



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 1**

Meeting with Board of Directors *

May 9, 2022

2:30 p.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.

**Monday, May 9, 2022
Meeting Schedule**

09:30 am - F&I
11:00 am - OP&T
12:00 pm - Break
12:30 pm - RP&AM
01:30 pm - C&L
02:30 pm - WP&S

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. Presentation on the Delta Conveyance Design and Construction Authority's role in the Delta Conveyance Project Environmental Impact Report: Graham Bradner, Executive Director [21-1134](#)

Attachments: [05092022 WPS 1a Presentation](#)

**** 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 April 12, 2022, and the Special Meeting held April 26, 2022 [21-1148](#)

Attachments: [05102022 WPS 2A-1 Minutes](#)
[05102022 WPS 2A-2 Minutes](#)

3. **CONSENT CALENDAR ITEMS - ACTION**

- 7-9 Express support for developing the Voluntary Agreement approach as an alternative in the State Water Resources Control Board's Bay-Delta Water Quality Control Plan Update; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.[ADDED ITEM 5/2/2022] [21-1158](#)

Attachments: [05102022 WPS 7-9 B-L](#)
[05092022 WPS 7-9 Presentation](#)

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

4. **OTHER BOARD ITEMS - ACTION**

NONE

5. **BOARD INFORMATION ITEMS**

NONE

6. **COMMITTEE ITEMS**

- a. Review of Policy Principles Regarding the Sacramento-San Joaquin River Bay-Delta. [SUBJECT REVISED 5/2/2022] [21-1136](#)

Attachments: [05092022 WPS 6a Presentation](#)

- b. Colorado River Tribal Partnerships [21-1135](#)

Attachments: [05092022 WPS 6b Presentation](#)

- c. Update on the Antelope Valley East Kern Water Agency High Desert Water Bank [21-1146](#)

Attachments: [05102022 WPS 6c Presentation](#)

- d. Update on Water Surplus and Drought Management [21-1137](#)

Attachments: [05092022 WPS 6d Report](#)
[05092022 WPS 6d Presentation](#)

- e. Update on Water Shortage Emergency Condition. [ADDED ITEM 5/2/2022] [21-1156](#)

Attachments: [05092022 WPS 6e Presentation.pdf](#)

7. MANAGEMENT REPORTS

- a. Colorado River Manager's Report [21-1133](#)

Attachments: [05102022 WPS 7a Report](#)

- b. Bay-Delta Manager's Report [21-1132](#)

Attachments: [05102022 WPS 7b Report](#)

- c. Water Resources Management Manager's Report [21-1138](#)

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.



Delta Conveyance Project Engineering Update

Water Planning and Stewardship Committee | Agenda Item 1a

Graham Bradner, DCA Executive Director

May 9th, 2022

WWW.WATER.CA.GOV/DELTA CONVEYANCE | DCDCA.ORG

Delta Conveyance – Engineering Summary

Three Alignments

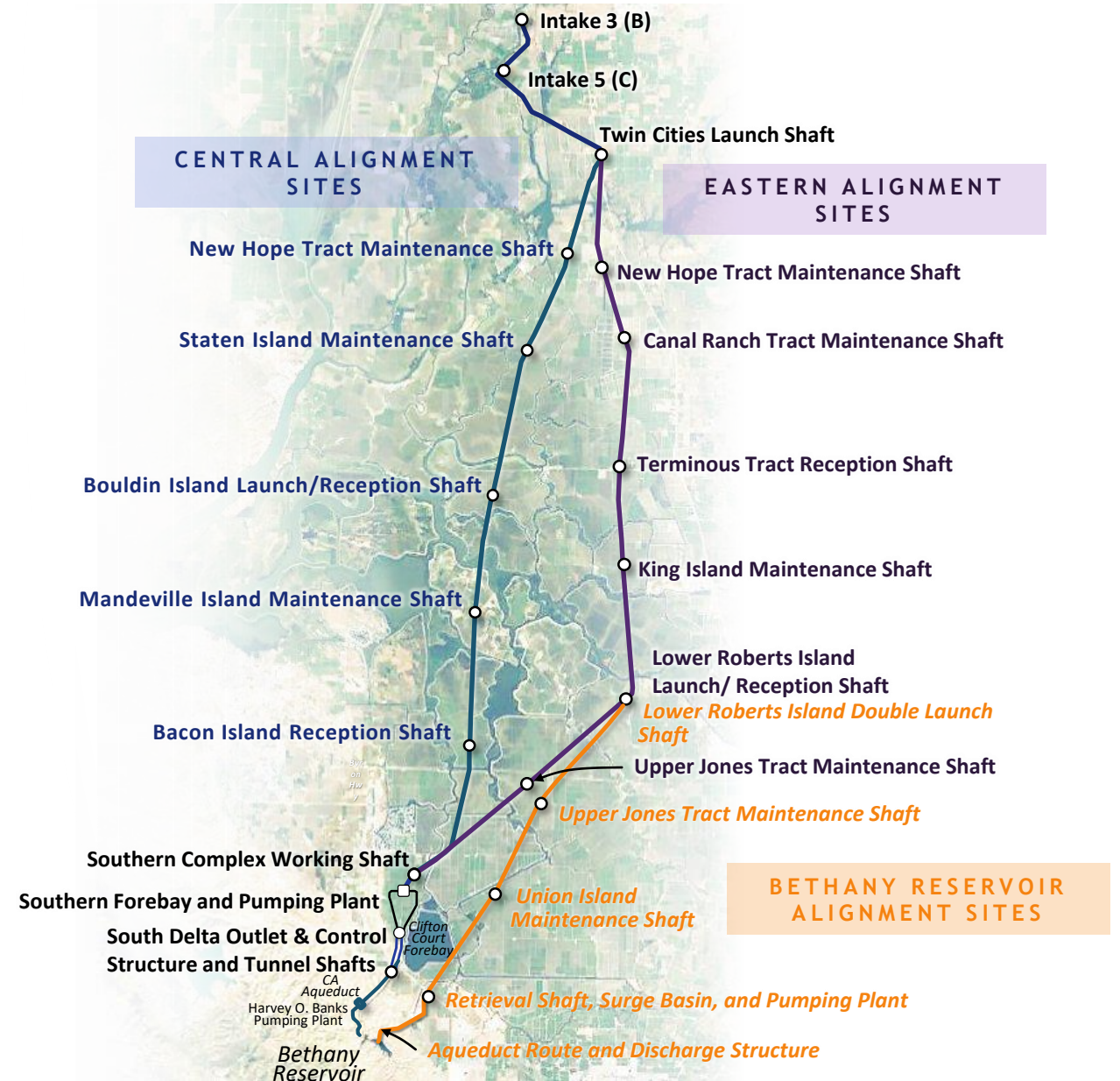
- Central
- Eastern
- Bethany

Two Engineering Project Reports

- Central/Eastern Alternatives
- Bethany Reservoir Alternative

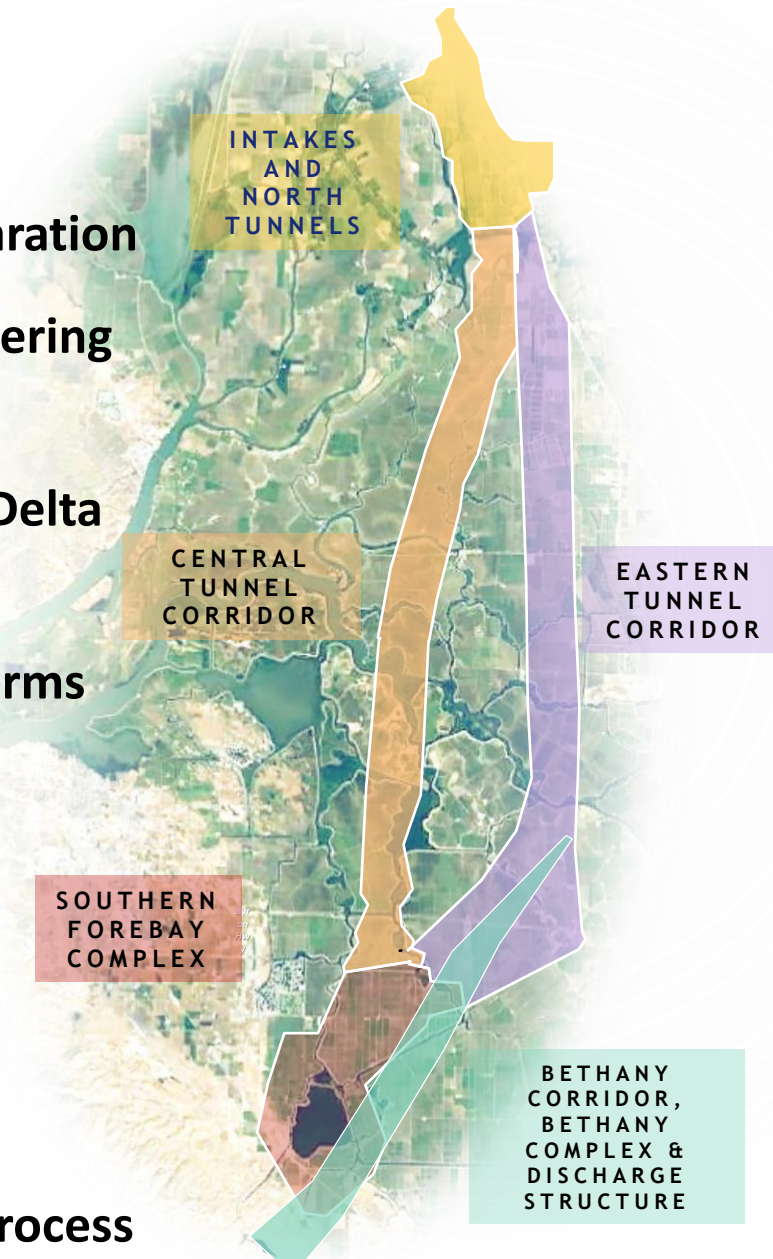
Four Capacity Options

- 3,000 cfs
- 4,500 cfs
- 6,000 cfs – Proposed Project
- 7,500 cfs



Conceptual Design Objectives

- Work started with the proposed corridors included in the Notice of Preparation
- At DWR's request, DCA set out to develop conceptual designs and engineering information for CEQA analyses
- Conceptual designs would attempt to minimize effects of the project on Delta communities and terrestrial and aquatic habitats
- Develop conceptual designs that reflect community input, through platforms such as the SEC and community meetings, with emphasis placed on:
 - Siting of facilities
 - Better understanding potential traffic and waterway effects
 - Reducing construction-related effects
 - Minimize disturbance to existing lands used for farming, wildlife habitats, communities, etc.
- Focus on engagement and transparency through the conceptual design process



Implementation of the Stakeholder Engagement Committee

- The DCA Board unanimously approved Resolution No. 19-12 on September 19, 2019, which outlined the SEC's purpose, scope, and membership.
- Up to 20 Committee Members participated in the SEC
- Represent wide array of interests and geographies
- **DCA Board Representatives**
 - Chair Sarah Palmer
 - Vice Chair Barbara Keegan
- **19 SEC Committee Meetings**
- **November 2019 thru December 2021**
- **Over 65 agendized SEC presentations**

The SEC represented a wide array of interests and geographies in the following 18 areas:

- | | |
|-----------------------------------|------------------------------------|
| • Agriculture | • Tribal Government Representative |
| • Recreation | • Delta Water District |
| • Sports Fishing | • At Large – Yolo County |
| • Environmental NGO - Terrestrial | • At Large – Solano County |
| • Environmental NGO - Aquatic | • At large – San Joaquin County |
| • Environmental Justice | • At Large – Sacramento County |
| • North Delta Local Business | • At Large – Contra Costa County |
| • South Delta Local Business | • Public Safety |
| • Delta History & Heritage | • Ex-Officio |

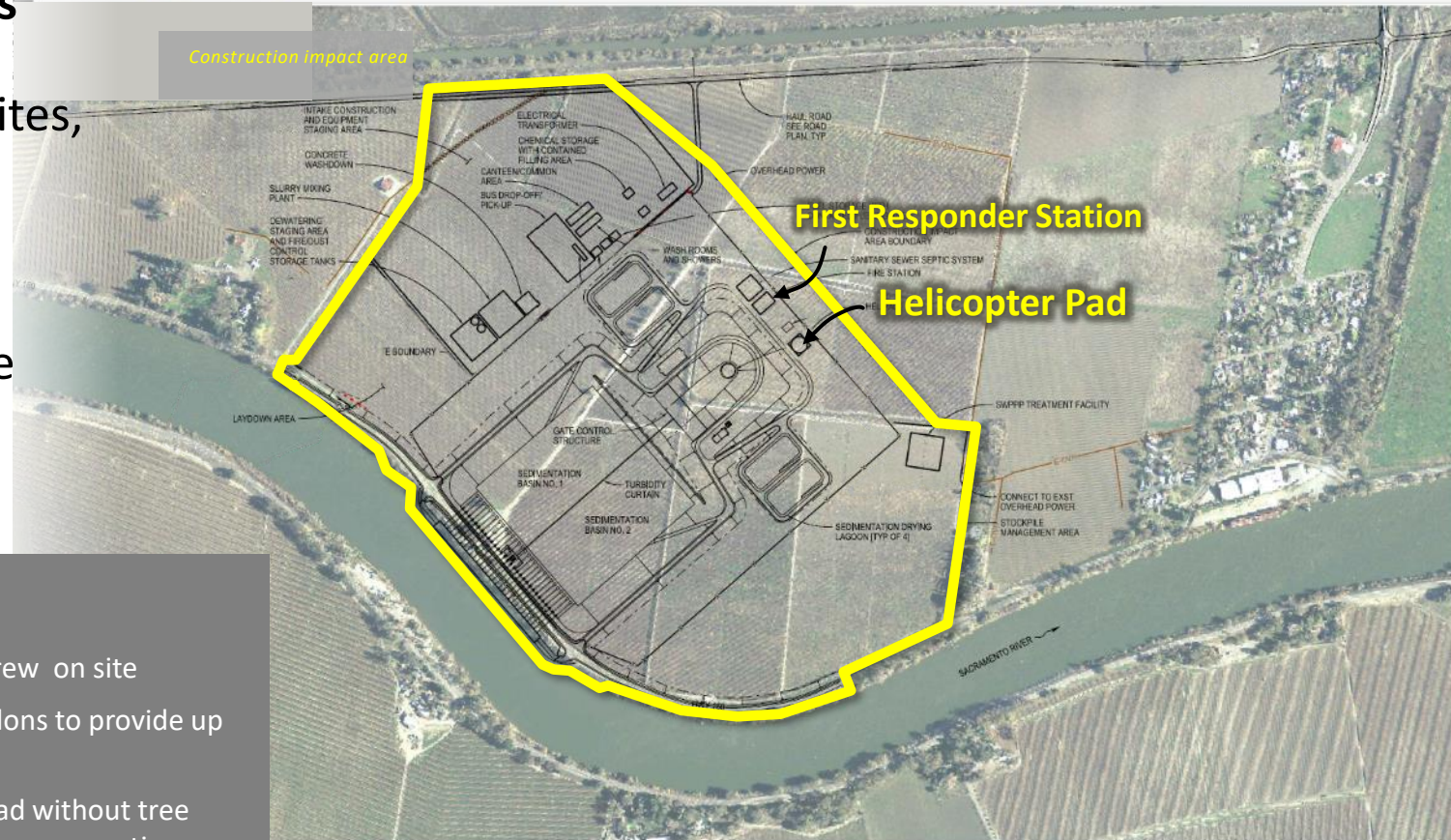
Summary of Conceptual Design Efforts to Minimize Community Effects

- 1 Avoid increasing demand for existing emergency services in the Delta
- 2 Manage flood risks to the project facilities and existing land uses
- 3 Manage seismic risks to people and property
- 4 Minimize activities that produce noise, dust, greenhouse gas emissions, traffic, and land use disturbances
- 5 Minimize construction effects to existing infrastructure or other community resources
- 6 Minimize construction traffic and associated effects
- 7 Minimize disturbance to existing land uses, including agricultural land, residences, and wildlife habitat
- 8 Minimize disturbance to sensitive wildlife and protected habitat areas
- 9 Minimize effects on Delta water-based recreation and navigation
- 10 Minimize noise during construction and operations

1

Avoid increasing demand for existing emergency services in the Delta

- **Emergency response facilities** would be constructed at the intakes, tunnel launch shaft sites, Southern Complex/Bethany Complex
- **Facilities could be developed with communities** to increase their long-term emergency response capabilities



Intake 3 (B)

Ambulance, Rescue Boat, Fire Truck and crew on site

Fire Water On-site storage at 300,000 gallons to provide up to 2,500 gallons/minute for 2 hours

Space for a 60-foot diameter paved helipad without tree coverage would only be used for emergency evacuations

Manage flood risks to the project facilities and existing land uses

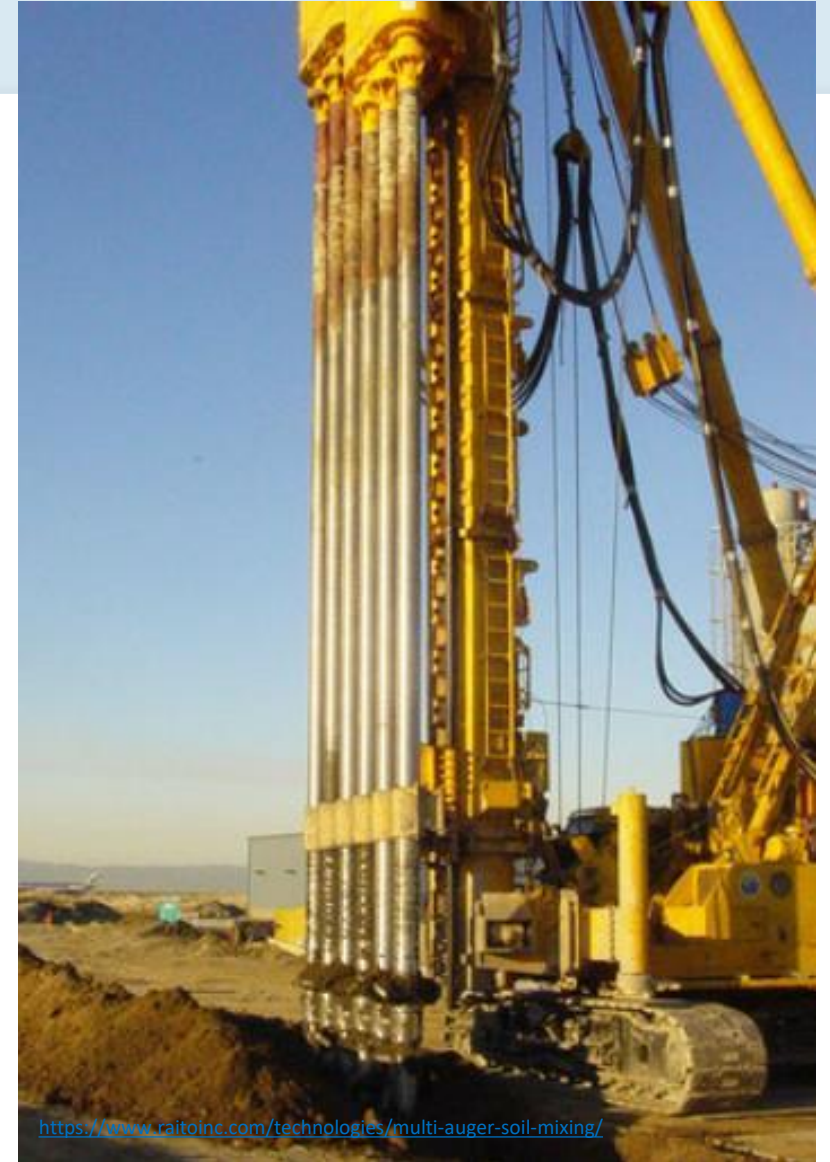


- Design all project facilities to contain **Sacramento River 200-year flood elevation** with Sea Level Rise and Climate Change projected for year 2100
- Provide **structural and non-structural flood risk mitigations** throughout the project
- **Avoid use of levee roads** for heavy construction traffic and maintain setback from existing levees for fill placement
- **Maintain Sacramento River flood management criteria** at the intakes
 - Intake structure would be positioned to limit increase of maximum water surface elevation
 - Provide continuous flood protection during construction
- Early consideration of Southern Forebay/Bethany Discharge Structure as **CA Division of Safety of Dams jurisdictional structures**



