. Notwithstanding the foregoing, to the extent any such liability is caused by the negligent or intentional act or omission of an Authority Member or a Project Agreement Member, such Authority Member or Project Agreement Member shall bear such liability.

(b) Each Project Agreement Member, including Authority Members acting in their capacity as Project Agreement Members, shall indemnify, defend and hold the Authority and the members of the Authority that do not execute this Project Agreement and their directors, trustees, officers, employees and agents harmless from and against any liabilities, costs or expenses of any kind (including, without limitation, reasonable attorney's fees) arising as a result of the activities described in or undertaken pursuant to this Project Agreement multiplied by each Project Agreement Member's Participation Percentage. All assets, rights, benefits, debts, liabilities and obligations attributable to activities undertaken under this Project Agreement shall be assets, rights, benefits, debts, liabilities and obligations solely of the Project Agreement Members in accordance with the terms hereof, and shall not be the assets, rights, benefits, debts, liabilities and obligations of the Authority or of those members of the Authority that have not executed this Project Agreement. Members of the Authority not electing to participate in the Project Agreement shall have no rights, benefits, debts, liabilities or obligations attributable to the Project Agreement.

Section 8 Term

(a) No provision of this Project Agreement shall take effect until this Project Agreement has been duly executed and delivered by the Authority and by one Project Agreement Member.

(b) The term of this Project Agreement shall continue until December 31, 2019, unless extended in writing by the parties hereto.

Section 9 Withdrawal From Further Participation

To withdraw from this Project Agreement, a Project Agreement Member shall give the Authority and other Project Agreement Members written notice of such withdrawal not less than 30 days prior to the withdrawal date. As of the withdrawal date, all rights of participation in this Project Agreement shall cease for the withdrawing Project Agreement Member. The financial obligation as prescribed in the Bylaws' Section 5.11 in effect on the withdrawal date, shall consist of the

withdrawing Member's share of the following costs: (a) payment of its share of all non-contract costs incurred prior to the date of the written notice of withdrawal, and (b) those contract costs associated with funds approved in either contract amendments or task orders that were approved prior to the date of the written notice of withdrawal for which the contractor's work extends beyond the withdrawal date. However, a withdrawing member shall have no liability for any change order or extensions of any contractor's work that the remaining Project Agreement Members agree to after the withdrawing Member provides written notice of withdrawal. Withdrawal from this Project Agreement shall not be considered a Material Change Item and shall not be subject to the Dispute Resolution process provided for in Section 13.3 of the Bylaws.

Section 10 Admission of New Project Agreement Members

Additional Members of the Authority and Non-Member Participating Parties may become Project Agreement Members upon (a) confirmation of compliance with the membership requirements established in the Bylaws, (b) the affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g) of the then-current Project Agreement Members, (c) the affirmative vote of at least 75% of the total number of Directors of the Authority, and (d) upon such conditions as are fixed by such Project Agreement Members.

Section 11 Amendments

This Project Agreement may be amended only by a writing executed by the Authority and at least 75% of the total weighted vote as provided in Subsection 3(g) of the then-current Committee members.

Section 12 Assignment; Binding on Successors

Except as otherwise provided in this Project Agreement, the rights and duties of the Project Agreement Members may not be assigned or delegated without the written consent of the other Project Agreement Members and the Authority, which consent shall not be unreasonably withheld. Any attempt to assign or delegate such rights or duties in contravention of this Project Agreement shall be null and void. Project Agreement Members may assign and delegate their rights and duties under this Project Agreement to other Project Agreement Members, and they may assign, sell, trade, or exchange all or a fraction of the potential benefits (e.g. acre-feet of water supply, megawatt-hours of power) they expect to receive through their participation in this Project Agreement. Any approved assignment or delegation shall be consistent with the terms of any contracts, resolutions, indemnities and other obligations of the Authority then in effect. This Project Agreement shall inure to the benefit of, and be binding upon, the successors and assigns of the Authority and the Project Agreement Members.

Section 13 Counterparts

This Project Agreement may be executed by the Authority and each Project Agreement Member in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument. Facsimile and electronic signatures shall be binding for all purposes.

Section 14 Merger of Prior Agreements

This Project Agreement and the exhibits hereto constitute the entire agreement between the parties and supersede all prior agreements and understanding between the parties relating to the subject matter hereof. This Project Agreement is intended to implement, and should be interpreted consistent with, the Joint Powers Agreement.

Section 15 Severability

If one or more clauses, sentences, paragraphs or provisions of this Project Agreement shall be held to be unlawful, invalid or unenforceable, the remainder of the Project Agreement shall not be affected thereby.

Section 16 Choice of Law

This Project Agreement shall be governed by the laws of the State of California.

Section 17 Notices

Notices authorized or required to be given under this Project Agreement shall be in writing and shall be deemed to have been given when mailed, postage prepaid, or delivered during working hours, to the addresses set forth **Exhibit E (“Notifications”)**, or to such other address as a Project Agreement Member may provide to the Authority and other Project Agreement Members from time to time.

IN WITNESS WHEREOF, the Authority and Project Agreement Members hereto, pursuant to resolutions duly and regularly adopted by their respective governing bodies, have caused their names to be affixed by their proper and respective officers on the date shown below:

Dated: _____

SITES PROJECT AUTHORITY

By: _____

Name:

Title:

[PROJECT AGREEMENT MEMBER]

Dated: _____

(Authority & Project Agreement Member)

By: _____

Name:

Title:

EXHIBIT A

PROJECT AGREEMENT MEMBERS

Participant	Participation (Annualized Acre-Foot)	
	Preliminary	Percent
American Canyon, City of	~4,000	1.7%
Antelope Valley-East Kern Water Agency	~500	0.2%
Carter Mutual Water Company ‡	~500	0.2%
Coachella Valley Water District	~10,000	4.3%
Colusa County	~10,000	4.3%
Colusa County Water District	~13,100	5.6%
Desert Water Agency	~6,500	2.8%
Glenn-Colusa Irrigation District	~5,000	2.1%
Metropolitan Water District of S. CA	~50,000	21.4%
Pacific Resources Mutual Water Company ‡	~20,000	8.5%
Reclamation District 108	~5,000	2.1%
San Bernardino Valley Municipal Water District	~21,400	9.1%
San Geronio Pass Water Agency	~14,000	6.0%
Santa Clara Valley Water District	24,000	10.3%
Santa Clarita Valley Water Agency	~5,000	2.1%
TC-4: Cortina Water District	~300	0.1%
TC-4: Davis Water District	~2,000	0.9%
TC-4: Dunnigan Water District	~2,774	1.2%
TC-4: LaGrande Water District	~1,000	0.4%
Westside Water District	~15,000	6.4%
Wheeler Ridge-Maricopa Water Storage District	14,000	6.0%
Zone 7 Water Agency	~10,000	4.3%
Potential new participants	TBD	%
Total:	234,074	100.0%

Participation Percentages exclude State of California and United States Bureau of Reclamation share of the Project.

NOTE: Any annualized amounts listed for Phase 2 are preliminary and are based on best estimates received after participants' respective review of the draft financing plan and draft Phase 2 Reservoir Project Agreement. These amounts do not represent the results of any action having been taken by the participants' respective governing body to formally execute the Phase 2 Reservoir Project Agreements. Final participation amounts will be established after interim financing terms and conditions have been provided and incorporated into the final Phase 2 Reservoir Project Agreement.

‡ Denotes a non-public agency. Refer to California Corporations Code Section 14300 et. seq. with additional requirements provided in both the Public Utilities Code and Water Code.

EXHIBIT B

2019 WORK PLAN

2018 November 16 Reservoir Committee Meeting - Attachment A - Agenda Item 3-3

Category	(Multiple Items)
Action	(Multiple Items)
Funding Source	(Multiple Items)
Work Manager	(All)
Priority	(All)

Report: **Reservoir Committee 2019 Work Plan & Budget**
Report Date: 2018 Nov 12

Expense (-) or Revenue (+)	Cost Center	Task	Resource	Reprioritize	Proposed Budget
				Currently Approved Budget	Authority= 12 mon Res. Comm= 9 mon
				Sum of Total End of Phase 1	Sum of Total 2019
Expense	C.R. Policy			\$ -	\$ (2,067,094)
	Engagement			\$ -	\$ (135,000)
	Operations	Contingency		\$ -	\$ -
		Env Interests		\$ (44,936)	\$ (120,552)
		Exchange		\$ -	\$ (75,550)
		Modeling		\$ (325,000)	\$ (998,480)
		Op POA		\$ (59,488)	\$ (61,040)
		Staff+		\$ (69,705)	\$ (417,555)
		Storage		\$ (17,824)	\$ (136,300)
		Water Rights		\$ (29,712)	\$ (204,264)
		Water Rights+		\$ (29,712)	\$ (119,892)
	Operations Total			\$ (576,377)	\$ (2,133,633)
	Power	Grid Interconn+		\$ -	\$ (1,097,880)
		H2oPower+		\$ -	\$ (668,453)
		Staff Aug+		\$ -	\$ (632,880)
		Staff+		\$ -	\$ -
	Power Total			\$ -	\$ (2,399,213)
	Res. Comm. O	Advisory		\$ (43,200)	\$ (82,565)
		Office		\$ -	\$ (133,100)
		Participation		\$ (109,800)	\$ (210,600)
		PROCURE		\$ -	\$ (80,240)
		PROCURE-2		\$ -	\$ -
		Rebalance		\$ (8,400)	\$ (134,070)
		Staff		\$ (6,000)	\$ (1,739,573)
		Staff Aug		\$ -	\$ (4,237,495)
		Staff Aug+		\$ -	\$ (225,990)
		Staff+		\$ -	\$ -
		Support		\$ (26,925)	\$ (107,678)
		Technology		\$ (3,330)	\$ (13,280)
		USDA-1		\$ (10,000)	\$ (10,800)
		WSIP-1		\$ (51,440)	\$ (81,960)
	Res. Comm. OH Total			\$ (259,095)	\$ (7,057,351)
	Water	Dam Design		\$ -	\$ (8,776,500)
		Economics+		\$ -	\$ (329,880)
		EIR-EIS		\$ (165,000)	\$ (2,371,767)
		Field Studies		\$ (200,000)	\$ (887,876)
		Field Surveys		\$ -	\$ (91,980)
		Permit Coord		\$ (590,000)	\$ (8,095,900)
		Rights of Entry		\$ (306,000)	\$ (600,119)
	Water Total			\$ (1,261,000)	\$ (21,154,022)
Expense Total				\$ (2,096,472)	\$ (34,946,312)

Summary - Page 1 of 2

NOTE: 2019 proposed budget, which is applicable to this Agreement, was approved by the Reservoir Committee at their November 16, 2018 meeting with the Reservoir Committee's share of expenses listed on page B-2.

				Reprioritize Currently Approved Budget	Proposed Budget Authority= 12 mon Res. Comm= 9 mon
Expense (-) or Revenue (+)	Cost Center	Task	Resource	Sum of Total End of Phase 1	Sum of Total 2019
Revenue	Conversion			\$ -	\$ 2,067,094
	WIIN			\$ -	\$ 8,776,500
	WSIP			\$ 821,603	\$ 10,077,760
	Res. Comm.			\$ -	\$ 14,044,440
Revenue Total				\$ 821,603	\$ 34,965,795
Grand Total				\$ (1,274,870)	\$ 19,482

EXHIBIT C

NOTIFICATIONS

Attention: Mr. Steve Hartwig
City of American Canyon
4381 Broadway, Suite 201
American Canyon, CA 94503

Attention: Mr. Tom Charter
c/o Ms Jamie Traynham
Davis Water District
P.O. Box 83
Arbuckle, CA 95912

Attention: Mr. Dwayne Chisam
Antelope Valley-East Kern WA
6500 West Avenue N
Palmdale, CA 93551

Attention: Mr. Mark Krause
Desert Water Agency
1200 South Gene Autry Trail
Palm Springs, CA 92264

Attention: Mr. Ben Carter
Carter MWC
4245 River Road
Colusa, CA 95932

Attention: Mr. Bill Vanderwaal
Dunnigan Water District
P.O. Box 84
Dunnigan, CA 95937

Attention: Mr. Jim Barrett
Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Attention: Mr. Thad Bettner
Glenn-Colusa Irrigation District
P.O. Box 150
Willows, CA 95988

Attention: Ms. Wendy Tyler
Colusa County
547 Market St., Suite 102
Colusa, CA 95932

Attention: Mr. Matt LaGrande
LaGrande Water District
P.O. Box 370
Williams, CA 9598

Attention: Ms. Shelley Murphy
Colusa County Water District
P.O. Box 337
Arbuckle, CA 95912

Attention: Mr. Steve Arakawa
Metropolitan Water District of Southern
California
1121 L Street, Suite 900
Sacramento, CA 95814

Attention: Mr. Jim Peterson
Cortina Water District
P.O. Box 489,
Williams, CA 95987

Attention: Mr. Preston Brittain
Pacific Resources MWC
4831 Calloway Drive, Ste. 102
Bakersfield, CA 93312
Bakersfield, CA 93312

Attention: Mr. Bill Vanderwaal

Reclamation District 108
P.O. Box 50
Grimes, CA 95950

Attention: Mr. Dirk Marks

Santa Clarita Valley Water Agency
27234 Bouquet Canyon Road
Santa Clarita, CA 91350

Attention: Mr. Doug Headrick

San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408-3593

Attention: Dan Ruiz

Westside Water District
5005 State Hwy 20
Williams, CA 95987

Attention: Mr. Jeff Davis

San Geronio Pass Water Agency
1210 Beaumont Ave,
Beaumont, CA 92223

Attention: Robert Kunde

Wheeler Ridge-Maricopa Water Storage District
12109 Highway 166
Bakersfield, CA 93313

Attention: Ms. Cindy Kao

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686

Attention: Ms. Valerie Pryor

Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 945

Attention: Mr. Dirk Marks

THIRD AMENDMENT TO 2019 RESERVOIR PROJECT AGREEMENT

BY AND AMONG
SITES PROJECT AUTHORITY

and

THE PROJECT AGREEMENT MEMBERS LISTED HEREIN

Dated as of January 1, 2022

THIS THIRD AMENDMENT TO 2019 RESERVOIR PROJECT AGREEMENT (this “Third Amendment”), dated as of January 1, 2022, by and among SITES PROJECT AUTHORITY, a joint powers authority duly organized and existing under the laws of the State of California (the “Authority”), and the project agreement members listed in the Agreement referenced below (the “Project Agreement Members”) amends that certain 2019 Reservoir Project Agreement dated as of April 1, 2019 (the “Original Agreement”), as previously amended by the First Amendment to 2019 Reservoir Project Agreement dated as of January 1, 2020 (the “First Amendment”) and by the Second Amendment to 2019 Reservoir Project Agreement dated as of July 1, 2020 (the “Second Amendment” and, together with the Original Agreement, the First Amendment and the Second Amendment, the “Agreement”), each by and among the Authority and the Project Agreement Members;

WITNESSETH:

WHEREAS, Authority and the Project Agreement Members have determined to approve an Amendment 3 Work Plan and to extend the term of the Agreement to December 31, 2024; and

WHEREAS, under Section 11 of the Agreement, the Agreement may be amended by a writing executed by the Authority and at least 75% of the total weighted vote of the then current Committee members as provided in Subsection 3(g); and

WHEREAS, except as provided below in Section 2.07 below, all acts, conditions and things required by law to exist, to have happened and to have been performed precedent to and in connection with the execution and the entering into of this Third Amendment do exist, have happened and have been performed in regular and due time, form and manner as required by law, and the parties hereto are now duly authorized to execute and enter into this Third Amendment;

NOW, THEREFORE, THIS THIRD AMENDMENT WITNESSETH, the Authority and the Project Agreement Members agree, as follows:

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. All capitalized terms not otherwise defined herein shall have the meaning set forth in the Agreement.

ARTICLE II

AMENDMENTS TO AGREEMENT

Section 2.01. Project Agreement Members.

(a) Effective January 1, 2022, Exhibit A to the Agreement titled “Project Agreement Members” shall be removed and replaced with Exhibit A to this Third Amendment titled “Project Agreement Members.”

Section 2.02. Work Plan.

(a) Effective January 1, 2022, the Amendment 2 Work Plan attached as Exhibit B to the Second Agreement shall be supplemented by the Work Plan attached hereto as Exhibit B (the “Amendment 3 Work Plan”).

Section 2.03. Funding.

The Agreement is hereby amended to remove Section 4(a) in its entirety and replace it with the following:

“(a) Budget. The Committee shall, in cooperation with the Authority’s Board, provide and approve both a Fiscal Year operating budget and reestablish a Phase 2 budget target, annually or more frequently as needed. The Project Agreement Members shall contribute their respective pro-rata share of the budgeted sums reflected in the Amendment 3 Work Plan in accordance with Section 5 of this Project Agreement. The contribution with respect to the pro-rata budgeted sums reflected in the Amendment 3 Work Plan shall be payable by each Project Agreement Member in three installments. The first installment shall be in an amount equal to \$100 per acre-foot and shall be payable by no later than May 1, 2022. The second installment shall be in an amount equal to up to \$140 per acre-foot and shall be payable by no later than January 1, 2023. The third installment shall be in an amount equal to up to \$160 per acre-foot and shall be payable by no later than January 1, 2024. The obligation of the Project Agreement Members to make the second installment and third installment shall be conditioned upon the Authority and the Committee reapproving the Amendment 3 Work Plan or approving an amendment thereto by (i) an affirmative vote of at least 75% of the total number of Directors of the Authority Board and (ii) an affirmative vote of at least 75% of the total weighted vote as provided at Subsection 3(g) of the then-current Committee members, prior to January 1, 2023 or January 1, 2024, as applicable.”

Section 2.04. Future Development of the Proposed Sites Reservoir Project.

The Agreement is hereby amended to add the below Sections 6(c), 6(d) and 6(e):

“(c) On or prior to March 31, 2022, each Project Agreement Member shall provide the Authority with a completed Project Agreement Member Project Payment Annex in the form attached hereto as Exhibit C. The Project Agreement Members, upon written request of the Authority, will meet with Authority staff from time to time, but not more often than once per calendar quarter, at which meeting, Authority staff will provide such Project Agreement Members with information regarding the then-current financing options being considered by the Authority and the expected terms of such financing options and the Project Agreement Member will provide updates regarding the status of the items identified in the Project Agreement Member Project Payment Annex.

(d) On or prior to June 30, 2023, each Project Agreement Member shall provide the Authority with a written update (the “Project Agreement Member Update”) with respect to the progress in the implementation of such repayment option, the remaining actions to be taken and the estimated completion dates.

For those Project Agreement Members that identified special benefit assessments or land based charges imposed in an improvement district as a source of repayment for an Authority

financing in its Project Agreement Member Payment Annex, the Project Agreement Member Update will also include a confirmation that such Project Agreement Member has the legal or contractual authority to discontinue water service to a water user that is delinquent in the payment of such special benefit assessment or land based charge, as applicable.

The Project Agreement Member Update will also include a confirmation that the Project Agreement Member has adopted a debt management policy that is compliant with California Government Code Section 8855(i), or, if such Project Agreement Member has not adopted such a debt management policy, the Project Agreement Member Update will include a statement that such Project Agreement Member expects to adopt such a debt management policy or an opinion from the general counsel to such Project Agreement Member to the effect that such a debt management policy is not required to be adopted by the Project Agreement Member to finance its share of the Project.

The Project Agreement Member Update shall also identify any change in the proposed source of repayment from the source identified in the Project Agreement Member Payment Annex previously submitted to the Authority.

(e) The Project Agreement Members that identified the repayment options of either special benefit assessments or land based charges imposed in an improvement district in their respective Project Agreement Member Payment Annexes agree to use best efforts to complete the necessary procedures to comply with the applicable requirements of Proposition 218 by no later than June 30, 2023.”

Section 2.05. Term. The Agreement is hereby amended to remove Section 8(b) in its entirety and replace it with the following:

“(b) The term of this Project Agreement shall continue until December 31, 2024. In the event that this Third Amendment is not approved by Project Agreement Members with the requisite percentage of the total weighted vote as set forth in the Agreement by March 31, 2022, the Agreement shall be revived immediately upon approval by such requisite percentage, without any additional approval of the Project Agreement Members, and this Third Amendment shall become effective.”

Section 2.06. Admission of New Project Agreement Members. The Agreement is hereby amended to add the following sentence to end of the paragraph included under Section 10 of the Agreement:

“The Authority shall have the right to charge Project Agreement Members executing the Agreement after a date determined by the Board a fee, which such fee shall be established by the Board, to compensate Project Agreement Members who executed the Agreement prior to a date determined by the Board, for providing funding for the initial phases of the Project.”

Section 2.07. California Environmental Quality Act. The Agreement is hereby amended to add the following Section 18:

“Section 18 California Environmental Quality Act

Notwithstanding any provision of this Agreement, the Authority and the Project Agreement Members fully reserve all of their respective rights, powers, authority and discretion with respect to

the proposed Project pursuant to the agencies' respective obligations and responsibilities under the California Environmental Quality Act ("CEQA"). This includes: (A) the power and discretion of the Authority as the lead agency, upon the completion of its CEQA review, to adopt feasible mitigation measures or a feasible project alternative, to approve the proposed Project based on the requisite CEQA findings, or to disapprove the proposed Project; and (B) the powers and discretion of the Project Agreement Members concerning the specific matters within their respective jurisdiction and authority acting as responsible agencies under CEQA. Any future decisions on whether to issue an approval of the proposed Project, and if so, how to issue such approval, will not be made until the agency making the decision has first completed its CEQA review of the proposed Project."

ARTICLE III

PROJECT AGREEMENT MEMBER PARTICIPATION

Section 3.01. Project Agreement Participation. Each Project Agreement Member shall specify its participation in the Sites Reservoir Project by indicating its storage amount in the Sites Reservoir Project on the signature page to this Third Amendment. Based upon the respective participation elections of the Project Agreement Members, the Authority shall update Exhibit A pursuant to Section 5 of the Agreement.

ARTICLE IV

MISCELLANEOUS

Section 4.01. Effectiveness of Agreement. Except as expressly amended by this Third Amendment, the Agreement is hereby ratified and confirmed and shall continue in full force and effect in accordance with the terms and provisions thereof. The amendments set forth in this Third Amendment shall be incorporated as part of the Agreement upon their effectiveness in accordance with Section 11 of the Agreement.

Section 4.02. Execution in Several Counterparts. This Third Amendment may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the Authority and the Project Agreement Members shall preserve undestroyed, shall together constitute but one and the same instrument.

Section 4.03. Laws Governing Third Amendment. The effect and meaning of this Third Amendment and the rights of all parties hereunder shall be governed by, and construed according to, the laws of the State.

IN WITNESS WHEREOF, the Authority and Project Agreement Members hereto, pursuant to resolutions duly and regularly adopted by their respective governing bodies, have caused their names to be affixed by their proper and respective officers on the date shown below:

Dated: _____

SITES PROJECT AUTHORITY

By: _____
Name: _____
Title: _____

[PROJECT AGREEMENT MEMBER]

Dated: _____

(Authority & Project Agreement Member)

By: _____
Name: _____
Title: _____

[PROJECT AGREEMENT MEMBER]
REPRESENTATIVES

The primary and alternate representatives of the [PROJECT AGREEMENT MEMBER] are identified below.

Primary Representative:

Alternate Representative:

ELECTION OF PARTICIPATION AMOUNT

[PROJECT AGREEMENT MEMBER] hereby elects to participate in the Sites Reservoir Project in the below amount.

- a) **Annualized Acre-Foot**
(acre-feet of releases)
- b) **Storage Allocation**
(acre-feet of storage)
*Box "a" * 6.234*
- c) **Total Budget Authorization**
*Box "a" * \$400 per acre-foot*

*****PARTICIPATION LEVELS ARE PRELIMINARY AND MAY BE ADJUSTED FOLLOWING REBALANCING*****

EXHIBIT A

PROJECT AGREEMENT MEMBERS

Participant	Third Amendment Participation		Percent
	Annualized Acre-Foot (Box "a")	Storage Allocation (Box "b")	
American Canyon, City of	4,000	24,936	2.4%
Antelope Valley-East Kern Water Agency	500	3,117	0.3
Carter Mutual Water Company #	300	1,870	0.2
Coachella Valley Water District	10,000	62,340	6.0
Colusa County	10,000	62,340	6.0
Colusa County Water District	10,073	62,795	6.0
Cortina Water District	450	2,805	0.3
Davis Water District	2,000	12,468	1.2
Desert Water Agency	6,500	40,521	3.9
Dunnigan Water District	2,972	18,527	1.8
Glenn-Colusa Irrigation District	5,000	31,170	3.0
Irvine Ranch Water District	1,000	6,234	0.6
LaGrande Water District	1,000	6,234	0.6
Metropolitan Water District of S. CA	50,000	311,700	29.8
Reclamation District 108	4,000	24,936	2.4
Rosedale-Rio Bravo Water Storage District	500	3,117	0.3
San Bernardino Valley Municipal Water District	21,400	133,408	12.8
San Geronio Pass Water Agency	14,000	87,276	8.4
Santa Clara Valley Water District	500	3,117	0.3
Santa Clarita Valley Water Agency	5,000	31,170	3.0
Westside Water District	5,375	33,508	3.2
Wheeler Ridge-Maricopa Water Storage District	3,050	19,014	1.8
Zone 7 Water Agency	10,000	62,340	6.0
Total:	167,620	1,044,943	100.0

Participation Percentages exclude State of California and United States Bureau of Reclamation share of the Project.

Denotes a non-public agency. Refer to California Corporations Code Section 14300 et. seq. with additional requirements provided in both the Public Utilities Code and Water Code.

EXHIBIT B
AMENDMENT 3 WORK PLAN

Exhibit B
Reservoir Committee
2022, 2023 and 2024 Work Plan Summary

Reservoir Committee and Authority Board Annual Budget for FY 2022, FY 2023 and FY 2024 (\$000)

Work Plan	Subject Area	2022	2023	2024	Total
Revenue	Participation Revenue	\$16,762	\$23,467	\$26,819	\$67,048
	Authority Board Seats	\$505	\$505	\$505	\$1,515
	Federal Revenue	\$10,000	\$20,000	\$20,000	\$50,000
	State Revenue	\$18,300	\$0	\$0	\$18,300
	Carry-over Funds	\$6,000	\$0	\$0	\$6,000
Revenue Total		\$51,567	\$43,972	\$47,324	\$142,863
Expenses	Communications	(\$477)	(\$477)	(\$495)	(\$1,449)
	Engineering	(\$18,715)	(\$30,516)	(\$20,485)	(\$69,716)
	External Affairs	(\$273)	(\$273)	(\$282)	(\$828)
	General Project Activities	(\$620)	(\$545)	(\$565)	(\$1,730)
	Permitting	(\$7,503)	(\$4,731)	(\$2595)	(\$14,829)
	Planning	(\$5,092)	(\$1,212)	(\$278)	(\$6,582)
	Program Operations	(\$8,594)	(\$7,440)	(\$5690)	(\$21,724)
	Real Estate	(\$902)	(\$903)	(\$935)	(\$2,740)
Expenses Total		(\$42,176)	(\$46,097)	(\$31,325)	(\$119,598)
Grand Total		\$9,391	(\$2,125)	\$15,999	\$23,265

EXHIBIT C

FORM OF PROJECT AGREEMENT MEMBER
PROJECT PAYMENT ANNEX**Project Agreement Member:****Date:**

Expected Source(s) of Repayment For Authority Financing (Check Each Box That Applies):	<input type="checkbox"/> Amounts Collected Through Department of Water Resources State Water Project Annual Statement of Charges	<input type="checkbox"/> Water Rates and Charges (Proposition 218 Compliance Required)	<input type="checkbox"/> Water Rates and Charges (Proposition 218 Compliance Not Required)	<input type="checkbox"/> Special Benefit Assessment-Districtwide	<input type="checkbox"/> Special Benefit Assessment Levied by District on Certain Lands	<input type="checkbox"/> Land-Based Charges Imposed Within an Improvement District
If An Improvement District, Has It Been Formed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If no, is it anticipated to be formed by June 30, 2023? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If A Special Benefit Assessment, Has the Special Benefit Been Approved In An Amount To Pay Debt Service On The Authority Financing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If no, is it anticipated to be presented for landowner approval by June 30, 2023? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Does the District Have A Debt Management Policy Compliant With Section 8855(i) of the California Government Code?	<input type="checkbox"/> Yes	<input type="checkbox"/> No				

Sites Reservoir Project

Project Participants in the Sites Project Planning

Sacramento Valley

- Carter Municipal Water Company
- City of American Canyon
- Colusa County
- Colusa County Water District
- Cortina Water District
- Davis Water District
- Dunnigan Water District
- Glenn County
- Glenn-Colusa Irrigation District
- La Grande Water District
- Reclamation District 108
- City of Roseville
- Sacramento County Water Agency
- City of Sacramento
- Tehama Colusa Canal Authority
- Westside Water District
- Western Canal Water District

Bay Area

- Santa Clara Valley Water District
- Zone 7 Water Agency

Southern California

- Antelope Valley - East Kern Water Agency
- Coachella Valley Water District
- Desert Water Agency
- Irvine Ranch Water District
- Metropolitan Water District of Southern California
- San Bernardino Valley Municipal Water District
- San Geronio Pass Water Agency
- Santa Clarita Valley Water Agency

San Joaquin Valley

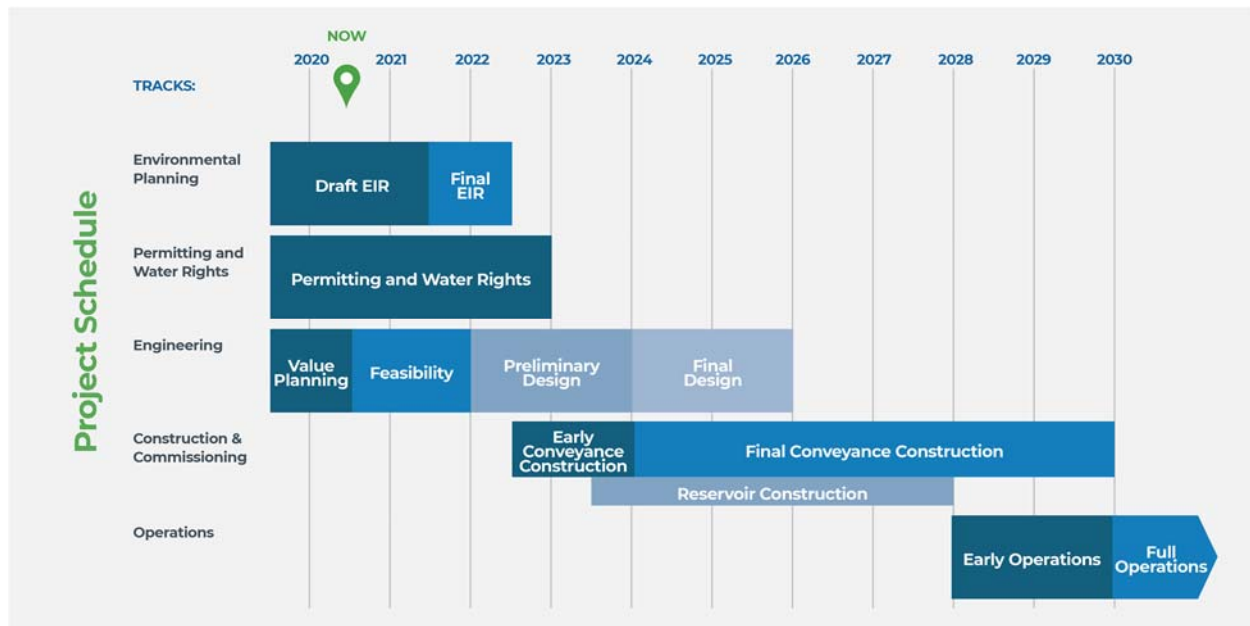
- Rosedale-Rio Bravo Water Storage District
- Wheeler Ridge - Maricopa Water Storage District

State/Federal

- California Department of Water Resources
- US Bureau of Reclamation



Sites Reservoir Schedule



	2020				2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	AMENDMENT 1A and 1B				AMENDMENT 2						
Go/No-Go Decision Points		★			★		★				
Participation Agreement Materials		◆	Home board package approved				◆	Home board package approved			
Value Planning		◆	Preferred Project Facilities								
Engineering			Engineering to support Project Description		Engineering to support Prop 1 Feasibility						
Confirm Operations and Temperature Benefits		◆	Preferred Project Operations								
Environmental Documentation						◆	EIR/EIS Response to Comments and Revisions		Final EIR/EIS	◆	
Ongoing Operations Modeling Support											
Prop 1 Feasibility Report (Env, Eng, Fin, Eco)					Submit to State	◆	State Review	◆	State Validation of Eligibility		
Advance Key Permits Needed for Project Certainty											
Water Rights									Submit Application	◆	
Biological Assessment					Submit to USFWS & NMFS	◆					
Incidental Take Permit (CDFW)							Submit to CDFW	◆			
106 Programmatic Agreement							Final Section 106 PA	◆			

NOTE: This graphic includes schedule drivers only and does not include all activities/deliverables. This work plan is based on current participation commitments.