Manage seismic risks to people and property

- **Early consideration of seismic design criteria** specialized to relevant features of the project
- Consider the West Tracy Fault, Bethany Fault, and **soil conditions in facility siting**
- **Enhanced ground improvement** for intakes and Southern Forebay for soft/loose ground
- **Use tunnels to deliver water from Southern Forebay** to existing Banks Pumping Plant approach channel



<https://www.raitoine.com/technologies/multi-auger-soil-mixing/>

Minimize activities that produce noise, dust, greenhouse gas emissions (GHG), traffic, and land use disturbances



NOISE

- Minimize the use of impact pile driving at intakes
- Minimize nighttime construction
- ■ ■ Pave access roads, cover stockpiles, and use enclosures
- ■ ■ ■ No concrete batch plants at intakes

DUST

- ■ ■ ■ Do not launch TBMs from intakes
- ■ ■ ■ Manufacture precast tunnel liner segments offsite
- ■ ■ ■ Consider access requirements as part of siting
- ■ ■ ■ Balance soil excavation and fill needs with onsite soil material sources and RTM

GHG

TRAFFIC

LAND USE DISTURBANCES

- ■ ■ ■ ■ Reduce tunnel shaft pad area and height
- ■ ■ ■ ■ Facilitate RTM reuse
- ■ ■ ■ ■ Eliminate the Intermediate Forebay
- ■ ■ ■ ■ Reduce the number of shafts
- ■ ■ ■ ■ Consider soil conditions in siting to minimize ground improvement

Minimize construction effects to existing infrastructure or other community resources



- **Consider existing infrastructure** as part of facility siting
- **Use cutoff walls** to minimize effects on groundwater during construction and operations
- **Treat and reuse water** generated during construction activities
- **Maintain irrigation and drainage systems** for areas surrounding project sites
- **Use tunnels to deliver water from Southern Forebay** to existing Banks Pumping Plant approach channel

Minimize construction traffic and associated effects

- **Limit routes** used for construction traffic:
 - Limited construction traffic allowed on SR 160 and SR 4
 - Worker shuttle buses on Hood-Franklin Rd
 - Limited Construction traffic in Solano and Yolo County
- **Perform traffic studies** for roads potentially affected by project activities
- **Develop designated access routes** and construct new dedicated haul roads
- **Construct park and ride lots** to facilitate employee carpools and truck staging areas
- **Develop rail depots** to transport bulk materials from select sites



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Minimize disturbance to existing land uses, including agricultural land, residences, and wildlife habitat

- Consider existing structures, number of ag parcels, and nearby communities as part of **facility siting**
- **Use cylindrical tee screens** at the intakes
- **Minimize nighttime construction** disturbance
- Include plans for **post-construction reclamation of agricultural land** disturbed during construction
- **Maintain irrigation and drainage systems** for areas surrounding project sites
- **Use tunnels to deliver water from Southern Forebay** to existing Banks Pumping Plant approach channel

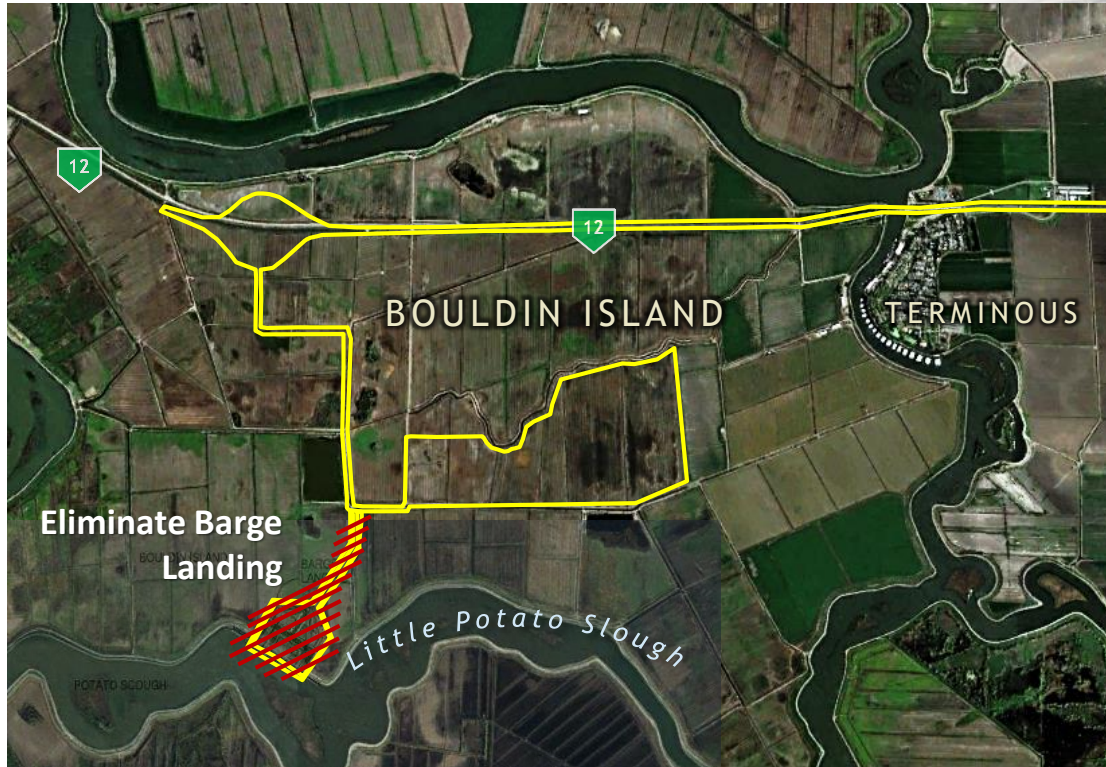


Minimize disturbance to sensitive wildlife and protected habitat areas

- Implement strategies to **minimize effects on** Stone Lakes National Wildlife Refuge, Woodbridge Ecological Reserve, and other **protected areas**
- **Consider greater sandhill cranes** in facility siting and power line alignments
- **Reroute and realign facilities** to avoid wetlands
- **Avoid conservation easements** in siting of key features
- **Limit barge use** for project construction
- **Use tunnels to deliver water from Southern Forebay** to existing Banks Pumping Plant approach channel



Minimize effects on Delta water-based recreation and navigation

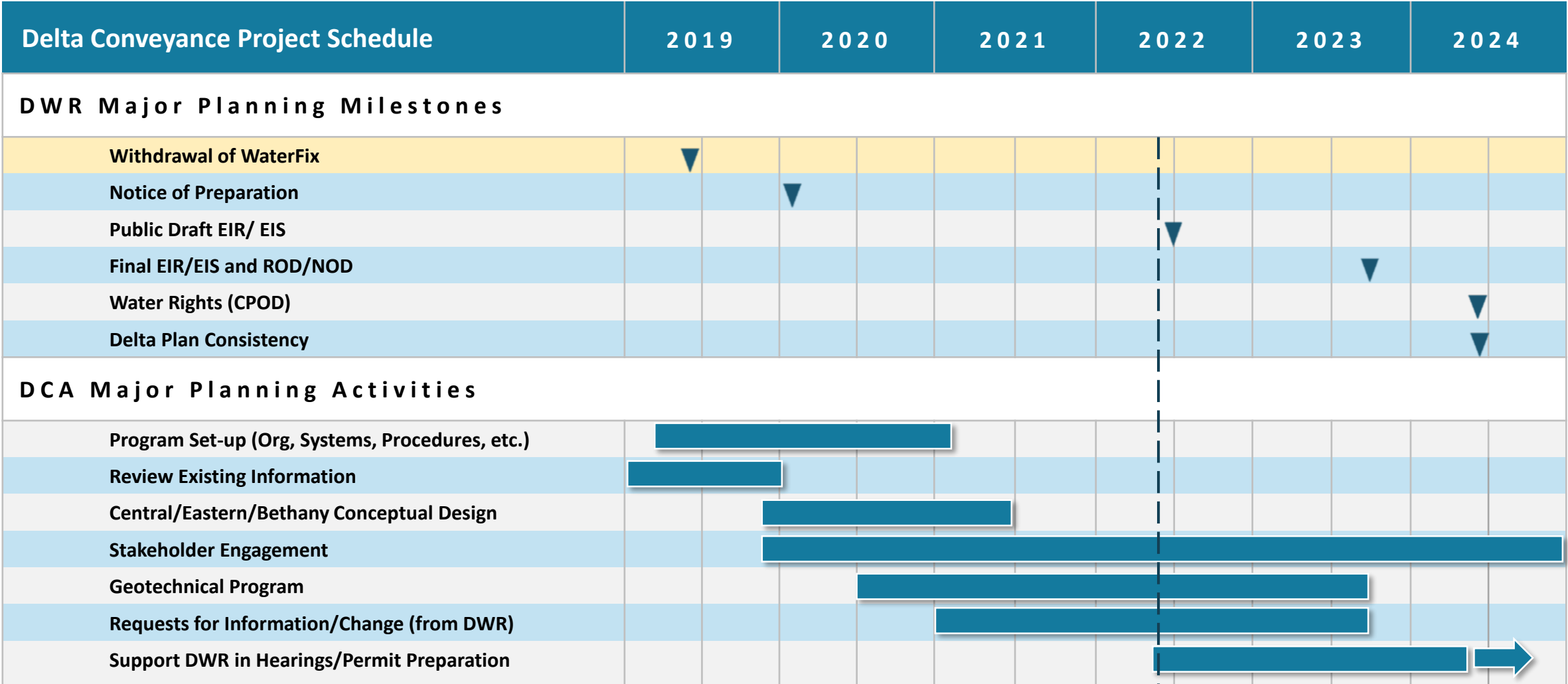


- **Limit barge use** for project construction to Intakes only
- **No barge landings**
- **Reconfigure the Lower Roberts Island shaft site access road** to be further away from Windmill Cove Marina

Minimize noise during construction and operations

- **Include noise reduction methods**
 - use temporary sound barriers and shrouds during construction
 - locate fans/ductwork inside buildings rather than on exterior
 - enclose RTM dryers and portions of concrete batch plants
- **Use cylindrical tee screens at the intakes**
- **Minimize nighttime construction disturbance**





Current Date



GRAHAM BRADNER, DCA EXECUTIVE DIRECTOR

Thank You!

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

WATER PLANNING AND STEWARDSHIP COMMITTEE

April 12, 2022

Chair Atwater called the teleconference meeting to order at 8:32 a.m.

Members present: Chair Atwater, Vice Chair Kurtz (entered after roll call), Directors Abdo, Ackerman, Cordero, De Jesus, Dick, Lefevre, Miller, Morris, Petersen (entered after roll call), Peterson (entered after roll call), Pressman, and Record.

Members absent: Directors Goldberg and Luna.

Other Board Members present: Chairwoman Gray, Directors Blois, Camacho, Dennstedt, Erdman, Fellow, Fong-Sakai, Jung, McCoy, Ortega, Quinn, Ramos, Smith, Sutley, and Tamaribuchi

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))

1. Sandra S. Rose, Board President, Monte Vista Water District, spoke in opposition of Item 9-2
2. Justin Scott-Coe, General Manager, Monte Vista Water District, spoke in opposition of Item 9-2
3. Randall Reed, President, Cucamonga Valley Water District, spoke in opposition of on Item 9-2.
4. Caty Wagner, Sierra Club California, spoke in opposition of Item 7-13
5. Shivaji Deshmukh, P.E., General Manager of IEUA, spoke in opposition of Item 9-2
6. Doug Obegi, NRDC, spoke in opposition of Items 7-13 and 6d
7. Charming Evelyn, Sierra Club, spoke in opposition of Items 7-13 and 6d
8. Maura Monagan, Los Angeles Water Keeper, spoke in opposition of Item 7-13

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 March 7, 2022

3. CONSENT CALENDAR ITEM – ACTION

- 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

Presented by: Jessica Arm, Associate Resource Specialist, Water Resource Management

Motion: Authorize the General Manager to enter into a one-year 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, subject to a possible extension if approved by the Board following a review by the General Manager on alternative means of addressing Rubidoux's needs.

Ms. Arm provided a presentation on a proposed agreement with Western Municipal Water District (WMWD), Rubidoux Community Services District, West Valley Water District, and San Bernardino Valley Municipal Water District to assist with water deliveries where Metropolitan would deliver, provided there is available capacity, up to 2,000 acre-feet of water per year to Rubidoux for use within WMWD's service area.

The following Directors provided comments or asked questions:

- | | | |
|-------------|----------------|-------------|
| 1. Ortega | 6. Abdo | 11. Dick |
| 2. Miller | 7. Tamaribuchi | 12. Lefevre |
| 3. Pressman | 8. Fong-Sakai | 13. Kurtz |
| 4. Peterson | 9. Morris | 14. Record |
| 5. DeJesus | 10. Blois | |

Staff responded to the Directors questions and comments.

Director Record made a motion with amended language, seconded by Director Kurtz.

Chair Atwater announced that the committee would hear the remaining Consent Calendar items before taking a vote.

- 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
- Presented by: Brandon J. Goshi, Manager, Resource Planning & Development Section
- Motion: Authorize the General Manager to negotiate an agreement consistent with the draft terms of the Metropolitan Water District/Inland Empire Utilities Agency Exchange Agreement.

Mr. Goshi gave a presentation that seeks authorization for the General Manager to negotiate an agreement to facilitate the exchange of an equivalent portion of Metropolitan's State Water Project Table A allocation for stored Chino Basin groundwater. He explained that the draft terms for this exchange cover the exchange quantities, operations, costs, and additional benefits provided for participation in the Chino Basin Program.

The following directors provided comments or asked questions:

1. Peterson
2. Dick

Mr. Coffey announced that Agenda item 6a would be provided ahead of 7-12, as to provide more context on item 7-12.

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 update on hydrological conditions of the two imported watersheds, drought actions, and supply demand balances.

The following directors provided comments or asked questions:

1. Peterson
2. Sutley

Staff responded to the Directors questions and comments.

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

Presented by: Nadia Hardjadinata, Resource Specialist, Resource Implementation Unit

Motion:

- 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.

Ms. Hardjadinata gave a presentation on a proposed action that authorizes 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 of additional supplies and to secure storage and conveyance agreements with the Department of Water Resources and various water districts as needed to facilitate these transfers, including Sacramento Valley water districts and the Yuba County Water Agency.

The following directors provided comments or asked questions:

1. Smith
2. Blois
3. Fong-Sakai

Staff responded to the Directors questions and comments.

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

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

Motion: 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.

Mr. Neudeck provided a presentation that explained the proposed 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 over the next three years.

The following directors provided comments or asked questions:

- | | |
|-------------|-----------------|
| 1. Miller | 7. Quinn |
| 2. Sutley | 8. Record |
| 3. Cordero | 9. Camacho |
| 4. Ortega | 10. Dick |
| 5. Petersen | 11. Tamaribuchi |
| 6. Peterson | 12. Lefevre |

Staff responded to the Directors questions and comments.

Chair Atwater reminded committee members that Agenda items 7-14 and 7-15 were withdrawn.

After completion of presentations, Director Record made a motion, seconded by Director Kurtz to approve the consent calendar consisting of items 2A, 7-10, 7-11, 7-12, and 7-13.

The vote was:

Ayes: Directors Abdo, Ackerman, Atwater, Cordero, De Jesus, Dick, Kurtz, Lefevre, Miller, Morris, Petersen, Peterson, Pressman, and Record.
Noes: Directors Abdo, Cordero, and Petersen for item 7-13 only.
Abstentions: Director Miller for item 7-13 only.
Absent: Directors Goldberg and Luna.

The motion for items 2A, 7-10, 7-11, and 7-12 passed by a vote of 14 ayes, 0 noes, 0 abstentions and 2 absent.

The motion for item 7-13, passed by a vote of 10 yes, 3 noes, 1 abstain, and 2 absent.

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

Presented by: Brad Coffey, Manager, Water Resource Management

Mr. Coffey gave a presentation on proposed board actions to reduce demands and preserve supplies in Metropolitan’s State Water Project-Dependent service areas.

Adel Hagekhalil, General Manager, provided additional comments.

Chairwoman Gray commented on the lateness of the meeting, and she recommended deferring the balance of the agenda.

6. COMMITTEE ITEMS

- b. Subject: Update on Antelope Valley East Kern Water Agency High Desert Water Bank

This item was deferred.

- c. Subject: Colorado River Tribal Partnerships

This item was deferred.

- d. Subject: Review Term Sheet for the Bay Delta Watershed Voluntary Agreements

This item was deferred.

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

This item was deferred.

7. MANAGEMENT REPORTS

- a. Subject: Colorado River Manager's Report

This item was deferred.

- b. Subject: Bay-Delta Manager's Report

This item was deferred.

- c. Subject: Water Resource Management Manager's Report

This item was deferred.

8. FOLLOW-UP ITEMS

None

9. FUTURE AGENDA ITEMS

None.

10. ADJOURNMENT

Next meeting will be held on May 9, 2022.

Meeting adjourned at 12:09 p.m.

Water Planning and
Stewardship Committee

-8-

April 12, 2022

Richard Atwater
Chair

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

SPECIAL WATER PLANNING AND STEWARDSHIP COMMITTEE

April 26, 2022

Chair Atwater called the teleconference meeting to order at 3:30p.m.

Members present: Chair Atwater, Vice Chair Kurtz, Directors Abdo, De Jesus, Dick, Lefevre, Miller, Morris, Petersen, Peterson, Pressman, and Record.

Members absent: Directors Ackerman, Cordero, Goldberg, and Luna.

Other Board Members present: Directors Blois, Dennstedt, Erdman, Jung, McCoy, Quinn, Ramos, Smith, Sutley, and Tamaribuchi.

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

1. Opportunity for members of the public to address the committee limited to the items listed on the committee's agenda (As required by Gov. Code Section 54954.3(a))

1. Caty Wager, Sierra Club California, spoke in opposition of item 2a.
2. Barry Nelson, Golden State Salmon Association, spoke in opposition of item 2a.
3. Valeria Garcia, Restore the Delta, spoke in opposition of item 2a.
4. Maura Monogan, Los Angeles Water Keeper, spoke in opposition of item 2a.

2. COMMITTEE ITEMS

- a. Subject: Review Term Sheet for the Bay Delta Watershed Voluntary Agreements

Presented by: Steve Arakawa, Manager, Bay Delta Initiatives

Mr. Arakawa provided an abbreviated presentation on the history of the State Water Resources Control Board's process to update the Water Quality Control Plan for the Bay-Delta and the term sheet for the Voluntary Agreements.

- b. Subject: Workshop on Voluntary Agreements and how they relate to Bay-Delta Watershed Management Issues with 1) Jared Blumfield, Secretary for Environmental Protection, California Environmental Protection Agency; 2) Jennifer Pierre, General Manager, State Water Contractors; 3) Doug Obegi; Senior Attorney, Natural Resources Defense Council; and 4) Bryce Lundberg; Vice President of Lundberg Farms, Board Member of Western Canal Water District

Presented by: Jared Blumefeld, California Enviornmental Protection Agency
Jennifer Pierre, State Water Contractors
Doug Obegi, Natural resouces Defense Council
Bryce Lundberg, Lundberg Farms and Western Canal Water District

Each of the four outside invited guests provided their perspectives on the Voluntary Agreement Terms Sheet.

The following Directors provided comments or asked questions:

1. Peterson
2. Lefevre
3. Record
4. Sutley

3. FOLLOW-UP ITEMS

None

4. FUTURE AGENDA ITEMS

5. ADJOURNMENT

Next meeting will be held on May 9, 2022.

Meeting adjourned at 5:05 p.m.

Richard Atwater
Chair



- Board of Directors
Water Planning and Stewardship Committee

5/10/2022 Board Meeting

7-9

Subject

Express support for developing the Voluntary Agreement approach as an alternative in the State Water Resources Control Board's Bay-Delta Water Quality Control Plan Update; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

On March 29, 2022, the state of California and many water agency stakeholders signed a Memorandum of Understanding for the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan, and Other Related Actions, which included a Term Sheet and other appendices (VAs MOU). Metropolitan Water District of Southern California's (Metropolitan) General Manager signed the VAs MOU agreeing to advance the VAs MOU to the Metropolitan Board for consideration. Therefore, the Metropolitan Board is now being asked if it will support the inclusion of the VAs approach in the State Water Resources Control Board's (Water Board) public process of environmental review and decision-making as part of its Water Quality Control Plan (Bay-Delta Plan) update. The VAs approach allows non-flow measures to be considered along with flow requirements, resulting in a more robust Bay-Delta Plan, including options for early implementation of measures in an effort to expeditiously improve operating and ecological conditions.

Details

Background

The 1995 Bay-Delta Plan (as amended) is the regulatory mechanism through which the Water Board protects beneficial uses of water by adopting and implementing water quality standards. The Bay-Delta Plan is periodically reviewed and updated, with the current update being initiated in 2008. At present, the State Water Project (SWP) and the Central Valley Project (CVP) are jointly responsible for meeting all numeric water quality standards in the Bay-Delta, as agreed to by the Bureau of Reclamation and the California Department of Water Resources (DWR) in anticipation of a longer-term solution.

The VAs are proposed as an alternative implementation approach to update the Bay-Delta Plan. The VAs have been in development since 2017 when the then-Governor issued the Principles for Voluntary Agreements, thereby initiating VAs negotiations between the state and the regulated community. On December 12, 2018, the California Department of Fish and Wildlife and DWR presented the negotiated "Framework Proposal for Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan" to the Water Board showing progress in the negotiations. In January 2019, Governor Newsom confirmed his intention to complete the VAs negotiations, entering the "Planning Agreement Proposing Project Description and Procedures for the Finalization of the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan" (Planning Agreement). After evaluation of the Planning Agreement, the state of California and the regulated community developed the Term Sheet to the VAs MOU (**Attachment 1**).

The VAs MOU includes a description of a governance structure, science program, and commitments of water and funding from various sources throughout the watershed. (See VAs MOU and appendices in **Attachment 1**.) Water agency parties, which could include Metropolitan, and non-government organizations could be involved in Governance under the VAs, participating in decisions related to flows, habitat development, monitoring, and funding. The Water Board would retain regulatory authority during VAs implementation, including over whether

the VAs would continue beyond eight years and up to a total of 15 years, and this decision-making would occur in a public process based on the Water Board's assessment of the overall performance of the VAs.

The Water Board's regulatory approach includes flow measures, but these measures do not directly address multiple aquatic stressors in the Delta that include invasive species, physical modifications of channels and loss of wetlands in the Delta, and loss of floodplain habitat. For this reason, the VAs were developed to provide a comprehensive approach to integrate flow and non-flow measures, including habitat restoration, subject to ongoing adaptive management, to address other stressors. The Water Board does not have the authority to order the regulated community to implement non-flow measures through amendments to their water right permits, which is the reason why a voluntary approach is necessary to enable a more comprehensive approach to protecting fish and wildlife beneficial uses. The VAs MOU describes an approach where the VAs would be implemented concurrent with the regulatory implementation approach, and these parallel programs would both contribute to meeting water quality standards.

Procedurally, the next step in the Bay-Delta Plan update differs by sub-watershed as the region upstream on the San Joaquin River (Phase 1) is on a different schedule as compared to the region that includes the Sacramento River and Delta (Phase 2). In 2018, the Water Board approved an amendment to the Bay-Delta Plan adopting a regulatory approach (i.e., percentage of unimpaired hydrograph/runoff) on the San Joaquin River. The amendment also acknowledged the potential for a future VA approach. The 2018 amendment has not been implemented, so the Water Board's next step will be moving to the implementation of Phase 1, which in the past has included a process for allocating responsibility amongst water users and modification of water rights. Water right holders could decide to join the VAs implementation rather than have their water rights amended through the regulatory process.

In the Sacramento River and Delta, the next step would be to incorporate the VAs into the project description for the proposed Bay-Delta Plan Update and the Water Board's California Environmental Quality Act (CEQA) compliance document. There is a public process associated with the completion of both Phase 1 and Phase 2 of the Bay-Delta Plan update. Going forward, it is staff's intent to advocate for broad inclusion in the public process, including engagement with environmental non-governmental organizations and tribes.

Ultimately, the SWP and the CVP must coordinate the reinitiated consultation on project operations with the update to the Bay-Delta Plan and the consideration of the VAs. The project description for the SWP-CVP consultation will need to include the VAs and other provisions of the Bay-Delta Plan update to ensure that associated changes in project operations will be covered by the Biological Opinions (BiOps) and state Incidental Take Permit (ITP). While the VAs MOU measures anticipated flow contributions from a baseline that includes the 2019 BiOps, the VAs MOU does not envision that the 2019 BiOps would remain in effect. The VAs MOU recognizes the relationship between the BiOps, ITP, and VAs and affirmatively commits to continue to work toward resolution of the litigation related to these permits, and the VAs MOU further supports a global resolution of litigation where "VA contributions, to the maximum extent allowable under law, will be recognized in the solution of other regulatory proceedings, including during the pending consultation on ongoing CVP and SWP operations and/or application for a new or amended incidental take permit..." (VAs MOU, Term Sheet, section 11.).

The VAs MOU does not commit Metropolitan to take any action. Similarly, as Metropolitan does not hold a water right in the Delta, Metropolitan is not directly subject to the Water Board's authority over Bay-Delta water quality standards. However, since Metropolitan relies on the water supply it receives from the SWP, Metropolitan would benefit from the VAs approach. Under the VAs, the SWP would be sharing responsibility for new water quality standards with other water users in the watershed, and would have certainty in the nature and magnitude of obligations that are passed on to the water contractors by DWR. In contrast, a regulatory process without the VAs poses significant risks to Metropolitan regarding future flow obligations of the SWP. The VAs watershed-wide approach coordinates actions in the Delta with upstream river and tributary management, as part of a holistic approach to environmental management. Future governance structures will also be established to allow ongoing input on the adaptive management and environmental flow actions needed to make the VAs a success over time.

Policy

Support administrative/legislative actions that protect water quality for beneficial uses and that are implemented consistent with water rights priorities. (2022 Legislative Priorities.)

Support administrative/legislative action and funding to improve scientific understanding of listed Delta fish and wildlife species and water project operations in the Delta, including data collection, real-time monitoring, and modeling. Promote the use of best available science to enhance flexibility for water project operations while maintaining regulatory and statutory protections for species listed under the state and federal Endangered Species Act. (2022 Legislative Priorities.)

Support administrative/legislative actions and funding to enhance watershed management in Southern California, the Bay-Delta and Colorado River watersheds that provide broad public benefits, including water quality and water supply reliability, reduced wildfire risks, and other environmental improvements. (2022 Legislative Priorities.)

Support administrative/legislative actions for environmental compliance that provide regulatory compliance flexibility, improve clarity and workability of the requirements, and promote consistency and reduce regulatory duplication, while protective of public health and the environment. (2022 Legislative Priorities.)

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 (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).

CEQA determination for Option #2:

None required

Board Options

Option #1

Express support for developing the VAs approach as an alternative in the Water Board's Bay-Delta Water Quality Control Plan Update.

Fiscal Impact: None at this time because the action is expressing support for developing the VAs approach rather than approving an agreement with financial commitments.

Business Analysis: Developing the VAs approach would benefit Metropolitan because, if the Water Board ultimately adopts the VAs approach, the SWP would be sharing responsibility for new water quality standards with other water users in the Bay-Delta watershed, and would have certainty in the nature and magnitude of obligations that are passed on to the water contractors by DWR.

Option #2

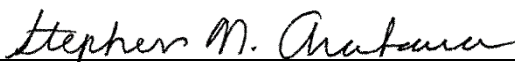
Do not express support for developing the VAs approach as an alternative in the Water Board's Bay-Delta Water Quality Control Plan Update.

Fiscal Impact: None

Business Analysis: By not pursuing the VAs approach, Metropolitan could have more exposure to water supply impacts due to higher SWP obligations of meeting new water quality standards in the Bay-Delta.

Staff Recommendation

Option #1


Stephen N. Arakawa
Manager, Bay-Delta Initiatives

5/6/2022

Date


Adel Hagekhalil
General Manager

5/6/2022

Date

**Attachment 1 – MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN AND OTHER RELATED ACTIONS**

Ref# eo12689482

**MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR
THE VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE
BAY-DELTA WATER QUALITY CONTROL PLAN, AND OTHER RELATED
ACTIONS**

March 29, 2022

This “Memorandum of Understanding” (MOU) is signed by the Parties, through their executive leadership, to advance the attached Term Sheet for Voluntary Agreements.

RECITALS

A. The State Water Resources Control Board (State Water Board) and the nine regional water quality control boards administer the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 *et seq.*) (Porter-Cologne Act) to achieve an effective water quality control program for the state and are responsible for the regulation of activities and factors that may affect the quality of the waters of the state.

B. The State Water Board is authorized to adopt a water quality control plan in accordance with the provisions of Water Code sections 13240 through 13244, insofar as they are applicable (Wat. Code, § 13170).

C. The State Water Board has adopted a Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan). It first adopted the plan in 1978, amending it in 1995, 2006, and 2018. In 2008, it initiated its periodic review and began proceedings to update the current Bay-Delta Plan.

D. The Bay-Delta Plan designates beneficial uses of the waters of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta watershed), establishes water quality objectives for the protection of those beneficial uses, and establishes a program of implementation to implement those objectives.

E. In May 2017 then-Governor Edmund G. Brown, Jr. issued “Principles for Voluntary Agreements” stating in relevant part: “The goal is to negotiate durable and enforceable Voluntary Agreements that will be approved by applicable regulatory agencies, will represent the program of implementation for the water quality objectives for the lower San Joaquin and Sacramento Rivers and Delta, will forego an adjudicatory proceeding related to water rights, and will resolve disputes among the parties regarding water management in the Sacramento-San Joaquin-Bay-Delta Watershed.”

F. Interested parties, including state and federal agencies, municipal and agricultural water suppliers, and others undertook extensive efforts beginning in 2017 to

negotiate Voluntary Agreements. On December 12, 2018, the Directors of California Department of Fish and Wildlife (CDFW) and California Department of Water Resources (CDWR) appeared before the State Water Board and presented the results of the negotiation process to date. Specifically, the Directors presented a “Framework Proposal for Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan” (Framework Proposal).

G. On December 12, 2018, the State Water Board adopted Resolution No. 2018-0059 to update the 2006 Bay-Delta Plan. First, it amended the water quality objectives for the protection of fish and wildlife beneficial uses in the Lower San Joaquin River (LSJR) and its three eastside tributaries, the Stanislaus, Tuolumne, and Merced Rivers, and agricultural beneficial uses in the southern Delta. It also amended the program of implementation for those objectives. It approved and adopted the Substitute Environmental Document (SED) for the Lower San Joaquin River. Ordering paragraph 7 of Resolution No. 2018-0059 states:

“The State Water Board directs staff to provide appropriate technical and regulatory information to assist the California Natural Resources Agency in completing a Delta watershed-wide agreement, including potential flow and non-flow measures for the Tuolumne River, and associated analyses no later than March 1, 2019. State Water Board staff shall incorporate the Delta watershed-wide agreement, including potential amendments to implement agreements related to the Tuolumne River, as an alternative for a future, comprehensive Bay-Delta Plan update that addresses the reasonable protection of beneficial uses across the Delta watershed, with the goal that comprehensive amendments to the Bay-Delta Plan across the Delta watershed may be presented to the State Water Board for consideration as early as possible after December 1, 2019.”

H. In January 2019, Governor Gavin Newsom confirmed his intention to complete the efforts to reach Voluntary Agreements. On March 1, 2019, the Directors of CDFW and CDWR entered into a “Planning Agreement Proposing Project Description and Procedures for the Finalization of the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan” (Planning Agreement).

I. After evaluation of the Planning Agreement, the Parties developed the “Term Sheet for the Voluntary Agreements Program to Update and Implement the Bay-Delta Water Quality Control Plan” (Term Sheet, as attached).

UNDERSTANDINGS

1. Intent of the Signatories

1.1. In the Bay-Delta watershed, a comprehensive approach to managing habitat, flow, and other factors is required to protect native fish and wildlife species, while concurrently protecting water supply reliability, consistent with the legal requirement of providing reasonable protection for all beneficial uses.

- A. The Bay-Delta Plan requires flow measures, and while creating opportunities for other actions, it does not require measures to directly address other limiting factors, including invasive species, ocean and tidal conditions, physical modifications of channels and wetlands, and loss of floodplain habitat.
- B. The Parties seek to take a comprehensive approach to integrate flow and non-flow measures, including habitat restoration, subject to ongoing adaptive management based on a science program. The attached Term Sheet describes a Voluntary Agreements Program to effect this comprehensive approach.

1.2. The Parties intend to cooperate to submit the Term Sheet to the State Water Board, so that it may consider including the Voluntary Agreements Program, consistent with Resolution 2018-0059, as the pathway to implement the Narrative Salmon Objective and a proposed Narrative Viability Objective for the VA Parties. The Parties further intend to undertake a process to assist the State Water Board in its independent analysis of that pathway.

1.3. The Parties intend to continue work on these further related actions:

- A. Plan for implementation of flow and non-flow measures in advance of the State Water Board's action on the alternative described in the Term Sheet, subject to any applicable requirements for project-specific environmental review or regulatory approval;
- B. Continue to work toward resolution of litigation related to the 2018 Bay-Delta Plan, the 2019 Biological Opinions for the State Water Project and Central Valley Project, the 2020 Incidental Take Permit for the State Water Project, including Interim Operations, Clean Water Act section 401 certifications, and other regulatory

authorizations and proceedings that relate to the actions described in the Term Sheet;

- C. Develop the Voluntary Agreements in a proposed complete and legally appropriate and binding form.

1.4. The Parties recognize that State Water Board will be the lead agency under the California Environmental Quality Act (CEQA) in preparation of the Substitute Environmental Document (SED) to update the Bay-Delta Plan. The Parties intend to propose that CDFW, CDWR, and other public agency Parties will participate in the environmental review as responsible and/or trustee agencies, with respect to the Voluntary Agreements Program. The Parties expect that the SED will include at least programmatic environmental review of all elements of the Voluntary Agreements as reflected in the Term Sheet, and that the Parties responsible to implement measures will undertake project-specific environmental review as needed. The Parties recognize that execution of Voluntary Agreements will not occur until required environmental review has been completed and that the ultimate terms in those agreements will reflect the results of that review.

2. General Provisions.

2.1. This MOU is signed by executive leadership for the Parties. For each party, implementation is conditioned upon and subject to review and approval by the decisional body of the Party, if required. By signing this MOU, the Parties agree to advance the VA Program as reflected in the Term Sheet to the decisional body, if any, for consideration as outlined in the Term Sheet.

2.2. The Parties reserve judgment whether they each will sign or otherwise support the Voluntary Agreements and do not at this time, commit to any actions described in the Term Sheet. They will decide whether or not to commit to take these actions after the State Water Board adopts a SED and resolution to update the Bay-Delta Plan consistent with Resolution 2018-0059.

2.3. Nothing in this MOU is intended to modify or supersede the independent authority or discretion of any Party. Nothing in this MOU is intended to exercise, modify, or supersede the regulatory authority of any Party that is a regulatory agency or any subordinate agency of such a Party.

2.4. Nothing in this MOU is intended to be a pre-decisional commitment of resources. The Parties recognize that while this Memorandum of Understanding is the

product of significant effort and collaboration to identify a proposed approach that the Parties believe will prove to be successful and consistent with all applicable regulatory and other obligations, any commitment to implement the flow and non-flow measures described in the Term Sheet is dependent on all necessary environmental review and regulatory approvals. Accordingly, the Parties acknowledge that nothing in this MOU or the attached Term Sheet can meaningfully foreclose any public agency's consideration of alternatives including not proceeding with any aspect of the flow and non-flow measures described herein. This MOU is not subject to CEQA consistent with CEQA Guidelines section 15004.

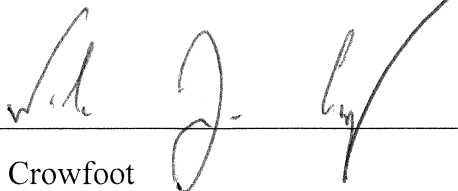
2.5. It is the intent of the Parties to encourage the possibility that additional entities, at a later date, will sign this MOU to offer contributions that would enhance the effectiveness of the VA Program described in the Term Sheet. A tributary or other water user group not party to the MOU should notify the Parties if it proposes to make contributions of flow, habitat and/or funding that are additive to the VA Program and commensurate with contributions by the original Parties. If appropriate, the entity shall sign this MOU as a separate counterpart, and the additive contributions shall be incorporated into the Term Sheet.

2.6. This MOU may be executed in separate counterparts, each of which when so executed and delivered will be an original. All such counterparts will together constitute but one and the same instrument.

2.7 The MOU expresses the mutual agreement of the Parties to advance the VA Program as reflected in the attached Term Sheet for consideration by their respective decisional bodies, if required.

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

CALIFORNIA NATURAL RESOURCES AGENCY



By: Wade Crowfoot

3/29/22
Date

Secretary of the Natural Resources Agency

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

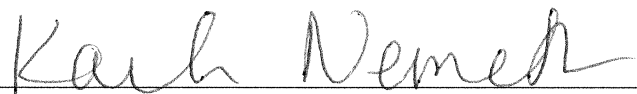


By: Jared Blumenfeld

March 29, 2022
Date

Secretary for Environmental Protection

CALIFORNIA DEPARTMENT OF WATER RESOURCES



By: Karla Nemeth

3-29-22
Date

Director

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE




By: Charlton Bonham

March 29, 2022
Date

Director

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS


YUBA WATER AGENCY


By: Willie Whittlesey
Its: General Manager

3/29/22
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS


GARDEN HIGHWAY MUTUAL WATER COMPANY


By: Nicole Van Vleck
Its: Vice President

3/29/22
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

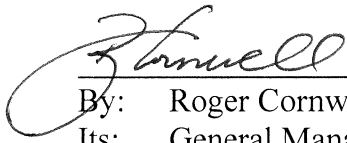


By: Adel Hagekhalil
Its: General Manager and Chief Executive Officer

3.29.2022
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

RIVER GARDEN FARMS



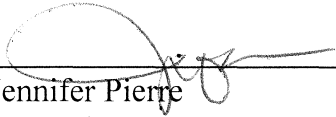
By: Roger Cornwell
Its: General Manager

3 - 29 - 2022

Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

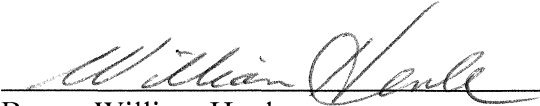
STATE WATER CONTRACTORS

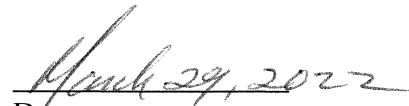
By: 
Its: General Manager

3/29/22
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

SUTTER MUTUAL WATER COMPANY


By: William Henle
Its: Board President


Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

GLENN-COLUSA IRRIGATION DISTRICT

A handwritten signature in black ink, appearing to read "Thaddeus Bettner", is written over a horizontal line.