Sites Reservoir Project

RDEIR/SDEIS Frequently Asked Questions

The following questions and answers are meant to respond to common questions about the potential environmental impacts of the proposed Sites Reservoir Project.

1. Would Sites Reservoir divert water from the Sacramento River during dry and critically dry years?

Yes, even during drier years there can be significant precipitation events that present conditions where water can be diverted safely from the river and placed in Sites Reservoir. All diversions would be subject to the highly protective operating conditions that are currently being proposed for the Sites Reservoir Project.

2. Would Sites Reservoir meaningfully address future droughts?

Sites Reservoir is an insurance policy for future droughts. Sites Reservoir does not rely on snowpack and if the scientific projections are correct about the impacts of climate change (i.e., California is expected to receive about the same annual precipitation that it currently does but more will come as rain than snow and be subject to year-to-year variability), then having Sites Reservoir would mean we can collect more water in the reservoir for use during future droughts.

3. Would Sites Reservoir decrease Delta flows?

Yes, slightly, when the Project is diverting. However, since the Sites Reservoir diversions would occur only when there are high river flows, any reduction to Delta flows would be minor and would not impact any of the beneficial uses of the water in the Delta. Storing water in Sites Reservoir during times when there is a lot of flow in the Sacramento River for use during times when the flows are low, including during drought periods, is part of the statewide strategy for adapting to changing climate conditions and to return much needed flexibility to our statewide water management system.

4. Have concerns about the impact of Sites Reservoir operations on the environment been addressed in the current proposal?

The Project operations have been modified substantially over the last two years to be more protective of the environment. These modifications have reduced the Project diversions from the Sacramento River substantially (almost in half) as compared to the criteria proposed in 2017. The current Project operations strikes the needed balance between environmental protections and Project affordability that has to exist for the Project to proceed.

5. Does this Project impact the Trinity River?

The Project would not affect or result in changes in the operation of the Central Valley Project (CVP), Trinity River Division facilities (including Clear Creek). Reclamation would continue to operate the Trinity River Division consistent with all applicable statutory, legal, and contractual obligations, including but not limited to the Trinity River Record of Decision (ROD), the 2017 ROD for the Long-Term Plan for the Lower Klamath River, and the provision of (not less than) 50,000 acre-feet identified in Trinity River Division Central Valley Project Act of 1955 to be made available to Humboldt County and downstream water users.



6. How does this Project impact water quality in the Sacramento River and Delta?

The Project would have some impacts to water quality and would also enhance beneficial uses of water, even improving water quality in some areas. For example, increases in outflow in drier years could reduce seawater intrusion into the Delta. During those same periods, exchanges with Sites water could benefit fish by preserving cold-water supplies from Shasta Lake, Lake Oroville, and Folsom Lake later into the year. The Sites Project Authority would implement best management practices to minimize any potential water quality impacts associated with facility operations and maintenance. These would include actions to prevent spills and reduce runoff that may cause sediment or contaminants to flow into waterbodies. Monthly water quality testing would be performed for discharges moving into and through the Yolo Bypass, and mitigation measures – such as mercury sediment management – would be implemented to counteract any impacts to water quality.

7. How will the Project benefit anadromous fish?

The additional water supply provided by Sites Reservoir may provide opportunities for improved management of salmonid habitat, particularly in the Sacramento River above Red Bluff Diversion Dam. By exchanging Sites water for CVP water, Reclamation has an additional tool to maintain and improve habitat for salmonid spawning, incubation, rearing, and migration. By delivering water to CVP contractors from Sites Reservoir, Reclamation may maintain supply in Shasta Lake for important periods to support these habitat conditions. The possible additional water supply in Shasta Lake can then be allocated during real-time management scenarios for a number of uses (e.g., cold-water pool maintenance, spring pulse or fall pulse flow events, reduced fall flows) that may provide enhanced anadromous fish benefits.

8. Will this Project curtail or otherwise reduce allocations for other water right holders?

Sites Reservoir would only divert water when flows in the Sacramento River meet minimum diversion criteria, when the Delta is in “excess” conditions, when all senior downstream water rights have been met, when all environmental permit conditions have been met, and when there is excess capacity within the conveyance facilities, such as the Tehama-Colusa and Glenn-Colusa Canals. The Project would not curtail or otherwise reduce allocations of water for other water right holders.





Water Planning & Stewardship Committee

Appropriate \$20 million, and
authorize an amendment to the
2019 Reservoir Project Agreement

Item 7-13

April 12, 2022

Topics

- Overview & Participants
- Project Benefits
- Key Progress & 2022-2024 Workplan
- Board Action

Sites Reservoir

Proposal Under Analysis



- 1.3 – 1.5 million acre-feet
- Off-stream Sacramento River storage
- Largest dedicated environmental storage
- Broad statewide involvement

Broad Statewide Involvement

● Bay Area

- Santa Clara Valley WD
- Zone 7 Water Agency

● San Joaquin Valley

- Rosedale-Rio Bravo WSD
- Wheeler Ridge - Maricopa

● Southern California

- Antelope Valley - East Kern WA
- Coachella Valley WD
- Desert Water Agency
- Irvine Ranch Water District
- Metropolitan Water District
- San Bernardino Valley MWD
- San Geronio Pass Water Agency
- Santa Clarita Valley Water Agency

● State/Federal

- California Dept. of Water Resources
- U.S. Bureau of Reclamation



Sites



● Sacramento Valley

- Carter Municipal Water Co.
- City of American Canyon
- Colusa County
- Colusa County Water District
- Cortina Water District
- Davis Water District
- Dunnigan Water District
- Glenn County
- Glenn-Colusa Irrigation District
- La Grande Water District
- Reclamation District 108
- Rosedale-Rio Bravo WSD
- City of Roseville
- Sacramento County WA
- City of Sacramento
- Tehama Colusa Canal Authority
- Westside Water District
- Western Canal Water District

Topics

- Overview & Participants
- Project Benefits
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- Board Action

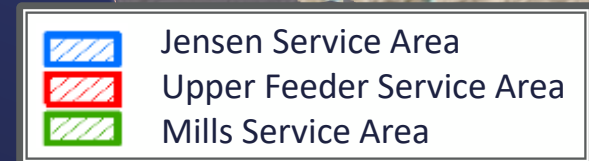
Sites Reservoir

Statewide Benefits



Sites Reservoir MWD Service Area Benefits

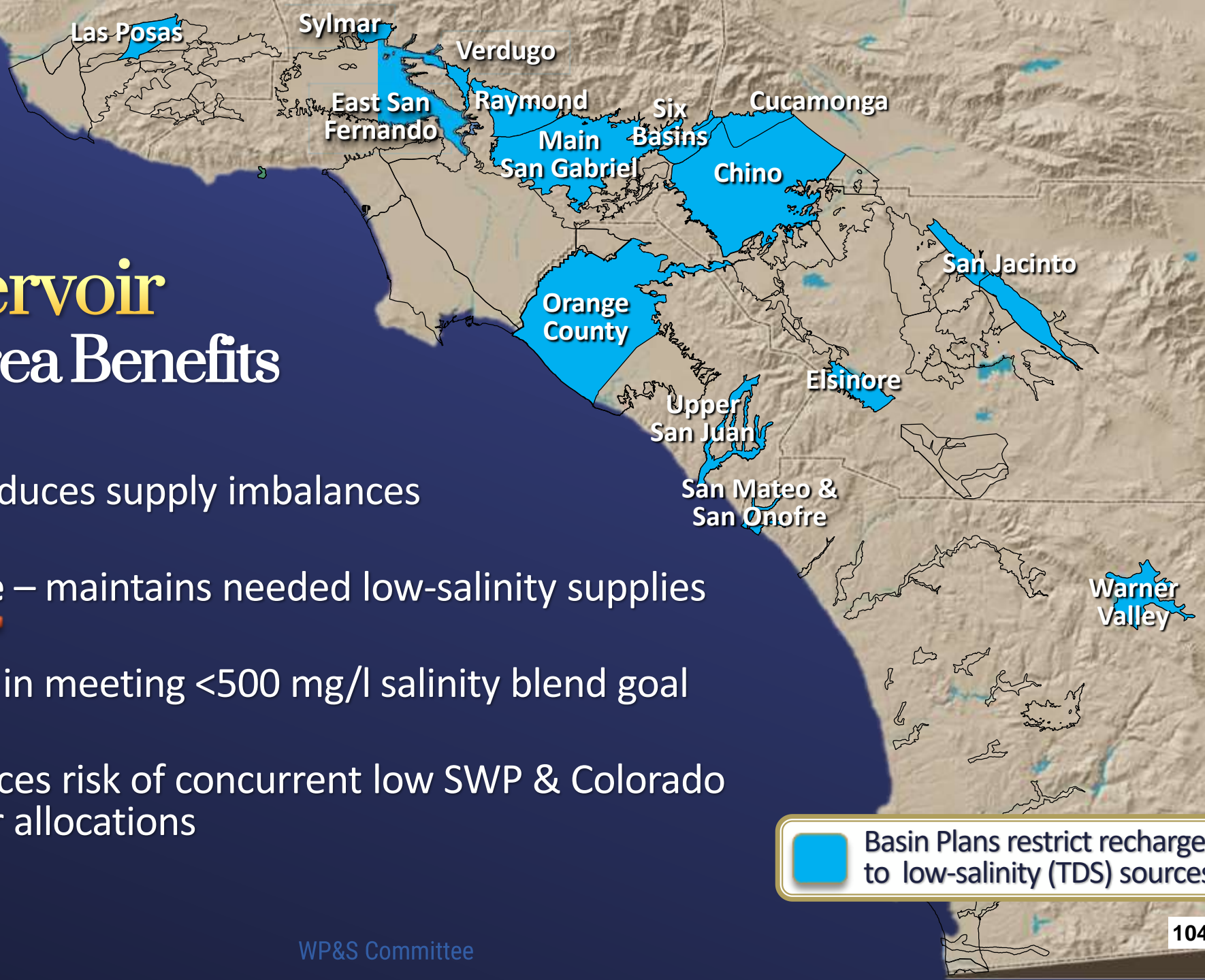
- ☒ **SWP Reliant Areas** – reduces supply imbalances
- ☐ **Groundwater Recharge** – maintains needed low-salinity supplies
- ☐ **Water Quality** – assists in meeting <500 mg/l salinity blend goal
- ☐ **Perfect Drought** – reduces risk of concurrent low SWP & Colorado River allocations



Sites Reservoir

MWD Service Area Benefits

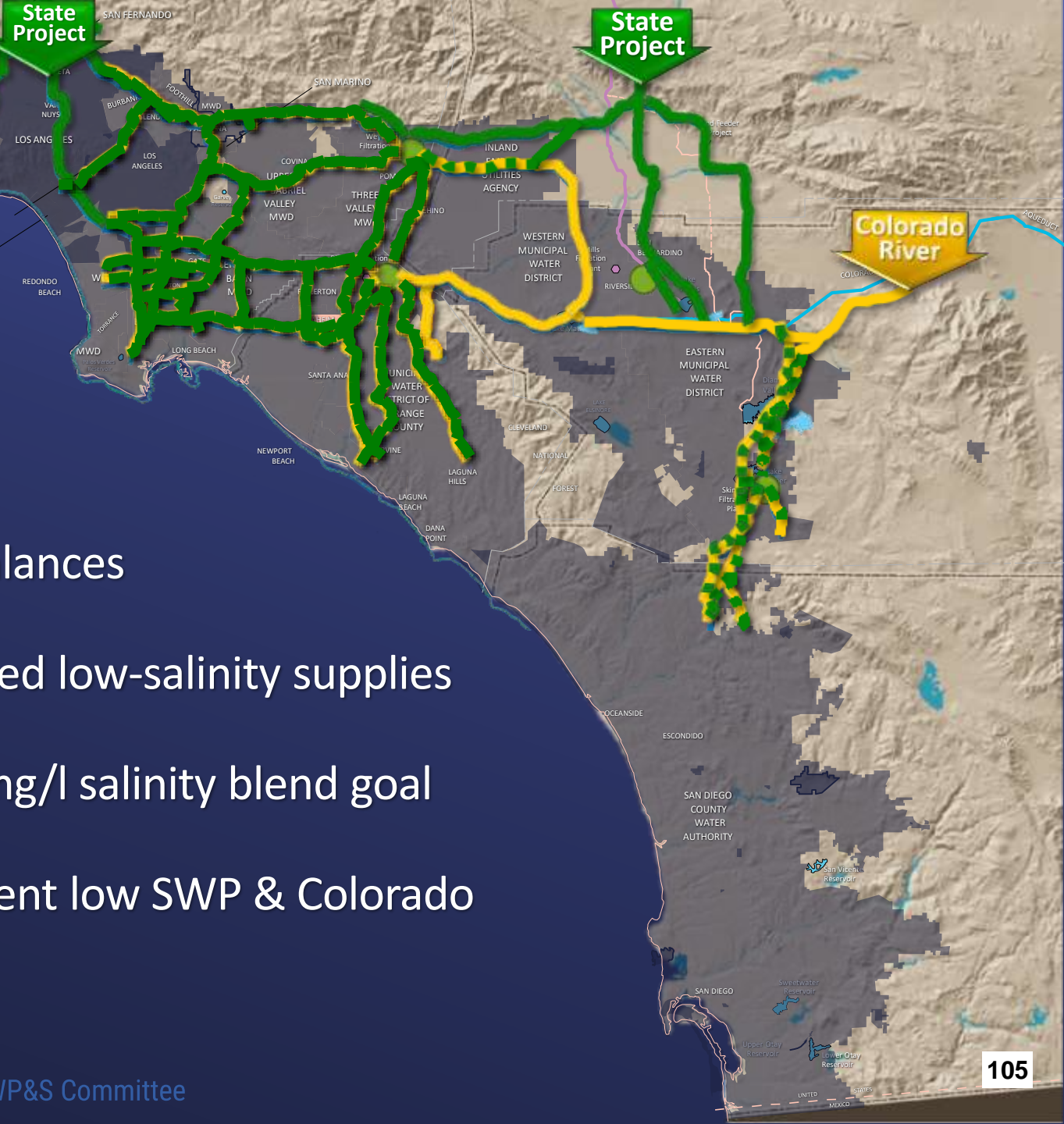
- ☐ SWP Reliant Areas – reduces supply imbalances
- ☒ Groundwater Recharge – maintains needed low-salinity supplies
- ☐ Water Quality – assists in meeting <500 mg/l salinity blend goal
- ☐ Perfect Drought – reduces risk of concurrent low SWP & Colorado River allocations



 Basin Plans restrict recharge to low-salinity (TDS) sources

Sites Reservoir MWD Service Area Benefits

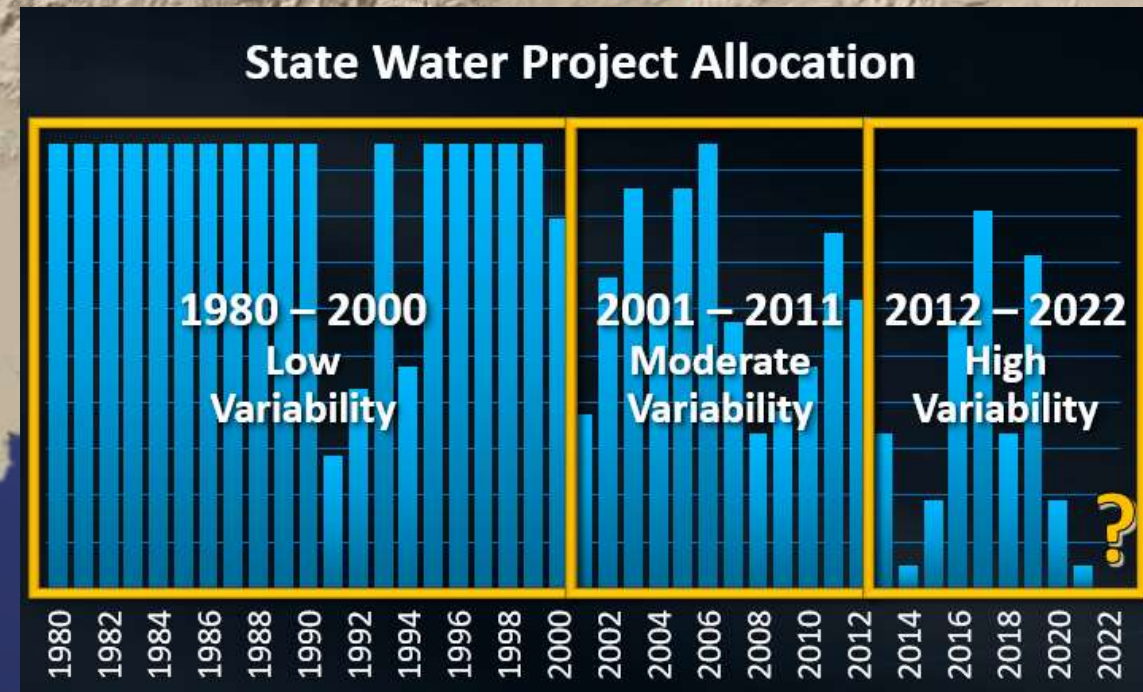
- ☐ SWP Reliant Areas – reduces supply imbalances
- ☐ Groundwater Recharge – maintains needed low-salinity supplies
- ☒ Water Quality – assists in meeting <500 mg/l salinity blend goal
- ☐ Perfect Drought – reduces risk of concurrent low SWP & Colorado River allocations



Sites Reservoir

MWD Service Area Benefits

- ☐ **SWP Reliant Areas** – reduces supply imbalances
- ☐ **Groundwater Recharge** – maintains needed low-salinity supplies
- ☐ **Water Quality** – assists in meeting <500 mg/l salinity blend goal
- ☒ **Perfect Drought** – reduces risk of concurrent low allocations of SWP and Colorado River supplies



Topics

- Overview & Participants
- Project Benefits
- Key Progress & 2022-2024 Workplan
- Board Action

Key Progress

✓ Technical Analyses

- Initial water supply modeling & operations
- Initial engineering design & cost estimates
- Value Planning project improvements


✓ Regulatory/Environmental

- Revised Draft Environmental Impact Report/Statement
- Regulatory agency consultation & initial permit application development

✓ State/Federal Funding

- \$875 million State Proposition 1 grant
- \$104 million federal WIIN Act grant
- \$449 million US Dept. of Agriculture loan
- \$2.2 billion federal WIFIA loan (application)





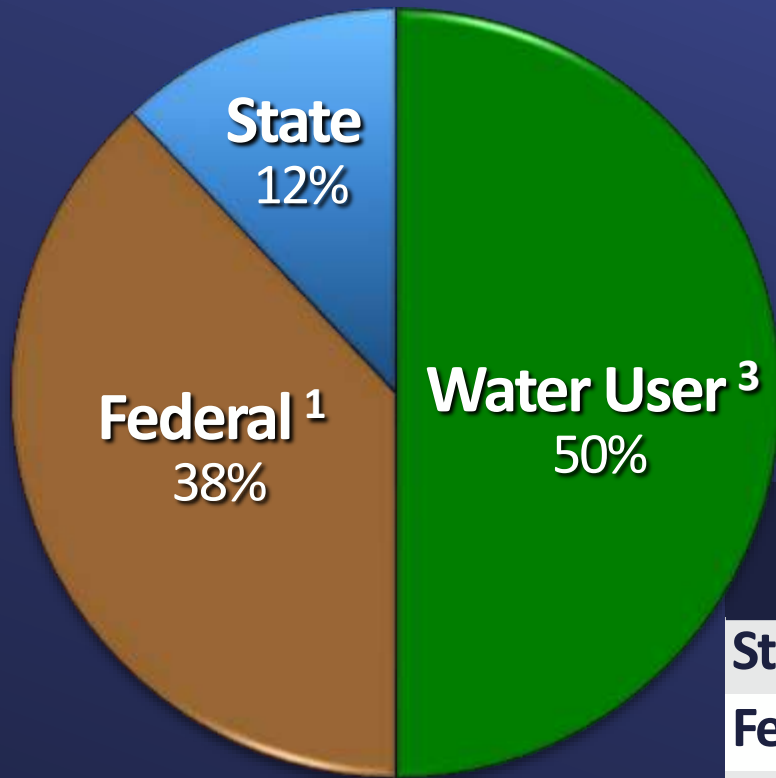
2022-24 Workplan

Focus & Key Deliverables

- Environmental
 - Final EIR/EIS & Record of Decision
- Permits/Agreements
 - Water rights permit
 - Environmental permits
 - Local agency agreements
- Project Operations
 - Final coordinated operations agreement with DWR/USBR
- Engineering
 - Advance 30% design & geotechnical investigations
- Develop mitigation & land acquisition master plan

Reservoir overlook – Governor Brown (2018)

1. 2022-24 Workplan, also referred to as the Amendment 3 Workplan



2022-24 Workplan 3-Year Budget¹

Source	2022	2023	2024	Total
State (Prop 1 Grant)	\$ 18,300,000	--	--	\$ 18,300,000
Federal (WIIN Act) ²	\$ 10,000,000	\$ 20,000,000	\$ 20,000,000	\$ 50,000,000
Water Users ³	\$ 17,267,000	\$ 23,972,000	\$ 27,324,000	\$ 68,563,000
Carryover Funds	\$ 6,000,000			\$ 6,000,000
TOTAL³	\$ 51,567,000	\$ 43,972,000	\$ 47,324,000	\$ 142,863,000
MWD Share ⁴	\$ 5,000,000	\$ 7,000,000	\$ 8,000,000	\$20,000,000

1. 2022-24 Workplan, also referred to as the Amendment 3 Workplan, is for the period of Jan. 1, 2022, through Dec. 31, 2024.

2. Subject to federal appropriation

3. Subject to individual participating agency Board approval

4. Assumes participation by Metropolitan based a 311,700 acre-ft of storage (also defined as an average yield of 50,000 AF/year)

Topics

- Overview & Participants
- Project Benefits
- Key Progress & 2022-2024 Workplan
- Board Action

Options

Option #1

- Authorize the General Manager to sign the Third Amendment to the 2019 Project Reservoir Agreement with the Sites Project Authority and other participants for participation in the Amendment 3 Workplan for an amount not to exceed \$20,000,000; and
- Appropriate \$20,000,000 for the Amendment 3 Workplan based on reserving 311,700 acre-feet (AF) of storage rights, which is equivalent to approximately 50,000 AF of annual water supply reservoir releases.

Option #2

- Do not authorize the General Manager to sign the Third Amendment to the 2019 Reservoir Project Agreement with the Sites Project Authority for participation in the Amendment 3 Workplan

Staff Recommendation

Option #1





- Board of Directors
Water Planning and Stewardship

4/12/2022 Board Meeting

9-2

Subject

Information on a proposed Water Shortage Emergency Condition and Emergency Water Conservation Program to Preserve Metropolitan's Supplies in the State Water Project-Dependent Areas

Executive Summary

As a result of record drought in California and extremely limited State Water Project (SWP) allocations, staff projects there will be insufficient supplies this year to meet the anticipated demands in areas staff has identified as the current SWP-dependent portions of Metropolitan's service area ("SWP Dependent Area"). Therefore, staff is proposing that the Board take the following actions to reduce demands and preserve supplies in this area:

1. Express support for the Governor's Executive Order N-7-22 on March 28, 2022, calling for all urban water suppliers to implement actions to reduce water use by 20-30 percent, depending on local conditions.
2. Declare that a Water Shortage Emergency Condition exists in the SWP Dependent Area.
3. Adopt the framework for a two-phase Emergency Water Conservation Program to reduce non-essential uses of water and preserve available water supplies for the greatest public benefit in the SWP Dependent Area. The first phase of this program would:
 - a. Limit landscape watering to one day per week in the SWP Dependent Area;
 - b. Require those member agencies whose service areas encompass all or a portion of the SWP Dependent Area to adopt and implement effective enforcement mechanisms to ensure compliance with this limit; and
 - c. Impose volumetric penalties of up to \$2,000 per acre-foot for non-compliance.

The one-day-per-week watering limitation would be effective immediately; any penalties for non-compliance would be assessed beginning June 1, 2022. If needed, the second phase of this program would involve a complete ban on landscape watering to further preserve available supplies in the SWP Dependent Area, with similar penalties for non-compliance.

4. Authorize the General Manager to finalize the terms for the Emergency Water Conservation Program consistent with the Board's authorization and in conformance with the California Department of Water Resources' (DWR) requirements to access SWP water for human health and safety purposes.
5. Require the General Manager to regularly report to the Board on the effectiveness of the first phase of the Emergency Water Conservation Program and authorize the General Manager to implement the second phase of the program if deemed necessary.
6. Require the General Manager to return to the Board with proposed modifications to the Emergency Water Conservation Program should he determine that implementation of the first and second phases of the program are not adequately preserving available supplies in the SWP Dependent Area. These modifications may include using a population-based approach to set limits or targets on per capita water use.

Staff projects that water savings attained from these actions, if implemented by member agencies and other retail agencies, would preserve supply for essential human health and safety needs through the fall. However, if drought conditions persist or the water savings from these actions fall short, staff is prepared to recommend a complete ban on outdoor watering in the SWP Dependent Area.

A public hearing and Special Board Meeting is scheduled for April 26, 2022, for the Board to consider these actions, which would be taken pursuant to Water Code section 350 et seq., Water Code section 375 et seq., and other applicable authorities, and in accordance with Metropolitan's Urban Water Management Plan and Water Shortage Contingency Plan, the Governor's Executive Orders related to the drought, and recent directives from DWR concerning the use of SWP supplies.

Details

The Need to Access Human Health and Safety Supplies from the SWP

For decades, Metropolitan has worked to improve its conveyance and distribution system to ensure flexibility in delivering SWP and Colorado River water throughout much of its service area. However, due to the depth and duration of the current drought, staff projects that Metropolitan will not be able to meet normal demands in the SWP Dependent Area utilizing existing resources. Despite best efforts to maximize available resources and operational flexibility this year, Metropolitan must seek additional human health and safety water allocated from DWR.

Beginning in water year 2020 (October 1, 2019, to September 30, 2020), watersheds supplying the SWP received well below-average precipitation. DWR classified water years 2020 and 2021 as dry and critically dry, respectively. Despite substantial precipitation in October and December 2021, precipitation in Northern California from January through March 2022 fell to the driest levels on record. In addition to reduced precipitation, California's climate is warming, and the historical relationships between temperature, precipitation, and runoff are changing. In 2021, the DWR's snowmelt runoff forecast over-estimated actual runoff by 68 percent. In 2022, despite DWR estimating runoff to a highly conservative 99th percentile, runoff forecasts for the Sacramento River dropped by 27 percent, further exacerbating supply planning.

The deteriorating hydrologic conditions led DWR to reduce the SWP Table A Allocation for 2022 from 15 to five percent of contract amounts on March 18, 2022. This follows a five percent SWP Table A Allocation in 2021. Coming in the third year of drought, this extremely low Table A allocation is insufficient to meet minimum human health and safety needs in the SWP Dependent Area. Accordingly, DWR will exercise a never-before-invoked provision of the water supply contract (Article 18a) that allows SWP water to be allocated on some other basis than Table A to meet minimum demands for domestic supply, fire protection, or sanitation. To that end, in October 2021 Metropolitan submitted a letter to DWR requesting delivery of certain human health and safety supplies to the SWP Dependent Area.

It should be noted that the boundaries of the SWP Dependent Area are not fixed and other Metropolitan supplies (such as previously stored SWP supplies from groundwater banking, carryover, flexible storage in Castaic Lake or Perris Lake, or north-of-Delta transfers) are also delivered through those service connections. The boundaries of the SWP Dependent Area have been reduced in recent years with the new ability to supply the Mills Water Treatment Plant from Diamond Valley Lake (May 2021) and through new water management programs such as the Operational Shift Cost Offset Program (May 2021) and the Reverse Cyclic Storage Program (February 2022).

Although the exact conditions to access human health and safety supplies are not finalized, DWR expects contractors receiving such supplies to mandate substantial reductions in water use consistent with these emergency drought circumstances. Further, DWR will require any water taken in 2022 for human health and safety purposes to be returned within five years, thus creating a water supply debt that effectively trims future Table A allocations and slows any storage recovery once the drought eases. Guidelines established by DWR are based on prior curtailment regulations adopted by the California State Water Resources Control Board (SWRCB) and could be further modified.

The Need for Demand Management in the SWP Dependent Area

Of most importance, the normal water demands of Member Agencies currently lying within the SWP Dependent Area cannot be met in 2022 without a real risk of depleting supplies needed for human health

and safety. Metropolitan must seek the water offered by DWR for human health and safety purposes and must conform to conditions that DWR places on its use.

In November 2021, the Board declared that specified emergency conditions exist within portions of the service area rather than across the entire regional system. The Board's action on that date also stated that, "should drought conditions persist or worsen in the coming months, Metropolitan's Board of Directors will consider declaring a water shortage emergency condition and imposing appropriate regulations, restrictions and penalties pursuant to California Water section 350 et seq., so as to conserve Metropolitan's water supplies for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection." Unfortunately, current hydrologic conditions require this type of action.

In 2014, the Board adopted a revised Water Supply Allocation Plan (WSAP) to be used when a regional shortage exists. The WSAP establishes baseline usage, regional shortage levels, and a surcharge for a member agency's aggregate water use above a predetermined allotment. The WSAP was designed and intended only for use during region-wide water shortages. The WSAP included provisions, based on Senate Bill X7-7 in 2009, to set a floor of minimum per capita usage of 100 gallons per person per day (gpcd) for total water use and 55 gpcd for indoor residential water use. Staff determined that the WSAP, with its regional focus, could not effectively or efficiently alleviate the circumstances of this current emergency.

Rather than modifying or reconstructing the WSAP for this rapidly developing emergency condition, a more expedient manner to preserve existing water supplies in the SWP Dependent Area is to reduce or eliminate non-essential uses in the directly affected areas. These non-essential uses (e.g., water for outdoor landscapes, filling swimming pools or fountains, or washing cars) could be curtailed through either price or non-price mechanisms.

A Framework for the Emergency Water Conservation Program

Based on these principles, and through collaboration with the affected member agencies, staff recommends the Board authorize an Emergency Water Conservation Program that initially focuses on non-price mechanisms to reduce outdoor watering. The proposed Emergency Water Conservation Program includes three main elements to achieve the goal of lowering normal demand and preserving water for human health and safety purposes:

- (1) Each member agency that currently receives SWP supplies¹ at the connections within the SWP Dependent Area must implement and enforce a restriction on outdoor watering of no more than one day per week (and outdoor watering may later be completely banned).
- (2) If a member agency either does not submit an acceptable plan to limit outdoor watering or if it inadequately enforces the plan, a penalty of up to \$2,000 per acre-foot shall be assessed on all supplies delivered to that non-compliant agency at the designated connections. Importantly, for wholesale member agencies, the penalty would apply only to that portion of water delivered to one or more of their non-compliant retail agencies. The penalty would not be applied to the full delivery to the wholesale member agency if only a portion of its retailers were non-compliant.
- (3) An agency **can entirely avoid these outdoor watering restrictions and penalties** if it takes sufficient action to entirely eliminate its use of SWP supplies at the designated connections.

Outdoor watering ordinances. Staff is coordinating with the affected member agencies to define elements of one-day-per-week watering. Metropolitan would not specify, for example, either the day of the week or any even/odd house numbering rotation. Metropolitan will, however, require that member agencies limit watering times to 8 minutes per station (for most irrigation systems) to prevent substitution of water use from newly banned days to permitted days. Hand watering of trees would be exempt from the one-day-per-week restriction.

Each retail water provider receiving supply at the designated connections must submit municipal codes or ordinances adopted by their respective governing bodies which clearly restrict outdoor watering to no more than one day per week. Staff will report progress and performance with these restrictions monthly to the Board. The

¹ SWP supplies are Metropolitan's supply inclusive of SWP Table A, carryover storage, flexible storage, north-of-Delta transfers, and previously stored Table A supplies pumped or exchanged through water management programs along the California Aqueduct.

call for one-day-per week watering would take place immediately upon the Board's authorization of the Emergency Water Conservation Plan (planned for April 26, 2022). In order to avoid a volumetric penalty for water used beginning in June 2022, the retailer must adopt and begin enforcement of the restrictions by May 31, 2022.