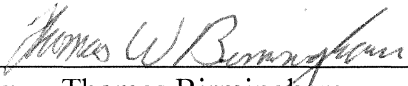
By: Thaddeus Bettner

Its: General Manager

May 29, 2022
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

WESTLANDS WATER DISTRICT

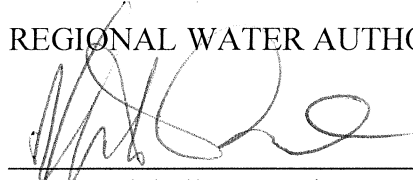


By: Thomas Birmingham
Its: General Manager

3/29/2022
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

REGIONAL WATER AUTHORITY




By: Michelle Banonis
Its: Manager of Strategic Affairs


3/29/22
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

KERN COUNTY WATER AGENCY




By: Thomas McCarthy
Its: General Manager



Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

U.S. BUREAU OF RECLAMATION – CALIFORNIA-GREAT BASIN REGION



By: Ernest Conant
Its: Regional Director

3/29/2022
Date

SIGNATORY PARTIES TO THE
MEMORANDUM OF UNDERSTANDING ADVANCING A TERM SHEET FOR THE
VOLUNTARY AGREEMENTS TO UPDATE AND IMPLEMENT THE BAY-DELTA
WATER QUALITY CONTROL PLAN, AND OTHER RELATED ACTIONS

WESTERN CANAL WATER DISTRICT



By: Ted Trimble
Its: General Manager

3/29/2022
Date

**TERM SHEET FOR VOLUNTARY AGREEMENTS TO UPDATE AND
IMPLEMENT THE BAY-DELTA WATER QUALITY CONTROL PLAN**

March 29, 2022

Parties signatory to the attached “Memorandum of Understanding” (MOU) propose this “Term Sheet (Term Sheet) for the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan” (Bay-Delta Plan).

1. Purpose.

- 1.1.** Subject to Section 13, this Term Sheet states the essential terms that the Parties will use to finalize the Voluntary Agreements (VAs). The VAs will consist of three types of agreements described in Section 2.2 below.
- 1.2.** The VAs will state actions, together with other measures in the Bay-Delta Plan, necessary to implement two water quality objectives in the plan related to protection of native fishes.
 - A.** These objectives are: (1) the existing narrative objective that provides for water quality conditions, together with other measures in the watershed, to achieve doubling of the reference salmon population (1967-1991) (Narrative Salmon Objective); and (2) a new narrative objective to achieve the viability of native fish populations (Narrative Viability Objective).
 - B.** The Parties propose that the State Water Resources Control Board (State Water Board) adopt the following Narrative Viability Objective:

“Maintain water quality conditions, including flow conditions in and from tributaries and into the Delta, together with other measures in the watershed, sufficient to support and maintain the natural production of viable native fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include, but may not be limited to, (1) flows that support native fish species, including the relative magnitude, duration, timing, temperature, and spatial extent of flows, and (2) conditions within water bodies that enhance spawning, rearing, growth, and migration in order to contribute to improved viability. Indicators of viability include population abundance, spatial extent,

distribution, structure, genetic and life history diversity, and productivity.* Flows provided to meet this objective shall be managed in a manner to avoid causing significant adverse impacts to fish and wildlife beneficial uses at other times of the year.

* The actions the State Water Board and other agencies expect to take to implement this objective are described in section [insert number] of this Plan's Program of Implementation."

C. The commitments in the VAs will provide the participating parties' share, during implementation of the VAs, to contribute to achieving the Narrative Salmon Objective by 2050.

1.3. The VAs will include new flow and other measures, including habitat restoration, subject to adaptive management pursuant to the Governance and Science Programs stated in Sections 9 and 10 below.

1.4. The Parties will request that the State Water Board consider and approve an updated Bay-Delta Plan that includes the VAs as a pathway within the Program of Implementation that, along with other measures required in the plan, implements the Narrative Salmon Objective and Narrative Viability Objective.

A. This Term Sheet will be submitted to the State Water Board pursuant to Resolution 2018-0059 (Ordering Paragraph 7), which states:

"The State Water Board directs staff to provide appropriate technical and regulatory information to assist the California Natural Resources Agency in completing a Delta watershed-wide agreement, including potential flow and non-flow measures for the Tuolumne River, and associated analyses no later than March 1, 2019. State Water Board staff will incorporate the Delta watershed-wide agreement, including potential amendments to implement agreements related to the Tuolumne River, as an alternative for a future, comprehensive Bay-Delta Plan update that addresses the reasonable protection of beneficial uses across the Delta watershed, with the goal that comprehensive amendments to the Bay-Delta Plan across the Delta watershed may be presented to the State Water Board for consideration as early as possible after December 1, 2019."

- B. The Parties request that the Program of Implementation in the updated Bay-Delta Plan include the VAs as a pathway to implement the Narrative Salmon Objective and Narrative Viability Objective, on a finding that the VA pathway in conjunction with the regulatory pathway described in section 1.4(C) will provide reasonable protection of the associated beneficial uses as documented in the SED. The Parties further request that the State Water Board consider the VAs as an alternative to be analyzed in the Substitute Environmental Document (SED) as described in Resolution 2018-0059.
- C. The Parties understand that the State Water Board will include in the Program of Implementation an additional pathway to implement the Narrative Salmon Objective and Narrative Viability Objective. This pathway will apply to tributaries, or persons or entities, not covered by a VA. In this pathway, the State Water Board will use its legal authorities and public processes to establish conditions to require flows and other measures by persons or entities not covered by a VA to provide reasonable protection of beneficial uses associated with the Narrative Salmon Objective and Narrative Viability Objective. The Parties request that the Program of Implementation provide an opportunity for water right holders not covered by a VA to, at a later date, commit to contributions to implement the Narrative Salmon Objective and Narrative Viability Objective under the VAs, as approved by the State Water Board.
- D. The Parties further request that the Program of Implementation include:
- (i). A summary of the VAs as reflected by this Term Sheet, including a summary of any early implementation before the Effective Date of the VAs (defined in Section 7.1);
 - (ii). A Strategic Plan for implementation of the VAs, including adaptive management of flow and habitat restoration measures, pursuant to Section 9.3;
 - (iii). Obligations of the State Water Board, the Parties and others to implement their commitments, pursuant to Section 2.2 and Water Code section 13247;

- (iv). A Governance Program including Annual and Triennial Reports pursuant to Section 9;
- (v). A Science Program pursuant to Section 10; and
- (vi). Procedures for renewal, modification, and extension of the VAs pursuant to Sections 7.4 through 7.5.

2. Structure.

- 2.1.** The parties that sign the attached MOU are “VA Parties” for the purpose of this Term Sheet.
- 2.2.** The VAs will consist of three types of agreements. These are:
 - A. Global Agreement that will describe the VAs’ structure, funding, Science Program, and Governance Program, to be signed by all VA Parties;
 - B. Implementing Agreements, each of which will state in detail the measures for a participating tributary, the Sacramento River mainstem, or the Delta, as applicable, each to be signed by those VA Parties with responsibility for implementation of that agreement, including the California Department of Fish and Wildlife (CDFW) and the California Department of Water Resources (CDWR); and
 - C. Government Code Section 11415.60 Agreements, each of which will state the specific obligations of those VA Parties responsible for implementation of an Implementing Agreement, along with related regulatory enforcement mechanisms related to flows, habitat restoration and other assurances, each to be signed by such VA Parties and the State Water Board. Each agreement will specify any contingencies outside the reasonable control of the responsible VA Party related to performance of a measure.
- 2.3.** The VAs will incorporate flow measures (including any refill criteria and other accounting provisions) as stated in Appendix 1, habitat restoration measures as stated in Appendix 2, funding as stated in Appendix 3, and expected outcomes and metrics as stated in Appendix 4.

3. **Relationship to Prior Proposed Agreements.** This Term Sheet supersedes all previously proposed VA agreements, VA frameworks and/or VA planning documents.¹
4. **Additional Delta Outflows, Tributary Flows, and Habitat.**
 - 4.1. The VA flows described in Appendix 1 will be additive to the Delta outflows required by Revised Water Rights Decision 1641 (Revised D-1641) and resulting from the 2019 Biological Opinions, although the 2019 Biological Opinions may be modified, including to resolve litigation concerning those opinions.
 - 4.2. The habitat restoration measures described in Appendix 2 will be additive to physical conditions and regulatory requirements existing as of December 2018, when the State Water Board adopted Resolution 2018-0059. Implementation of such measures by Parties after that date, but prior to execution of the VAs, will be considered as contributing towards implementation of the Narrative Salmon Objective and Narrative Viability Objective.
5. **Contributions of Tributary Flows, Delta Outflows, and Habitat Restoration.** The VAs will result in flow and non-flow measures as shown in Appendices 1 and 2 respectively.
 - 5.1. With respect to tributary flows and Delta outflows shown in Appendix 1:
 - A. These flows may be shaped in timing and seasonality, to test biological hypotheses and respond to hydrologic conditions while reasonably protecting beneficial uses. Such shaping will occur through the Governance Program stated in Section 9 below, and subject to the Implementing Agreements and applicable regulatory requirements. The Parties agree a portion of the volumes of water in Appendix 1 will be managed with a priority of providing increased flows in the months of April and May in D, BN, and AN water years to replicate average outflow resulting from the I/E ratio in the 2009 salmonid BiOp as modeled.

¹ The State signatories stand by the funding commitments contained in the March 2019 Proposed Action as scaled to reflect an 8-year VA term, see Appendix 3.

- B. Such shaping will occur through the Governance Program stated in Section 9 below, and subject to the Implementing Agreements and applicable regulatory requirements.
 - C. Flow measures described in Appendix 1 as “Water Purchase Program” or other water purchases will be obtained through a free-market program for single-year transfers, subject to applicable law. The Parties acknowledge that, if the water purchases do not occur, then the VAs will be subject to the provisions of Section 7.4(B)(ii) or (iii).
- 5.2.** The Global Agreement and Implementing Agreements will include appropriate provisions that VA Parties (including regulatory agencies) will expedite and coordinate permitting of flow and non-flow measures, consistent with applicable laws.
- A. Each Party acknowledges that a metric for success in the voluntary agreements would be the completion of identified restoration projects.
 - B. CDFW will apply innovative uses of its Lake and Streambed Alteration and California Endangered Species Act authorities to expedite permitting of these restoration projects.
 - C. The Parties anticipate that the State Water Board will complete and employ its proposed general order for Clean Water Action section 401 Water Quality Certification and waste discharge requirements for restoration projects to expedite permitting of these restoration projects.
 - D. The United States Fish and Wildlife Service and National Marine Fisheries Service will use regulatory tools for restoration to expedite permitting of these restoration projects.
 - E. California will establish a multi-disciplinary restoration unit of 8 full-time specialists to track, permit and implement these restoration projects. This team will regularly report to Secretaries for Environmental Protection and Natural Resources.

- F. The relevant state and federal agencies involved in implementation of these restoration projects will convene with other VA Parties as part of the governance to update on project delivery.
 - G. The relevant state and federal agencies involved in implementation of the VAs' restoration projects will update the California Governor's Office regularly on status of permitting these projects.
- 6. **Funding.** The VAs will include the funding commitments shown in Appendix 3. Those commitments will include appropriate assurances of performance, as provided in the Global Agreement. Any Global Agreement executed by the U.S. Fish and Wildlife Service, the U.S Bureau of Reclamation or National Marine Fisheries Service will be subject to appropriations.
- 7. **Effectiveness, Enforcement, Assurances, and Termination or Renewal.**
 - 7.1. The VAs will become effective on the date the Government Code section 11415.60 Agreements are executed. The VAs will remain in effect for a term of 8 years after the Effective Date. For purpose of this Term Sheet, a numbered "Year" refers to the year after the Effective Date.
 - A. The Parties with permitting authority recognize their affirmative obligation to move as expeditiously as possible to complete permitting processes prior to Year 1.
 - B. The Parties will request and expect the State Water Board include in the Program of Implementation a process for the Executive Director to recognize unanticipated permitting delays prior to Year 1 and to defer review and performance milestones within the Program of Implementation accordingly to better align the VA implementation with State Water Board's processes. In considering any adjustments under this paragraph, the delay must result from actions or inactions that were beyond the control of the Parties.
 - 7.2. The State Water Board will have authority to enforce the flow and non-flow measures relying on Water Code authorities, as provided in the Government Code Section 11415.60 Agreements. The agreements will specify responsible parties and conditions precedent for implementation and related liability for enforcement. The Parties will be accountable to secure their individual funding commitments specified in Appendix 3, as provided in the Global Agreement. It is anticipated that neither the U.S.

Fish and Wildlife Service, nor the U.S. Bureau of Reclamation, nor National Marine Fisheries Service will be participating through a Government Code 11415.60 Agreement.

- 7.3. Through the Government Code Section 11415.60 Agreements, the State Water Board will provide assurances that the VAs state the total obligations of the VA Parties to implement the Narrative Salmon Objective and Narrative Viability Objective for the term of the VAs, subject to Section 7.4.
- 7.4. The Parties propose that, in Year 6, the State Water Board will initiate the process to evaluate and determine the implementation pathway for VA parties after Year 8. The Parties also propose that the Program of Implementation include a process to incorporate consideration of the following information:
- The VA science program’s synthesis of the most current science and analyses of the effects of the VAs’ implementation, consistent with Appendix 4;
 - Past, present, and probable future beneficial uses of water;
 - Environmental characteristics of the Bay-Delta watershed, including the quality of water available thereto;
 - Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the Bay-Delta watershed; and
 - Economic considerations.

At Year 8, the State Water Board will consider potential amendments to the Program of Implementation under the “green”-“yellow”-“red” structure described in Section 7.4.B, which will be informed by the consideration of the scientific analysis and information submitted pursuant to section 7.D. If under the “red” option in Section 7.4B(iii), the VA Parties may present new agreements to fulfill the purpose stated in Section 1.4(B), or the State Water Board will begin implementing the Bay Delta Plan through the additional pathway described in Section 1.4(C).

- A. In Year 6, the State Water Board will issue a notice to initiate the process. It will hold a public informational workshop, at which time the VA Parties will present on their second Triennial Reports and Strategic Plan for Years 6-9. Based on these reports and the

information gathered by the VA Science Committee (as described in Appendix 4), the VA Parties, through the Systemwide Governance Committee, will recommend to the State Water Board whether the VAs should continue for another term with limited modification or if more significant changes to the VA terms are needed. The State Water Board will consider the Systemwide Governance Committee's recommendation and all public comments on the progress of VA implementation, technical information, and the implementation pathway in Year 8.

B. Following the workshop and after consideration of all comments, the State Water Board will distribute a draft proposed pathway to be implemented for VA Parties after Year 8. In summary form, it will select from three options:

- (i). **Green** – The VAs are substantially achieving the required metrics as described in Appendix 4; and the ecological outcomes analysis described there supports the conclusion that continuing the VA, together with other actions in the Bay-Delta Plan, will result in attainment of the narrative objectives. If so, the VA Parties will continue implementation of VAs without any substantial modification in terms, except for necessary changes to provide for funding and other measures necessary to continue the VAs. Necessary updates to the VA terms (if any) will be determined and the process to renew the VAs will be initiated so that renewed VAs are in place at Year 9.
- (ii). **Yellow** – The VAs are meeting a significant number of metrics as described in Appendix 4; and the ecological outcomes analysis as described there supports the conclusion that continuing the VAs, together with other actions in the Bay-Delta Plan, will result in attainment of the narrative objectives, but some modifications are needed. If so, the VA Parties will continue implementation with substantive modification in terms. The process to modify the VA terms to address deficiencies will be initiated. Concurrently, the State Water Board will consider alternative means to address deficiencies in achieving the metrics as described in Appendix 4.

- (iii). **Red** – A new pathway is required because VAs are not achieving required metrics as described in Appendix 4; and the ecological outcomes analysis as described there does not support the conclusion that continuing the VAs, together with other actions in the Bay-Delta Plan, will result in attainment of the narrative objectives. New agreements will be negotiated, or the Bay-Delta Plan's Program of Implementation will be implemented through the State Water Board's regulatory authorities and the VA Parties reserve all rights to fully participate in the related regulatory processes, and potential remedies related thereto.

C. Factors the State Water Board will consider in selecting one of the three options from subsection (B), will include, but not necessarily be limited to:

- (i). Whether permits required for implementation were pursued and available within a reasonable timeframe.
- (ii). Whether VA Parties timely and fully performed VA flow asset commitments.
- (iii). Whether the Triennial Reports analyze progress across the Delta watershed, provide considerations for updating the Strategic Plan, include considerations for updating the VA flow and non-flow measures, and are timely submitted to the State Water Board to inform its triennial review process.
- (iv). Whether the guidance as set forth in the Strategic Plan for the initiation and construction of habitat projects has been achieved.
- (v). Whether VAs were fully funded through Year 8;
- (vi). Whether the Triennial Reports or other sources of reliable information indicate that factors outside of the VAs are impairing the relevant fish species;
- (vii). Whether flows have been adequately protected pursuant to Section 8; and

- (viii). Whether additional funds are available to continue the VA program.
- D. Prior to selecting one of the three options from subsection (B), the State Water Board will:
 - (i). Hold appropriate hearings to review and receive input on the scientific reports, analysis, information, and data generated by the VA Science Program and other sources and receive recommendations on the anticipated effectiveness of continuing or modifying VAs or implementing the regulatory pathway described in Section 1.4(C); and
 - (ii). Conduct a Delta Independent Science Board review to receive input and recommendations on the scientific rationale for continuing or modifying the VAs.
- E. In Year 8, the VA Parties will submit their final Annual Report. The State Water Board will distribute any proposed amendments to the Bay-Delta Plan's Program of Implementation, which will be informed by the consideration of factors in Section 7.4(C), to be implemented after Year 8.
- F. If, by the end of Year 8, no new agreements have been adopted or State Water Board has not yet assigned responsibility for implementing the Bay-Delta Plan through a regulatory pathway described in amendments to that Bay-Delta Plan's Program of Implementation, the original VAs (and their terms concerning water-user funding for flow contributions) will continue, but unless otherwise negotiated, those obligations will not extend beyond 15 years.
- G. In the Government Code section 11415.60 Agreements, the VA Parties and the State Water Board will establish a procedure for timely and effective referral of disputes that arise during any update to the Bay-Delta Plan's Program of Implementation described in Section 7.4. The procedure will promptly involve executive leadership (across the VA Parties) in resolution of disputes that, if unresolved, would involve significant risk of delay in final action.

- 7.5.** The Government Code section 11415.60 Agreements will authorize an extension of the VAs beyond Year 8 to continue until new VAs are adopted or the State Water Board adopts a pathway as described in Section 7.4(B). VA Parties that are water agencies will reserve remedies specified in these agreements.

8. Protection of Flows.

- 8.1.** The Parties propose to, and anticipate that, the State Water Board will use its legal authorities to protect all flows generated by actions identified in Appendix 1 against diversions for other purposes for the term of the VAs. The VA Parties will support the State Water Board in its proceedings by assisting with developing technically and legally defensible methods to provide these protections. During administrative proceedings, the VA Parties will support the developed protections, provided the VA Parties agree with the authority cited by the State Water Board for the proceedings, the scope of proceedings, and the technical methodology. Prior to the potential adoption of VAs by the State Water Board, the Parties agree to collaboratively identify and resolve any redirected adverse impacts resulting from the implementation of flow contributions identified in Appendix 1.
- 8.2.** The Parties anticipate that State Water Board will report annually on what actions the State Water Board has taken to protect these flows from unauthorized uses.
- 8.3.** All San Joaquin River watershed flows required as a result of implementing the 2018 Bay Delta Plan Update or VAs will be protected as Delta outflows to the maximum extent feasible, and prior to the State Water Board's adoption of an action to protect the new Delta outflows, the 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 as Delta outflow.
- 8.4.** In coordination with the State Water Board and other Parties, the Department of Water Resources, and the U.S. Bureau of Reclamation will develop accounting procedures to assure that flows and habitat restoration provided under the VAs are additional contributions as stated in Section 4. These procedures will be incorporated into the Implementation

Agreements, as appropriate, and will be subject to approval by the State Water Board.

9. **Governance Program.** The VAs will establish a Governance Program to direct flows and habitat restoration, conduct assessments, develop strategic plans and annual reports, implement a science program, and hire staff and contractors.

- 9.1. **Governance Entities.** VA Parties will formally establish the following entities to govern implementation of the VAs unless a comparable governance entity already exists. Each governance entity will adopt a charter that is consistent with the Global Agreement and applicable Implementing Agreement.

- A. The Systemwide Governance Committee will make recommendations related to deployment of flow and non-flow measures as provided in its charter, oversee Triennial Reports in Years 3 and 6 (and potentially Years 9 and 12, if the VAs are renewed), regarding implementation and effects, any revision to the Strategic Plan in Year 6 (and potentially 12, if the VAs are renewed), and overall coordination of the VA Program. Through the Strategic Plan and otherwise, this committee will assure that implementation is consistent with the terms of applicable Implementing Agreements. This committee may include members from appropriate stakeholders who are not VA Parties.
- B. The Tributary/Delta Governance Entities will be responsible for implementation of Implementing Agreements for which that entity is responsible, including deployment of flow and nonflow measures as specified in those Implementing Agreements, and preparation and submittal of associated Annual Reports to the Systemwide Governance Committee. Each such entity will include VA Parties subject to the applicable agreement.

- 9.2. **Governance Procedures for Flow Measures.**

- A. Tributary flow measures will be subject to implementation in accordance with the recommendation or request of the Systemwide Governance Committee, consistent with rules set forth in the Implementing Agreements. A Tributary Governing Entity may consent but is not required to agree to a recommendation for

implementing a measure in a manner that would be inconsistent with its Implementing Agreement.

- B. Delta flow measures will be subject to implementation in accordance with the recommendation or request of the Delta Governance Entity consistent with rules that will define the scope that the measure is available to be adaptively managed. Such implementation will be coordinated with the Systemwide Governance Committee.

9.3. Strategic Plans.

- A. The VA Parties will propose an initial Strategic Plan for approval in the update to the Bay-Delta Plan, along with other elements of the VAs. The plan will provide multi-year guidance for the implementation of flow and other measures, set priorities to guide the Science Program, and establish reporting procedures related to implementation and effects. The Strategic Plan will be consistent with applicable terms of Implementing Agreements.
- B. The Parties will request that the State Water Board approve the initial Strategic Plan as an element of the Program of Implementation.
- C. The Systemwide Governance Committee may revise the initial Strategic Plan for the purpose of Years 3 and 6, and subsequently as applicable, subject to the State Water Board's review and approval of any adaptive management outside of the limits established in the initial Strategic Plan.

9.4. Annual and Triennial Reports.

- A. The Tributary/Delta Governance Entities will prepare Annual Reports of their implementation of the VAs in the preceding year. The Systemwide Governance Committee will compile and integrate these reports for annual submittal to the State Water Board.
 - (i). Reports will inform adaptive management.
 - (ii). Reports will be technical in nature, identify actions taken, monitoring results, and milestones achieved.

- (iii). Reports will document status and trends of native fish.
 - (iv). Reports will document whether commitments for VA asset deployments are being met. Commitments will be documented using a State approved accounting methodology and validated to be true and correct by a third party independent registered professional engineer.
 - (v). Reports will document progress toward completion of VA habitat restoration projects. Each report will document permit success in terms of applications submitted, processing timelines, and permits obtained.
 - (vi). Reports will document efforts to seek new funding to support program.
- B. In Years 3 and 6, and subsequently as applicable, the Systemwide Governance Committee will prepare a Triennial Report to analyze progress across the Delta watershed and, in coordination with the Tributary/Delta Governance Entities, will submit these reports to the State Water Board.
- C. The State Water Board will hold a public informational workshop on the VAs following receipt of each Triennial Report.

10. Science Program. The VAs will include a comprehensive Science Program.

- 10.1.** The Science Program will serve the following purposes: (A) inform decision-making by the Systemwide Governance Committee, Tributary/Delta Governance Entities, and VA Parties; (B) track and report progress relative to the metrics and outcomes stated in Appendix 4; (C) reduce management-relevant uncertainty; and (D) provide recommendations on adjusting management actions to the Systemwide Governance Committee, Tributary/Delta Governance Entities and VA Parties.
- 10.2.** The Science Program will be guided by the principles of best available science, efficiency, forward-looking perspective, shared risk in addressing uncertainty in data and analyses, transparency, collaboration, and timeliness.

10.3. The Science Program will include the following elements.

- A. Implement specific experiments. The science program will adopt a “safe to fail” experimental approach to maximize learning.
- B. Test hypotheses. The program will identify and test key hypotheses/assertions, especially/even if conflicting, about how the ecosystem functions and what measures will be most effective at achieving desired outcomes.
- C. Learn from the experiments. Ensure that each measure is designed and implemented in a manner that maximizes learning.
- D. Design the experiments to test specific outcomes.
- E. Facilitate a collaborative process. All parties will be engaged in the development and implementation of the science program.
- F. Facilitate a transparent process. All parties will facilitate a transparent process through collaboration, reporting, and open data.
- G. Monitoring. The Science Program will ensure one or more monitoring regimes are developed that will allow the parties to collect data on target species and their habitats necessary to assess the efficacy of flow and non-flow measures

10.4. For purposes of adaptive management, the Science Program will include structured decision-making processes to determine or adjust flow and non-flow measures, direct science efforts, and incorporate outcomes of the testable hypotheses to continue to inform decision-making, consistent with applicable provisions of the Governance Program.

11. Resolution of Litigation and Other Related Regulatory Proceedings. The Parties understand the VA contributions, to the maximum extent allowable under law, will be recognized in the resolution of other related regulatory proceedings, including during the pending consultation on ongoing CVP and SWP operations and/or application for a new or amended incidental take permit for operations. As provided in Section 1.3.B of the MOU, the VA Parties will address appropriate resolution of litigation pertaining to other regulatory actions, interim operations in 2023 and 2024, and other regulatory proceedings that relate to the actions described in the Term Sheet.

12. Early Implementation. State agencies will work with the VA Parties to implement the following measures before the State Water Board's approval of the VAs in the Program of Implementation, subject to applicable environmental review:

12.1. Dedication of water that can be made available without the establishment of revolving or water purchase funds;

12.2. Dedication of water that can be made available through an identified funding source; and

12.3. Advanced planning and/or implementation of habitat restoration projects that have funding and necessary regulatory approvals, including that available through the \$70M appropriated from Proposition 68.

13. Environmental Review. The Parties request that the State Water Board consider this Term Sheet, including Appendices 1 through 4, as a proposal in the SED to support the update of the Bay-Delta Plan.

13.1. The Parties will develop a plan for all necessary environmental review for all VA-related implementation actions, including but not limited to use of the programmatic discussion in the State Water Board's SED consistent with applicable law.

13.2. This Term Sheet is not a contract and does not represent a commitment by any Party to approve or implement any project or alternative or otherwise bind any Party to a definite course of action.

Appendix 1.
Flow Tables

Table 1a: New Contributions to Tributary Flow and Delta Outflows in Thousand Acre Feet^{1,2,3}

Source	C (15%) ⁴	D (22%)	BN (17%)	AN (14%)	W (32%)
San Joaquin River Basin					
<i>Minimum Placeholder Contributions⁵</i>	48	145	179	112	0
<i>San Joaquin Basin Portion of Gap</i>		11	2	10	
Friant	0	50	50	50	0
Sacramento River Basin⁶					
Sacramento ⁷	2	102	100	100	0
Feather	0	60	60	60	0
Yuba	0	60	60	60	0
American ⁸	30	40	10	10	0
Mokelumne	0	10	20	45	0
Putah ⁹	7	6	6	6	0
CVP/SWP Export Reduction¹⁰	0	125	125	175	0
PWA Water Purchase Program					
Fixed Price (see Table 1b)	3	63.5	84.5	99.5	27
Market Price ¹¹	0	45	45	45	0
Permanent State Water Purchases¹²	65	108	9	52	123
<i>Year 1 New Outflow Above Baseline (Low Target)</i>	155	825.5	750.5	824.5	150

Table 1b: Supporting Details for New Flow Contributions (Table 1a) and Year 8 Water Storage

	C (15%)	D (22%)	BN (17%)	AN (14%)	W (32%)
PWA Fixed Price Water Purchase Program					
Sac Valley NOD		10	10	10	
CVP SOD		12.5	24.5	35	
WWD SOD ¹³	3	6	15	19.5	27
Add CVP SOD ¹³		5	5	5	
SWP SOD		30	30	30	
Refill (Mokelumne)¹⁴	0	9	18	13.5	0

New Water Projects (Before Year 8)¹⁵					
Chino Basin	0	50	50	0	0
Kern Fan	0	18	18	0	0
Willow Springs Conjunctive Use	0	19	29	0	0

¹ This table reflects status of negotiations as of the date of this Framework. Prior "global gap" to meet adequacy are now reflected as Permanent State Water Purchases.

² Outflows additive to baseline and will be provided January through June. A portion of the VAs' flows can be flexibly shaped to other times of year to test biological hypotheses while reasonably protecting beneficial uses. Such shaping will be subject to VAs' governance program. Flows made available through reservoir reoperations will be subject to accounting procedures described in term sheet and all flows will be verified as a contribution above baseline using these accounting procedures.

³ An assessment based on the accounting procedures to be developed pursuant to Term Sheet section 8.4 will be conducted prior to year 8 of VA to determine if the flows in this table have materialized on average above baseline by water year type. The VA parties acknowledge that, if this analysis does not demonstrate that flows have materialized as shown in this table, then the VAs will be subject to Term Sheet provisions of Section 7.4(B)(ii) or (iii).

⁴ C year off-ramps subject to negotiation, but flows in this table must reflect average C year contributions over the term of the VA.

⁵ Minimum placeholder contribution for the SJR tributaries equivalent to what would have been provided under the VA. Additional flows above minimum placeholder values will be required in certain year types to satisfy current water quality objectives.

⁶ The new flow contributions from the Sacramento River Basin identified in this Table 1a, plus new flow contributions resulting from the below-referenced PWA Water Purchase Program, Permanent State Water Purchases, and PWA Fixed Price Water Purchase Program line items in Tables 1a and 1b, are not intended to result in idling more than 35,000 acres of rice land in the Sacramento River Basin.

⁷ VA parties agree that the Sacramento River flow contribution of 100 TAF will be provided during the January through June period, except when it is recommended through the VA governance process that shifting the timing of a portion of this contribution would be in the best interest of the fishery. Recommendations by the VA governance group require approval from the following agencies: National Marine Fisheries Service, California Department of Fish and Wildlife, and the State Water Board.

⁸ Contingent on funding groundwater substitution infrastructure to be completed by a subsequent year. These flows are included in the Year 1 subtotal.

⁹ Consistent with the safe yield of the Putah Creek Accord (2000).

¹⁰ If, in any year, this level of Exporter contribution would reduce supplies that would otherwise be provided to Exporters to protect M&I Public Health and Safety, then the Exporter contribution will be reduced to avoid reduction of M&I Public Health and Safety water, consistent with operations contemplated in D-1641 and the biological opinions for the coordinated operations of the CVP and SWP to protect health and safety water supplies.

¹¹ The VA's governance program will be used to determine the use of available funding to provide additional outflow in AN, BN, or W years. If DWR is called upon to provide the water by foregoing SWP exports, such call will be handled through a separate agreement between DWR and its contractors.

¹² State to permanently acquire 65TAF of water in all water year types to contribute to meeting the flow targets specified in row 27 of this table. After applying this 65TAF in all water years a gap of 43TAF will persist in D years and a gap of 58TAF will persist in W years; however, there will be a surplus of 56TAF in BN years and a surplus of 13TAF in AN years. D and W year gaps to filled by redistributing a portion of the PWA water purchase contribution from BN and AN years, and through additional State water purchases in W years.

¹³ If flows are not obtained through this source, the equivalent volume would be obtained at market price or otherwise obtained through other mechanisms.

¹⁴ Requires refill commitments or mutually agreeable operational agreement. Refill commitments are not included in tabulation of additive flows since they serve to ensure tributary flow contributions are protected as outflow without injury to other users.

¹⁵ State funding to be secured, and projects to be phased-in, by Year 8.

Appendix 2.*
Minimum Additive Contributions to Habitat Restoration

Area	Total Acresⁱ
Sacramento Basin	
Sacramento	137.5 (instream), 113.5 (spawning)
Sutter Bypass, Butte Sink, and Colusa Basin	20,000 (floodplain) ⁱⁱ , 20,000 (fish food production) ⁱⁱⁱ <i>Initial Targets per funding and permitting</i>
Feather	15 (spawning), 5.25 (instream), 1,655 (floodplain) ^{iv}
Yuba ^v	50 (instream), 100 (floodplain)
American	25 (spawning), 75 (rearing)
Mokelumne	1 (instream), 25 (floodplain)
Putah	1.4 (spawning)
North Delta Arc and Suisun Marsh	5,227.5^{vi}

**To expedite the completion of these projects, the State will commit to establish a new, multi-disciplinary restoration unit, with authority to coordinate and work collaboratively to obtain all permits required to implement the restoration activities. The unit will track and permit these projects and seek to: (1) encourage coordination between and among state and federal agencies, (2) avoid repetitive steps in the permitting process, (3) avoid conflicting conditions of approval and permit terms, and (4) provide an expedited path to elevate and resolve permitting challenges.*

ⁱ This column represents the sum of habitat restoration commitments proposed in the Planning Agreement and habitat restoration acres identified in the State's VA Framework from February 2020 (modified to reflect the 8-yr VA term, State Team's discussion with participants, and modeling analysis).

ⁱⁱ Floodplain habitat will be generated via Tisdale Weir and other modifications. Subject to analysis showing that acreage meets suitability criteria.

ⁱⁱⁱ Subject to analysis of effectiveness. Water will be pumped onto rice fields, held for a period of time to allow fish food production (e.g., zooplankton), and then discharged to the river for the benefit of native fishes downstream.

^{iv} This consists of added instream habitat complexity and side-channel improvements.

^v This constructed floodplain will be activated at 2,000 cfs.

^{vi} This will be tidal wetland and associated floodplain habitats.

Appendix 3.
Costs to Implement VAs

Costs to Implement VAs	\$ Million (M)	Notes
Costs in Planning Agreement		
Habitat Construction	\$477	Estimated project costs throughout tributaries.
Voluntary Fallowing	\$268	Upfront payments plus voluntary fallowing in Sacramento and Feather watersheds.
Water Purchases in Various Water Years	\$125	Funding to purchase water from Yuba and upfront water purchase from American.
American River Recharge Project	\$40	Project specified for funding in Planning Agreement.
Science and Adaptive Management Programs	\$104	Estimated costs of science program across all tributaries (\$1M/tributary/year) and Delta (\$3M/year), and adaptive management (\$5M/year).
Subtotal	\$1,014	
Additional Costs to Achieve VAs as Described in this Framework		
Water Development Costs	\$370	Projects that generate Delta outflow. Reflects State's share of awarded Prop 1 WSIP funding.
Additional Water Purchase on Market	\$64	Funding deployed to secure additional flows in certain water years allocated per VA's Governance Program.
Additional Water Purchase with Fixed Price	\$208	
Additional Habitat Restoration per this Framework	\$381	Estimated cost to construct additional habitat identified in this Framework.
Adjusted Science and Adaptive Management Program	\$24	Additional estimated science costs across all participating tributaries (+\$0.5M/tributary/year) and Delta (+\$0.5M/year).
Permanent State water purchases (no defined source)	\$490	Estimated cost of water in various WYT's

Total Estimated Cost Refill	\$25	Estimated cost on Mokelumne (Potential to Operate around and avoid this cost)
Mokelumne AN Water Purchase (30 taf)	\$13	
Subtotal	\$1,575	
Total VA Costs	\$2,589	Aggregated costs from Planning Agreement plus additional costs to achieve commitments per this Framework.

Table 4.
Funding for VAs' Framework

Funding Source	Use of Funds	\$ million (M)	Notes
Committed Funding in Proposed Framework (December 2018)			
Water Agencies	CVPIA Funding for VAs' Term	\$80	Approximately \$10M/year for 8 years.
Water Agencies	Water Revolving Fund	\$217 ¹	Generated by \$5/AF charge on state and federal contractors and some other water agencies. Hydrology dependent. Portion required to stay within contributing tributaries.
Water Agencies	Habitat on Mokelumne	\$17	Water agency contribution to habitat on Mokelumne per Planning Agreement
Water Agencies	Structural Science and Habitat Fund (SSHF)	\$124	Generated by \$1-2/AF charge on state and federal contractors and some other water agencies. Portion required to stay within contributing tributaries (Yuba and American).
Subtotal		\$438	
State	Proposition 68	\$165	Explicitly provided in Proposition 68 for water purchases, land fallowing, and habitat projects
State	Proposition 1 Water Storage Investment	\$370	Funding generated by Proposition 1. Requires other funding match from

¹ Dollars in this and the subsequent row are based on historical deliveries on a long-term average. Actual dollars may vary.

	Program (WSIP) for Feather River		individual State Water Contractors (Chino, Kern, and Willow Springs).
Various	CVPIA and State funding allocated to VA habitat projects in March 2019 PD	\$87	Funding from CVPIA, Prop 1, and other grants already allocated to projects identified in the March 2019 PD. Does not include Prop 68 funds.
Subtotal		\$622	
Total Committed Funding		\$1,060	From PWAs, State and Federal combined
Identified New Funding			
Water Agencies	Immediate collection of self-assessment	\$100	Contribution to revolving fund two years prior to VAs' effective date. Any federal funding that is not available in these first two years due to appropriations constraints will be recouped through a surcharge over the 8-year term of the VAs. If federal funding is recouped through a surcharge, each PWA that pays a surcharge will receive credit in the amount of the surcharge paid. The credit shall be applied as soon as possible against a financial obligation the PWA assumes under the VAs.
Water Agencies	Additional funding for water purchases (Water Revolving Fund)	\$130	Funding generated by an additional \$3/AF self-assessment by PWAs.
Subtotal of New Funding from Water Agencies		\$230	
New Funding from State (secured)		\$503	\$200 M from DWR for habitat restoration and \$303 M from CNRA water resilience funds (which total \$445 M)
New Funding from State (unsecured)		\$381	
New Federal Funding (unsecured)		\$740	New federal funding to support habitat restoration throughout tributaries, multi-

			benefit projects, and Sacramento Valley habitat projects.
Total of New Funding Commitments		\$1,854	
Total Funding for VAs		\$2,914	This total exceeds VA costs above because it includes federal funding which is needed for habitat restoration.

Appendix 4: Metrics, Monitoring, and Outcomes Framework for Assessing VA Effectiveness

This framework, including implementation criteria, habitat suitability and utilization criteria, and the final monitoring framework will be further developed collaboratively by the VA Parties (see Sections 2.1 and 5.2 of VA Term Sheet) in coordination with the State Water Board.

Implementation criteria: Quantitative metrics will be developed to ascertain whether VA commitments are met. Implementation criteria will be established to ensure actions are taken to provide (1) flow volumes by water year type above baseline as specified in Appendix 1, and (2) non-flow assets, including instream and floodplain habitat projects, that meet design criteria, acreage, and other targets. The implementation criteria answer the question: Did we implement the actions we committed to undertake? If not, why not? Consideration will be given for non-party caused implementation hurdles.

Habitat suitability and utilization criteria: Quantitative metrics will be developed for determining if constructed habitat meets predetermined: 1) project level suitability criteria (e.g. depth, velocity, duration); and 2) utilization criteria (e.g. fish presence, food production, juvenile fish movement, fish condition). The habitat suitability and utilization criteria answer the question: Are the constructed and restored habitats providing or likely to provide suitable habitat or food production for target species and life stages and are they being used as intended? Consideration will be given for non-party caused implementation issues and for the time it takes for restoration sites to “mature.”

Monitoring: Before VA year 0, the VA Governance and Science Program will develop a monitoring framework (e.g. species and habitat) to test the specific hypotheses for each of the VA commitments. The framework will include habitat design, suitability, and utilization criteria, which will be subject to approval by DFW, in consultation with USFWS and NMFS, and adopted by the SWB as part of the overall VA. Project specific monitoring plans will be developed through the VA Governance and Science Program. In coordination with the SWB and other VA Parties, CDWR and the U.S. Bureau of Reclamation will develop accounting procedures to assure that flows and habitat restoration provided under the VAs are additional contributions above baseline conditions as defined in Section 4 of this Term Sheet. These procedures will be incorporated into the Implementation Agreements and subject to approval by the State Water Board. Early implementation projects will follow monitoring protocols developed during permitting/granting process, and adjust, as appropriate, once VA governance has developed a framework. The framework will require SWB approval.