Enforcement plans. Equally important to the outdoor watering restrictions on paper is the agency's willingness and ability to enforce meaningful penalties for non-compliance. Staff is also coordinating with the member agencies in this area to develop a list of acceptable enforcement provisions, because enforcement mechanisms may vary widely. For example, one agency might use code enforcement officers to cite and educate customers. Another agency might use advanced metering infrastructure to flag suspected outdoor water use on banned days electronically. Yet another agency might use tiered pricing penalties to assure compliance. **The relevant enforcement principle is that the agency establishes a plan with real consequences to the consumer for inaction with either a one-day-per-week restriction or a ban on all outdoor water use.** Further, an enforcement plan must be auditable with a clear and transparent way to verify enforcement. Similar to the outdoor watering ordinances, enforcement plans must be adopted by the retail agency's governing body by May 31, 2022, to avoid the volumetric penalty beginning Jun. 1, 2022. If the retail agency is not the Metropolitan member agency, then the Metropolitan member agency must coordinate regulations to be enacted by the retail agency in the affected area.

Volumetric penalties. If a retail agency takes supply at the designated connection but does not adopt either an acceptable outdoor watering ordinance or enforcement plan, the volume of water purchased by the member agency at that connection for itself, or on behalf of the retail agency, shall be assessed a \$2,000 per acre-foot penalty. This penalty will be charged to the member agency separate from all other applicable rates and charges for water service, as it is not a charge for service. For wholesale member agencies, the penalty would apply only to that portion of water delivered to one or more of their non-compliant retail agencies. The penalty would not be applied to the full delivery to the wholesale Member Agency if only a portion of its retailers were non-compliant.

The fine of \$2,000 per acre-foot was selected to send a strong economic signal to reduce water use by complying with an outdoor watering ordinance and enforcement plan. Any penalties collected would be proportionately returned to member agencies (once compliant) to help defray enforcement or other costs incurred in conjunction with the proposed Emergency Water Conservation Program.

The outdoor watering ordinances, enforcement plans, and volumetric penalties listed above comprise the framework of the Emergency Water Conservation Plan. At the Special Board Meeting planned for April 26, 2022, the Board will consider whether to authorize the General Manager to finalize the plan's terms. Once final, the member agencies and retail agencies that are not member agencies would adopt ordinances and enforcement plans to avoid penalties to the Member agencies.

Assistance Provided to Member Agencies

Metropolitan will assist the member agencies in improving compliance with the watering restrictions and amplifying the serious message to consumers within the SWP dependent areas. Assistance will take these forms:

- (1) **Member Agency Administered Program (MAAP).** Metropolitan will make available the full allotment of the MAAP funds to the affected Member agencies. Metropolitan will allow affected member agencies to access remaining funds in the MAAP for enforcement activities for the current biennium. For the upcoming biennium, approximately \$4.2 million is proposed in the budget for the affected agencies. These funds would be made immediately available beginning July 1, 2021. In addition, any penalties paid for non-compliance with the Emergency Water Conservation Plan would likewise be made available to agencies for enforcement. A member agency wishing to access these funds must still submit a proposal for approval by Metropolitan.
- (2) **Assistance with public messaging for drought awareness and water conservation.** In Mar. 2022, the Board authorized staff to enter into a three-year contract with a media placement firm. From March – June 2022, up to \$3.5 million is available to develop and purchase advertising. Likewise, up to \$7.4 million is available in the proposed FY 2022-24 biennium budget. Metropolitan staff will coordinate closely with the public affairs staff of the affected member agencies to send an amplified and unified message to consumers about the one-day-per-week watering restrictions. Metropolitan will stand with the

member agencies in communicating these emergency conditions. Staff expects many opportunities to amplify the message also through the earned media of press conferences and news media stories.

Planned Monitoring and Reporting

Staff will report to the Water Planning and Stewardship Committee each month on progress achieved by the Emergency Water Conservation Program. Further, staff will partner with the member agencies to collect and report changes in per-capita water use. Staff will monitor progress and report back to the Board using these types of tools:

- Lists of agencies with compliant outdoor watering restrictions and enforcement plans.
- Change in Metropolitan water deliveries to the SWP Dependent Area.
- Total local supply production within the SWP Dependent Area.
- Water conservation and productions reports based on monthly data submitted to the SWRCB on residential per capita water use.
- Disaggregated data from more than 5,000 flow-monitoring devices installed on single-family homes in Metropolitan's service area (including approximately 1,500 within the SWP Dependent Area) showing changes in outdoor water use behavior.
- Remote-sensing imagery showing change in "greenness" of outdoor landscapes (this is a developing research method).

Through this monthly monitoring and through regular communications with the member agencies, the General Manager would inform the member agencies and the Board in advance of the intent to implement the second phase of the Emergency Water Conservation Plan and ban all outdoor watering.

Continuing Actions to Improve the Plan if the Drought Persists or Compliance Falters

The primary goals of the two-phase Emergency Water Conservation Plan are to (1) preserve Metropolitan's scarce supplies in 2022; (2) minimize the amount of SWP human health and safety water that Metropolitan must access (and pay back); and (3) prepare for a potentially dry 2023. Preserving water supply now allows the potential for a new water year to develop, and the plan could be modified as conditions improve. Alternatively, despite the best efforts of agencies in the SWP Dependent Area to reduce or eliminate non-essential water use, continuing drought conditions may force further action.

Staff is actively exploring with the member agencies alternative approaches to reduce demands if the outdoor watering restrictions within the proposed Emergency Water Conservation Plan prove ineffective, disproportionate, or unworkable. Staff will develop a population-based method designed to share the remaining supply across the agencies using limits on per-capita water use rather than solely on outdoor watering restrictions. The population-based method, or a hybrid approach combining outdoor watering restrictions with a backstop of a population-based limit, may prove to be a more viable tool to reduce water use. If an alternative approach is needed, the General Manager would seek Board approval before implementation.

Other Activities Supporting the SWP Dependent Area

Staff regularly reported to the Board and sought authority and funding to address system and supply shortages affecting the SWP Dependent Area. The Emergency Water Conservation Program is intended only as a short-term, stop-gap policy until lasting relief can be provided. Sample operational, physical, and supply actions to improve the supply constraints include:

- Adjusted distribution system operations to minimize SWP use and draw heavily on the Colorado River and stored supplies (January 2021).
- Increased pumping on the Colorado River Aqueduct to the total capacity of eight pumps (intermittent operation since April 2021).
- Initiated the Operational Shift Cost Offset Program (May 2021) and Reverse Cyclic Program (February 2022), which removed financial barriers to switching from or deferring SWP deliveries.
- Switched the source water feed to the Mills Water Treatment Plant from SWP to Diamond Valley Lake storage (May 2021).
- Rebuilt and started up the Greg Avenue facility to pump ~100 acre-feet per day of Colorado River and stored supplies into the western portion of the distribution system (June 2021).

- Expanded conservation programs (December 2021).
- Authorized agreements with other water agencies to improve management of SWP supplies (San Bernardino Valley MWD, San Diego County Water Authority, December 2021).
- Amended the capital investment plan to start planning and implementing infrastructure projects for the western portion of the distribution system (February 2022).

These actions are accelerating with the development of infrastructure and water supply portfolios through the Extreme Drought Assessment, which includes as its design condition three SWP allocations of five percent.

Policy

Metropolitan Water District Administrative Code Section 6410. Powers and Duties

Metropolitan Water District Administrative Code Section 6412. Delegation of Executive and Administrative Powers

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 20984, dated Nov. 1, 1960, the Board adopted Resolution 5838 and approved the execution of the SWP contract with DWR.

By Minute Item 49979, dated Dec. 9, 2014, the Board approved adjustments to the Water Supply Allocation Plan

By Minute Item 50824, dated May 9, 2017, the Board adopted a resolution that declared a “Condition 1 –Water Supply Watch.”

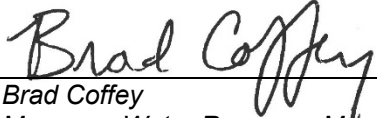
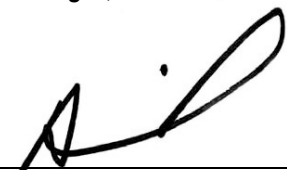
By Minute Item 52378, dated May 10, 2021, the Board adopted the 2020 Urban Water Management Plan and the Water Shortage Contingency Plan

By Minute Item 52481, dated Aug. 17, 2021, the Board adopted a resolution that declared a “Condition 2 –Water Supply Alert.”

By Minute Item 52581, dated Nov. 9, 2021, the Board adopted a resolution which declared specified emergency conditions within the Metropolitan service area.

Fiscal Impact

Upon adopting the Emergency Water Conservation Plan, revenues from water transactions will likely decrease as member agencies reduce water demands. At the Mar. 22, 2022, budget workshop, staff presented a scenario with 100 thousand acre-feet fewer transactions for two years. This scenario—realistic in the magnitude of the needed demand management activity—would reduce revenues by approximately \$100 million each year.

 Brad Coffey Manager, Water Resource Management	4/7/2022 Date
 Adel Hagekhalil General Manager	4/8/2022 Date



Water Planning and Stewardship Committee

Emergency Conservation Program for the SWP Dependent Areas

Item 9-2
April 12, 2022

How did we get here?

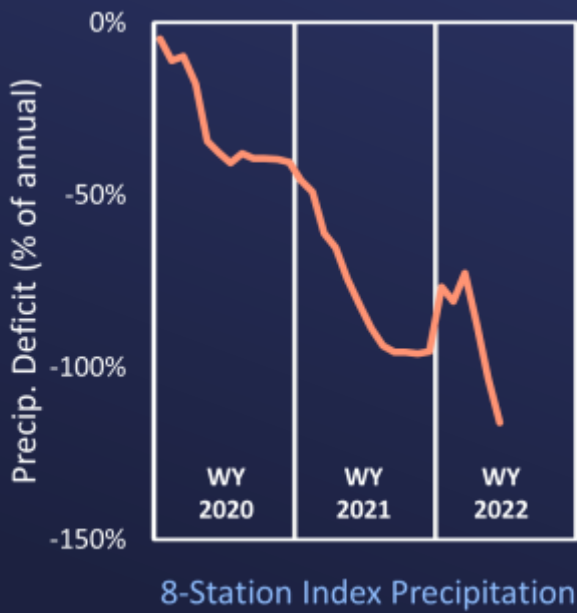
Third Year of Drought

- Driest 3 years
- Driest 3 months (Jan. – Mar.)



● Declarations and
Executive Orders by
Governor Newsom

How did we get here?

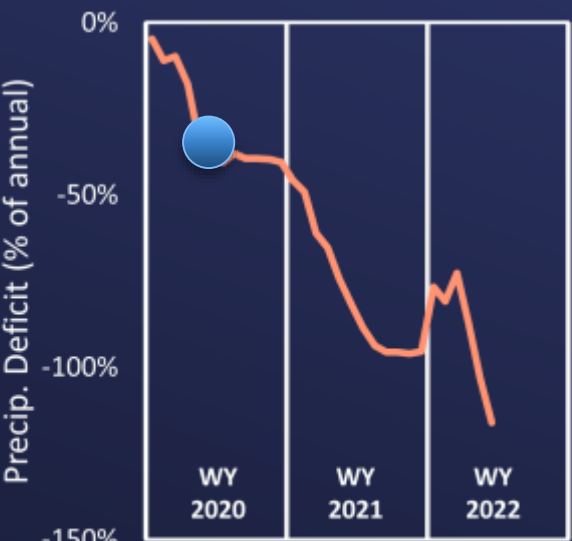


Third Year of Drought

- Driest 3 years
- Driest 3 months (Jan. – Mar.)
- Lowest 3-year total deliveries from State Water Project

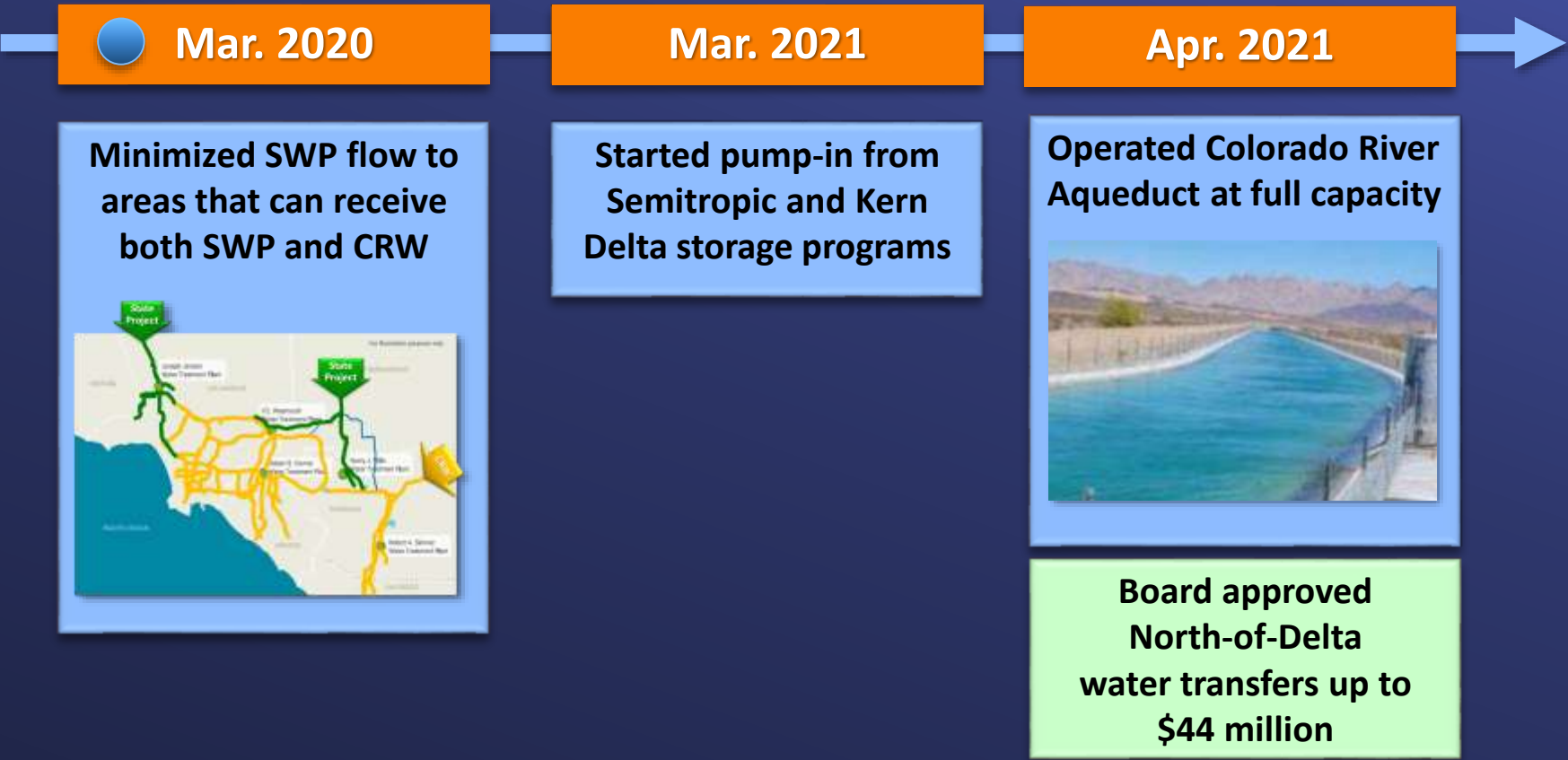
Average Expectation for SWP	3.2 million AF
DWR’s Lowest Forecast	1.0 million AF
Today	0.6 million AF

What did we do as the drought intensified?



8-Station Index Precipitation

Proportionate Response Since Mar. 2020



What did we do as the drought intensified?



8-Station Index Precipitation

Proportionate Response Since Mar. 2020

● May 2021

Board approved new Operational Shift Cost-Offset Program

Fed Mills Plant from DVL for the first time



Jun. 2021

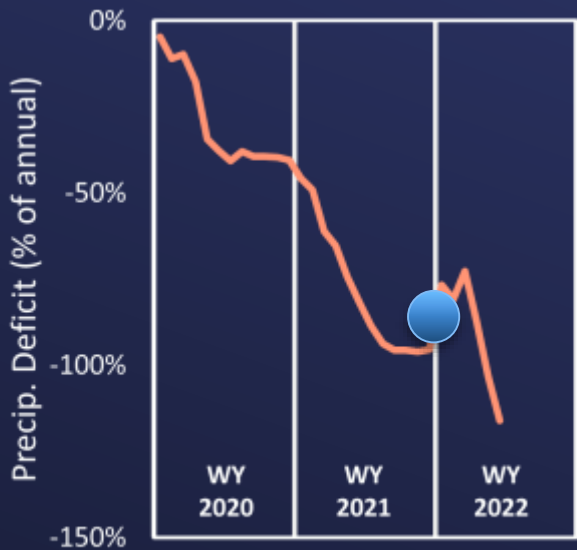
Rehabilitated Greg Avenue pumps began operation



Aug. 2021

Board declared Water Supply Alert, calling for consumers & businesses to voluntarily reduce water use

What did we do as the drought intensified?



8-Station Index Precipitation

Proportionate Response Since Mar. 2020

Oct. 2021

Governor Newsom declares State of Emergency for all California counties

Zero percent SWP allocation expected

Metropolitan requests supplies for human health and safety* if drought persists



Nov. 2021

Board declares drought emergency for SWP dependent area and warns of further action if drought continues

Board expands conservation programs

Dec. 2021

More than 16 feet of snow falls in December

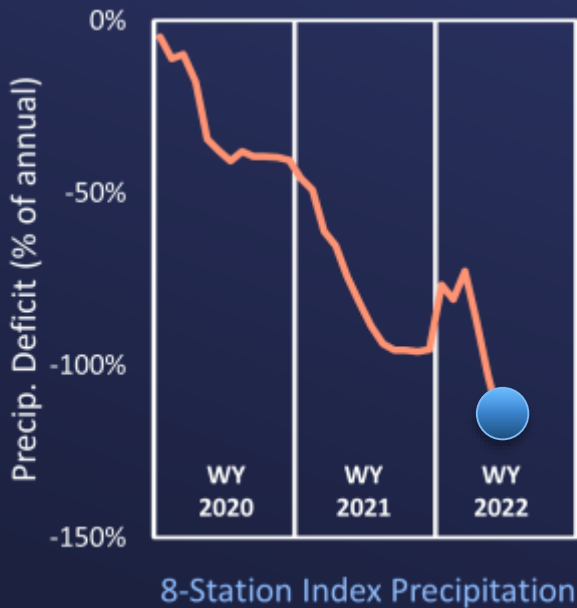


Board approves SDCWA & San Bernardino Valley Water District agreements

Board amends Capital Investment Plan to improve east area infrastructure reliability

*domestic supply, fire suppression, or sanitation

What did we do as the drought intensified?



Proportionate Response Since Mar. 2020



What is Human Health & Safety supply?

Water needed for domestic supply, fire protection, or sanitation

- SWP contract provision allocating water on a basis other than Table A
- Implemented consistent with State Water Board curtailment regulations
- Primary basis is 55 gal/person/day
- Does not include outdoor uses (except hand watering for fire protection)

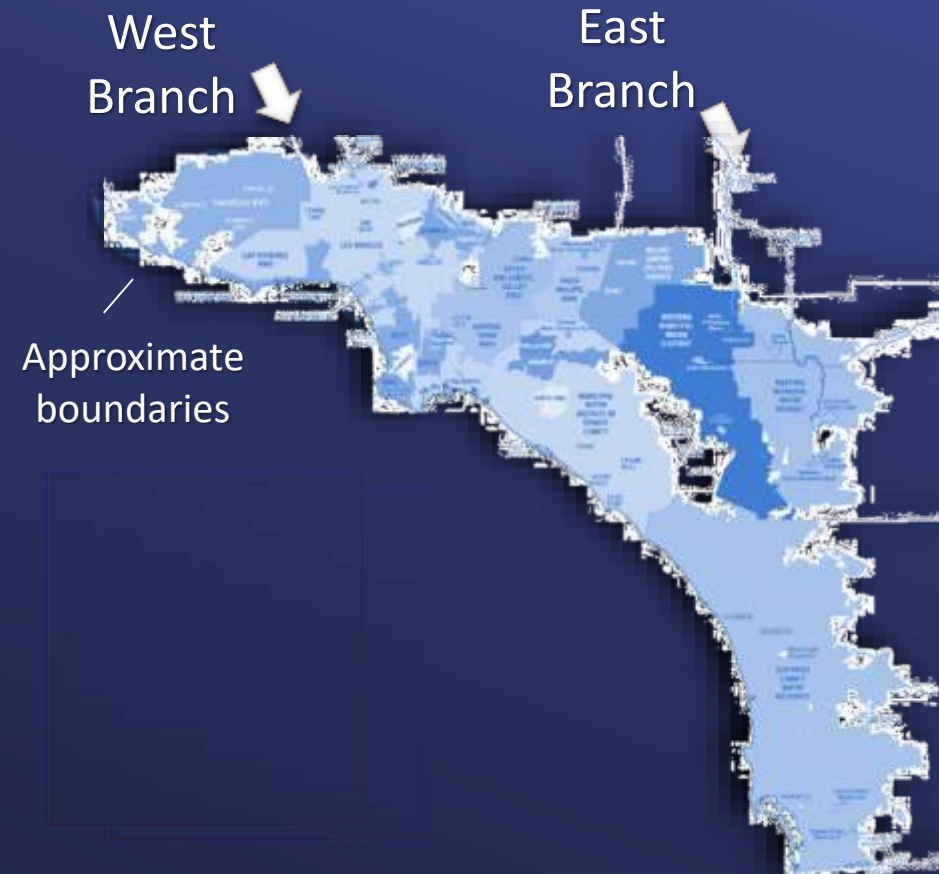
What are the conditions for receiving Human Health & Safety supplies?

DWR conditions to accessing human health & safety supplies

- “Robust conservation efforts with mandatory requirements”
- Pay back water within five years
- Make investments to reduce reliance on SWP for human health & safety needs
- Certain other supplies may supplement human health & safety deliveries

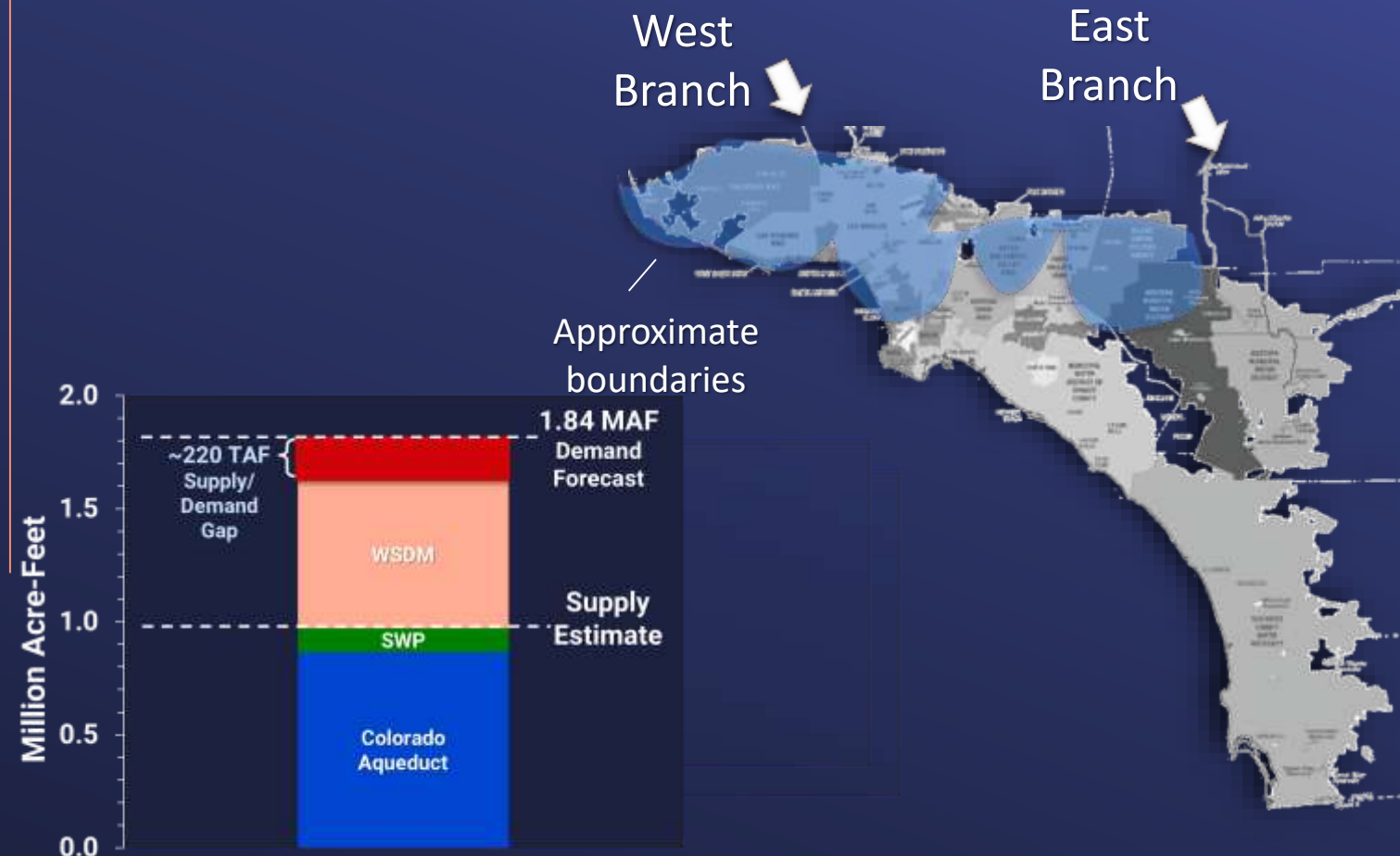
What is the SWP dependent area?

Areas currently served by Metropolitan primarily through the State Water Project



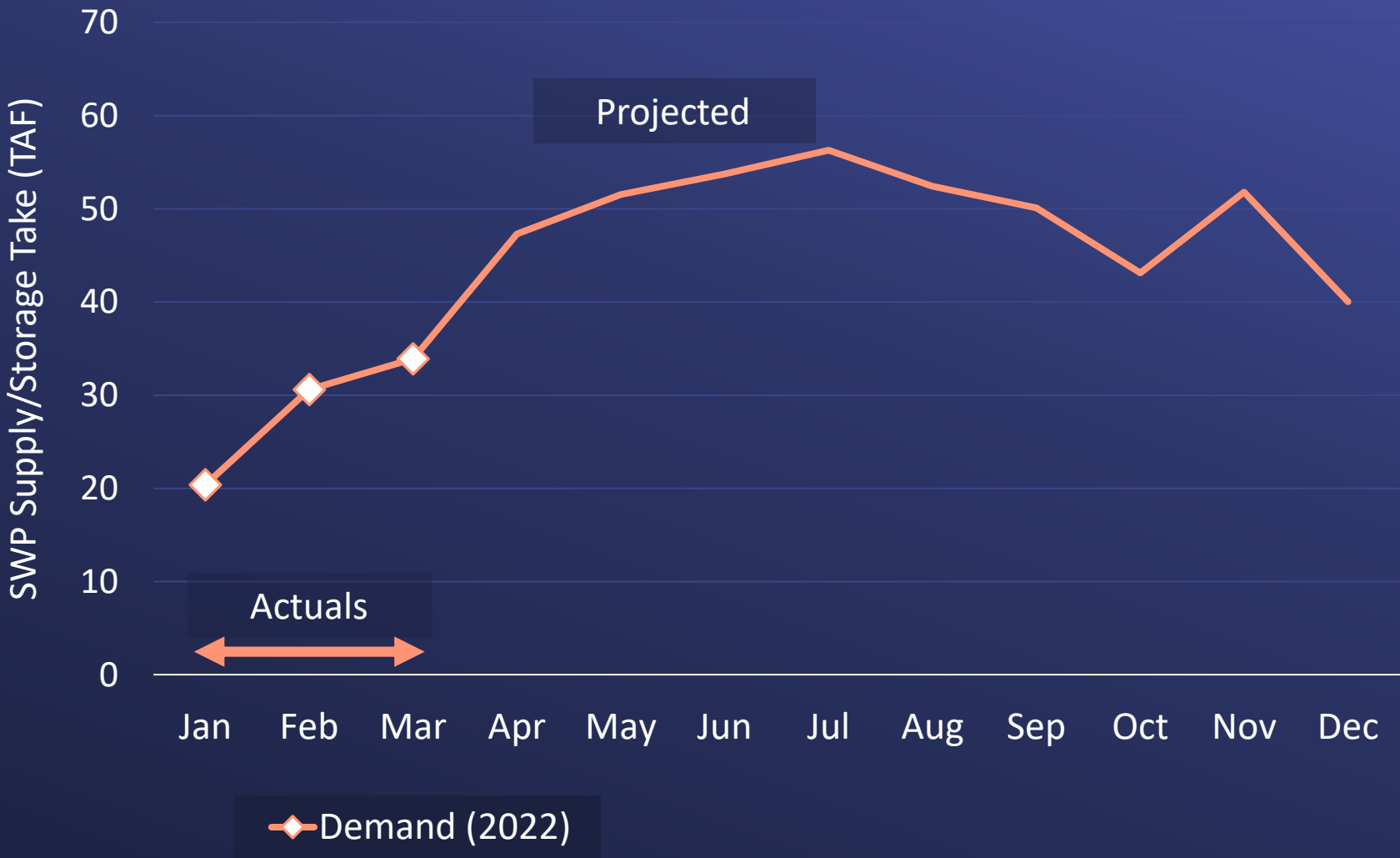
Can we
meet normal
demands
in the SWP
dependent
area?

Normal water demands cannot be met
in the SWP dependent area



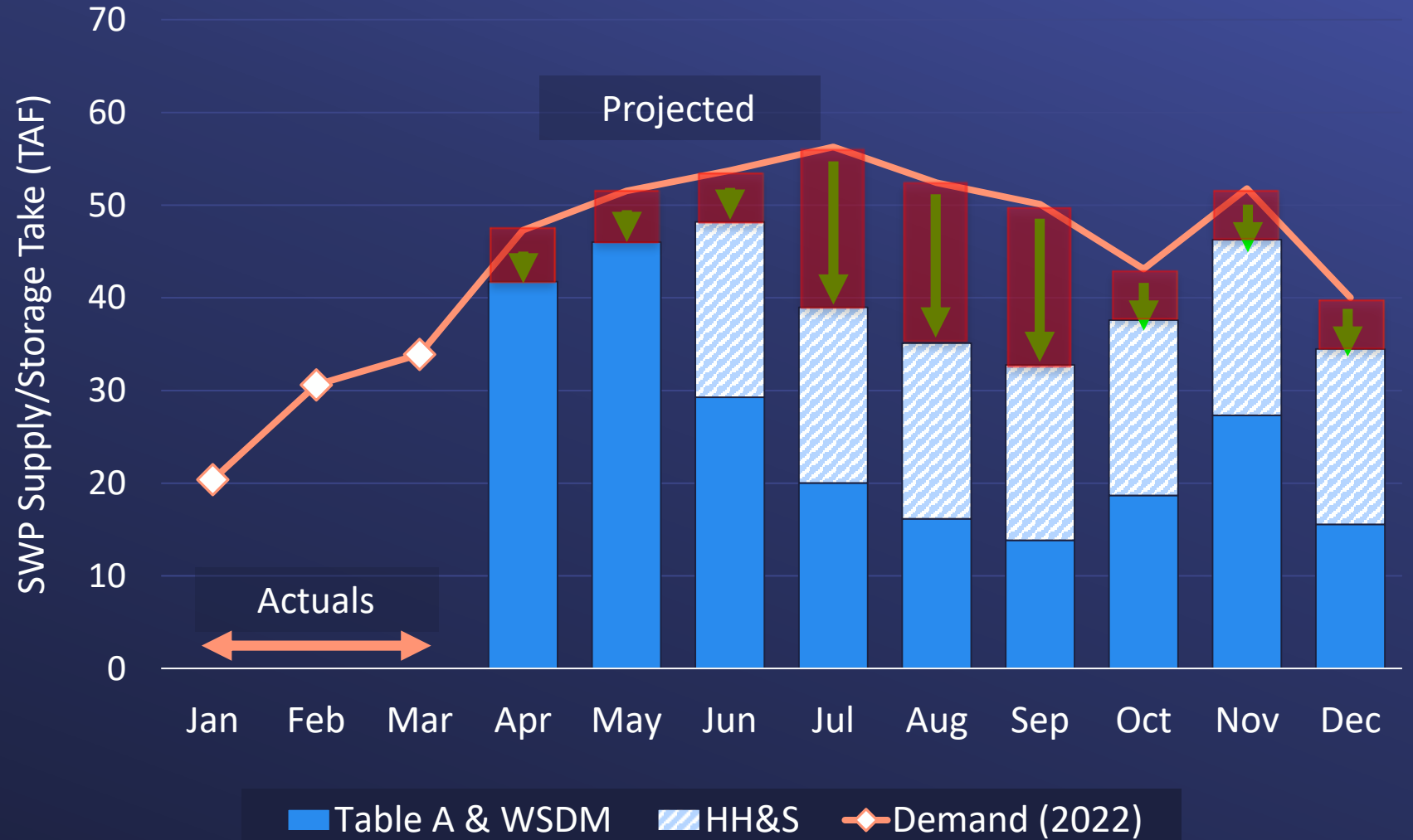
When
should we
accelerate
actions?