Sufficient monitoring of target species and flow and habitat assets deployed over the initial term of the VA will be key to informing the scientific basis and rationale for continuing the VA beyond year 8. Monitoring approaches will vary geographically and by habitat type but should be hypotheses driven and supported by recent data from the watershed or geographic region in question. The goal of this monitoring effort is to ensure species and habitats are monitored correctly and sufficiently to answer the

hypotheses as described in the habitat monitoring framework. An illustrative example is provided below:

Habitat Type	Objective	Hypothesis	Monitoring Metrics
Tributary Spawning	<ul style="list-style-type: none"> • Increase abundance of fry 	Increase in suitable spawning habitat area increases number of redds and successfully hatched eggs.	<ul style="list-style-type: none"> • Number of redds • Egg→Fry survival • Abiotic parameters

Ecological outcomes analysis: Prior to year 7 of the VA, a report from the VA governance program will be submitted to the SWB synthesizing the scientific data and information generated by the VA science program, primarily based on the Years 3 and 6 Triennial Reports. The governance and science programs will include, but not be limited to, members of all represented parties in the development of reports and synthesis analysis. This report will document the hypotheses tested and the results, and will demonstrate the scientific basis and rationale for continuing the VA beyond year 8. This report will also synthesize available information and extrapolate from the VA hypothesis testing the expected ecological outcomes from continuing the VA, including quantifying how the continuation of the VA will improve species abundance, ecosystem conditions, and contribute to meeting the WQCP Objectives. The analysis will be informed by a variety of approaches, including monitoring data and models developed over the initial 8-year term of the VA. Sufficient monitoring of target species and flow and habitat assets deployed over the initial term of the VA will be key to informing the scientific basis and rationale for continuing the VA beyond year 8. The ecological outcomes analysis could answer the key questions: What have we learned from flow and non-flow actions implemented under the VA, what combination of flow and non-flow assets maximize ecological benefits, are changes needed to VA assets after Year 8, and how will continuation of the VA effect the overall ecosystem at the population level for target species? Consideration will be given for actions or circumstances outside the control of the VA parties.



Water Planning & Stewardship Committee

Express support for developing the Voluntary Agreement approach as an alternative in the State Water Resources Control Board's Bay-Delta Water Quality Control Plan Update.

Item 7-9

May 9, 2022

Express Board support for

Bay-Delta Watershed Voluntary Agreement

Agenda

- Background
- MOU and Term Sheet
- Next Steps
- Board Action

Background

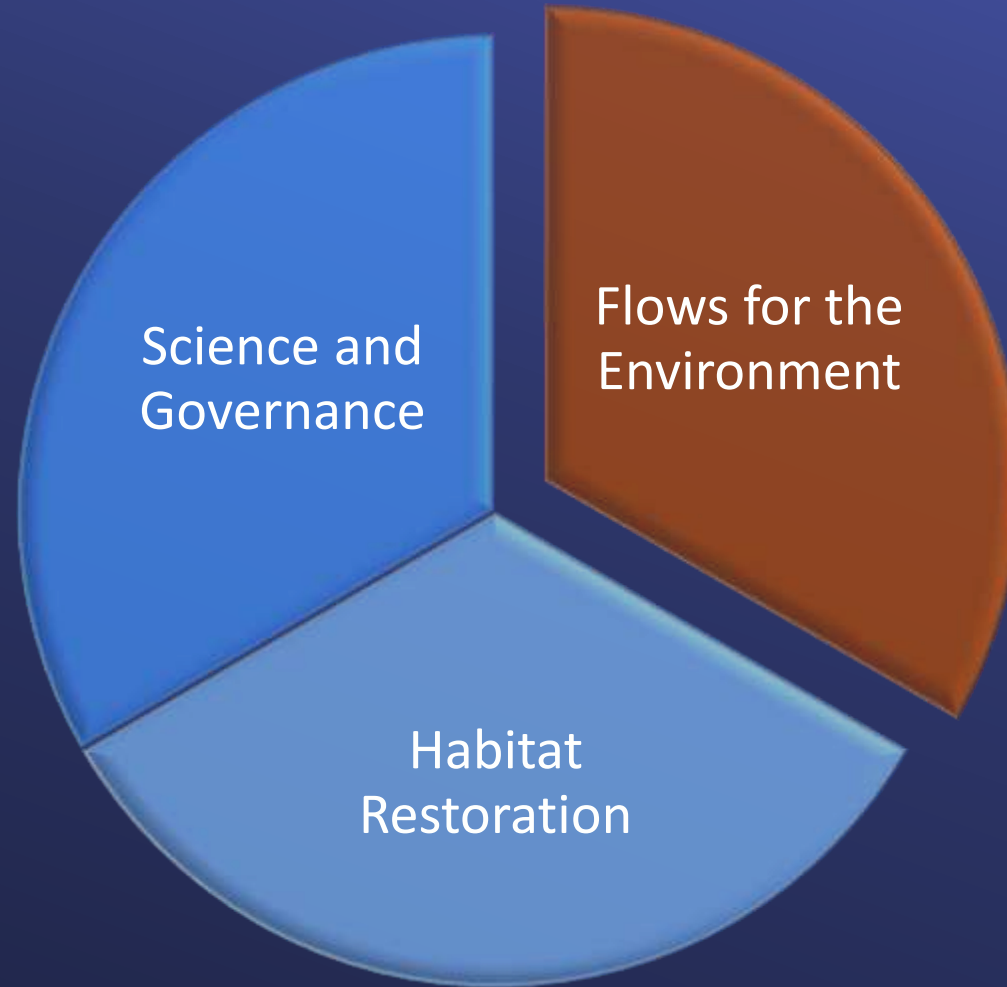
State Board update to the

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 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.

MOU and Term Sheet

Voluntary Agreements

MOU and Term Sheet

KEY COMPONENTS OF
VOLUNTARY AGREEMENT



Voluntary Agreement Flows



Habitat Restoration



Governance



Funding



Voluntary Agreement Timeline



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 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

Next Steps

Next Steps

Advancing the Voluntary Agreements

- Staff intends to advocate for broad inclusion and engagement
- Continued discussions on Early Implementation
- 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

Options

Option #1

Express support for developing the Voluntary Agreement approach as an alternative in the State Water Resources Control Board's Bay Delta Water Quality Control Plan Update

Option #2

Do not express support for developing the Voluntary Agreement approach as an alternative in the State Water Resources Control Board's Bay Delta Water Quality Control Plan Update

Staff Recommendation

Option #1





Water Planning and Stewardship Committee

Review of Policy Principles Regarding the Sacramento- San Joaquin River Bay-Delta

Item 6a
May 9, 2022

Policy Principle Review

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

Fall Action

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Staff Research and Development												
Kick Off with BDI Committee												
Policy Principle Reviews												
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

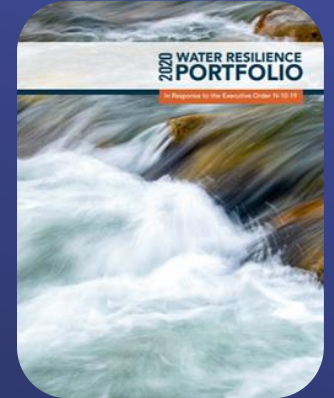
(2006) Application of Existing Bay-Delta Policies and key initiatives

Conveyance
Criteria

Delta Action
Framework



CSAMP



2006

2008

2010

2012

2014

2016

2018

2020

Bay-Delta Policy
Principles

Delta Governance
Principles



Delta Conveyance Project

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

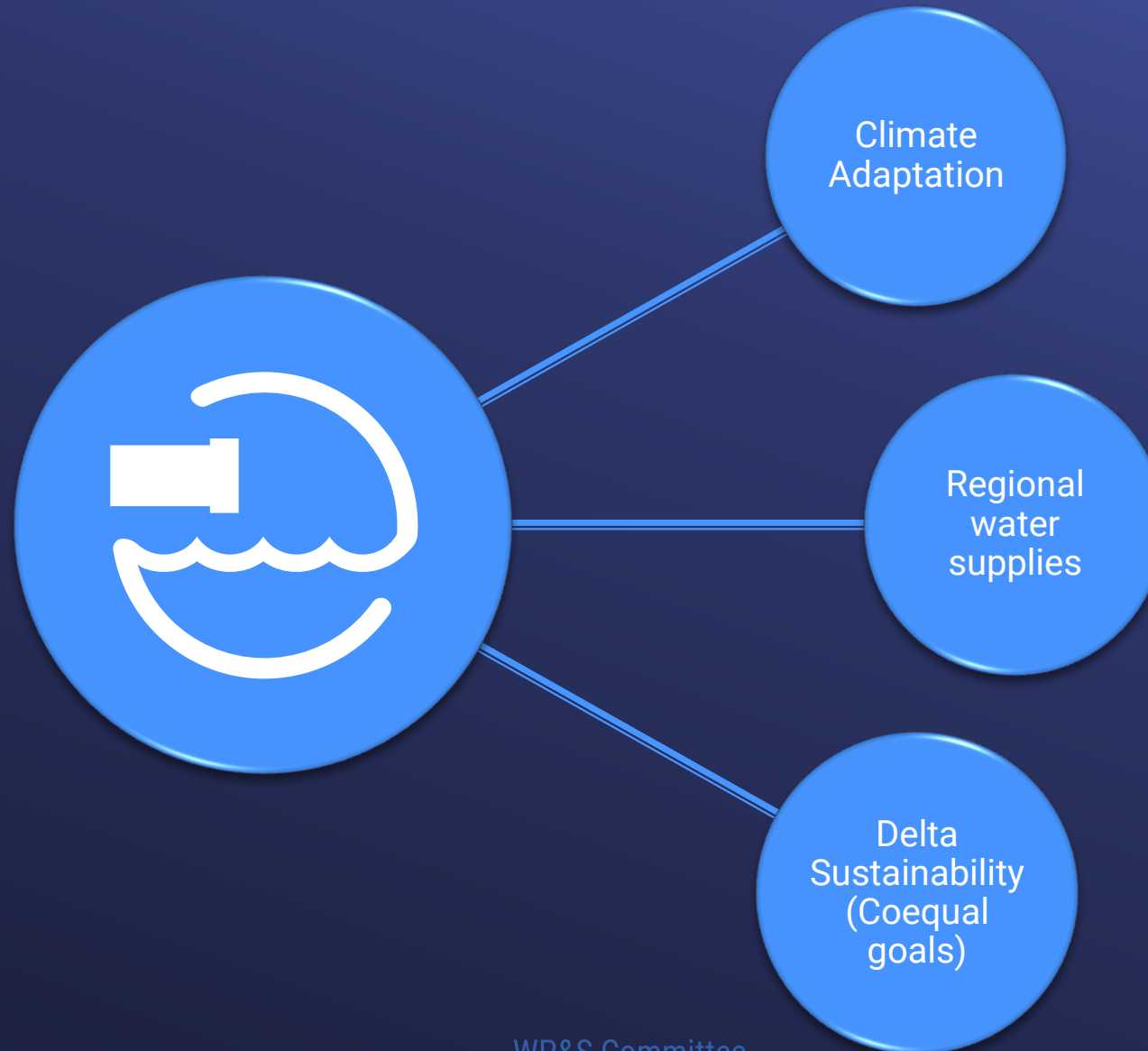


Policy Area 5: Community Investments and Partnerships

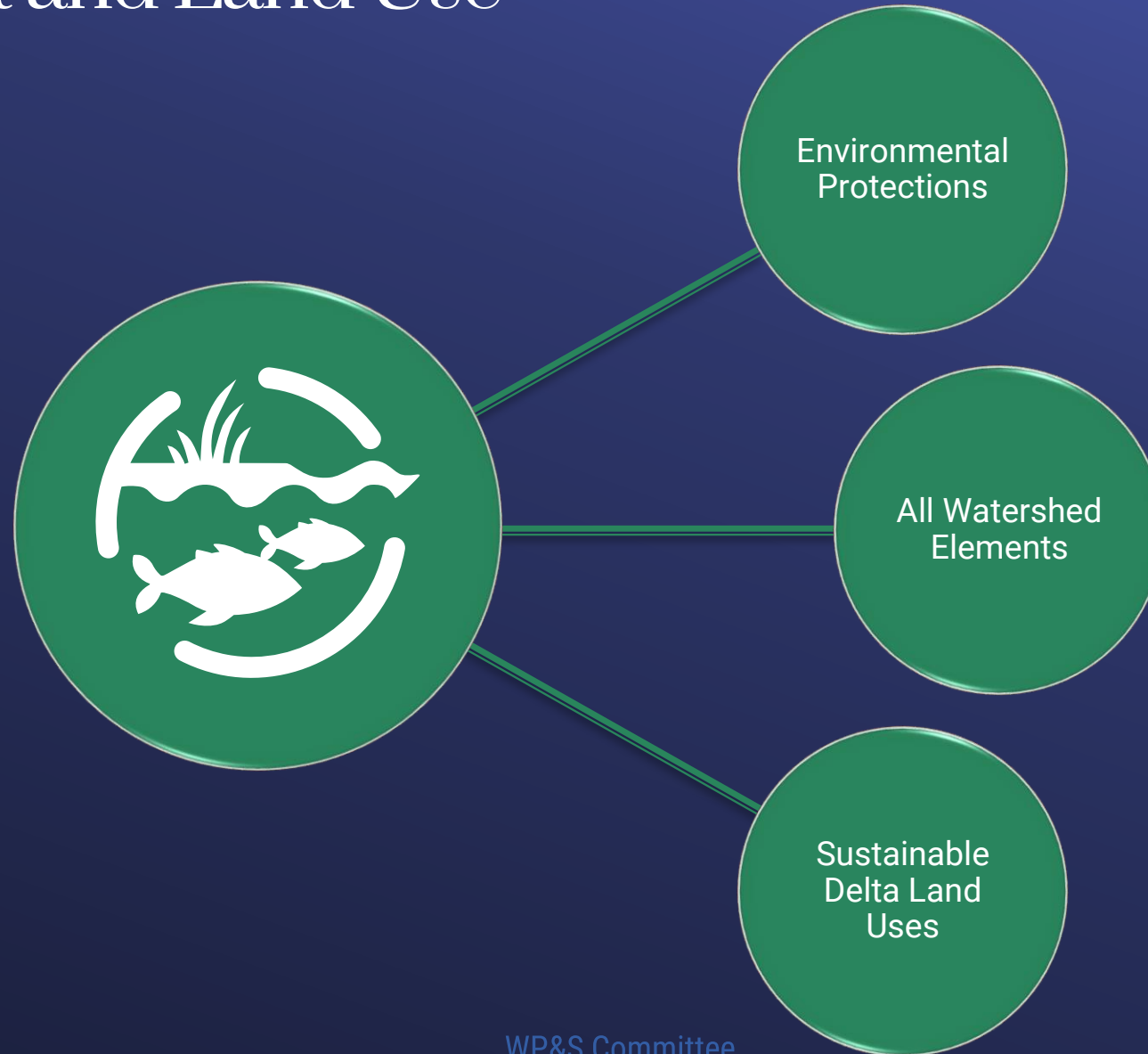


Policy Area 6: Statewide Water Resources Management Supports MWD's One Water

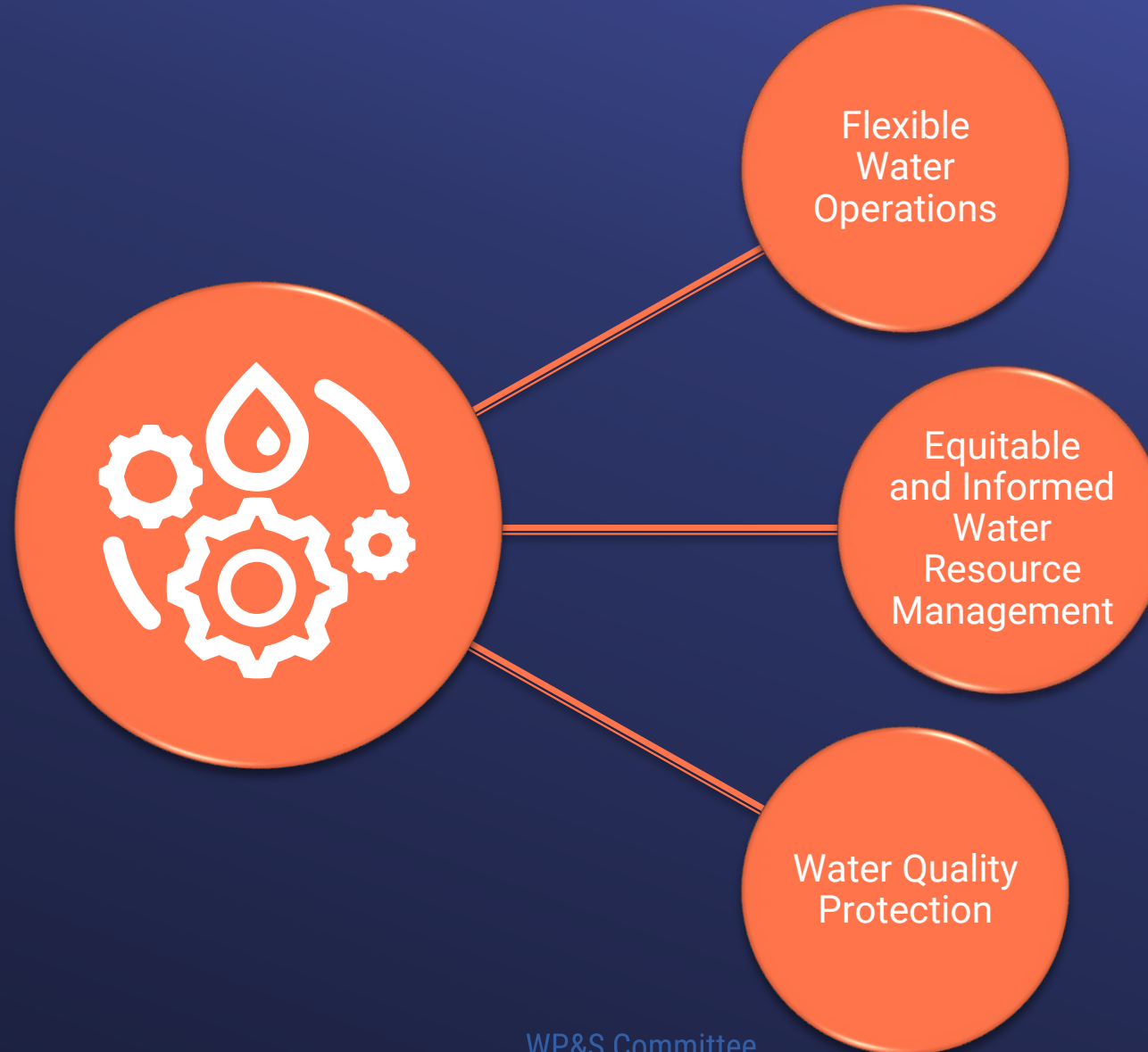
Policy Area I: Statewide Water Resource Management



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



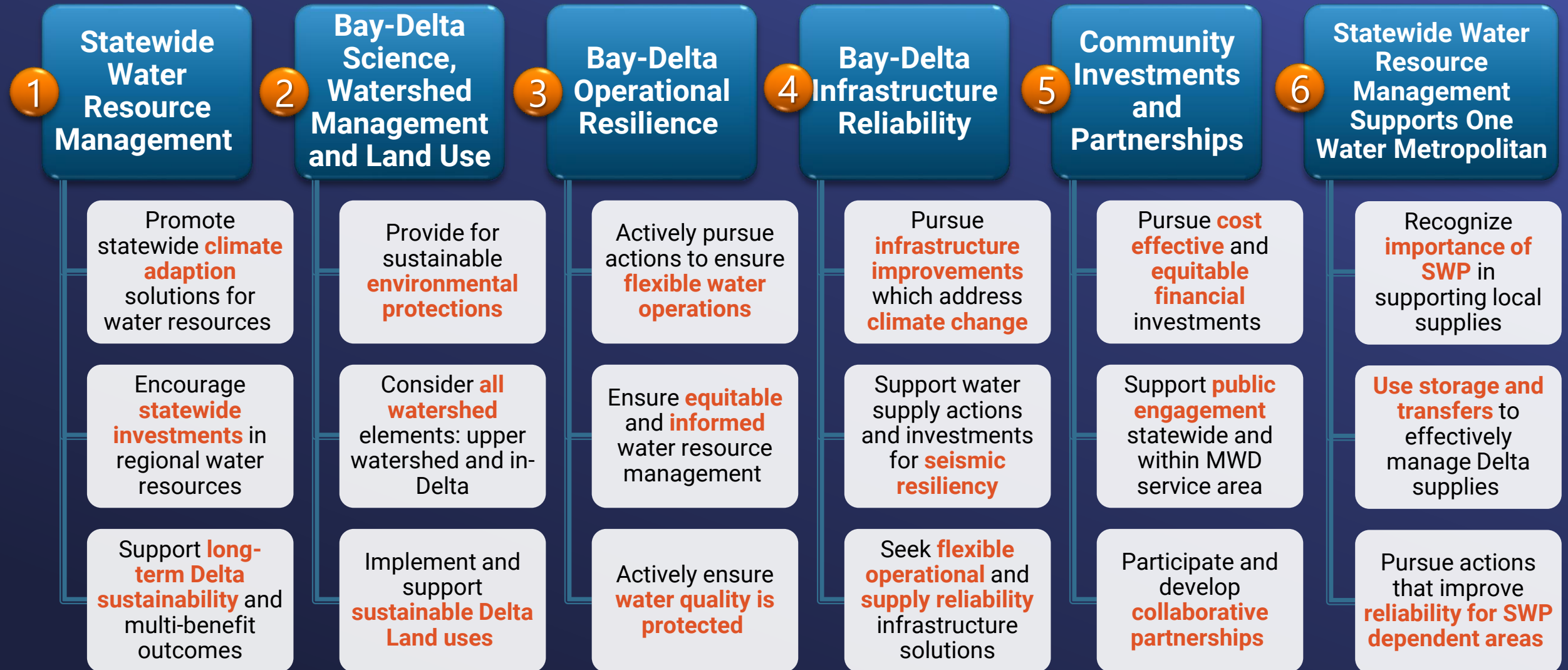
Policy Area 5: Community Investments and Partnerships



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

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

Policy Principle Review #2

June 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**

August Info Item

September Action Item





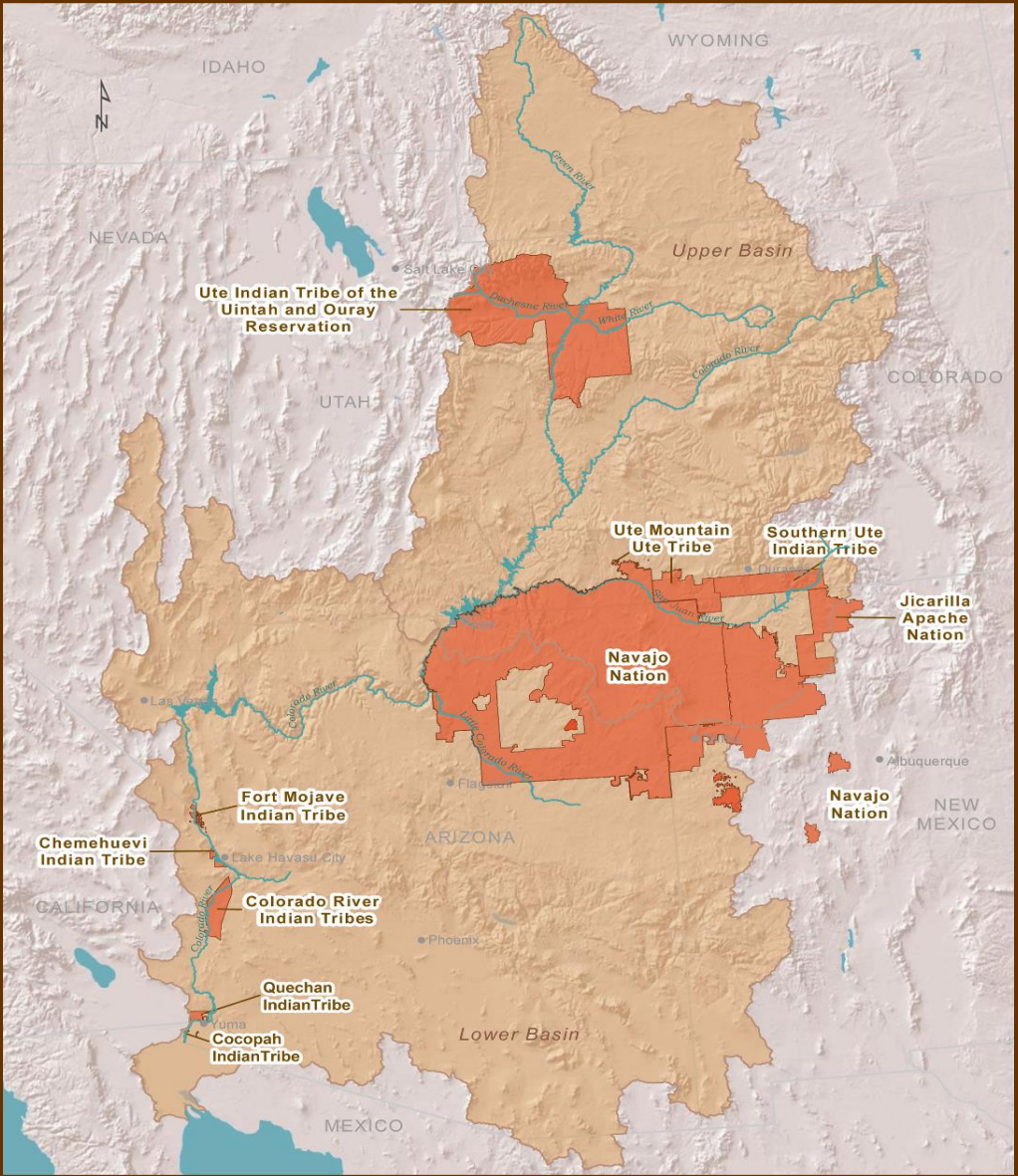
Water Planning and Stewardship Committee

Tribal Partnerships Along the Colorado River

Item 6b

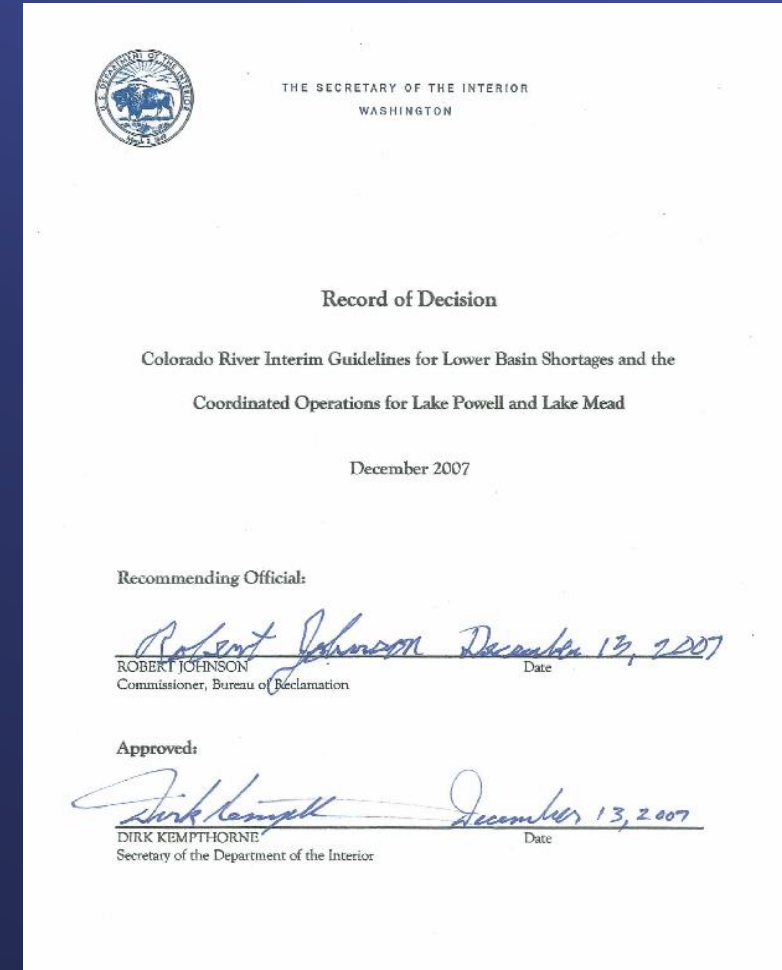
May 9, 2022

Reclamation Map of Tribes Along the Colorado River

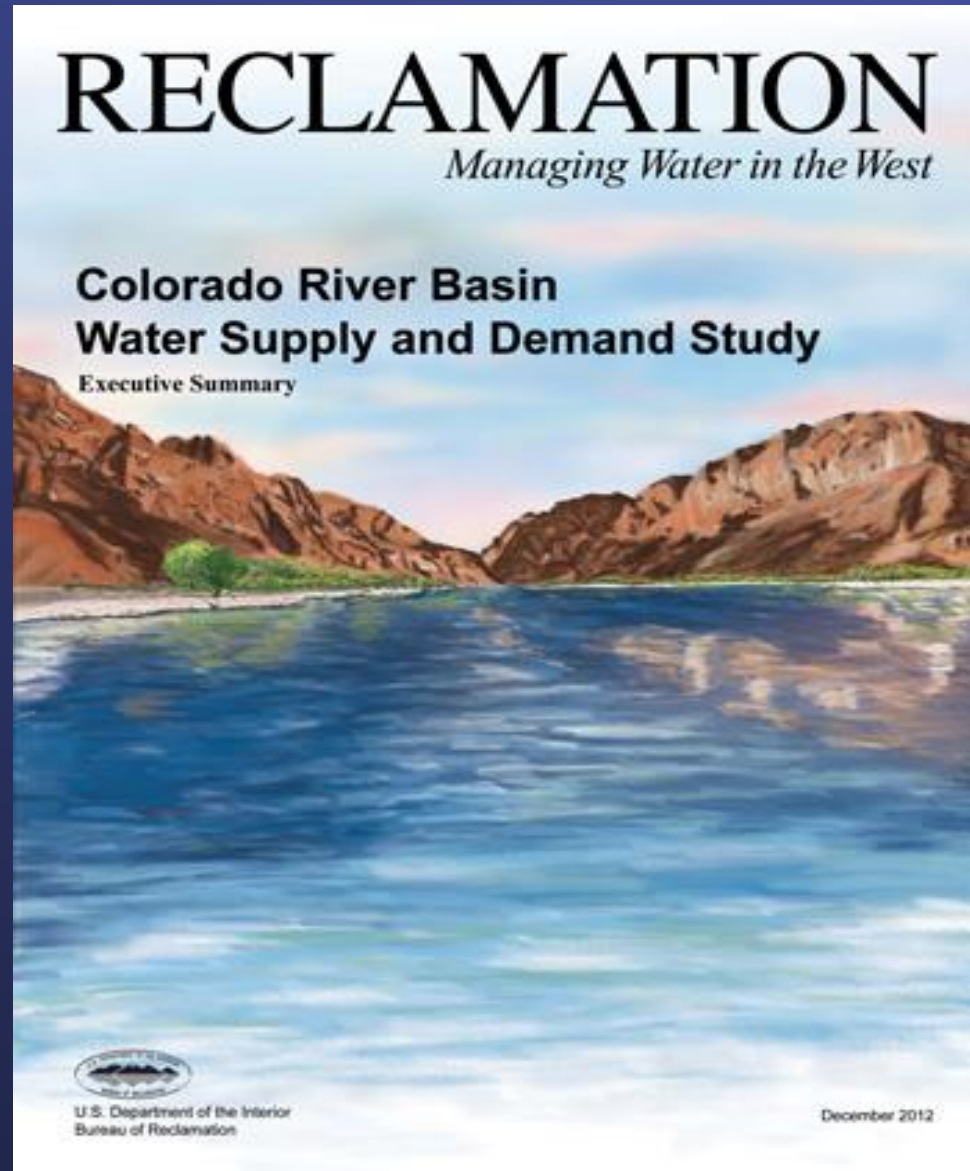


2007 Interim Guidelines

- 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

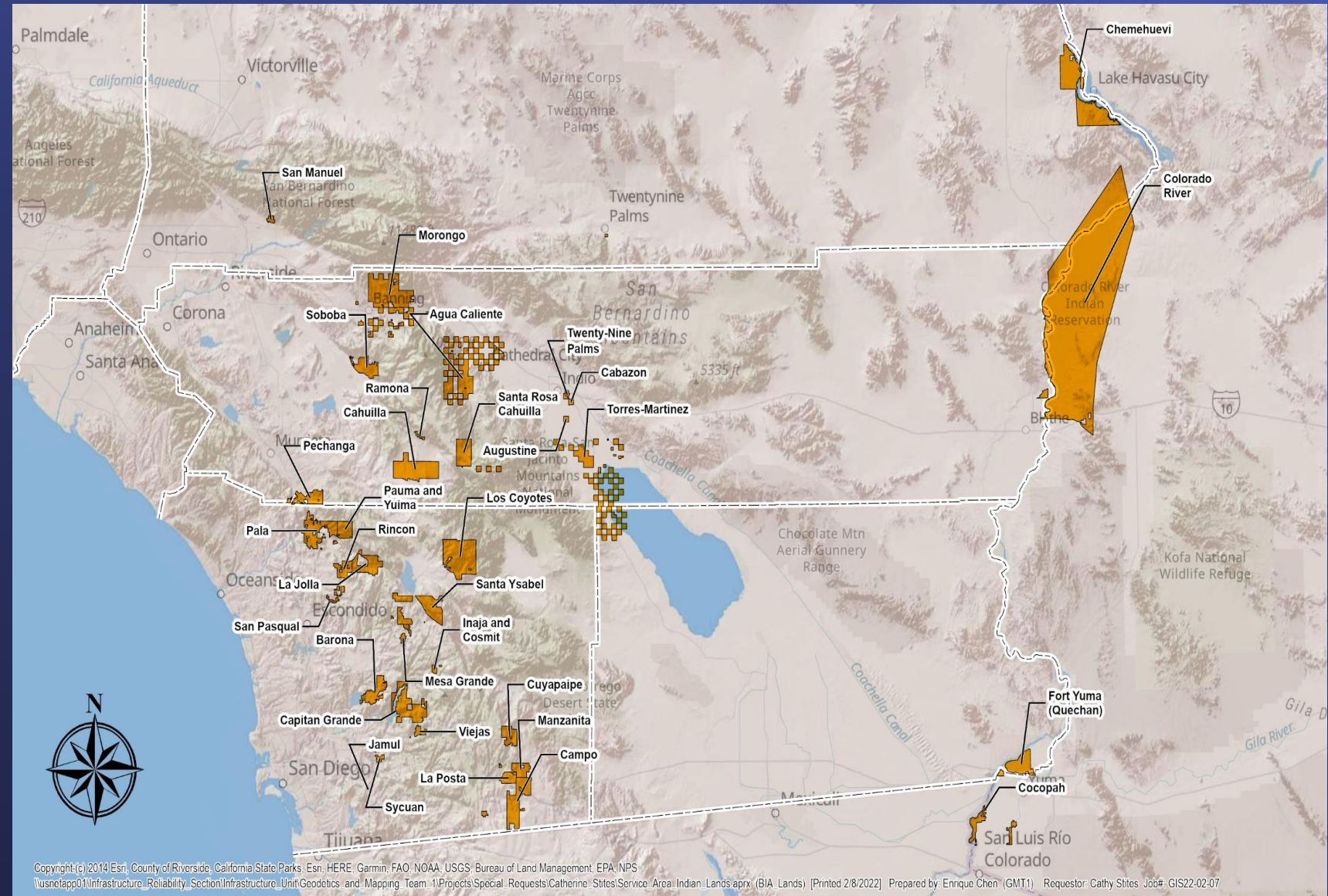
NATIVE PEOPLES OF ARIZONA
COMPREHENSIVE MAP OF ARIZONA INDIAN RESERVATIONS

SOURCES:
 American Indian Tribes and Communities in Arizona.
http://www.apa.gov/regions/atl/images/images/ARIZ100040_2g.gif
 Arizona Tribal Lands and Reservations
http://www.apa.gov/regions/atl/images/images/ARIZ100040_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
 - Torres Martinez Desert Cahuilla Indians





Water Planning and Stewardship Committee

Update on Metropolitan/AVEK High Desert Water Bank Program

Item 6c

May 9, 2022

Background

- East Branch of CA Aqueduct
- Downstream of Edmonston PP
- Table A: 144,844 AF



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



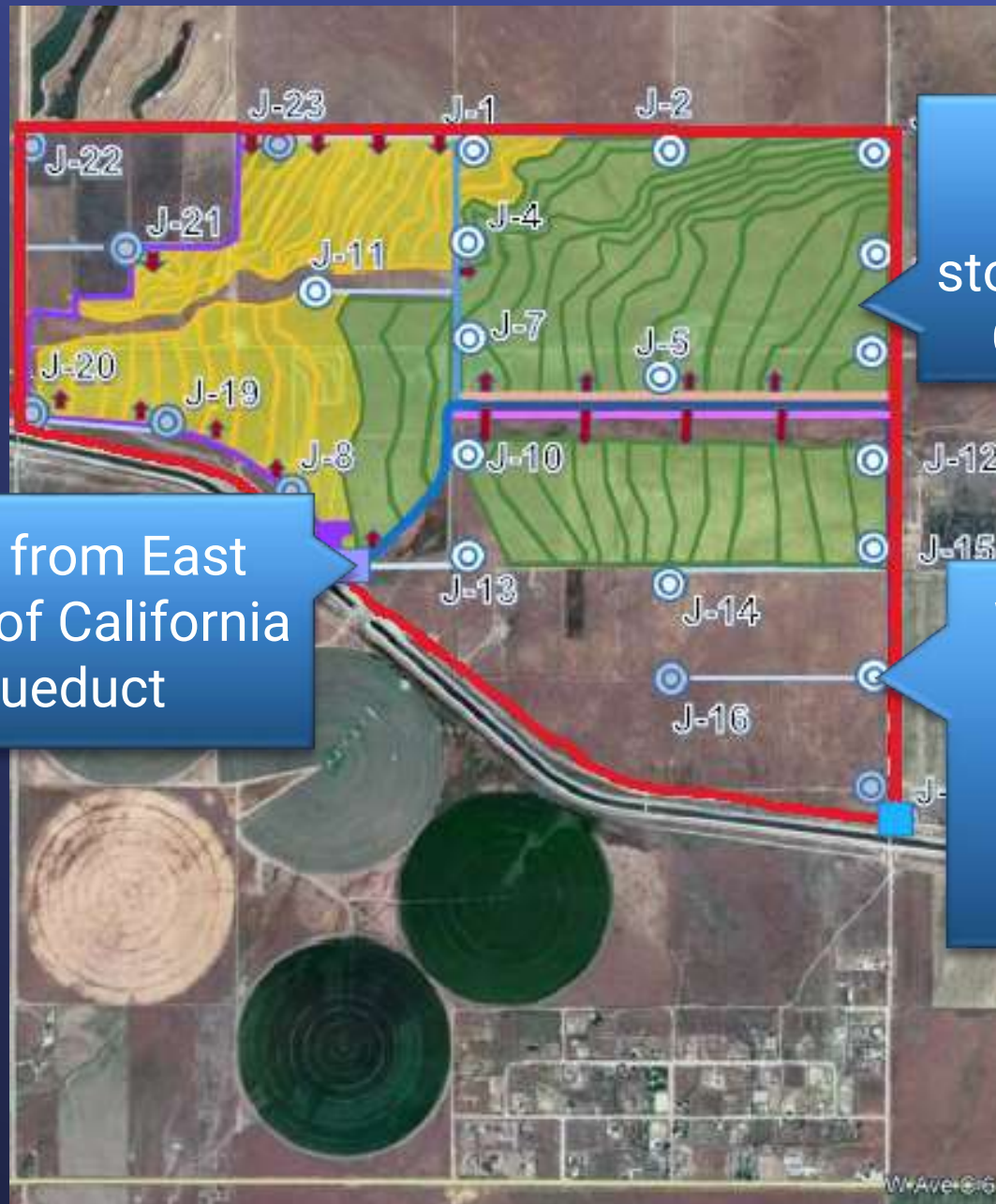
- Capital costs of up to \$131 million
- Recovery usage fee of \$100/AF; no fee to store
 - Escalated annually
- O&M and site power costs
- Estimated unit cost of \$320/AF in 2019

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



- Gravity Recharge
- Pumped Recharge

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 6,000 AFY
- Up to 20,000 AF over 3 years



How much does it cost?