Additional conservation needed now



When
should we
accelerate
actions?

Additional conservation needed now



What are the
goals of this
proposed
action?

Seeking three objectives

- Preserve scarce supplies this year
- Minimize take of human health and safety water and show clear line-of-sight to conditions for its use
- Prepare for a potential fourth year of drought

Were others involved?

Metropolitan staff advocated with DWR and sought Member Agency input

- DWR coordination to maximize use of stored supplies and transfers
- 15 meetings with directly affected Member Agency managers (since Aug. 2021)
- Monthly reporting to all Member Agency Managers and WP&S Committee of Board (through WSDM reports and presentations)

What tools were considered?

Three alternatives considered:

- Water Supply Allocation Plan (2014)
- Population-Based Allocation
 - Human health and safety (55 gal/person/day)
 - Water supply balance (~130 gal/person/day)
 - Minimum additional conservation (5% reduction)
- Mandatory Conservation Actions
 - Single day per week outdoor watering
 - No outdoor watering (if warranted)

What is the framework?

Three main elements of the Emergency Conservation Program

- Mandate and enforce conservation actions
 - Single day per week outdoor watering
 - No outdoor watering (if warranted)
- Volumetric penalty of \$2,000 per acre-ft
 - Assessed on all SWP delivered to non-compliant water provider (e.g., only part wholesale Member Agency delivery)
- Ability to opt out
 - Outdoor watering restrictions and penalties do not apply if agency eliminates need for delivery of water from SWP
 - This incentivizes local production and conservation

How does an agency comply?

Agencies must adopt certain elements (codes, ordinances, resolutions)

- Outdoor watering restrictions
 - Phase 1: Single day per week outdoor watering
 - Phase 2: No outdoor watering
- Enforcement plan
 - Real consequences to the customer for inaction
 - Approach will vary by agency
 - Ability to audit the enforcement plan
- Adopt by May 31, 2022, to avoid volumetric penalty in June

What would success look like?

Measures of Success

- Preserve sufficient supply for human health & safety if drought continues
- Provide supply for indoor commercial, industrial, and institutional use
- Allow time for additional emergency supply actions to come on-line

How will you monitor success?

Monitoring Mechanisms in SWP Dependent Areas

- Compliance status of water providers
- Metropolitan deliveries to affected service connections
- Local supply production
- Residential water use (existing SWRCB reporting)
- Disaggregated data from flow monitoring devices
- Remote sensing imagery analysis

What assistance is available?

- Assistance available for enforcement activities
 - Access to remaining Member Agency Administered Program (MAAP) funds in the current biennium
 - Access to the proposed \$4.2 million in the upcoming biennium will be made available on July 1, 2022
 - Any collected penalties add to these available funds
- Partnering with drought awareness and public water conservation messaging
- Regional conservation programs
 - Increased flexibility for turf removal applicants
 - Seeking additional conservation funding from state (\$4.5 million awarded last month)

What actions are proposed on April 26?

1. Support Governor's Executive Order N-7-22
 - Implement Water Shortage Contingency Plan Level 2 response actions to reduce water use
2. Declare a Water Shortage Emergency Condition
 - Targeted to the SWP Dependent Area
3. Adopt two-phase Emergency Water Conservation Program framework
 - Limit outdoor watering to one-day-per-week immediately
 - Require effective enforcement
 - Impose volumetric penalties of \$2,000 per acre-foot for non-compliance
 - Include second phase of complete ban on outdoor watering, if needed

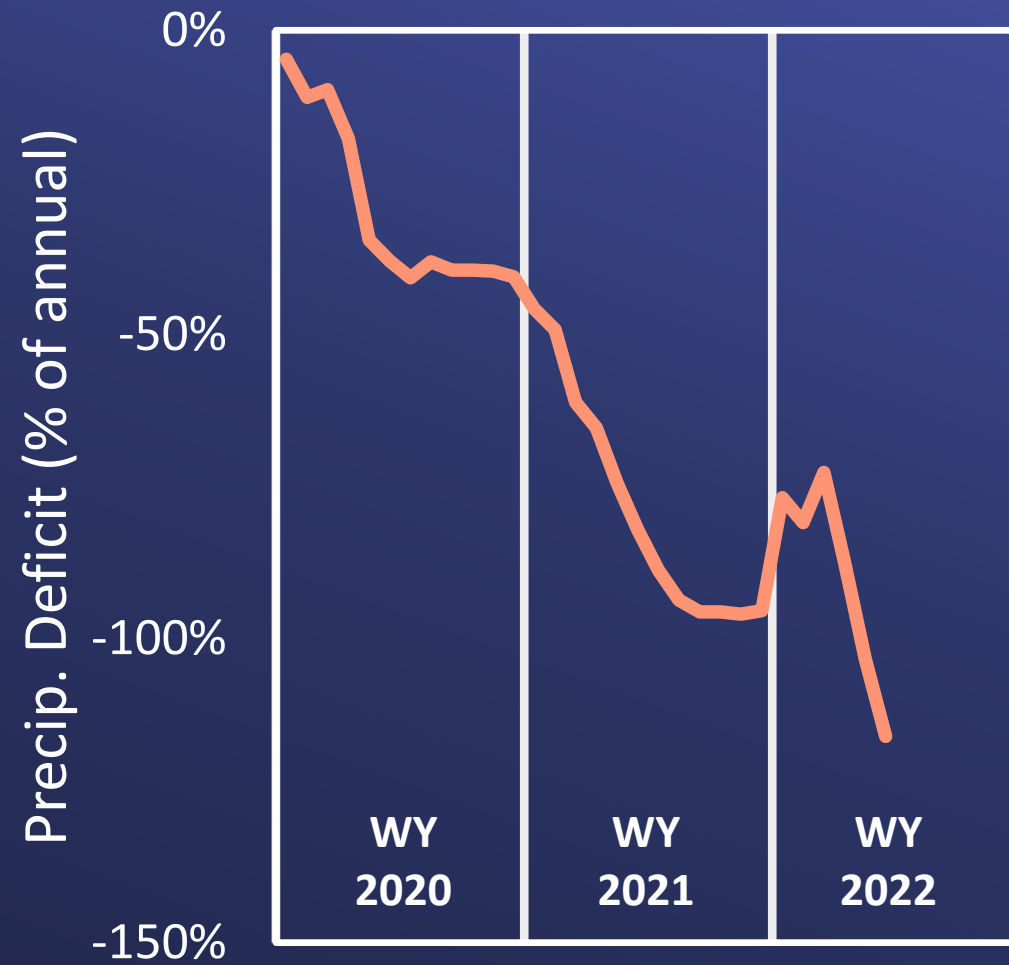
What actions are proposed on April 26? (cont.)

4. Authorize GM to finalize Emergency Conservation Program
 - Ensure conformance with DWR human health and safety requirements
5. Require regular reporting
 - Effectiveness of 1-day watering restriction
 - Need for outdoor watering ban
6. Develop modifications to program if needed
 - Monitoring and feedback will determine if existing plan is effective, workable, and proportionate
 - Potential use of population-based approach to set limits on per capita water use
 - Board action required

How do we coordinate and accelerate actions?

- Continue coordination to finalize and implement the plan
 - Develop suite of acceptable enforcement provisions
 - Finalize and execute an amplified and unified public message for consumer actions
 - Bring information-sharing on-line with affected agencies
- Advocate before State and Federal government for maximum action and assistance during drought





8-Station Index Precipitation



● **Water Surplus and Drought Management Update** *Conditions as of 4/1/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of April 1, 2022. The report also tracks the hydrologic conditions for water year (WY) 2021-2022.

January through March was the driest start of the calendar year in recorded history for the state of California. This severely reduced available water supply for the State Water Project (SWP). In response, the State took measures to stretch the limited water supply for the current year as well as prepare for a potential dry 2023. On March 18, 2022, the Department of Water Resources (DWR) reduced the SWP Table A allocation from 15 percent to 5 percent. To help offset the reduced allocation, DWR will provide additional water for any unmet critical human health and safety needs (HH&S) at 55 gallons per person per day. This includes water for indoor uses like drinking, cooking, and sanitation, but does not include water for other uses (e.g., commercial, industrial, and institutional needs). DWR requires all contractors receiving HH&S water to implement robust conservation actions with mandatory requirements. On March 28, 2022, Governor Newsom signed Executive Order N-7-22 calling on local water suppliers to implement more aggressive water conservation measures and having the State Water Resources Control Board evaluate a ban on watering ornamental grass on commercial properties.

The United States Bureau of Reclamation (USBR) began releasing its daily forecast of water use for California's Colorado River water users for this year. The current forecast indicates that several higher priority water users are projected to use significantly more water than in recent years, decreasing Metropolitan's projected Colorado River supply by 130 thousand acre-feet (TAF) from last month's report. Metropolitan will be able to satisfy demands by withdrawing a like amount from storage. The USBR forecast also shows that the Imperial Irrigation District (IID) is currently projected to use 68 TAF more than its submitted water order. Metropolitan expects IID to meet this demand by withdrawing from water it has stored previously with Metropolitan, thereby reducing Metropolitan's return obligation to IID.

Metropolitan's projected supply/demand gap estimate for calendar year 2022 is currently estimated to be 848 TAF based on a demand estimate of 1.82 million acre-feet, the 5 percent SWP Table A allocation, and the Colorado River Aqueduct (CRA) estimate. Consecutive years of low SWP allocations and storage withdrawals have left insufficient supplies to meet normal demands in the SWP Dependent Area. As such, Metropolitan will request delivery of HH&S water. To support the implementation and enforcement of mandatory conservation at the retail level and conform to DWR's HH&S guidance, staff will seek board action in April to establish a SWP Emergency Conservation Plan. Also in April, staff will seek board action to secure 2022 Sacramento Valley water transfers to provide additional resource options to the SWP Dependent Area. If approved, these actions will help balance current year water supply in the SWP Dependent Area and prepare for a potential dry 2023.

Purpose

Informational

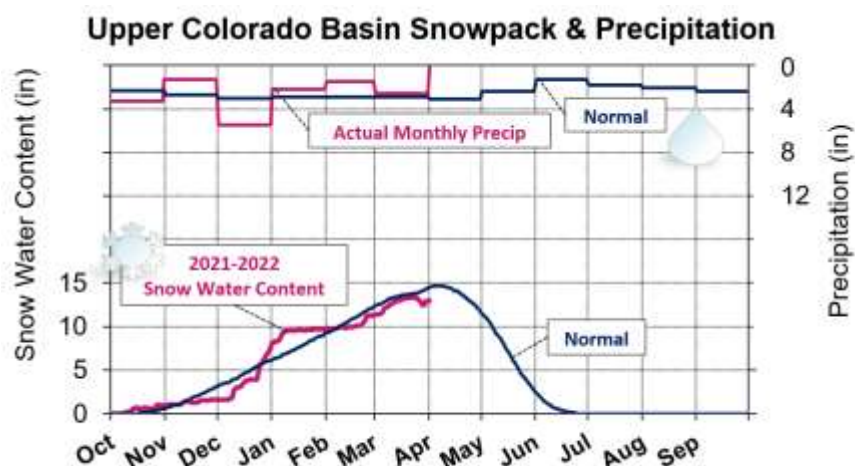
Attachments

Attachment 1: Projected 2022 WSDM Storage Detail (5 percent SWP Table A allocation)

Attachment 2: Agreements to Exchange or Return Stored Water, Potential Magnitude of California's Drought Contingency Plan Contribution, and Cyclic Program Balances

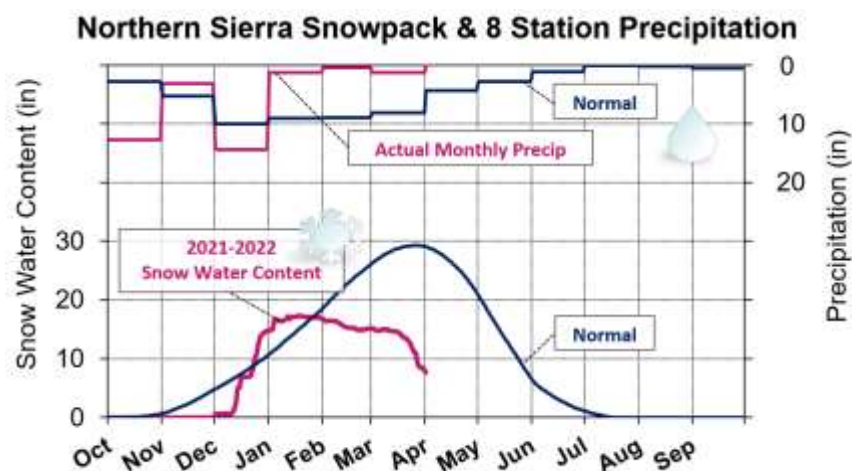
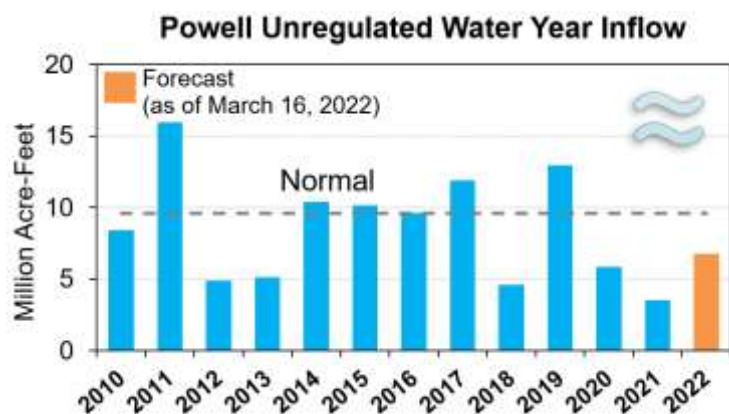
Detailed Report

This Water Surplus and Drought Management (WSDM) report updates water supply and demand conditions for CY 2022 and developing hydrologic conditions for WY 2021-2022.



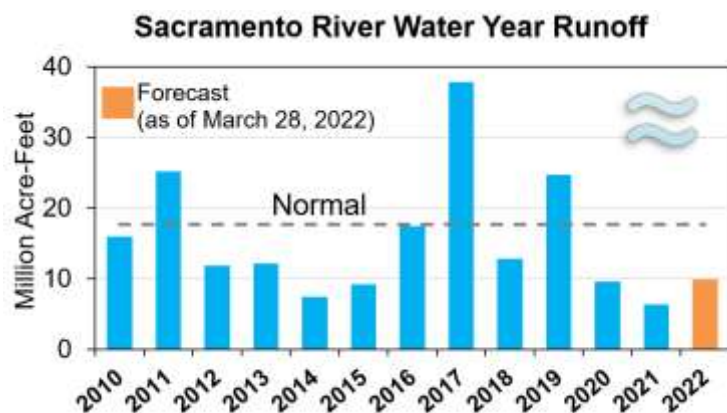
Upper Colorado River Basin

- ❄ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- 💧 Near normal precipitation to date (15.8 inches).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 71% of normal.



Sacramento River Basin

- ❄ Snowpack water content peaked low and early in mid-January (17.2 inches or 61% of normal April 1).
- 💧 Below normal precipitation at the 8 Station to date (33.2 inches). January through March was the driest start of the calendar year in recorded history.
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 56% of normal.



CRA Supplies	Acre-Feet
<i>Basic Apportionment</i>	550,000
<i>IID/ MWD Conservation Program</i>	105,000
<i>PVID Fallowing Program</i>	25,000
<i>Exchange w/ SDCWA (IID/Canal Lining)</i>	280,000
<i>Exchange w/ USBR (San Luis Rey Tribe)</i>	16,000
<i>Lower Colorado Water Supply Project</i>	9,000
<i>Bard Seasonal Fallowing Program</i> ¹	3,000
<i>Quechan Diversion Forbearance</i>	6,000
<i>Quechan Seasonal Fallowing Program</i> ²	0
<i>Higher Priority Water Use Adjustment</i> ³	-130,000
Total CRA Supplies ⁴	867,000

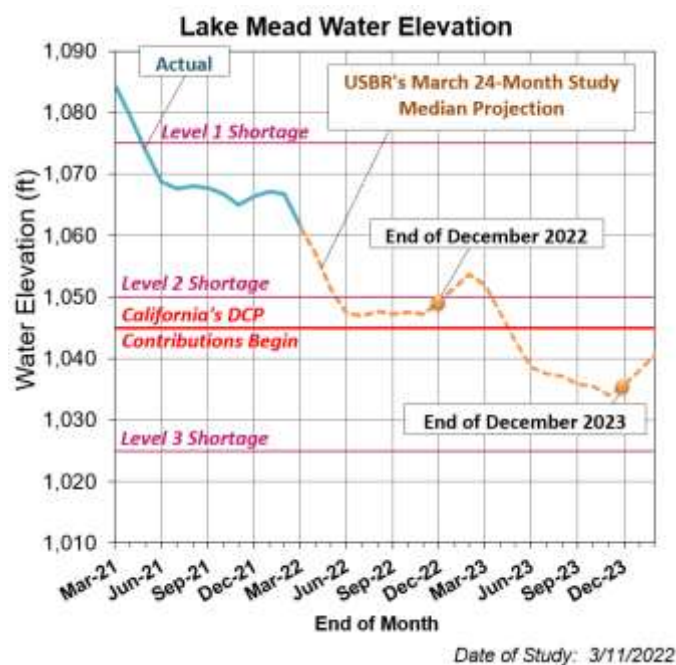
¹ Reduced by 3 TAF due to unanticipated reduction in participating acreage.

² Reduced by 3 TAF due to unanticipated reduction in participating acreage.

Rounded to the nearest thousand. Supply is 356 AF.

³ Per USBR Forecast (3/28/22).

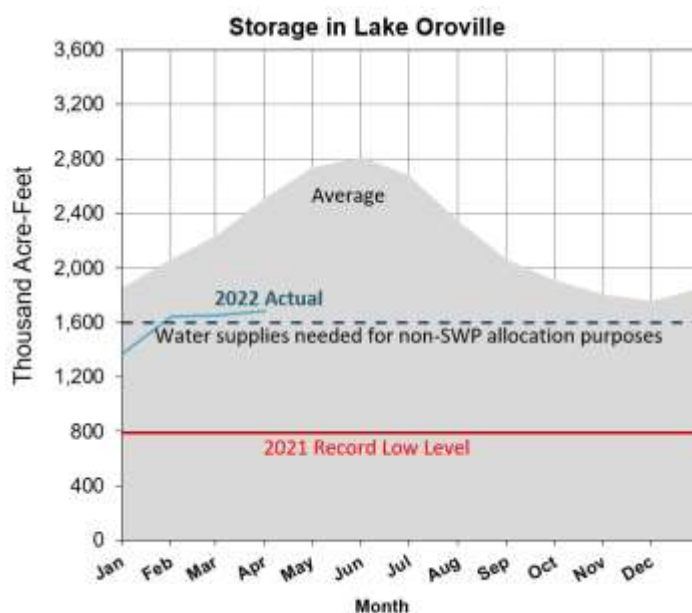
⁴ Total may not sum due to rounding.



- Lake Mead storage is currently at 8.52 MAF (elevation 1061.2 feet).
- The Lower Basin is at a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022.

SWP Supplies	Acre-Feet
<i>Table A (5% SWP allocation)</i>	96,000
<i>Article 21</i>	0
<i>Port Hueneme</i> ¹	0
<i>SWC Buyers Group Transfers</i>	0
<i>Yuba Accord Dry-Year Purchase Program</i>	0
<i>MWDOC/IRWD Partnership</i>	4,000
<i>Purchase of SDCWA's Semitropic Supply</i>	4,000
Total SWP Supplies	104,000
Total Supplies (CRA + SWP)	971,000
(Prior to storage actions)	

¹ Rounded to the nearest thousand. Supply is 92.5 AF.

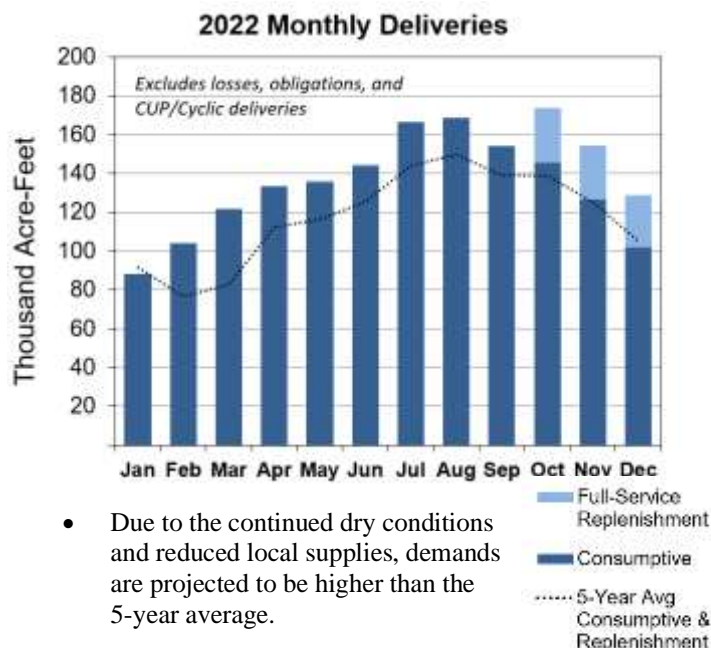


- In addition to the 5 percent Table A allocation, DWR will also provide water for Contractors' unmet Human Health and Safety needs (HH&S). DWR expects Contractors receiving HH&S water to take mandatory conservation measures; implement conjunctive use practices; acquire alternative supplies; and return water to the SWP in a future year for any HH&S supplies received. Changes to the allocation are unlikely given the ongoing record dry conditions and the rainy season is behind us.
- Storage in Lake Oroville is currently at 1.68 MAF (48 percent of total capacity) or 67 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,583,000
Member Agency Replenishment	87,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District ²	68,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands	1,819,000

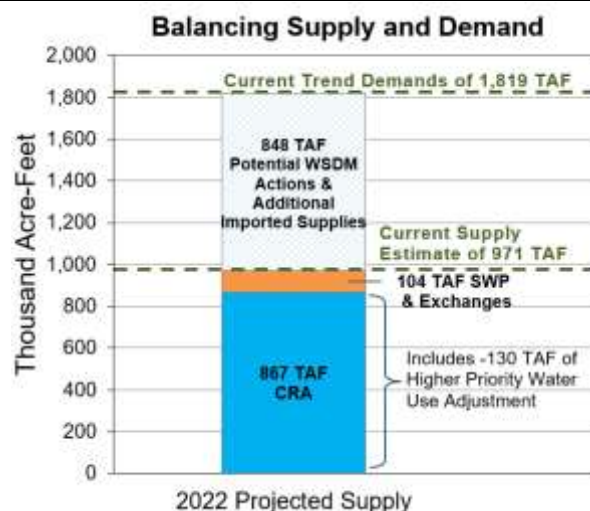
¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.

² Per USBR Forecast (3/28/2022).



MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	971,000
Total Demands	1,819,000
Current Balance Estimate	-848,000



Dry-Year WSDM Strategies/Actions

The following WSDM actions are being pursued or are underway to satisfy the estimated supply/demand gap in 2022, enhance Metropolitan's capability of delivering supplies to the SWP Dependent Areas, and reduce storage withdrawals in 2022.

- Strategic withdrawals of water from dry-year storage reserves.
- Coordinating with member agencies to identify new drought actions targeted at Metropolitan's SWP Dependent Areas.
- Executed an agreement with DWR to allow for water withdrawals from Perris Flex storage at Castaic Lake.
- Increased exchange amounts with Arvin-Edison for Metropolitan to receive Friant surface water supplies.
- Maximizing use of Colorado River or stored supplies by using the Greg Avenue pump station and drafting water from Diamond Valley Lake to serve the Lakeview Pipeline and the Mills Plant.
- Advancing infrastructure improvements to reduce the impact of the current drought and provide future system flexibility.
- Working with member agencies to switch from service connections providing SWP supplies to alternate connections that use Colorado River supplies, both within and outside of the Operational Shift Cost-Offset Program.
- Purchasing San Diego County Water Authority's groundwater stored in the Semitropic Water Bank and leasing their pumping capacity.
- Partnering with non-member agencies such as the San Bernardino Valley Municipal Water District, a SWP Contractor, for exchange opportunities.
- Utilizing the Coordinated Operating Agreement with Municipal Water District of Orange County and Irvine Ranch Water District to enhance SWP supplies.
- Seeking board action in April to secure one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 AF of additional supplies and to establish a SWP Dependent Area allocation plan.

2022 WSDM Storage Detail

	1/1/2022 Estimated Storage Levels ¹	CY 2022 Take Capacity ²	2022 Total Storage Capacity
WSDM Storage			
Colorado River Aqueduct Delivery System	1,243,000	347,000	1,657,000
Lake Mead ICS	1,243,000	347,000 ³	1,657,000
State Water Project System	636,000	184,000	1,879,000
MWD SWP Carryover ⁴	38,000	38,000	350,000
DWCV SWP Carryover ⁴			
MWD Articles 14(b) and 12(e)	0	0	N/A
Castaic Lake (DWR Flex Storage)	0	0	154,000
Lake Perris (DWR Flex Storage)	49,000	49,000 ⁵	65,000
Arvin Edison Storage Program	136,000	16,000 ⁶	350,000
Semitropic Storage Program	218,000	49,000 ⁷	350,000
Kern Delta Storage Program	149,000	32,000	250,000
Mojave Storage Program	19,000	0	330,000
AVEK Storage Program	27,000	0	30,000
In-Region Supplies and WSDM Actions	795,000	426,000	1,246,000
Diamond Valley Lake	600,000	343,000	810,000
Lake Mathews and Lake Skinner	179,000	67,000	226,000
Conjunctive Use Programs (CUP) ⁸	16,000	16,000	210,000
Other Programs	674,000	20,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	20,000	800,000
Total	3,348,000	977,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁹	2,598,000	977,000	5,213,000

¹ Start of year balances, subject to DWR adjustments and USBR final accounting in May 2022.

² Take capacity assumed under a 5 percent SWP Table A Allocation. Storage program losses included where applicable.

³ Take capacity based on planned maintenance activities and current CRA supply estimate and includes return of water to IID.

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

⁵ Available for withdrawal from Castaic Lake in 2022 pursuant to an MWD-DWR agreement.

⁶ Take amounts dependent on exchange capabilities.

⁷ Includes leasing 5,000 AF of return capacity from SDCWA. This provides Metropolitan the ability to withdraw more of its groundwater stored in the program.

⁸ 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.

⁹ Total WSDM Storage level subject to change based on accounting adjustments.

Agreements to Exchange or Return Stored Water

	Future Returns ¹
California ICS Agreement – IID	240,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 ⁴
Coachella Valley Water District Agreement	210,000 ⁴
Total (AF)	780,000 ⁵

¹ Rounded to the nearest thousand.

² IID can request return in any year, conditional on agreement terms. Projected to be reduced by 68,000 AF as shown on page 4.

³ Up to 30,000 AF per year beginning no earlier than 2022.

⁴ Obligation to be met by the end of 2026.

⁵ Subject to change based on accounting adjustments.

Potential Magnitude of California's Drought Contingency Plan Contribution

	2022	2023	2024	2025	2026
Likelihood of Required California Drought Contingency Plan Contribution ¹	0%	0%	67%	67%	60%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0	248,000	279,000	283,000

¹ Results from USBR's March 2022 Colorado River Mid-Term Modeling System (CRMMS) model run which is the latest CRMMS study at the time of this report.

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	78,000
2021	78,000	0	0	0	28,000	50,000
2022 ¹	50,000	0	0	0	32,000	18,000

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



Water Planning and Stewardship Committee

Update on Water Surplus and Drought Management

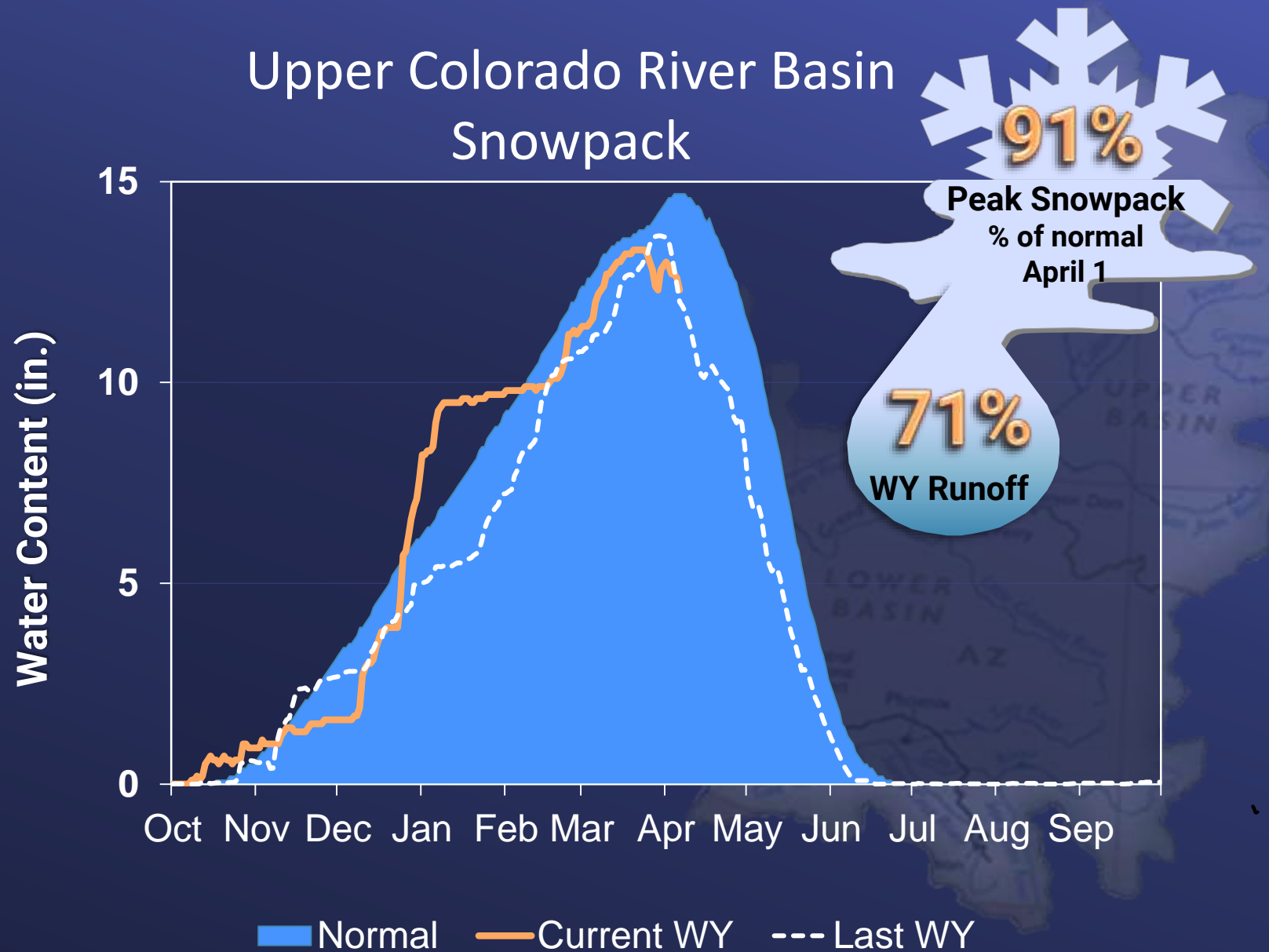
Item 6a
April 12, 2022

Outline

- Hydrologic Conditions
- Drought Actions Taken by the State
- Supply and Demand Balances
 - *Need for Human Health & Safety Water Deliveries*
 - *Need for Transfer Supplies*
 - *Need for Mandatory Conservation*

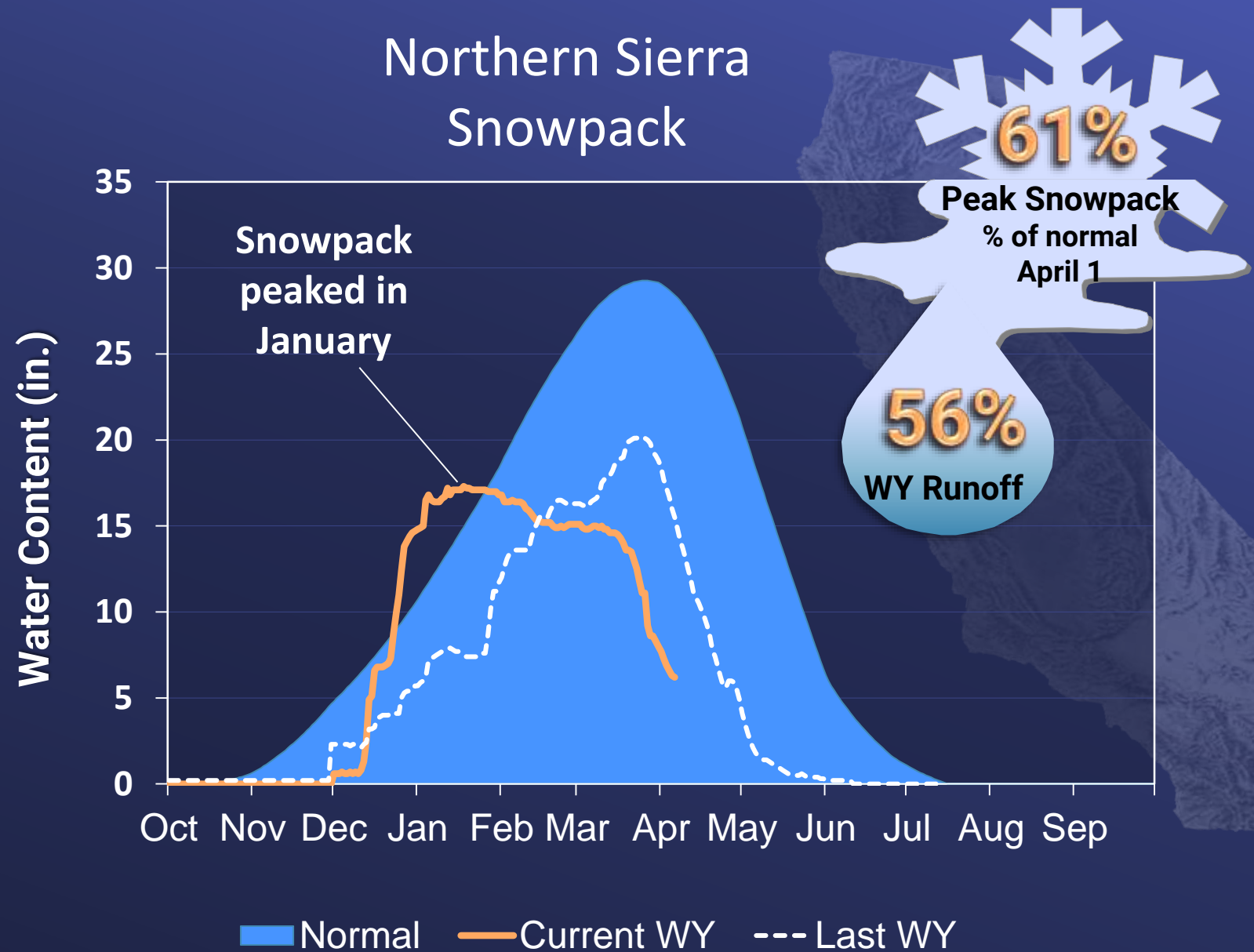
Upper Colorado River Basin

Disparity Between Snowpack and Runoff



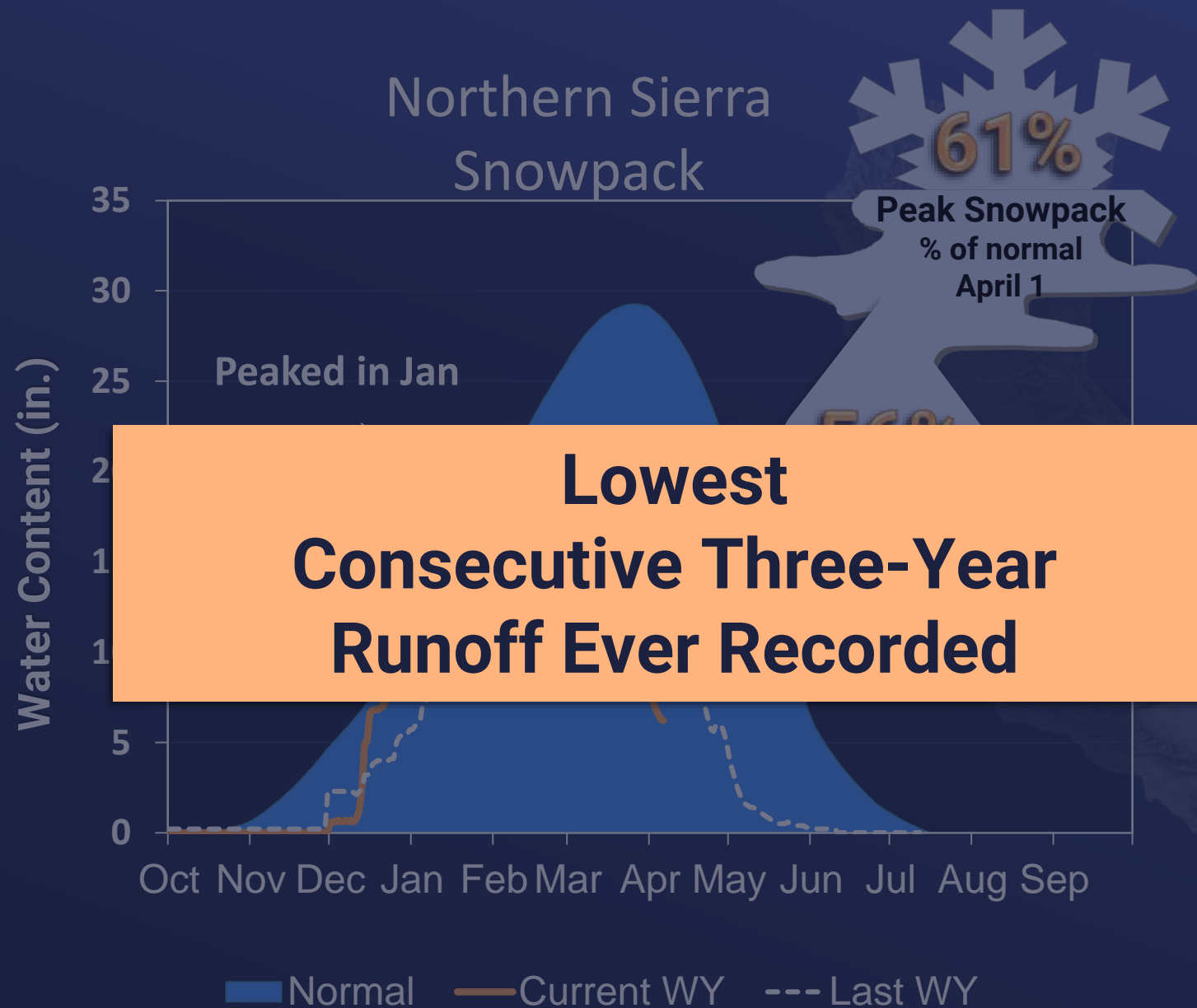
Northern California

Early and Low Snowpack Peak



Northern California

Early and Low Snowpack Peak



April 1st Snowpack Survey

Snowpack
Virtually
Gone at the
Peak of
Season



Statewide Drought Actions

- DWR reduces SWP Allocation from 15 to 5%
- DWR will offer Human Health & Safety water supplies
- State Board grants relaxation of Delta standards for SWP and CVP operations
- DWR re-installs rock barrier in Delta
- Governor issues Executive Order requiring urban water suppliers to implement, at a minimum, their Water Shortage Contingency Plan Level 2 response actions



WSDM

Accounting Adjustments

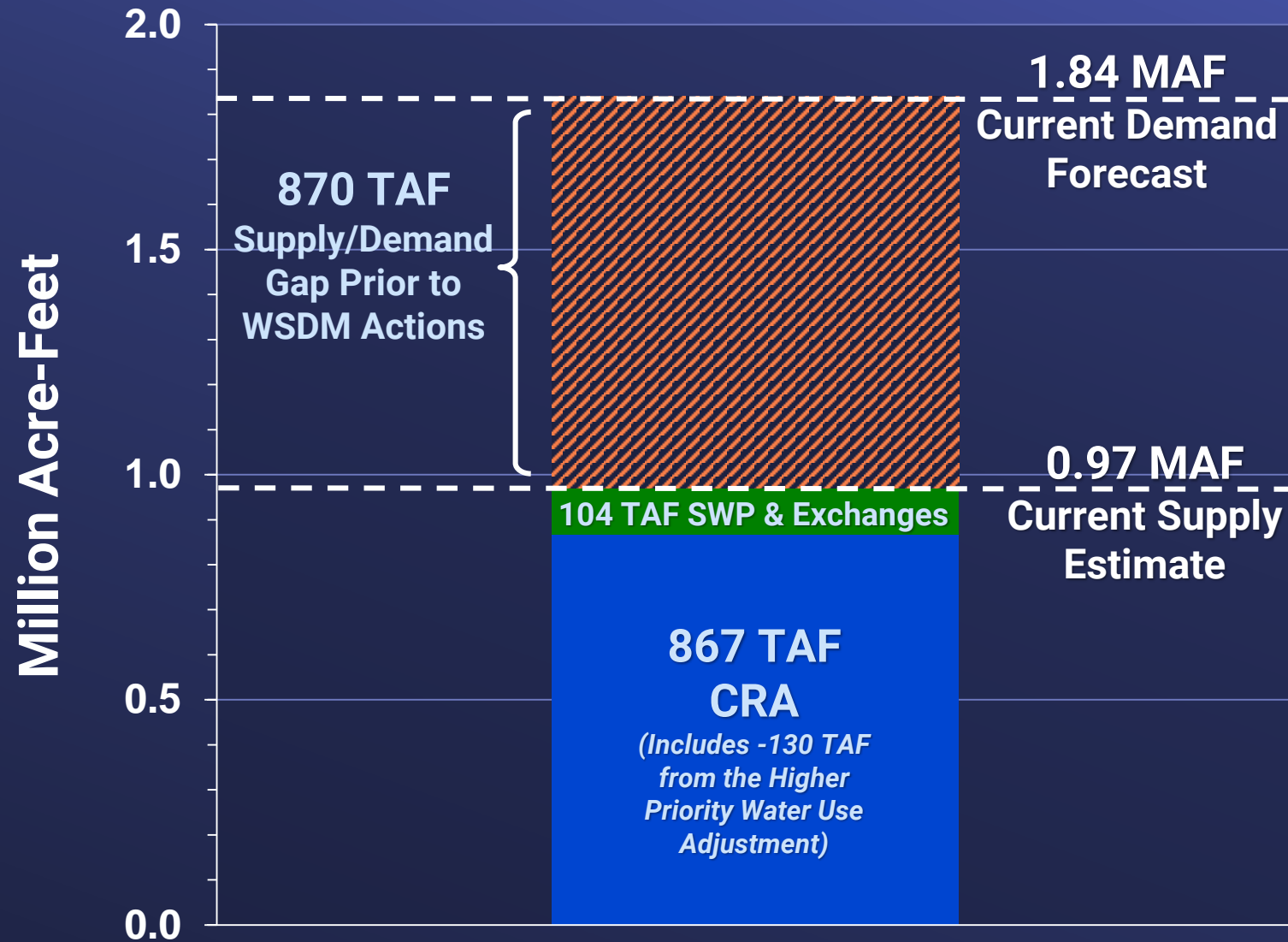
1) Higher Priority Water Use

- Reclamation forecasts Metropolitan's supply to decrease by 130 TAF
- More certainty with higher priority water use as the year develops

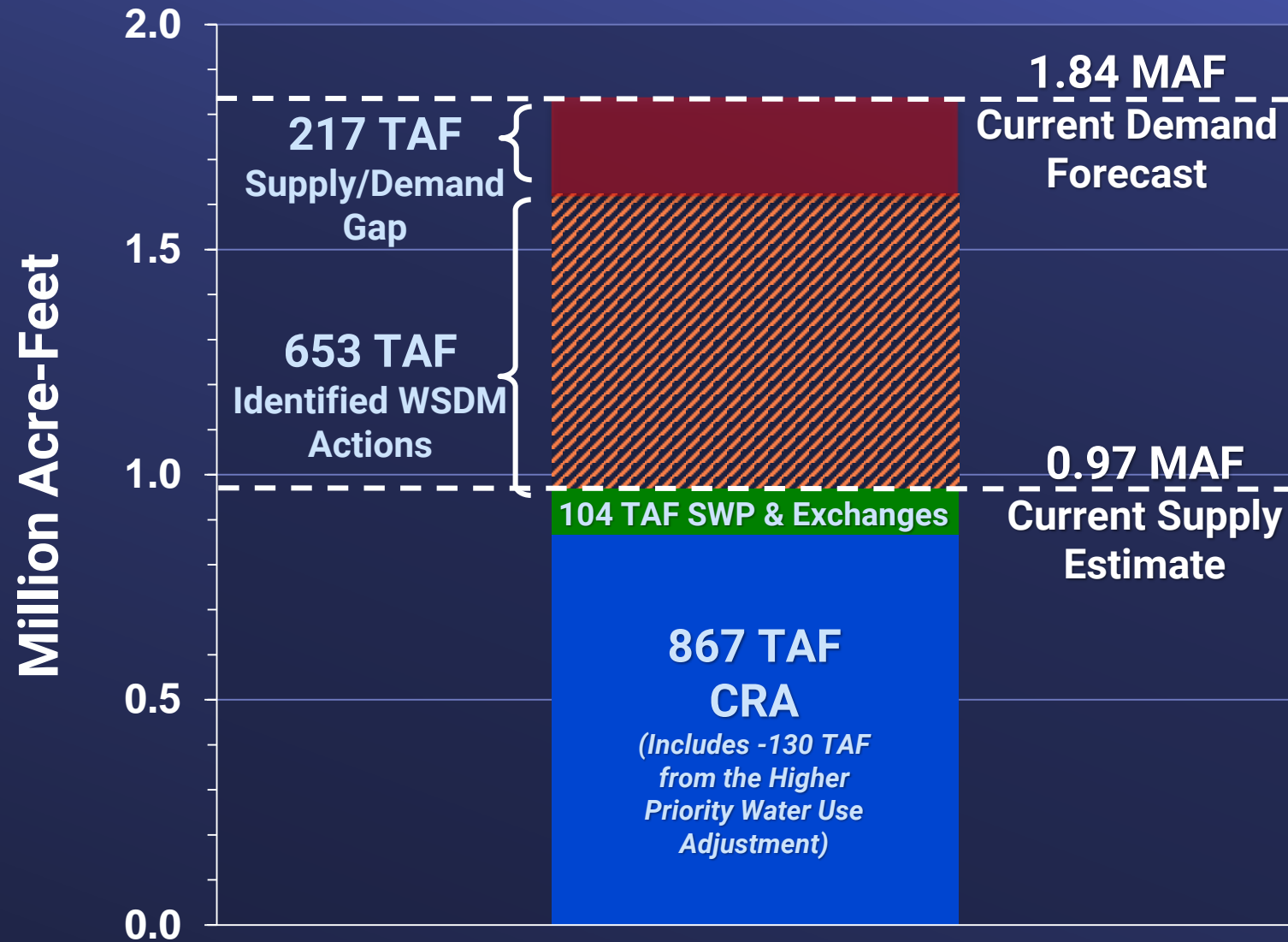
2) Return of Water to Imperial Irrigation District (IID)

- Reclamation forecast shows IID is projected to use 68 TAF more than their submitted water order
- Metropolitan will return water previously stored for IID to satisfy this overrun and reduce Metropolitan's obligation to IID by a like amount

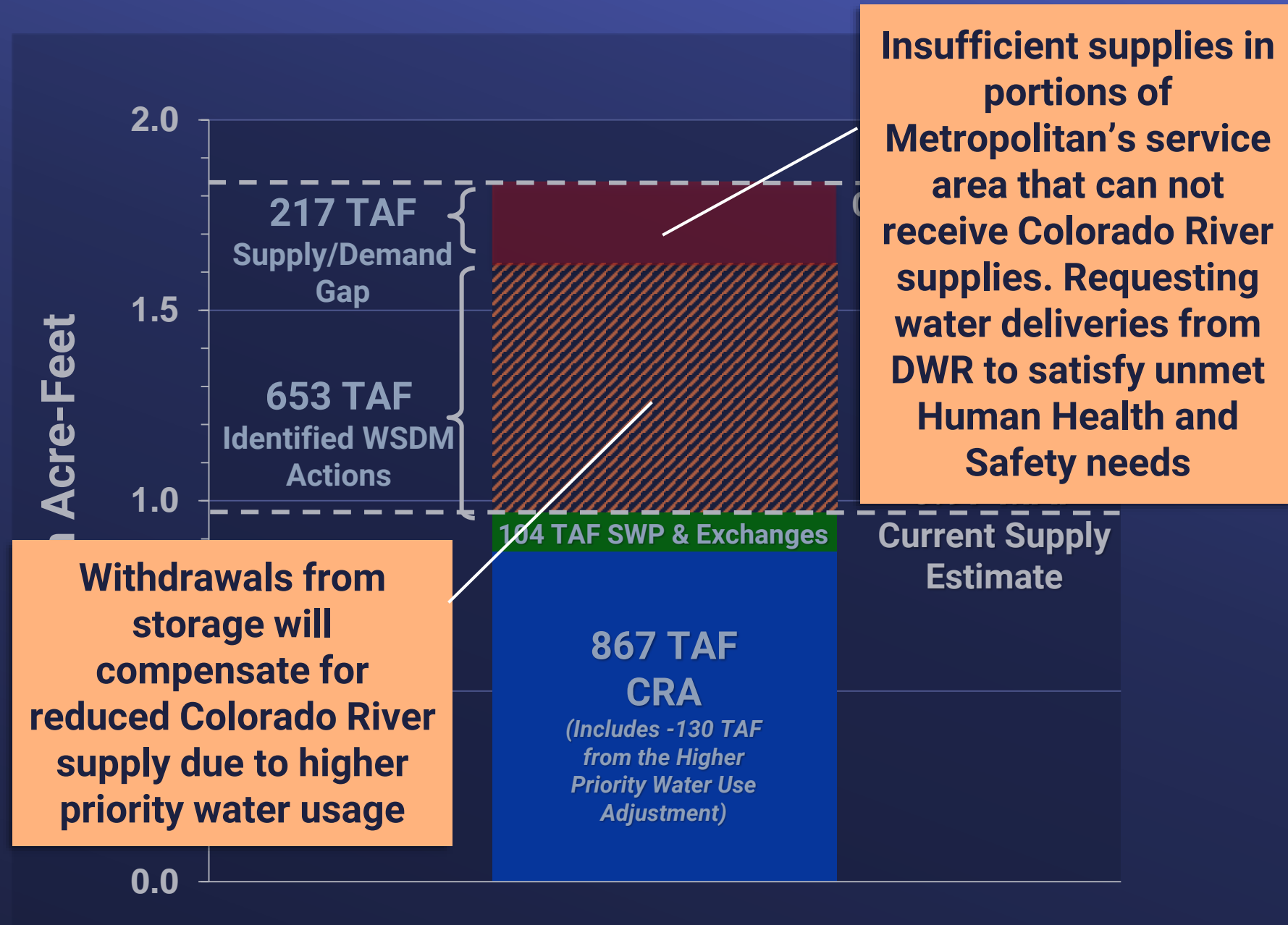
Regional Supply Demand Balance



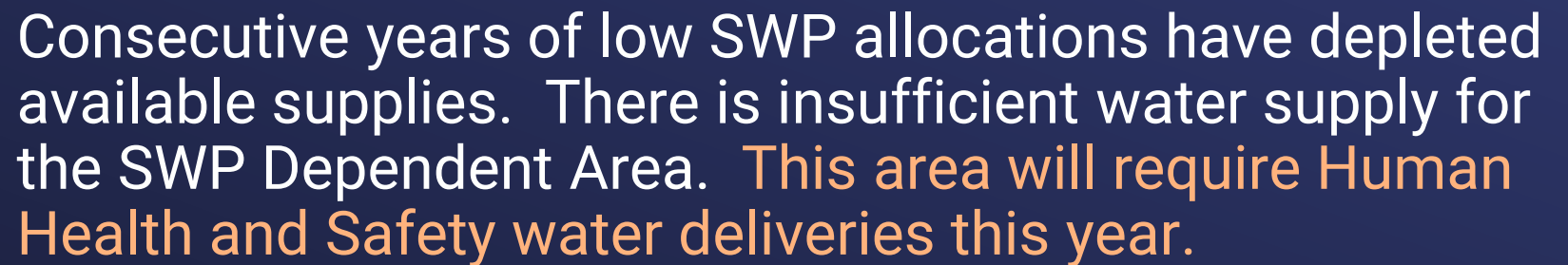
Regional Supply Demand Balance



Regional Supply Demand Balance



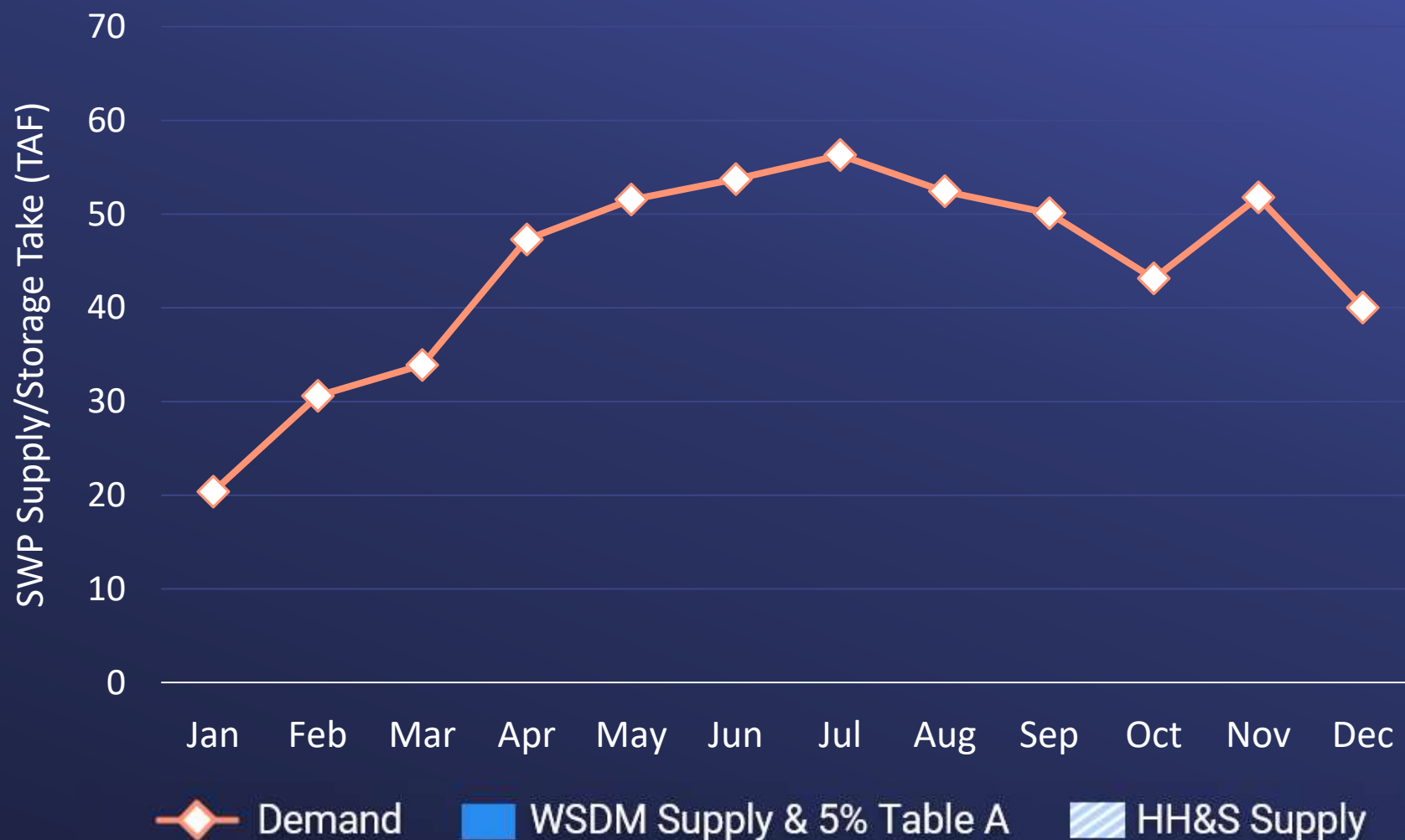
Portions of Service Area Do Not Have Access to Colorado River Supplies



SWP
Dependent
Area

Demand
Projection

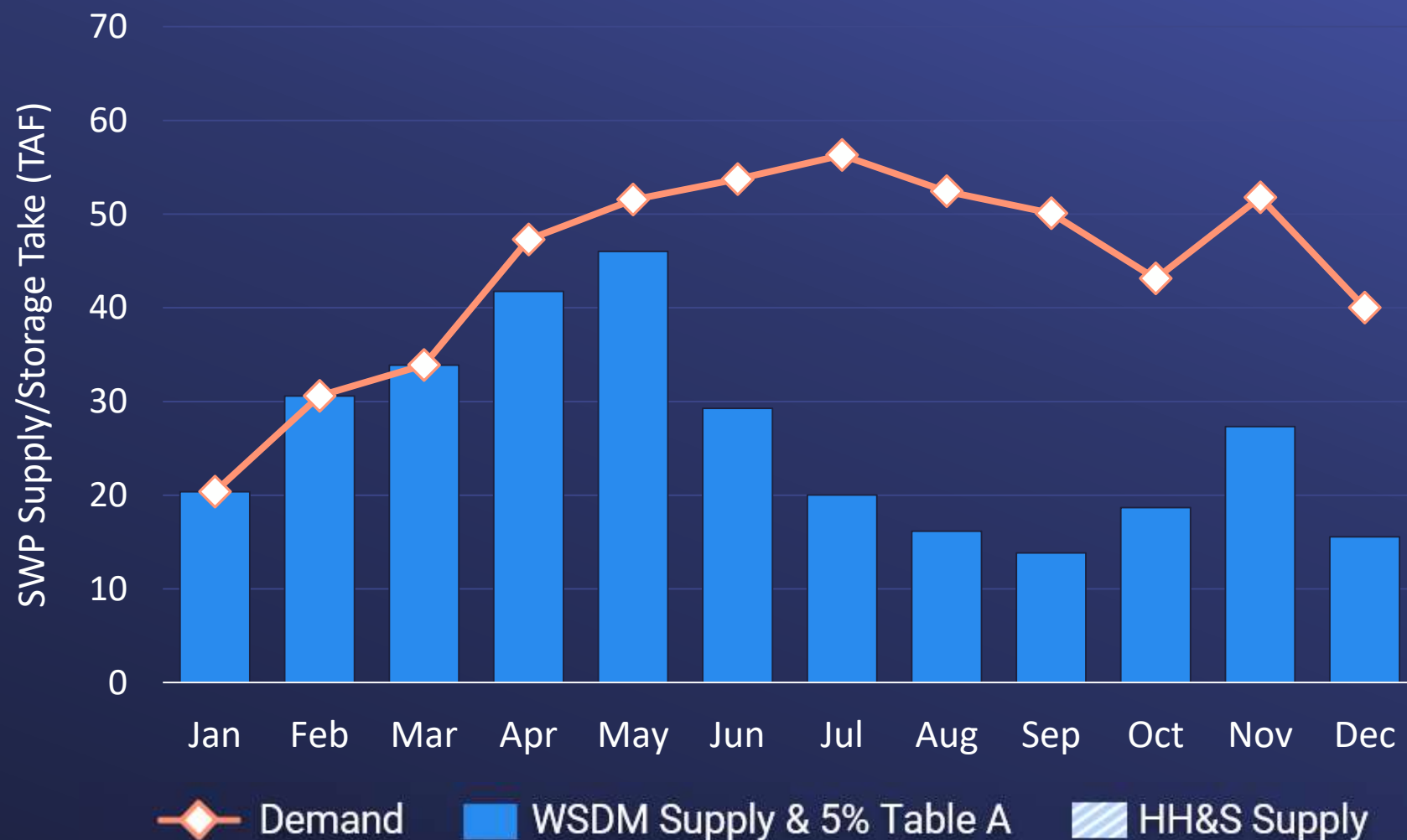
2022 SWP Dependent Area Monthly Supply/Demand



SWP
Dependent
Area

Available
Supply

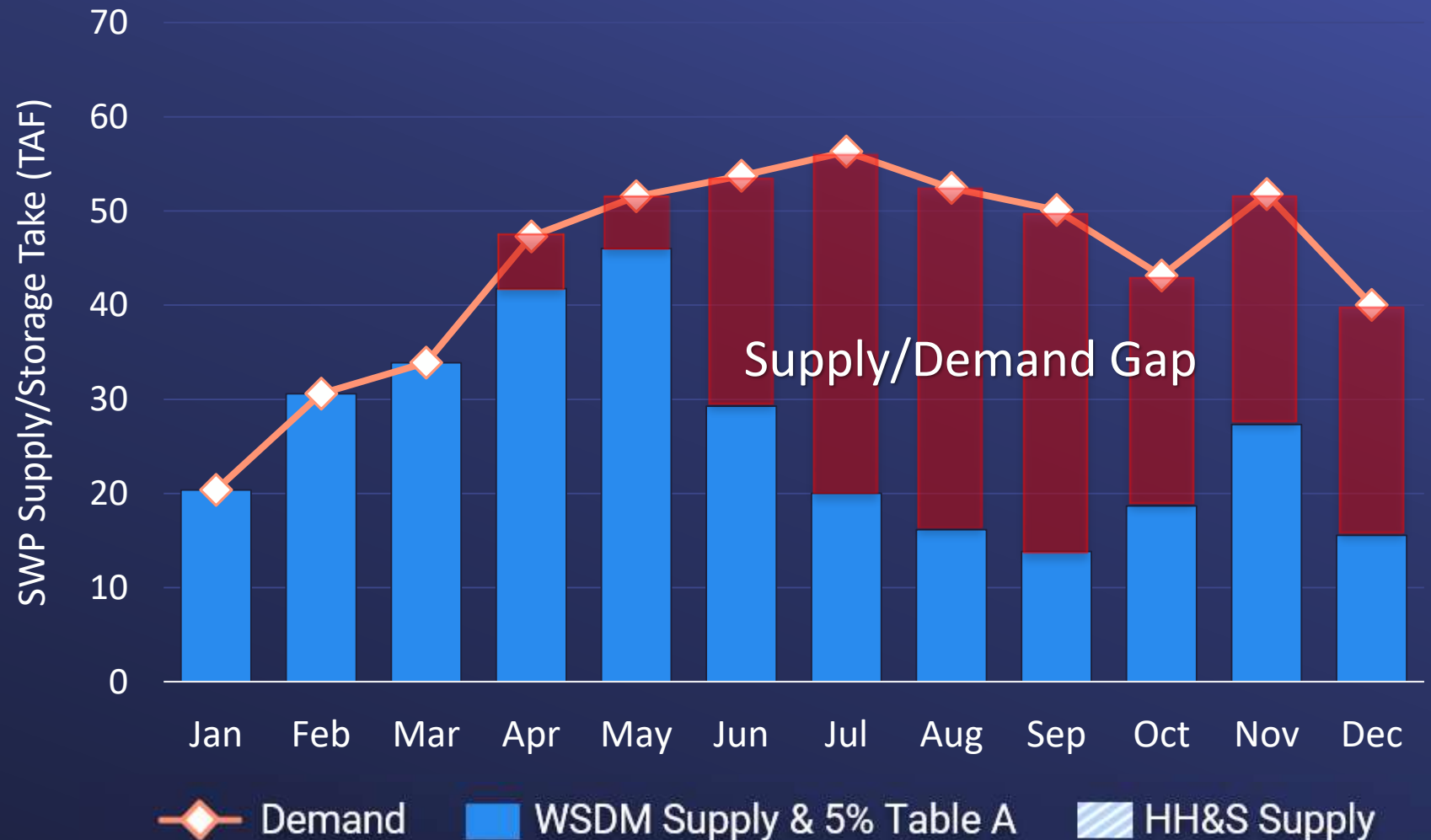
2022 SWP Dependent Area Monthly Supply/Demand



SWP
Dependent
Area

Available
Supply Not
Sufficient to
Satisfy
Demand

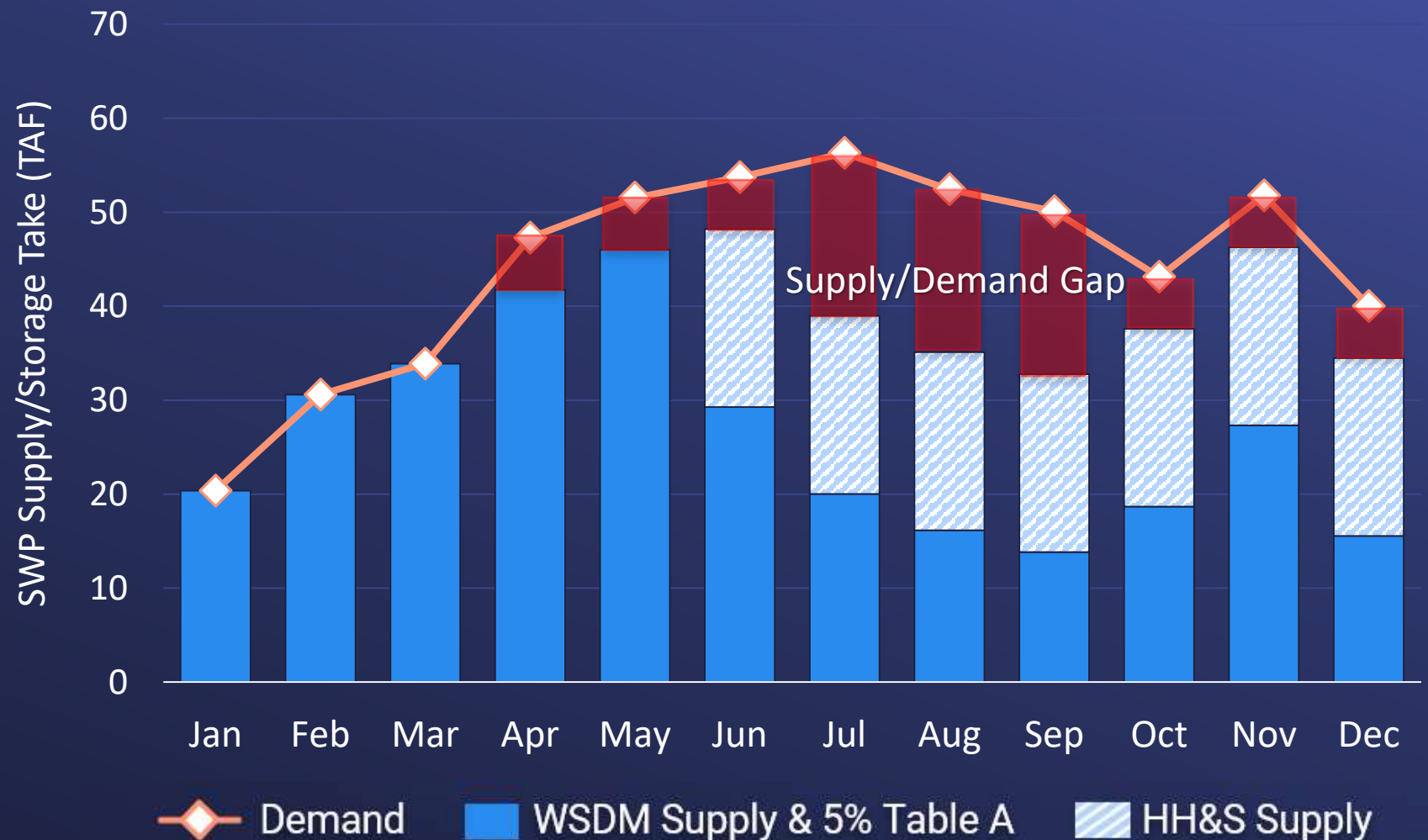
2022 SWP Dependent Area Monthly Supply/Demand



SWP
Dependent
Area

Requesting
Deliveries to
Meet Unmet
Human
Health &
Safety Needs

2022 SWP Dependent Area Monthly Supply/Demand



2022 SWP Dependent Area Monthly Supply/Demand

SWP Dependent Area

Requesting Deliveries to Meet Unmet Human Health & Safety Needs

SWP Supply/Storage Take (TAF)

70
60
50
40
30
20
10
0

Human Health & Safety (HH&S) Water - DWR Guidance

- Unmet HH&S water is based on 55 gallons/person/day adjusted for available non-SWP supplies
- Does not include allocation for critical CII
- Monthly deliveries of Table A, Carryover and HH&S water combined can not exceed a total of 55 gallons/person/day
- SWP pump-in programs, transfer supply, and flex storage are additive to HH&S supplies
- Requires implementation of mandatory conservation actions
- HH&S water received must be returned to DWR in a future year

Demand

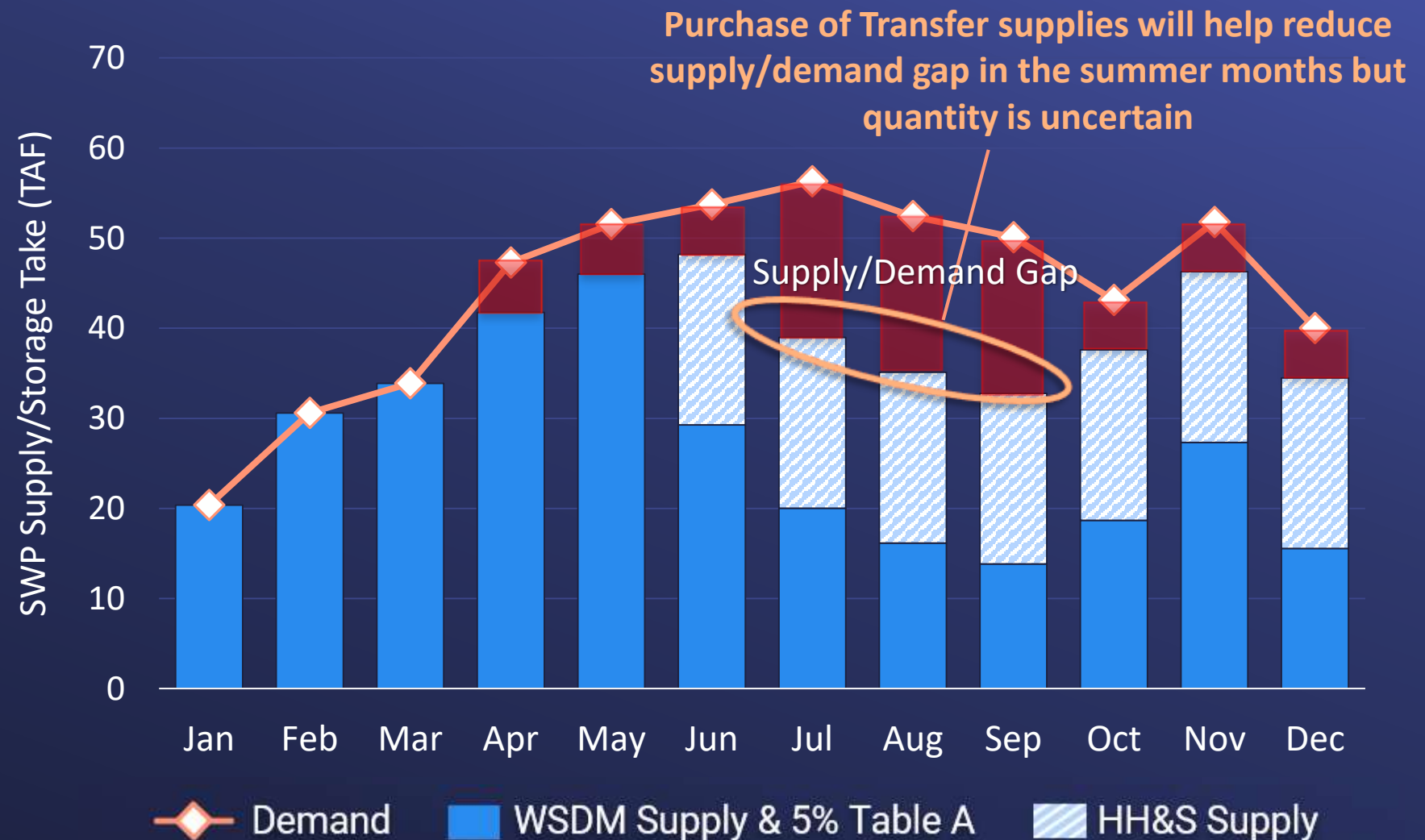
WSDM Supply & 5% Table A

HH&S Supply

SWP
Dependent
Area

Insufficient
Supplies to
Satisfy
Demand

2022 SWP Dependent Area Monthly Supply/Demand



SWP Dependent Area

Insufficient
Supplies to
Satisfy
Demand

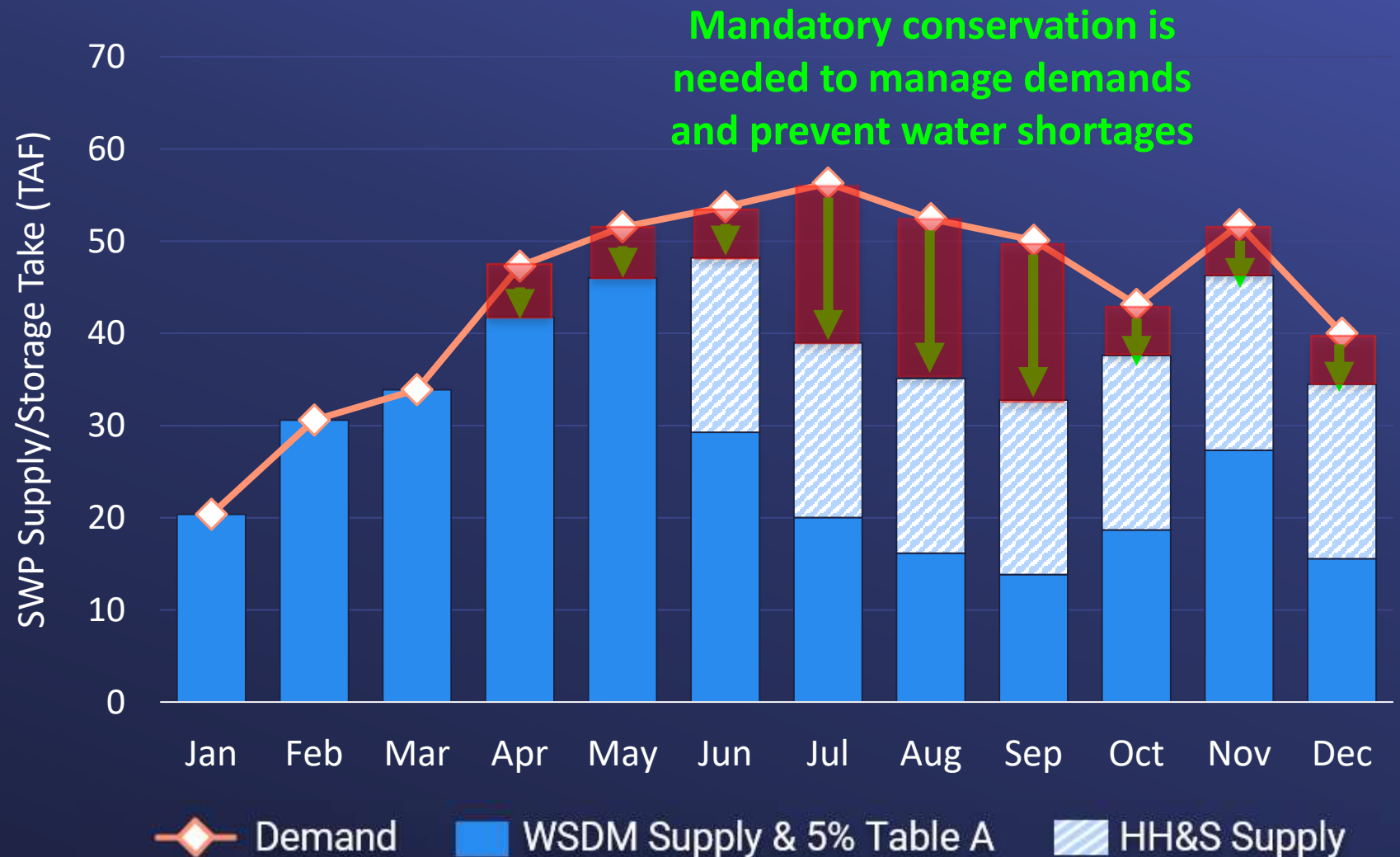
2022 SWP Dependent Area Monthly Supply/Demand



SWP
Dependent
Area

Additional
Conservation
Needed
to Balance
Supply/
Demands

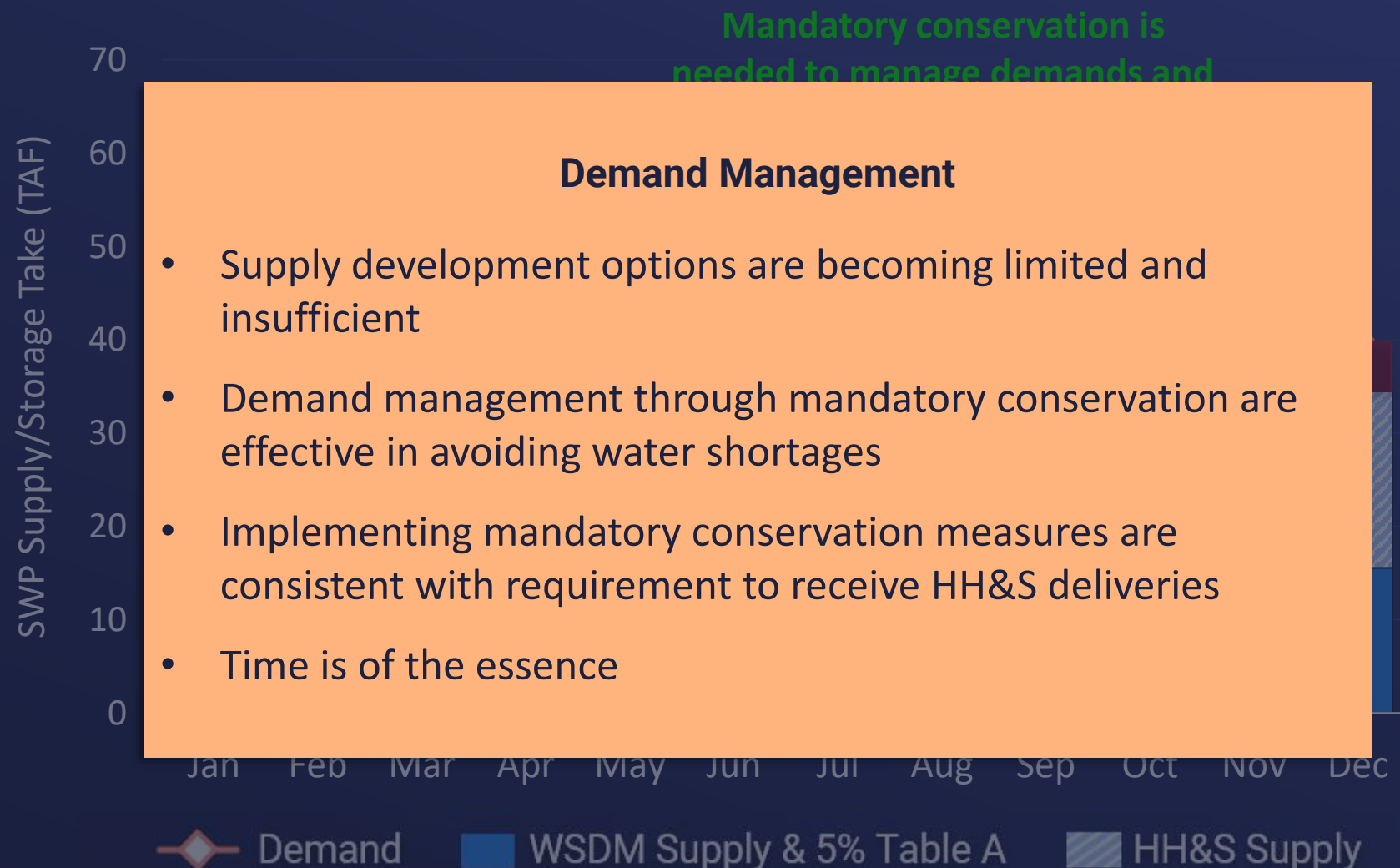
2022 SWP Dependent Area Monthly Supply/Demand



SWP Dependent Area

Additional Conservation Needed to Balance Supply/ Demands

2022 SWP Dependent Area Monthly Supply/Demand



Summary

- Record dry conditions persist
- DWR drops SWP Table A allocation to 5 percent and will provide water for any unmet critical human health and safety needs (HH&S)
- With the 5% allocation, strategic withdrawals from storage, and HH&S supply, there is not enough supply to meet normal demands for the Metropolitan's SWP Dependent Area
- Implementation of additional conservation efforts are needed now to balance current year water supply/demand in the SWP Dependent Area





Water Planning and Stewardship Committee

Update on Metropolitan/AVEK High Desert Water Bank Program

Item 6b
April 12, 2022

Background



About the Program

- Board authorized in April 2019
- Program size:
 - Storage capacity of 280,000 AF
 - Put/take capability of 70,000 AFY
 - Doubles existing direct pumpback
- Agreement term: 2019 - 2037
 - 20-year no cost option to extend



Program Benefits



Reliability

- Improves water supply reliability during dry years
- Provides emergency reliability to SWP Dependent Areas downstream of Edmonston Pumping Plant
- Could provide reliability to West side Member Agencies through LA Aqueduct



Operational Flexibility

- Provides greater operational flexibility to help meet demands



Partnership

- Strengthens relationship with a key State Water Contractor



Cost Competitive

- Unit cost is competitive to other groundwater banking programs

Program Costs



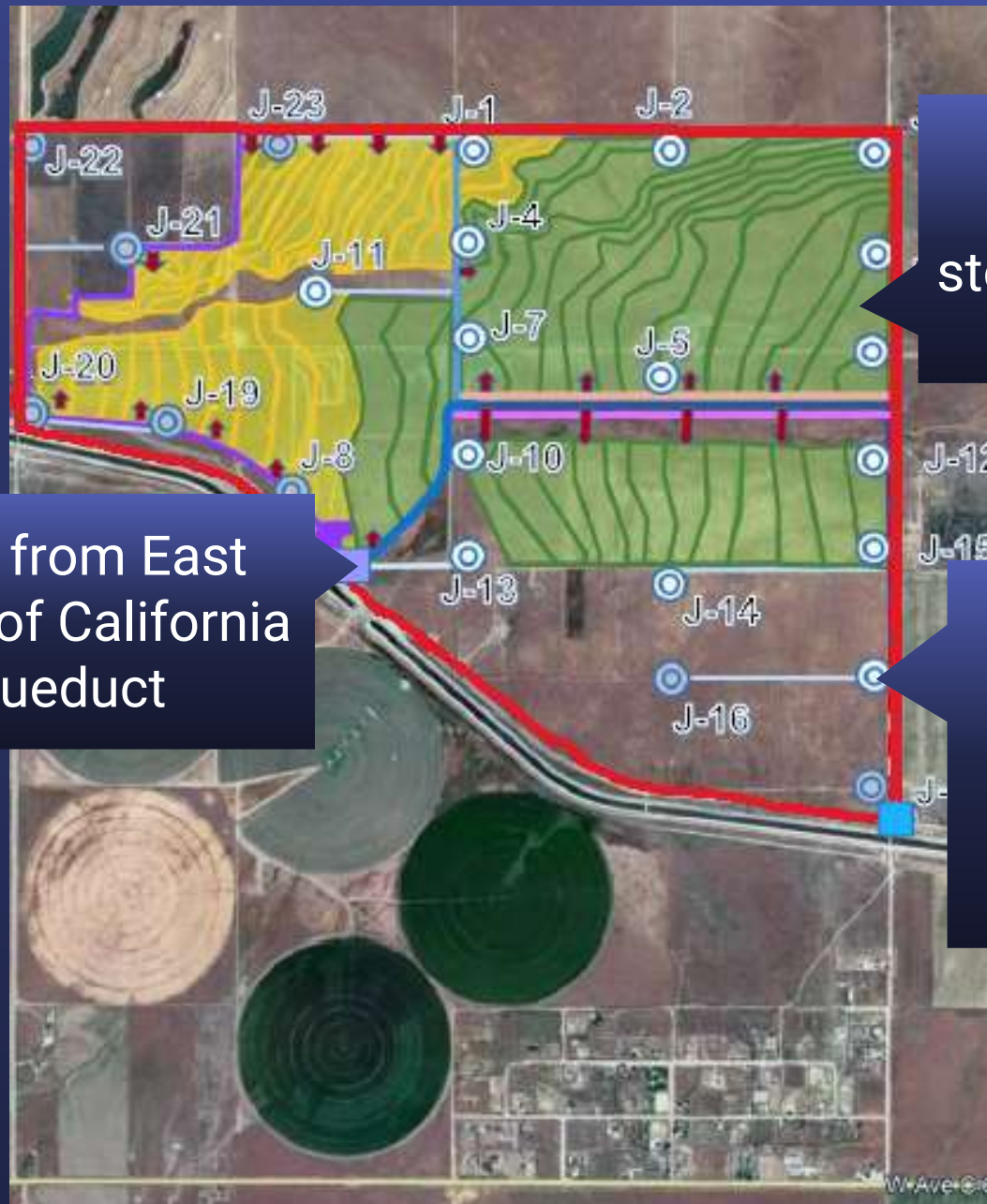
- Capital costs of up to \$131 M
- Recovery usage fee of \$100/AF; no fee to store
 - Escalated annually
- O&M and site power costs
- Estimated unit cost of \$320/AF in 2019

How the Program Works

Water from East Branch of California Aqueduct

Water piped to recharge basins to store in Antelope Valley Groundwater Basin

Water pumped from groundwater wells and returned to CA Aqueduct for Metropolitan use



Where We Are Today

- Provided \$25 million to-date
 - Largest expenditures expected in FY2023 & FY2024
- Four pilot recovery wells successfully constructed
- Turn-in/out structure and next phase of wells under construction
- On schedule to commence operation in 2023 (recharge) and 2025 (recovery)



Potential Changes

- Potential increases in cost
 - Off-site electrical costs not included in original estimate
 - Hydraulic uncertainty
 - Inflation higher than anticipated in original estimate
- Evaluating options to minimize cost increases while maintaining performance
- Future discussion with Board
 - Options and next steps
 - Request authorization for additional funding, if needed

Extraordinary Drought Operation



What is it?

- Operating new HDWB wells to pump in water to CA Aqueduct from existing storage account



How much water?

- About 500 AF/month



How much does it cost?

- Estimated additional costs of \$ 2.5 million
- Costs include design, installation, power, staff



How soon?

- AVEK to obtain temporary pump-in agreement from DWR
- Water as early as this summer

Next Steps

- Continue to meet with AVEK
 - Monthly and as needed
- Monitor progress and potential changes
 - Cost and schedule
- Provide updates to Board on project progress





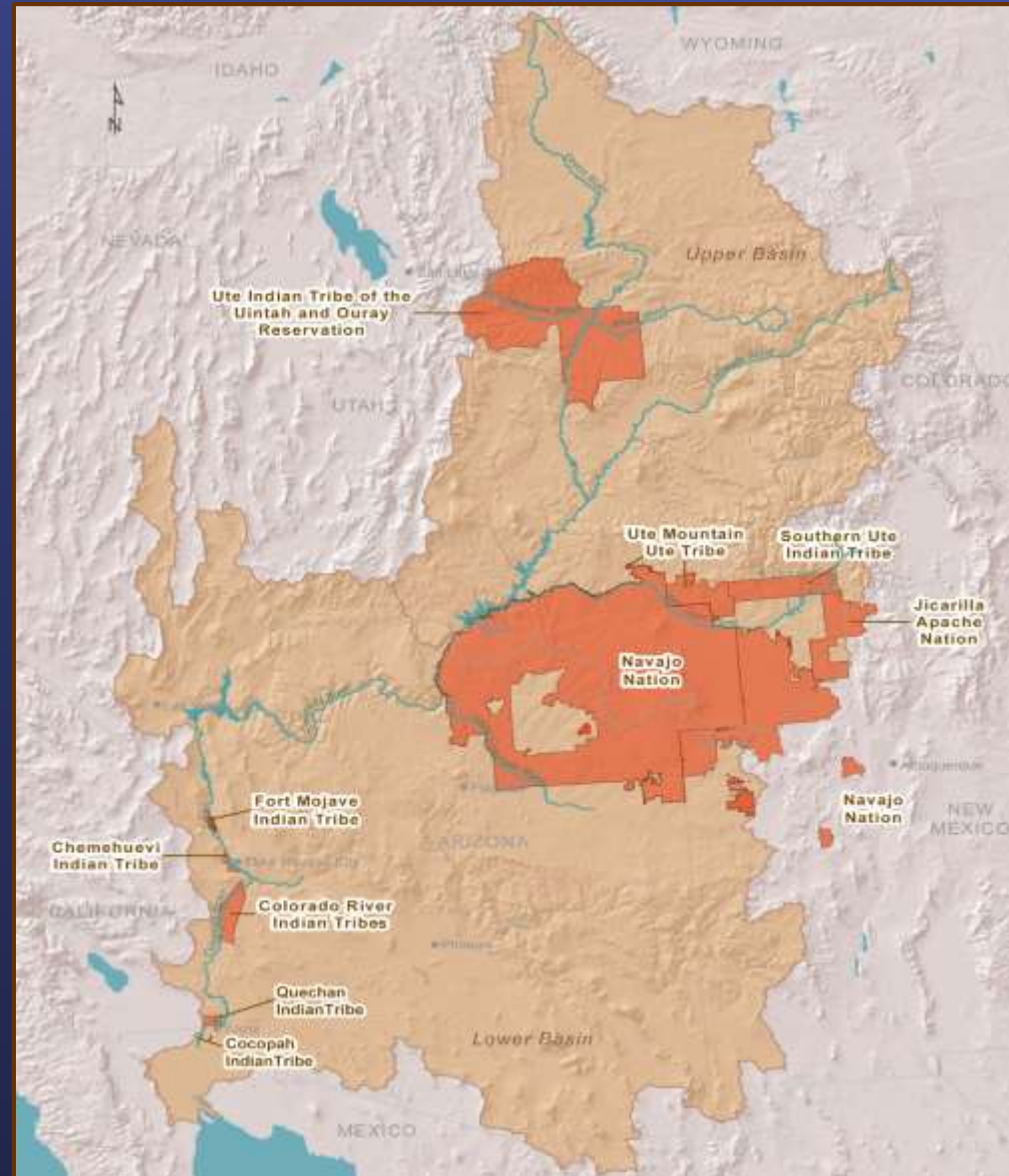
Water Planning and Stewardship Committee

Tribal Partnerships along the Colorado River

Item 6c

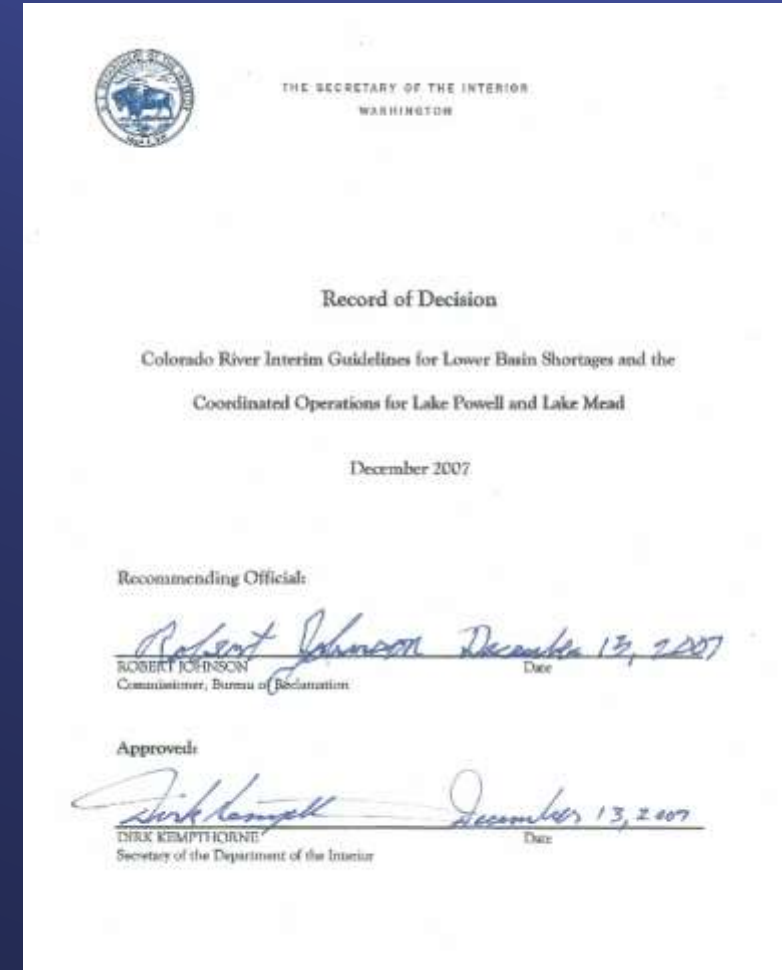
April 12, 2022

Reclamation Map of Tribes Along the Colorado River

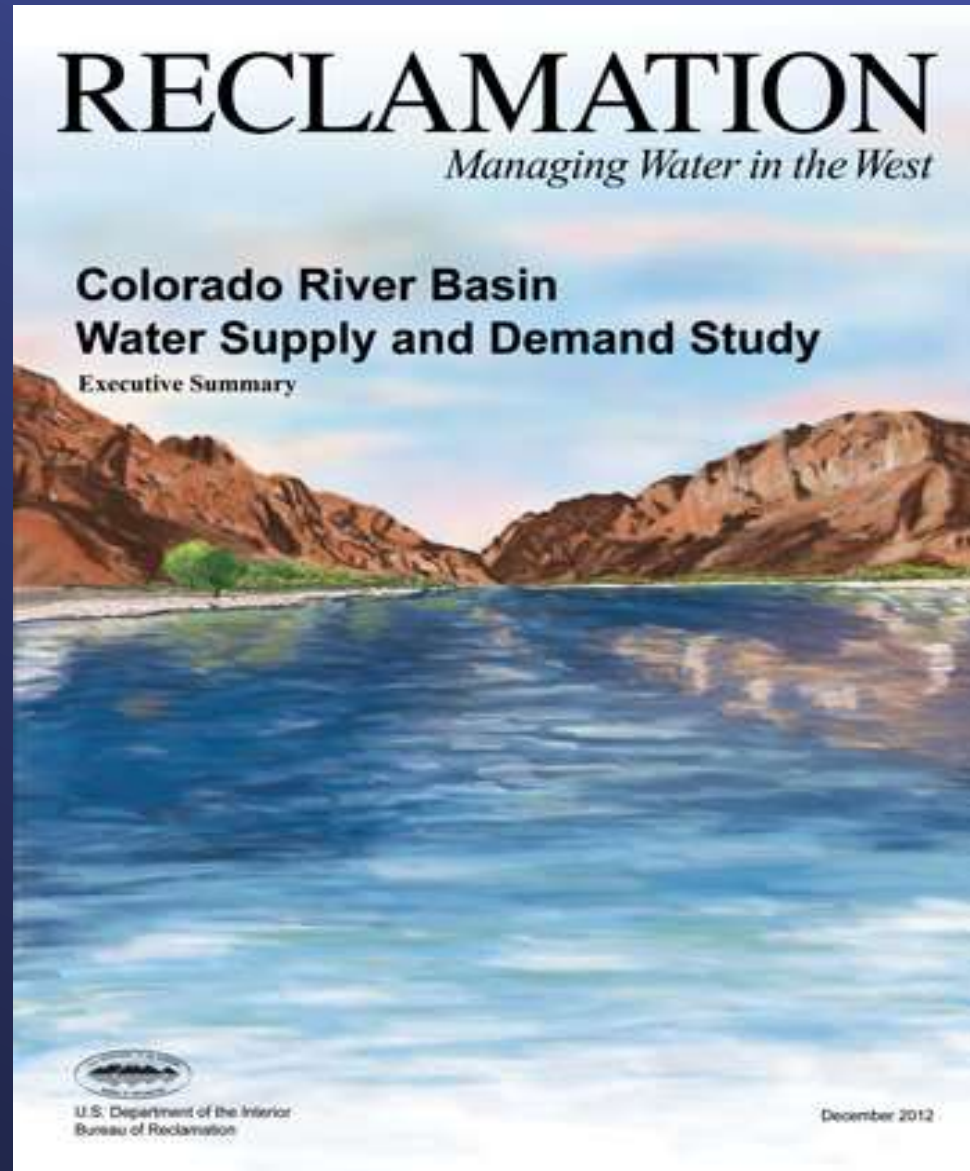


2007 Interim Guidelines

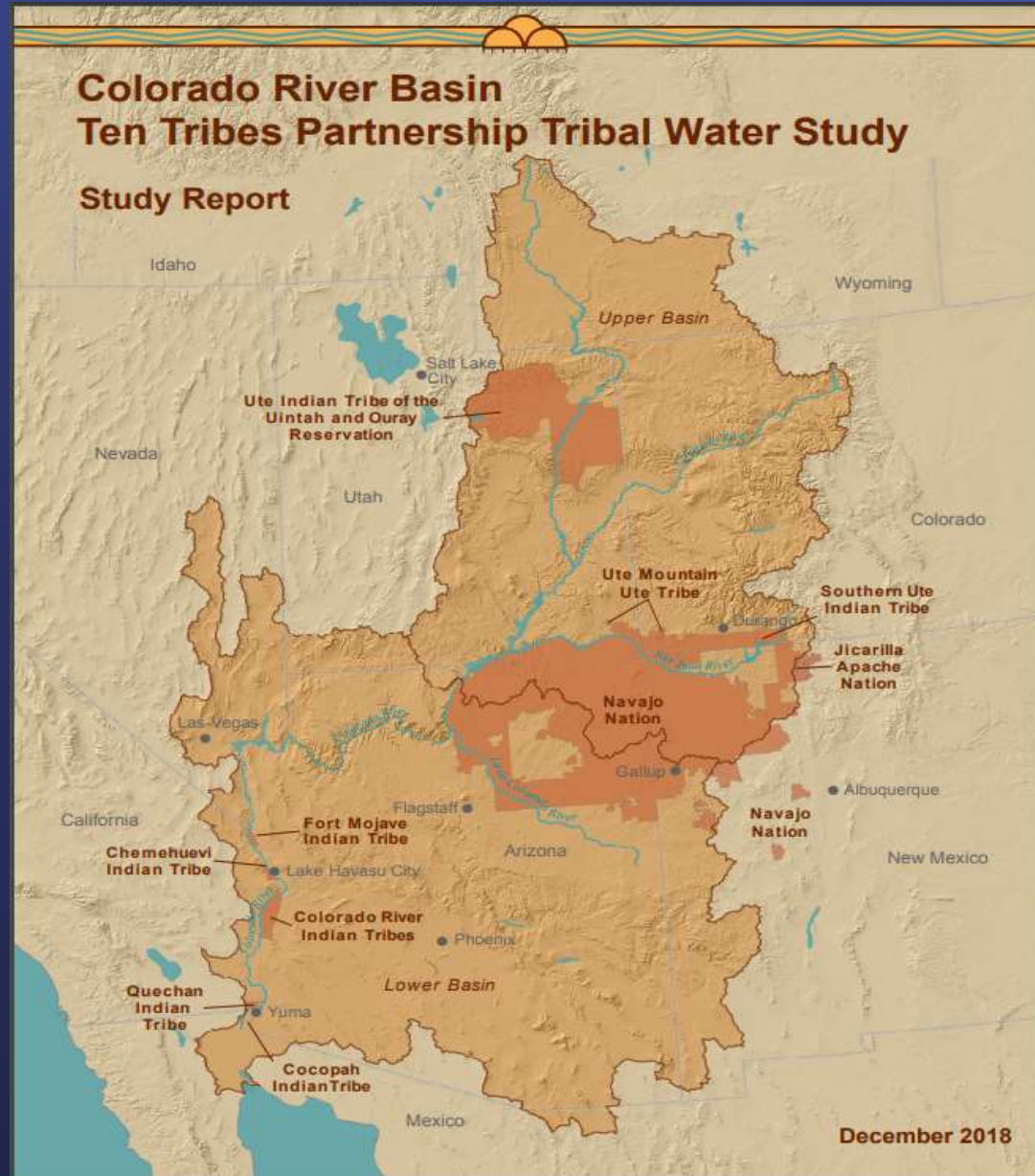
- Effective through 2026
- Key Guidelines Provisions
 - Established Lower Basin Surplus and Shortage Triggers
 - Coordinated Reservoir Operations
 - Developed Intentionally Created Surplus (ICS)



Reclamation Water Supply and Demand Study (2012)



Ten Tribes Partnership Tribal Water Study (2018)



2019 Colorado River Drought Contingency Plan

- Key DCP Provisions
 - Established triggers for Lower Basin Lake Mead Contributions
 - Incentivized Storage
 - Provided flexibility for recovering storage, implementing exchanges



Tribal water rights in the mainstream of the Colorado River

- Five tribes with federal Indian reserved water rights for direct mainstream diversions below Hoover Dam
- Present perfected rights or PPRs decreed in *Arizona v. California*:
 - Fort Mojave Indian Tribe
 - Chemehuevi Indian Tribe
 - Colorado River Indian Tribes
 - Quechan Indian Tribe
 - Cocopah Indian Tribe

Navajo Nation v. United States

- Commenced in 2003 and still pending
- Fundamentally a claim to mainstream Colorado River water
- Metropolitan intervened in this action along with the State of Arizona, Coachella, and Imperial Irrigation District to protect their interests
- Parties considering appeal of Ninth Circuit decision to U.S. Supreme Court or remand to district court

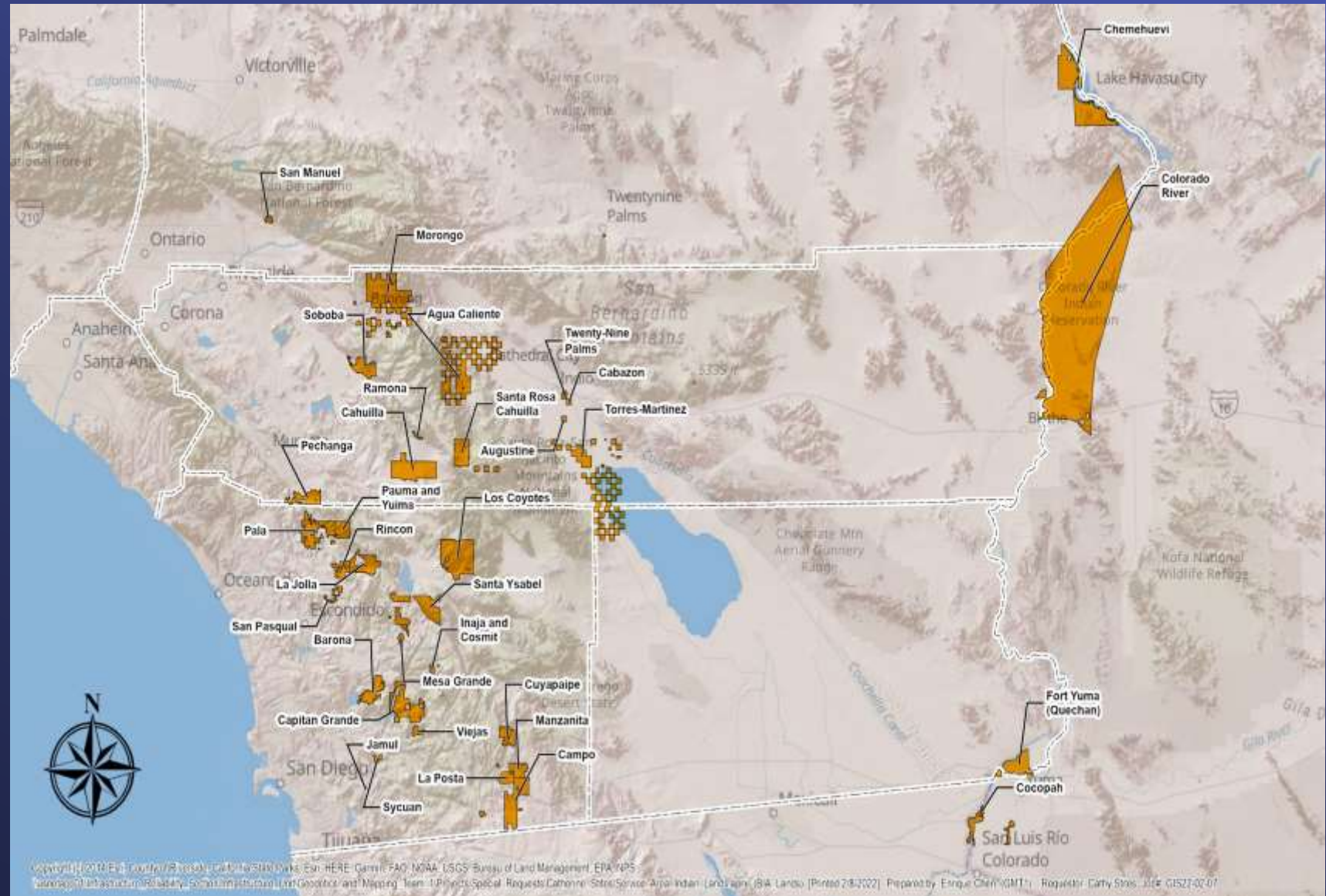
NATIVE PEOPLES OF ARIZONA
COMPREHENSIVE MAP OF ARIZONA INDIAN RESERVATIONS

SOURCES:
 American Indian Tribes and Communities in Arizona.
http://www.apa.gov/region1/arc/reservations/NR1100040_2g.gif
 Arizona Tribal Lands and Reservations.
http://www.apa.gov/region1/arc/reservations/NR1100040_2g.gif

Quechan Seasonal Following Pilot Program Signing Ceremony (2021)



Federally recognized tribes in Southern CA



Existing tribal partnerships

- Quechan (Kwatsáan) Indian Tribe of the Fort Yuma Indian Reservation (Quechan)
- San Pasqual Band of Mission Indians (San Pasqual)
- San Luis Rey Band of Mission Indians (San Luis Rey)
- Soboba Band of Luiseño Indians (Soboba)
- Pechanga Band of Luiseño Indians (Pechanga)
- Sycuan Band of the Kumeyaay Nation (Sycuan)

Future tribal opportunities

- Many existing relationships
 - Including successful partnerships in-region
- Regular respect and protection of tribal cultural resources
- Several future opportunities
 - Colorado River Indian Tribes





Water Planning & Stewardship Committee

Review Term Sheet for the Bay-Delta Watershed Voluntary Agreement

Item 6d

April 12, 2022

Review of Term Sheet for

Bay-Delta Watershed Voluntary Agreement

Agenda



Background



MOU and Term Sheet overview



Next Steps



Discussion

Background

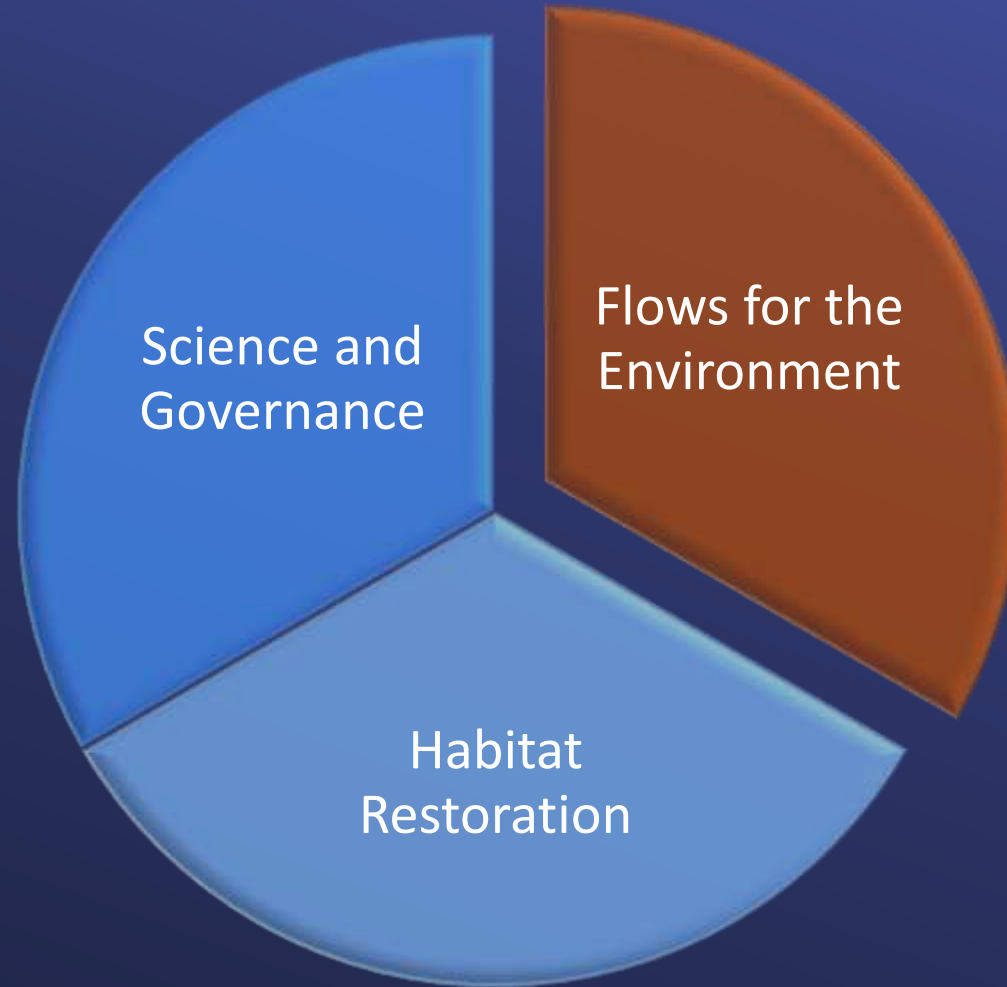
State Board update to the

Water Quality Control Plan



Since 2015 the State has been,
and will continue to lead

An Alternative Approach



Aligns with:

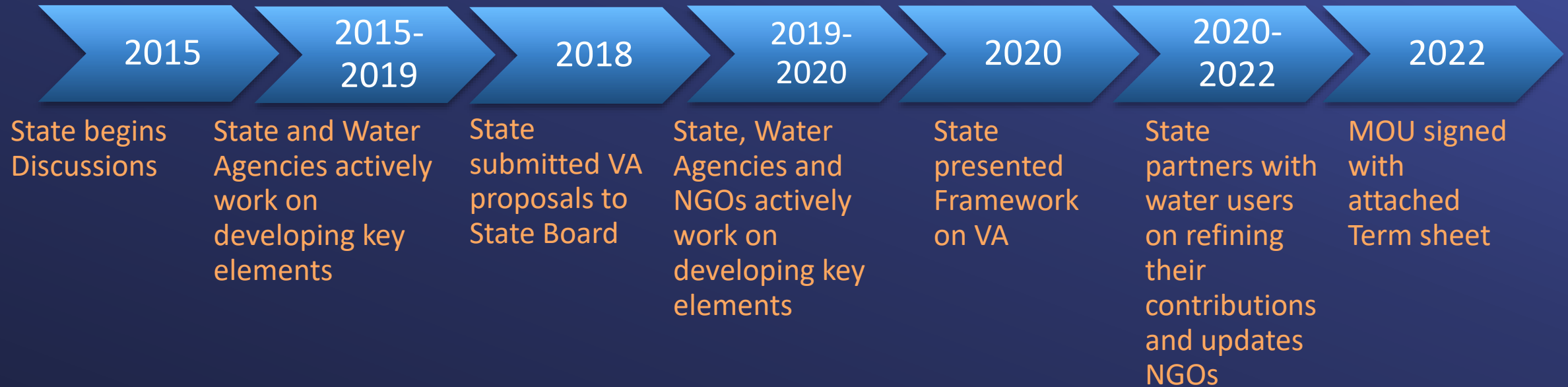
Water Resilience Portfolio

State's priorities in Executive Orders
(Drought and Biodiversity)

State's desire to fund multiple
benefit programs

Voluntary Agreement (VA) Development

2015 to present



March 29, 2022

MOU signed



- California Natural Resources Agency
- California Environmental Protection Agency
- Department of Water Resources
- Department of Fish and Wildlife
- State Water Contractors
- Metropolitan Water District
- Kern County Water Agency
- Westlands Water District
- Glenn-Colusa Irrigation District
- Yuba Water Agency
- Regional Water Authority
- River Partners
- Feather River Settlement Contractors

MOU provision: 2.5. “It is the intent of the Parties to encourage the possibility that additional entities, at a later date, will sign this MOU to offer contributions that would enhance the effectiveness of the VA Program described in the Term Sheet....If appropriate, the entity shall sign this MOU as a separate counterpart, and the additive contributions shall be incorporated into the Term Sheet.”

MOU and Term Sheet

Voluntary Agreements

MOU and Term Sheet

KEY COMPONENTS OF
VOLUNTARY AGREEMENT



Voluntary Agreement Flows



Habitat Restoration



Governance



Voluntary Agreement Timeline



Funding

Voluntary Agreements

Watershed Wide Approach

- Up to 824,000 acre-feet of additional flow
- Flows made available under the agreement will be above regulatory conditions¹

SWP Flow Contributions for Environment Thousand Acre-Feet (TAF)	Critical	Dry	Below Normal	Above Normal	Wet
Water Purchase Program - Fixed	0	30	30	30	0
State Water Project and Central Valley Project Export Reduction	0	125	125	175	0

¹ Per Term sheet section 4.1. The VA flows described in Appendix 1 will be additive to the Delta outflows required by Revised Water Rights Decision 1641 (Revised D1641) and resulting from the 2019 Biological Opinions, although the 2019 Biological Opinions may be modified, including to resolve litigation concerning those opinions.



Voluntary Agreement Flows

Flow Amounts for Environment Thousand Acre-Feet (TAF)	Critical (15%)	Dry (22%)	Below Normal (17%)	Above Normal (14%)	Wet (32%)
San Joaquin Basin	48	156	181	122	0
Sacramento River Basin	39	278	256	281	0
Friant	0	50	50	50	0
Water Purchase Program	3	108.5	129.5	144.5	27
SWP/CVP Export Reduction	0	125	125	175	0
State Purchases	65	108	9	52	123
Total New outflow (Year 1)	155	825.5	750.5	824.5	150
New Water Projects (Before Year 8)	0	87	97	0	0

¹ All Appendix 1 and Phase 1 flows will be protected and parties agree to discuss the protection of these flows and collaboratively identify and resolve any redirected adverse impacts to water supply in excess of Appendix 1 contributions resulting from the protection of these flows from delta outflow.

NOTE: These flow amounts were from Table 1a of Appendix 1 and summarized by Basin



Voluntary Agreements

Habitat Restoration

Habitat Type	Acres
Fish Food Production	20,000
Floodplain Habitat	20,000
Tidal Wetlands and Associated Floodplain	5,000
Spawning, Instream and Floodplain juvenile rearing habitat	3,300
Approximate Total	48,000

¹ Per Term sheet Appendix 2. Minimum Additive Contributions to Habitat Restoration: Sacramento: 137.5 (instream), 113.5 (spawning), Sutter Bypass, Butte Sink, and Colusa Basin: 20,000 (floodplain), 20,000 (fish food production; Feather 15 (spawning), 5.25 (instream), 1,655 (floodplain); Yuba 50 (instream), 100 (floodplain); American 25 (spawning), 75 (rearing); Mokelumne: 1 (instream), 25 (floodplain); Putah: 1.4 (spawning)



Voluntary Agreement

Governance, Science, and Adaptive Management

Governance Program will direct flows and habitat restoration



Systemwide Governance
Committee



Tributary / Delta Governance
Entities



State's Voluntary Agreement Timeline

8 year term – potential up to 15 years



Implement Voluntary Agreements

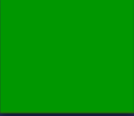


- Annual Reports
- Triennial Reports
- Strategic Plan
- Governance and Science

Three possible pathways

- 1) Renew Voluntary Agreements up to 15 years
- 2) Voluntary Agreements modified and/or Bay-Delta Plan update
- 3) Regulatory pathway

State Board Determines Pathway after Year 8

State Board Public Process

	Substantially achieving	Renew VAs up to 15 years
	Significant progress	VA modifications and/or Bay-Delta Plan update
	Not achieving	New VAs or regulatory approach

State Board review considers implementation progress and adaptive management studies



Voluntary Agreement Program Costs and Funding

Based on up to 8 years

Total Estimated Costs	\$2.589 billion
Total Estimated Funding	\$2.914 billion
Public Water Agency Funding Mechanism	
Metropolitan Estimated Funding Contribution	
~\$8¹ - \$12² million annual average	

¹Based on historic 10-year deliveries 2011-2020

²Based on 4.9 MAF exports per operational permit modeling

Next Steps

Next Steps

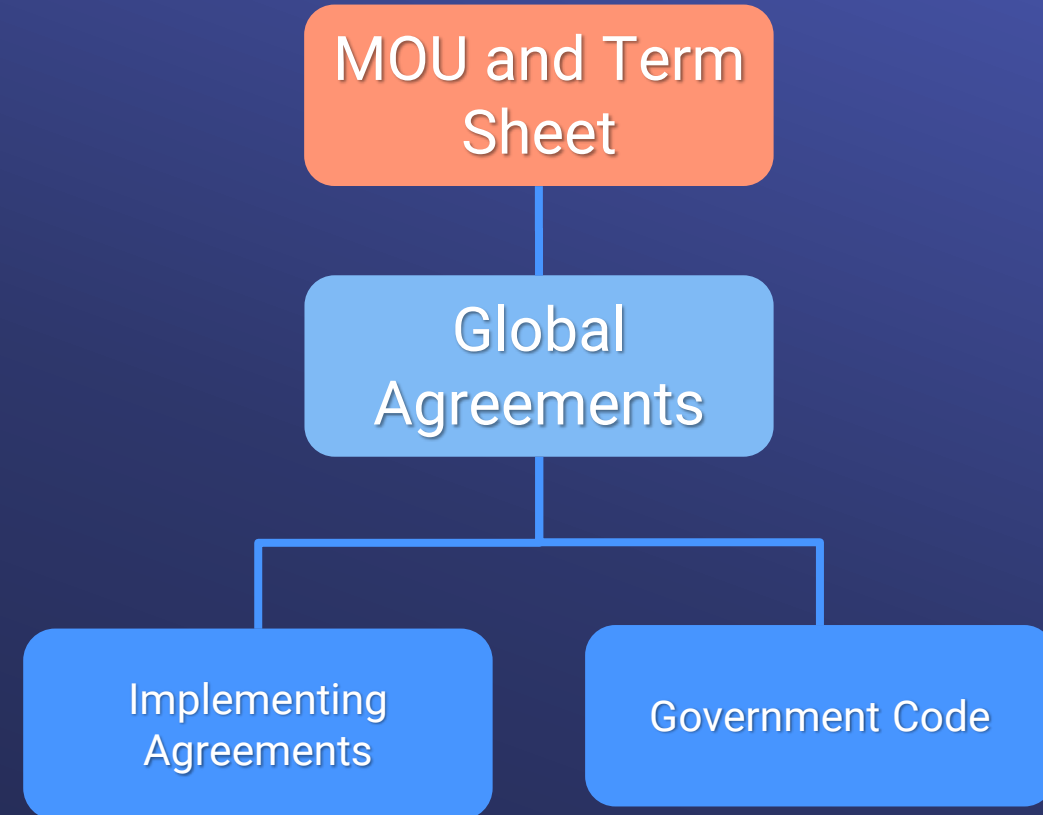
Advancing the Voluntary Agreements

- State Board considers Voluntary Agreements as an alternative implementation of narrative objectives in Substitute Environmental Document
- Approval of the Update to the Water Quality Control Plan that includes the Voluntary Agreements
- Implementation of Voluntary Agreements
- Continued discussions on Early Implementation

Voluntary Agreements

Key Agreements

- Global Agreements
 - Structure
 - Funding
 - Science Program
 - Governance
- Implementing Agreements
- Government Code Section 11415.60



Voluntary Agreements vs. Regulatory Approach

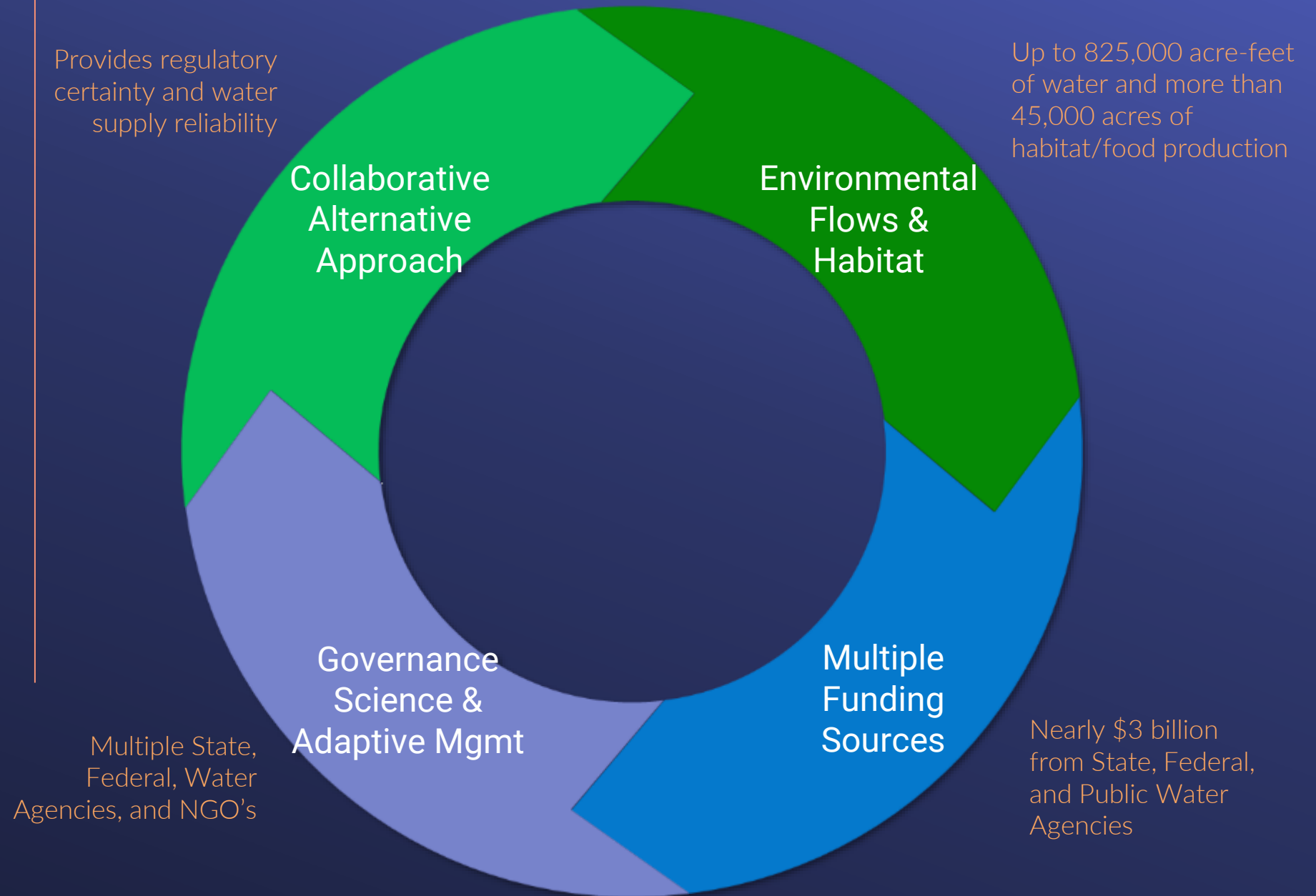
	Voluntary Agreements	Regulatory Approach
Water Supply	Up to 175 TAF (SWP/CVP) Additional 30 TAF SWP only	55% Unimpaired Flow ¹
Costs	\$10/AF diverted	No direct costs, but must replace lost supply
Structure	Voluntary Approach 8 up to 15 years	Permanent change, unless amended
Watershed	Bay-Delta Watershed-wide	Juniors (SWP-CVP) larger obligation
Governance	State Board/Water Users/NGO's/Science	State Board
Functionality	Habitat Restoration Adaptively Managed flows (functional flows) Performance based	Flow only

¹State Board would allocate responsibility for the 55% in a subsequent water rights adjudication or by regulation amending water rights

NOTE: Current estimated flows to be agreed upon by multiple parties. This information reflects the State's most recent proposal, subject to agreement by multiple parties, legislation, and actions by multiple boards and state/federal agencies. May be modified, updated or reconciled based on actual agreements.

Voluntary Agreements
Summarized

Watershed Wide Approach



Discussion





Water Planning and Stewardship Committee

Bay-Delta Policy Update Workshop One

Item 6e
April 12, 2022

Workshop One

Bay Delta Policy Update

Overview



Background: Bay-Delta Policies



Research and Staff Workshops



Bay-Delta Policy Development
and Framework







Policy Framework Application



Discussion

BDI Policy Update Timeline

June Action

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Staff Research and Development									
Kick Off with BDI Committee									
Committee Workshops 1+2									
Board Info and Action Items								INFO	ACTION

Background: Bay Delta Policies


Existing Board Adopted Bay-Delta Policies



Policy Principles 2006
(Policy Principles - Themes)



Delta Action Plan Framework 2007
(Short, Mid, and Long Term)



Delta Conveyance Criteria 2007
(Near, Long Term and Approved
Conveyance Criteria)

Other Key Bay-Delta Board actions: Bay-Delta Finance & Cost Allocation (May 2004), Delta Governance Principles (August 2008), Delta Vision Implementation (Jan 2009), Delta Related Legislation (April 2009)

Four Central Policy Themes (2006)

Focus on a long-term Sustainable Delta

Promote Statewide Integrated Resource Management Actions – consistent with IRP

Long-Term Solutions Must be Cost-Effective and Fairly Apportion Costs to All Beneficiaries

Pursue continued Implementation/Protection of Drinking Water Supplies/Quality Facility Improvements

(2006) Application of Existing Bay-Delta Policies and key initiatives

Conveyance
Criteria

Delta Action
Framework



CSAMP



2006

2008

2010

2012

2014

2016

2018

2020

Bay-Delta Policy
Principles

Delta Governance
Principles



Why Update the Bay-Delta Policies?



Policies have not been updated in over 15 years



Policy structure is dense and spread over multiple board actions



Policies can be difficult to understand for both decision makers and the public



Metropolitan's policies should be clear and concise to support the board's future oversight and actions

Research and Staff Workshops

Summarized Research

26

Detailed policy profiles focused on current issues and emerging trends completed by Subject Matter Experts.

50+

Internal workshop participants from across the organization

173

Comments reviewed and categorized

Emerging Trends



Climate change impacts on hydrology

Increased intensity and frequency of droughts, wildfires, floods



Joint funding and partnerships are occurring statewide

Watershed wide partnerships, multi-agency science partnerships, project partnerships



Delta Sustainability has become even more critical

Strain on environment, multi-benefit projects trending, co-existing environment and water supply needs

Highlights and Key Points



Community building in the Delta



Promote sustainable farming practices in Delta (flexible leases)



Delta Conveyance planning should emphasize proposed project operational reliability



Local resource development still requires imported water for recycling and groundwater recharge



Multi-benefit restoration projects are essential, streamlining permitting processes is a must



Energy sustainability and reliability is a paramount concern, but should not be at the expense of water suppliers

Bay-Delta Policy Development and Framework

Objective: Restructure policies to align with emerging trends while preserving topics that are still relevant to the Board's ongoing direction

Key Six Policy Areas



Policy Area 1: Statewide Water Resource Management



Policy Area 2: Bay-Delta Science, Watershed Management, and Land use



Policy Area 3: Bay-Delta Operational Resilience



Policy Area 4: Bay-Delta Infrastructure Reliability

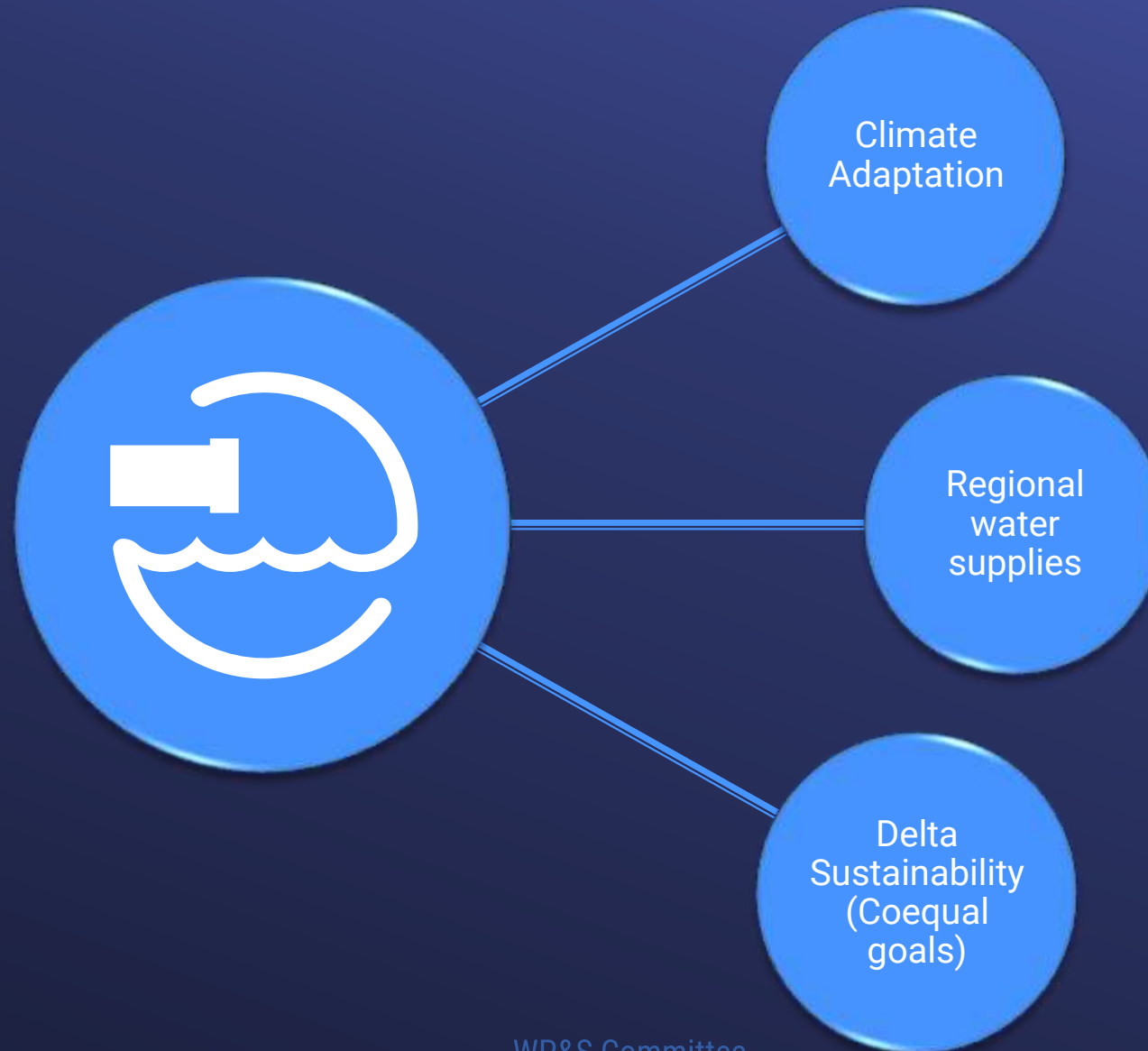


Policy Area 5: Community Investments and Partnerships

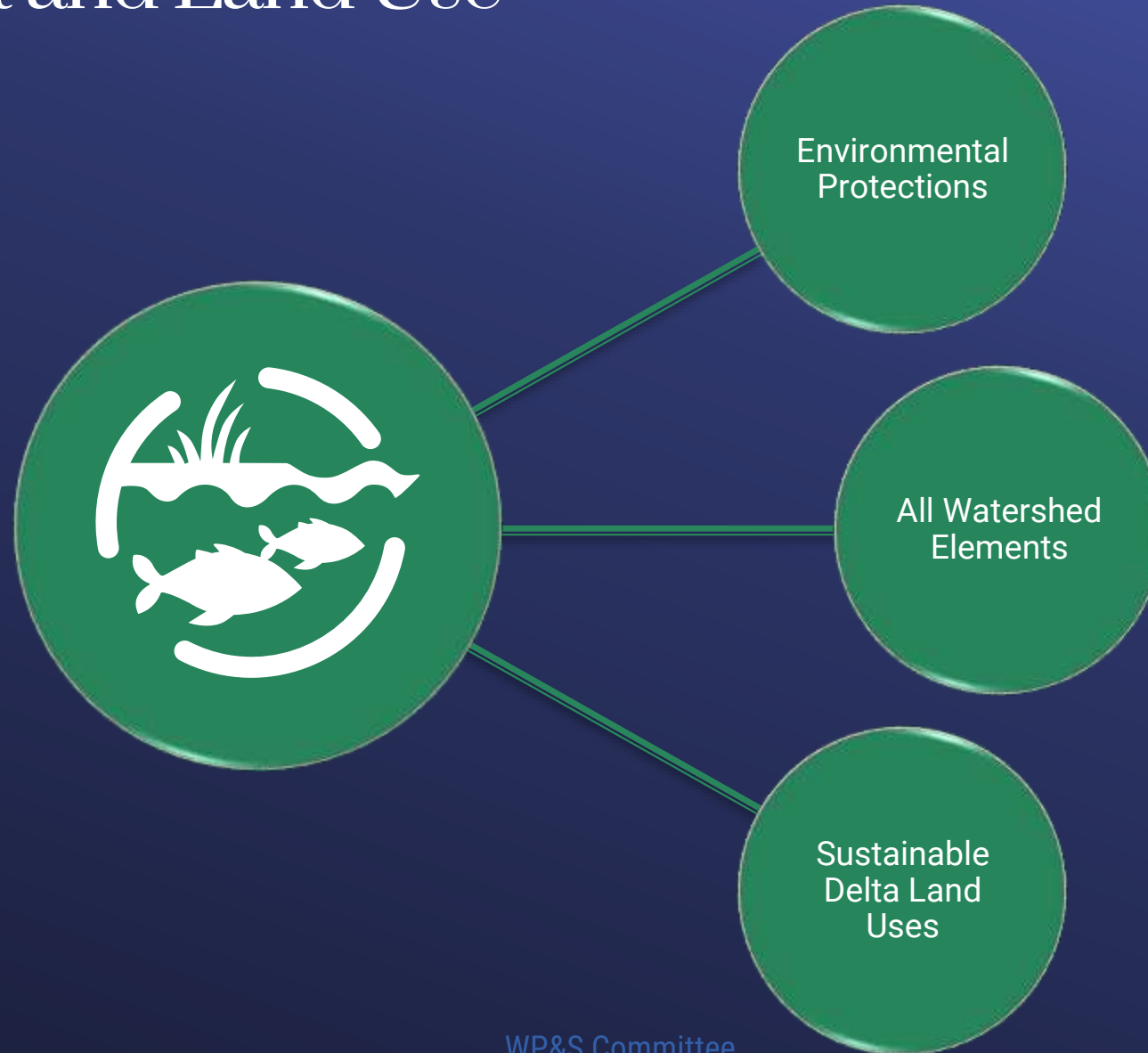


Policy Area 6: Statewide Water Resources Management Supports MWD's One Water

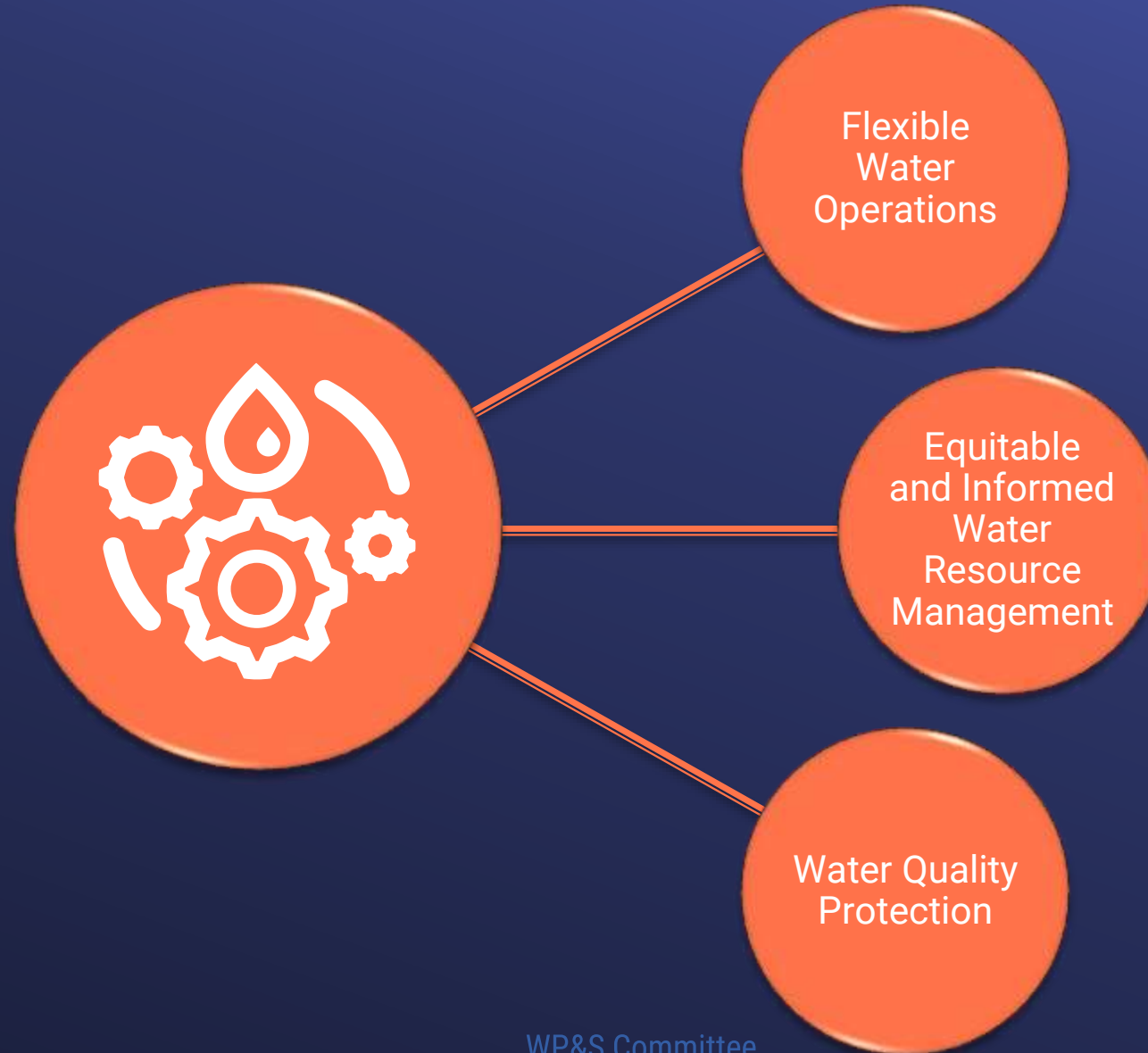
Policy Area I: Statewide Water Resource Management



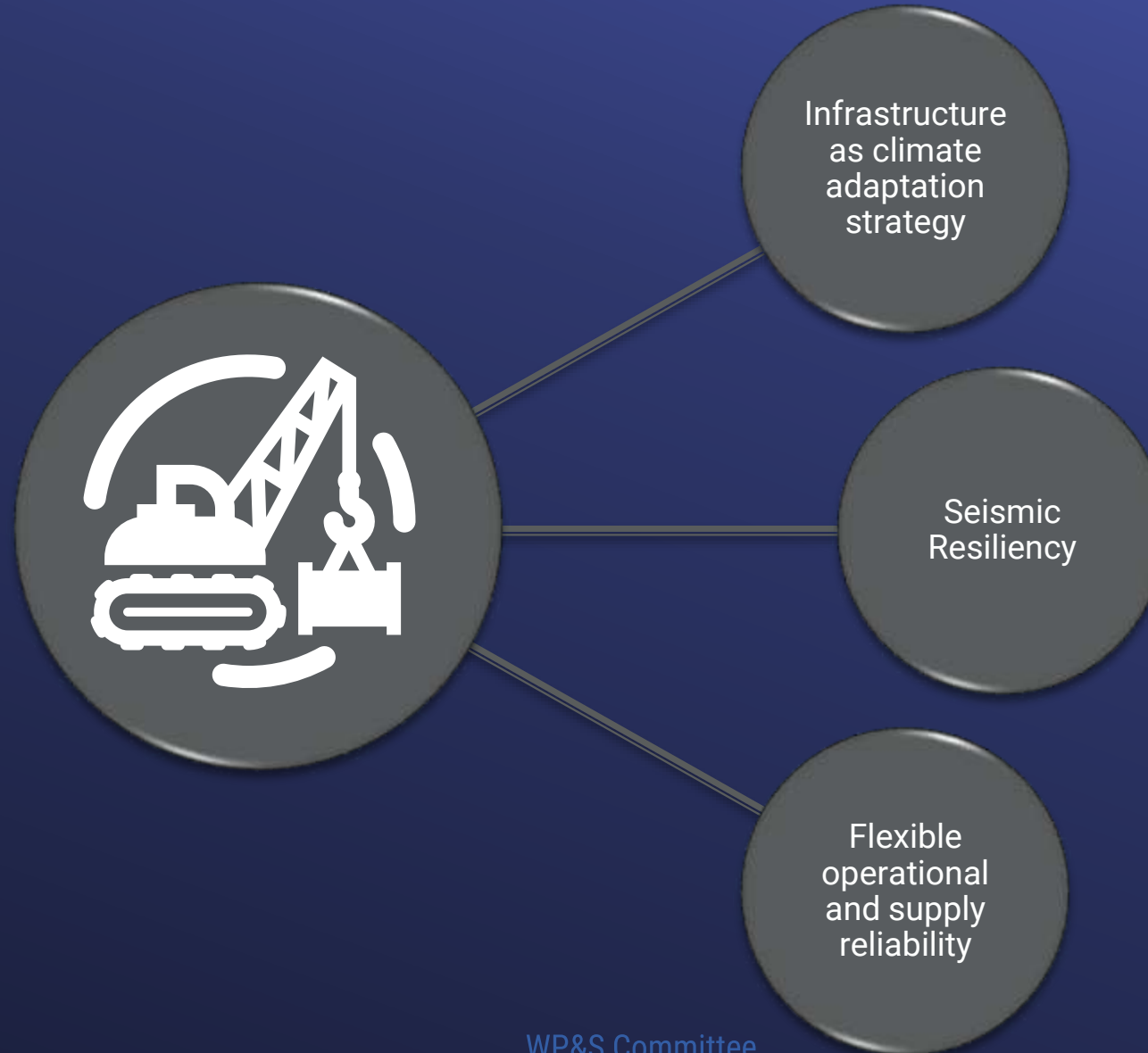
Policy Area 2: Bay-Delta Science, Watershed Management and Land Use



Policy Area 3: Bay-Delta Operational Resilience



Policy Area 4: Bay-Delta Infrastructure Reliability



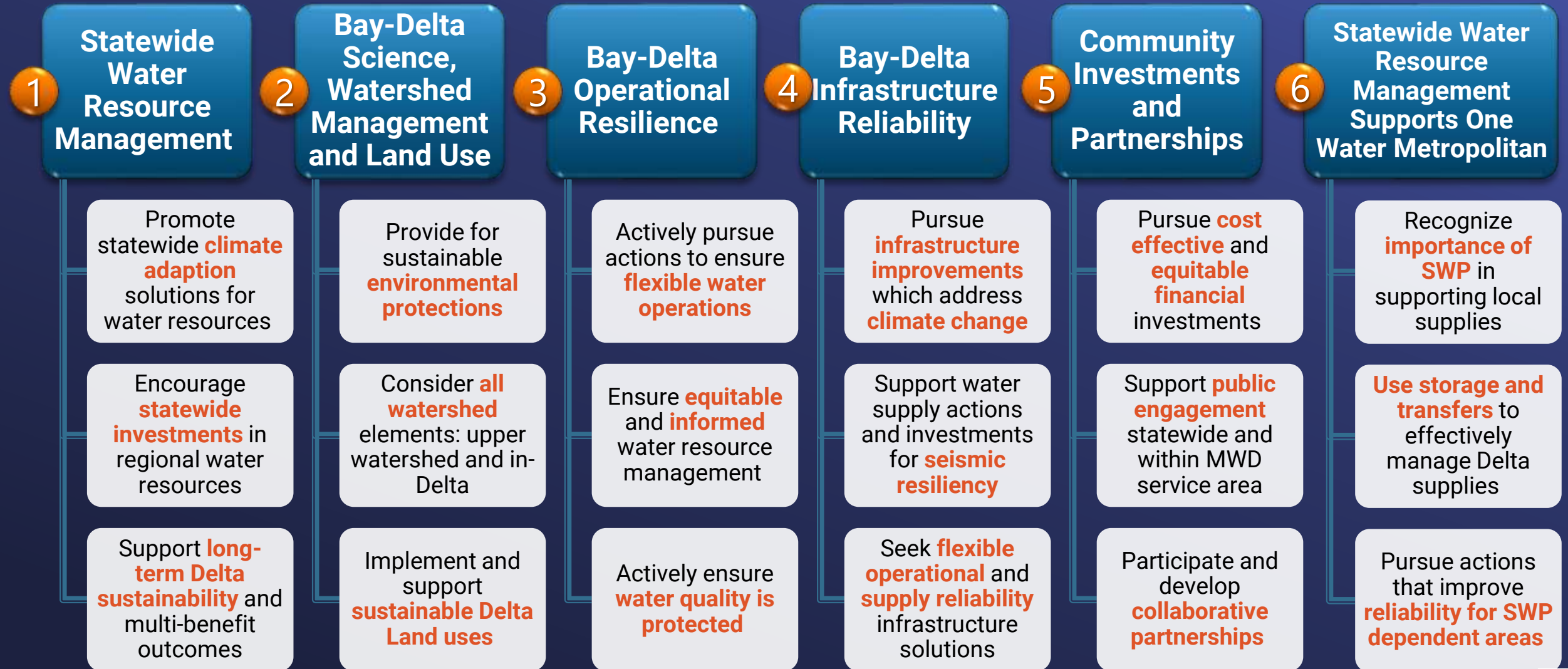
Policy Area 5: Community Investments and Partnerships



Policy Area 6: Statewide Water Resources Management Supports MWD's One Water



DRAFT Bay-Delta Policy Framework: Policy Areas and Principles



Applying the Bay-Delta Policy Framework

Workshop One

Policy Framework

Use of Bay-Delta Policies

- Provide board direction to staff related to Bay-Delta activities:
 - Program and project management
 - External engagement
 - Longer term planning
 - Key Investments
 - Day to day activities
- Align with proposed future board actions
- Final Board deliberation and actions would still be addressed individually

Policy Application – Delta Science



Policy Area 1: Statewide Water Resource Management

- Support long term Delta sustainability and multi-benefit outcomes



Policy Area 2: Bay-Delta Science, Watershed and Land Use Management

- Provide sustainable environmental protections



Policy Area 5: Community Investments and Partnerships

- Participate and develop collaborative partnerships

Policy Application – Delta Islands



Policy Area 2: Bay-Delta Science, Watershed and Land Use Management

- Implement and support sustainable Delta Land uses



Policy Area 4: Bay-Delta Infrastructure Reliability

- Pursue infrastructure improvements which address climate change
- Support water supply actions and investments for seismic resiliency



Policy Area 5: Community Investments and Partnerships

- Participate and develop collaborative partnerships

Policy Application – Delta Infrastructure



Policy Area 1: Statewide Water Resource Management

- Encourage statewide investments in regional water resources



Policy Area 3: Bay-Delta Operational Resilience

- Actively ensure water quality is protected



Policy Area 4: Bay-Delta Infrastructure Reliability

- Support water supply actions and investments for seismic resiliency

Discussion

Next Steps

Committee Workshop #2

May 2022



Review DRAFT Bay-Delta Framework and policy principles



Discuss key policies



Solicit Board Input / Discussion



Next Steps:

**Update and Finalize Policies
for Board adoption
May Info Item
June Action Item**





• 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 March 2022.

Purpose

Informational

Detailed Report

Lake Powell Elevation and Operation of Glen Canyon Dam Update

The elevation of Lake Powell recently declined to 3,525 feet for the first time since Glen Canyon Dam was filled. In the Upper Basin Drought Contingency Plan, Lake Powell's surface elevation 3,525 feet is considered the "Target Elevation" for minimizing the risk of Lake Powell declining below minimum power pool (approximately elevation 3,490 feet) and to assist in maintaining Upper Division States' compliance with the Colorado River Compact. The Upper Basin's goals in protecting elevation 3,525 feet include balancing the need to protect infrastructure, compact obligations, and operations at Glen Canyon Dam. The U.S. Bureau of Reclamation's (Reclamation) March 2022, 24-Month Study's most probable scenario forecasts that Lake Powell elevations will remain near elevation 3,525 feet before rising with spring runoff and then declining back to around 3,525 feet in December 2022, which the possibility of falling below minimum power pool in 2023. The Upper Division States and Reclamation are exploring an additional release of water from one or more Colorado River Storage Project Act facilities upstream to Lake Powell to support its elevations, as provided in the Upper Basin Drought Contingency Plan Drought Response Operations Agreement. Additionally, Reclamation is working with the seven Basin States to consider reducing releases from Lake Powell this summer to help reduce the chance of falling below minimum power pool in the next few years. Metropolitan staff is involved in the discussions and will keep the Board informed as these discussions evolve.

Conference Focusing on Colorado River Tribal Issues

On March 17-18, Metropolitan staff participated in the Water & Tribes Initiative Basin-wide Gathering at the 27th Annual Wallace Steger Center Symposium. The program agenda covered a candid conversation about the past, present, and future of water management in the Basin, and the historic roles the tribes have played in it. Assistant Secretary Trujillo provided opening remarks emphasizing the Department's concern about Lake Powell's low elevation. Staff presented on the panel "Strategies to Equitably Share Available Water" and highlighted the collective actions Metropolitan and its member agencies have taken to reduce reliance on the Colorado River. Staff will continue to participate in these conversations and outreach activities as Metropolitan and the rest of the Basin community prepares for the upcoming process to develop new operational rules for the Colorado River, which are currently scheduled to begin in January 2023.

General Manager and Staff meet with PVID and Metropolitan's Palo Verde Lessees

On March 25, General Manager Hagekhalil and staff traveled to the Palo Verde Valley to meet with Palo Verde Irrigation District (PVID) representatives to discuss farming practices in the Valley. Metropolitan staff participated in a tour of various farms and learned about operational challenges and economic factors affecting the Palo Verde region. Following the tour, staff participated in a meeting with Metropolitan's lessees in the Palo Verde Valley, where the General Manager shared his vision of his partnership of collaboration with our tenants to conserve water while maintaining a healthy agricultural community. Our lessees had some new ideas to save additional water, which could potentially be funded through implementation of the 500+ plan to protect Lake Mead over the next two years. Staff will follow-up with the lessees to refine those options.

Board Report (Colorado River Management Report)



● Bay-Delta Management Report

Summary

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

Purpose

Informational

Detailed Report

Long-Term Delta Actions

Delta Conveyance

The California Department of Water Resources (DWR) is continuing to develop a public Draft Environmental Impact Report (EIR) under the California Environmental Quality Act for the Delta Conveyance Project. The U.S. Army Corps of Engineers (USACE), as part of its permitting review under the Clean Water Act and Rivers and Harbors Act and is preparing an Environmental Impact Statement (EIS) to comply with the National Environmental Policy Act. DWR and USACE are planning to release draft environmental documents for public review in mid-2022.

Joint Powers Authorities

At its regularly scheduled March 17 Delta Conveyance Design and Construction Authority (DCA) Board of Director's meeting, the Board of Directors approved a resolution to amend the Joint Exercise of Power Authority (JEPA) to clarify the expiration date of the agreement during the planning phase. While the body of the JEPA does not have an express termination date, an expiration date was included when the Department of General Services approved a prior amendment. This amendment will extend the termination date of the agreement during the planning phase until June 30, 2025.

The regularly scheduled March 17 Delta Conveyance Finance Authority meeting was cancelled.

Sites Reservoir

At their joint March meeting, the Sites Project Authority Board (Authority Board) and the Sites Reservoir Committee (Reservoir Committee) gave the Executive Director authorization to submit the Sites Reservoir Project's (Project) water right application to the State Water Resources Control Board (State Water Board) including the associated application fee. The Authority Board and Reservoir Committee also directed staff to proceed pivoting to Alternative 3 as the Preferred Project Alternative and adjusting to more environmentally protective diversion criteria that could potentially achieve a higher degree of permitting certainty while maintaining project affordability. Alternative 3 would allow for a federal investment in the Project of between 7 and 25 percent. Their current level of participation is 7 percent.

The Executive Director was also authorized to execute a proposal letter with the Environmental Defense Fund and The Nature Conservancy, to cooperatively develop terms and conditions for consideration in the Proposition 1 Benefit Agreement with the California Department of Fish and Wildlife (CDFW) to incorporate an Environmental Water Manager "pilot" as part of the Sites Project implementation. The goal of this pilot is to work with the non-governmental organization partners to determine the technical, legal, contractual, and statutory provisions necessary for the practical implementation of an Environmental Water Manager within the Sites Reservoir Project. Revisions to the Funding Credit and Reimbursement Policy were also approved to incorporate an opportunity cost fee and key terms for potential new participants, and priority system for admitting new participants was discussed.

Board Report (Bay-Delta Management Report)

Near-Term Delta Actions

Regulatory Activities

On February 28, the U.S. Bureau of Reclamation (Reclamation) issued a Notice of Intent in the Federal Register which formally began the process to reinstate consultation on the 2019 Biological Opinions (BiOp) for the long-term operations of the Central Valley Project (CVP) and State Water Project (SWP). Staff is working in coordination with the State Water Contractors to provide scoping comments by the March 30, 2022, deadline. Staff is also involved in ongoing technical workgroups and policy-level discussions that help provide input into the process. Under the current schedule, Reclamation anticipates a Biological Assessment and Public Draft EIS will be completed in 2023, and a Final EIS and Record of Decision in 2024.

On March 18, DWR and Reclamation jointly filed a Temporary Urgency Change Petition (TUCP) with the State Water Board requesting temporary modification of water right permit and license requirements for Delta outflow and Delta salinity during the April 1 to June 30, 2022 timeframe. The TUCP was filed in response to critically dry conditions in the Bay-Delta watershed. The State Water Board will consider the TUCP at a future meeting.

Staff continued to participate in the collaborative groups called for in the 2019 BiOp for the SWP and CVP, and in the 2020 Incidental Take Permit (ITP) for long-term operation of the SWP, to address science needs and inform management and operation of the water projects. Staff is collaborating with state and federal agencies to conduct planning for a migratory barrier at Georgiana Slough to reduce the diversion of juvenile salmonids from the Sacramento River into the interior and south Delta, as required by the ITP. The group is finalizing the monitoring plan, which describes the project location, the infrastructure that is part of the project and how the effectiveness of the project will be monitored and analyzed.

Staff is participating in the Delta Coordination Group to develop and implement an expert elicitation regarding the Summer-Fall Habitat Actions considered for 2022 through the structured decision-making process as part of the BiOp/ITP. The elicitation will address how contaminants may change in response to the actions and how changes in contaminants may affect the vital rates of Delta smelt and zooplankton. The two actions planned for 2022 are the Suisun Marsh Salinity Control Gate Operations and the North Delta Foodweb Enhancement.

Science Activities

Staff co-authored two scientific papers published in March in peer-reviewed journals that reported on results from a study evaluating the bioavailability of pesticides in juvenile Chinook salmon habitat in the Sacramento River watershed. The study was funded by a Proposition 1 grant with cost-share from Metropolitan. The first paper published in the journal *Chemosphere* ([Bioavailability of legacy and current-use pesticides in juvenile Chinook salmon habitat of the Sacramento River watershed: Importance of sediment characteristics and extraction techniques - ScienceDirect](#)), evaluated the presence and bioavailability of pesticides in salmon habitats in a floodplain and the mainstem Sacramento River. Higher organochlorine pesticide concentrations were found in floodplain compared to riverine habitats, and overall, there were less pesticides available during low flow conditions. The second paper published in the journal *Environmental Pollution* ([Pesticide residues in juvenile Chinook salmon and prey items of the Sacramento River watershed, California – A comparison of riverine and floodplain habitats - ScienceDirect](#)), reported on the occurrence of pesticide residues in Chinook salmon, zooplankton, and macroinvertebrates from the Yolo Bypass floodplain and the mainstem Sacramento River. The study found that zooplankton had higher concentrations of pesticides than macroinvertebrates. Chinook salmon had threefold higher organochlorine pesticide concentrations in the floodplain as compared to the Sacramento River, and pesticide concentrations were higher in prey organisms during flood events than in drought conditions. The study findings suggest that within these habitats the benefits to juvenile salmon of an improved food supply in floodplains may be countered by increased pesticide exposure.

Staff co-authored another salmon scientific paper in March in collaboration with researchers from UC Davis, UC Santa Cruz and the National Oceanic and Atmospheric Administration Southwest Fisheries Science Center, evaluating juvenile salmon growth in the Delta. The paper published in *San Francisco Estuary and Watershed Science* ([Variation in Juvenile Salmon Growth Opportunities Across a Shifting Habitat Mosaic \(escholarship.org\)](#)) reported on a study evaluating juvenile salmon growth rates in the American River and Delta by measuring the

Board Report (Bay-Delta Management Report)

width of the daily rings in the fish's otoliths (earbones) similar to how growth is measured with tree rings. The region that produced the highest growth rates varied within and among years. Juvenile salmon grew fastest in the Delta in some years, but slower in drought years. The study findings suggest that maintaining a mosaic of quality habitats in both the rivers and Delta will be important for juvenile salmon in California's dynamic hydroclimate.

Two scientific papers addressing Delta smelt studies were also published in March. Staff co-authored a study in collaboration with researchers from UC Davis, CDFW and Reclamation. The paper published in *PLOS ONE* ([Reproductive strategy of Delta Smelt *Hypomesus transpacificus* and impacts of drought on reproductive performance \(plos.org\)](#)) reported on a study evaluating the impacts of drought on Delta smelt reproduction. The study found that salinity was a stronger driver of distribution than temperature or turbidity during the subadult/adult period. Mature females exhibited lower numbers and smaller sized eggs during the drought of 2013-2014 than the wet year class of 2011 suggesting that reproductive performance was negatively affected by environmental conditions during the drought.

The second Delta smelt publication reported on a study funded by Metropolitan to conduct pathogen screening in Delta smelt. The paper published in *San Francisco Estuary and Watershed Science* ([Investigation of Molecular Pathogen Screening Assays for Use in Delta Smelt \(escholarship.org\)](#)) reported on efforts to develop molecular assays to screen cultured Delta smelt in the lab and in enclosures in the Delta, and screen wild Delta smelt for a variety of pathogens. The study found that hatchery and wild Delta smelt had similar pathogens, and that hatchery Delta smelt posed a low risk for pathogen transmission.

Staff continued participating in the Collaborative Science and Adaptive Management Program (CSAMP), including participation on the Collaborative Adaptive Management Team (CAMT). In March, activity focused on discussion of CSAMP priorities for next year, next steps in the CSAMP monitoring assessment, and on salmon recovery. Staff continued collaboration with non-government environmental organizations and public water agencies on the CSAMP Salmon Recovery Initiative. In March, the project team gave presentations to interested parties throughout the Central Valley to make them aware of the project and ask for their participation in Phase 2 of the process. At the first large presentation, over 40 interested parties including tribal groups, conservation groups, water agencies, and state and federal agencies joined the meeting. Phase 2 is focused on soliciting actions planned to aid in salmon recovery, and in phase 3, those actions will be analyzed to see which actions best achieve salmon recovery while meeting other objectives (e.g. cost, water supply, ag production, etc.).

Staff continued work on the Delta smelt and Native Species Preservation Project, which will utilize Delta island properties currently owned by Metropolitan to evaluate opportunities to support Delta smelt supplementation efforts. Staff is working with the U.S. Geological Survey to monitor the impoundments on the Delta Islands to determine their current suitability for Delta smelt supplementation research. Staff presented this study at the Interagency Ecological Program 2022 Annual Workshop held March 22-24. Preliminary findings suggest that Fall 2022 would be an appropriate time to conduct a pilot study using hatchery Delta smelt for mesocosm studies in support of state and federal agencies' Delta smelt supplementation efforts. Staff is working with CDFW and U.S. Fish and Wildlife Service to obtain the appropriate permits for the study this fall.

Delta Islands Adaptation Planning Grant

Staff is managing the Delta Island Adaptations project funded by a CDFW Proposition 1 Planning Grant. The planning project is an evaluation of opportunities for island-wide improvements that include subsidence reversal, sustainable agricultural practices, carbon sequestration, water quality improvements, and habitat restoration. The objective of this effort is to provide science-based planning for potential land uses on an entire island owned by Metropolitan that meets the Delta Plan co-equal goals using creative and innovative solutions for subsided Delta islands. The first public workshop was held on March 15, to get input from interested parties on the adaptation opportunities. The next step in the project is to document and include the public input and continue focused meetings with subject expert teams.