- Estimated additional costs of \$3 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 Surplus and Drought Management Update** *Conditions as of 4/25/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of April 25, 2022. The report also tracks the hydrologic conditions for water year (WY) 2021-2022.

April 1st is generally the snowpack peak associated with both of Metropolitan's imported water supplies. In the Upper Colorado River Basin, the snow water content peaked mid-March at 91 percent of the April 1st normal. For the Northern Sierra, the snowpack peaked in mid-January, unusually early, at only 61 percent of the April 1st normal despite the recent storm event that increased the snowpack accumulation in mid-April. Runoff for both systems is projected to be below normal.

Metropolitan's supply/demand gap for calendar year 2022 is currently projected to be negative at 846 thousand acre-feet (TAF) based on a demand estimate of 1.86 million acre-feet, the 5 percent SWP Table A allocation, and the Colorado River Aqueduct (CRA) estimate. A majority of this supply/demand gap will be met through storage withdrawals. However, significant storage withdrawals over the past few years have depleted supplies available to the SWP Dependent Area. Coupled with the low SWP allocation, there is not enough supply to meet normal demands in the SWP Dependent Area this year. As such, Metropolitan is taking extraordinary actions to reduce demands in the SWP Dependent Area and preserve Metropolitan's remaining SWP supply accessible to the SWP Dependent Area including taking delivery of human health and safety (HH&S) supply from the Department of Water Resources.

On April 26, 2022, Metropolitan's board declared that a Water Shortage Emergency Condition exists in the SWP Dependent Area and adopted an Emergency Water Conservation Program framework. These actions are intended to reduce non-essential water use in the SWP Dependent Area by significantly restricting outdoor water use. While this emergency applies to the SWP Dependent Area, all member agencies have been called on to conserve by 20 to 30 percent under Governor Newsom's executive order issued last month to help further conserve water and improve drought resiliency if the drought lasts beyond this year.

Purpose

Informational

Attachments

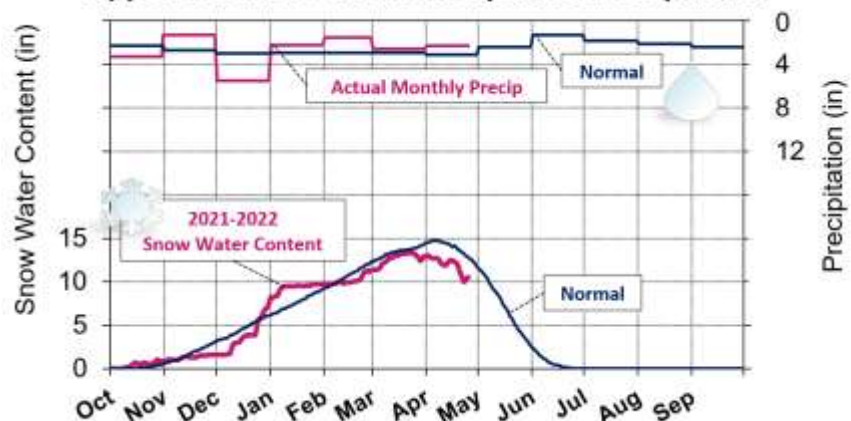
Attachment 1: Projected 2022 WSDM Storage Detail (5 percent SWP Table A allocation)

Attachment 2: Agreements to Exchange or Return Stored Water 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.

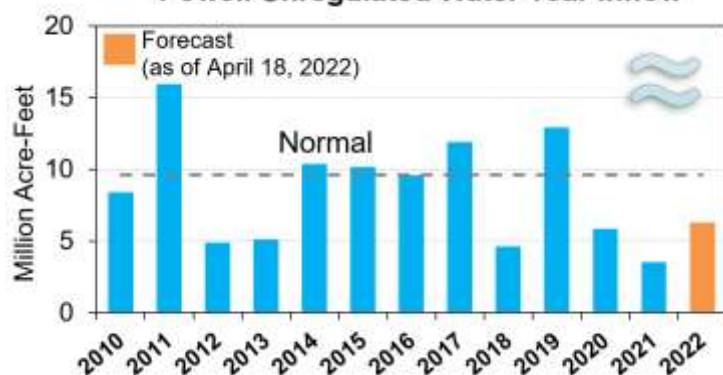
Upper Colorado Basin Snowpack & Precipitation



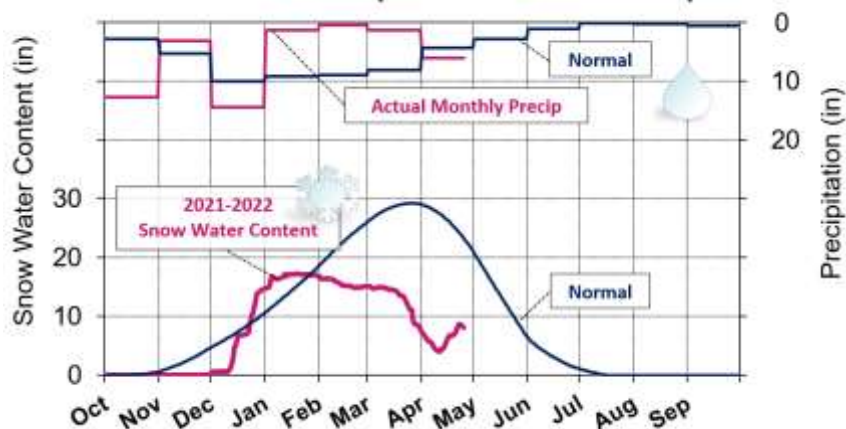
Upper Colorado River Basin

- ❄ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- 💧 Near normal precipitation to date (18.7 inches).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 66% of normal.

Powell Unregulated Water Year Inflow



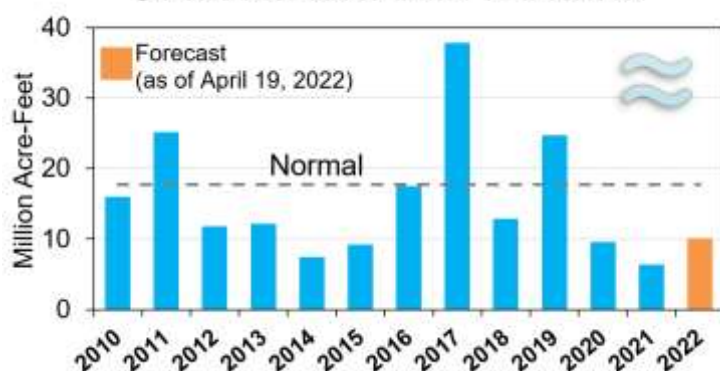
Northern Sierra Snowpack & 8 Station Precipitation



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 (39.2 inches).
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 57% of normal.

Sacramento River Water Year Runoff

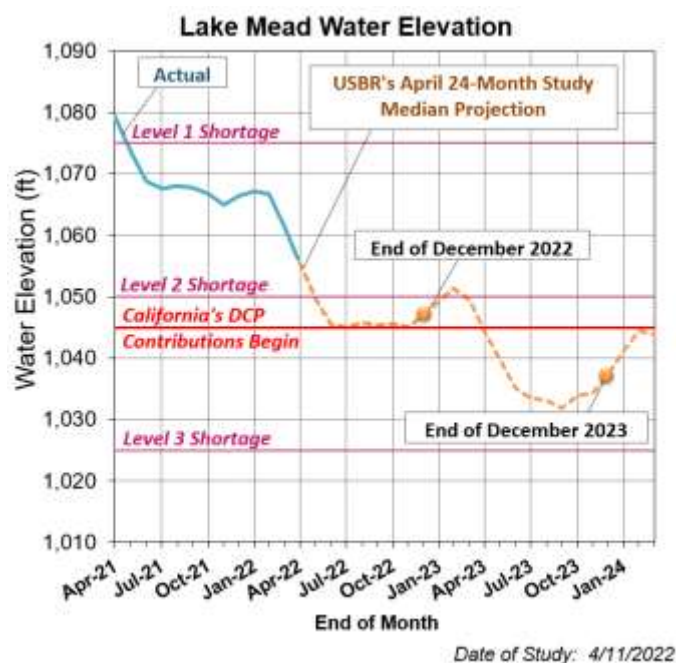


CRA Supplies	Acre-Feet
<i>Basic Apportionment</i>	550,000
<i>IID/ MWD Conservation Program</i>	105,000
<i>PVID Fallowing Program</i>	25,000
<i>Exchange w/ SDCWA (IID/Canal Lining)</i>	280,000
<i>Exchange w/ USBR (San Luis Rey Tribe)</i>	16,000
<i>Lower Colorado Water Supply Project</i>	9,000
<i>Bard Seasonal Fallowing Program</i>	3,000
<i>Quechan Diversion Forbearance</i>	6,000
<i>Quechan Seasonal Fallowing Program</i> ¹	0
<i>Higher Priority Water Use Adjustment</i> ²	-120,000
Total CRA Supplies ³	877,000

¹ Rounded to the nearest thousand. Supply is 356 AF.

² Per USBR Forecast (4/25/22).

³ Total may not sum due to rounding.



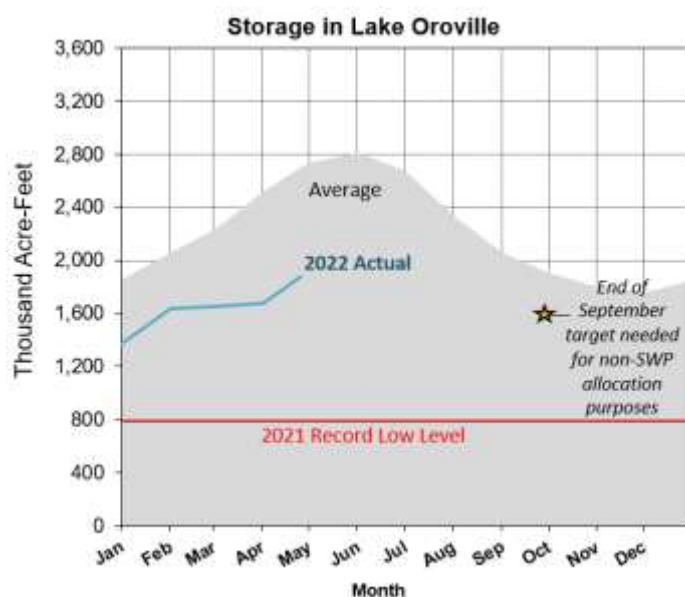
- Lake Mead storage is currently at 8.13 MAF (elevation 1056.1 feet).
- The Lower Basin is at a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022.

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> ²	6,000
<i>Yuba Accord Dry-Year Purchase Program</i> ²	27,000
<i>MWDOC/IRWD Partnership</i>	4,000
<i>Purchase of SDCWA's Semitropic Supply</i>	4,000
Total SWP Supplies ³	137,000
Total Supplies (CRA + SWP)	1,014,000
(Prior to storage actions)	

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

² Current estimate subject to change based on buyer/seller participation and losses.

³ Total may not sum due to rounding.



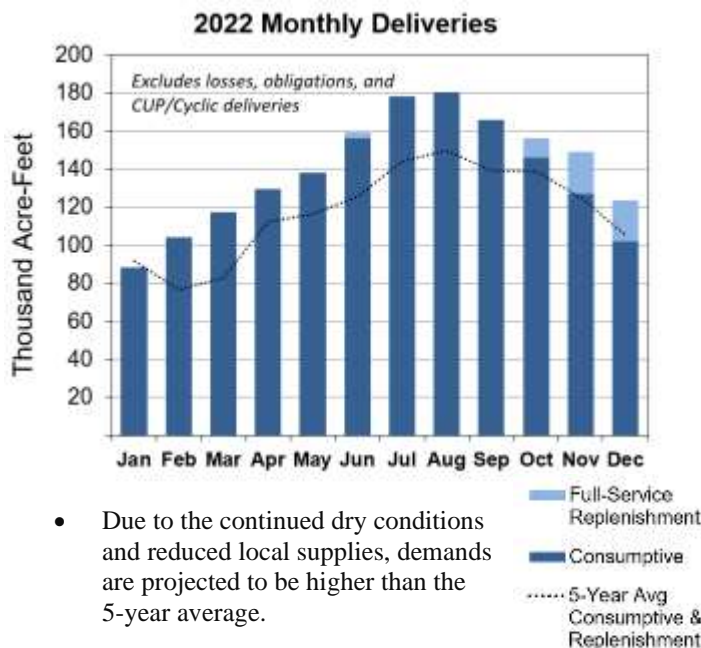
- In addition to the 5 percent Table A allocation, DWR will provide water for Contractors' unmet Human Health and Safety needs (HH&S). DWR expects Contractors receiving HH&S water to take mandatory conservation measures; implement conjunctive use practices; acquire alternative supplies; and return any HH&S water to the SWP in a future year. Changes to the allocation are unlikely as the rainy season has passed and the ongoing record dry conditions.
- April storms helped increase water levels in Lake Oroville, enabling power generation at the Hyatt Powerplant to continue throughout the year. Lake Oroville is currently at 1.88 MAF (53 percent of total capacity) or 70 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,639,000
Member Agency Replenishment	57,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District ²	83,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands ³	1,861,000

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

² Per USBR Forecast (4/25/22).

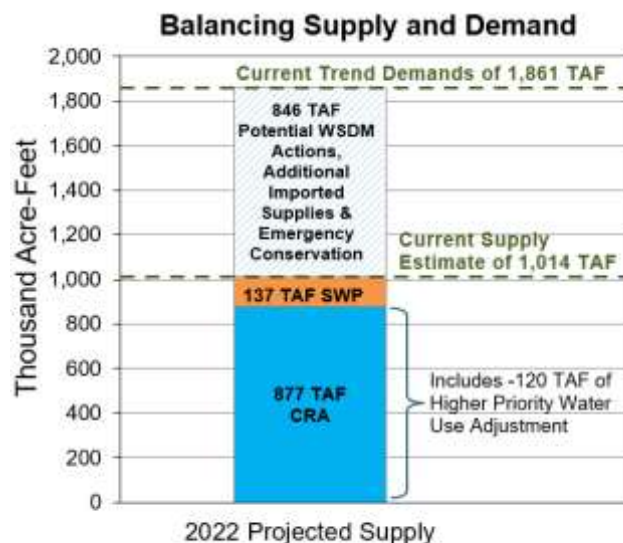
³ Total may not sum due to rounding.



MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	1,014,000
Total Demands	1,861,000
Current Balance Estimate ¹	-846,000

¹ Total may not sum due to rounding.



Dry-Year WSDM Strategies/Actions

The following WSDM actions are being pursued or are underway to satisfy the estimated supply/demand gap in 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.
- Securing one-year transfers with various water districts north of the Sacramento-San Joaquin River Delta.
- Declared that a Water Shortage Emergency Condition exists in the SWP Dependent Area and adopted an Emergency Water Conservation Program framework.

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	351,000	1,657,000
Lake Mead ICS	1,243,000	351,000 ³	1,657,000
State Water Project System	636,000	185,000	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	17,000 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	10,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	10,000	800,000
Total	3,348,000	972,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁹	2,598,000	972,000	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
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	240,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 ³
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 83,000 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.

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 6d
May 9, 2022

Outline

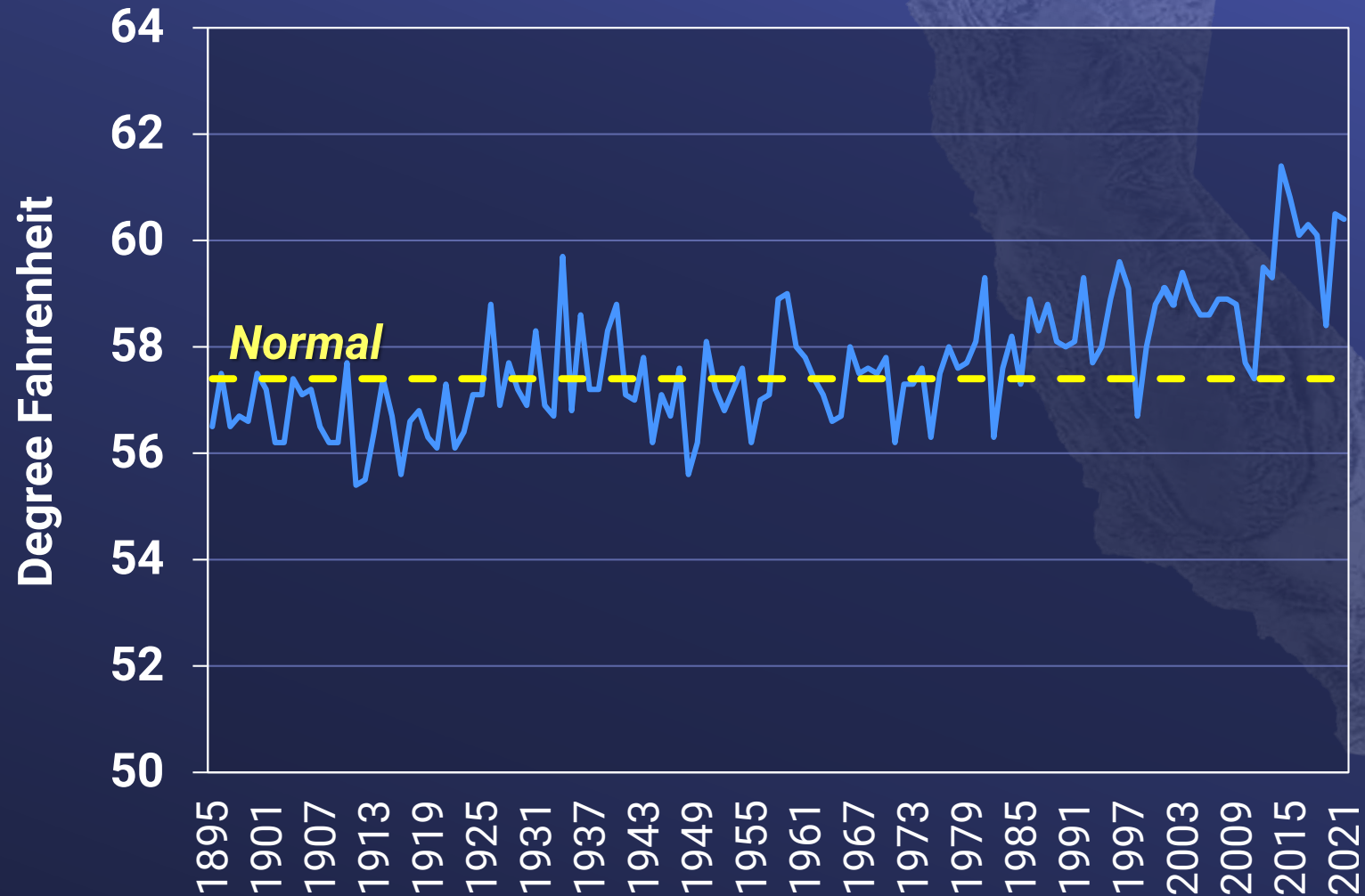
- Hydrologic Conditions
- Supply and Demand Balances



Statewide

Unprecedented
warming trend
since the turn of
the century

Statewide Average Temperature





Northern California

WY 2020-2022
is Currently the
Driest 3
Consecutive
Years on
Record

8-Station Index Precipitation 3 Consecutive Year Total Ranking

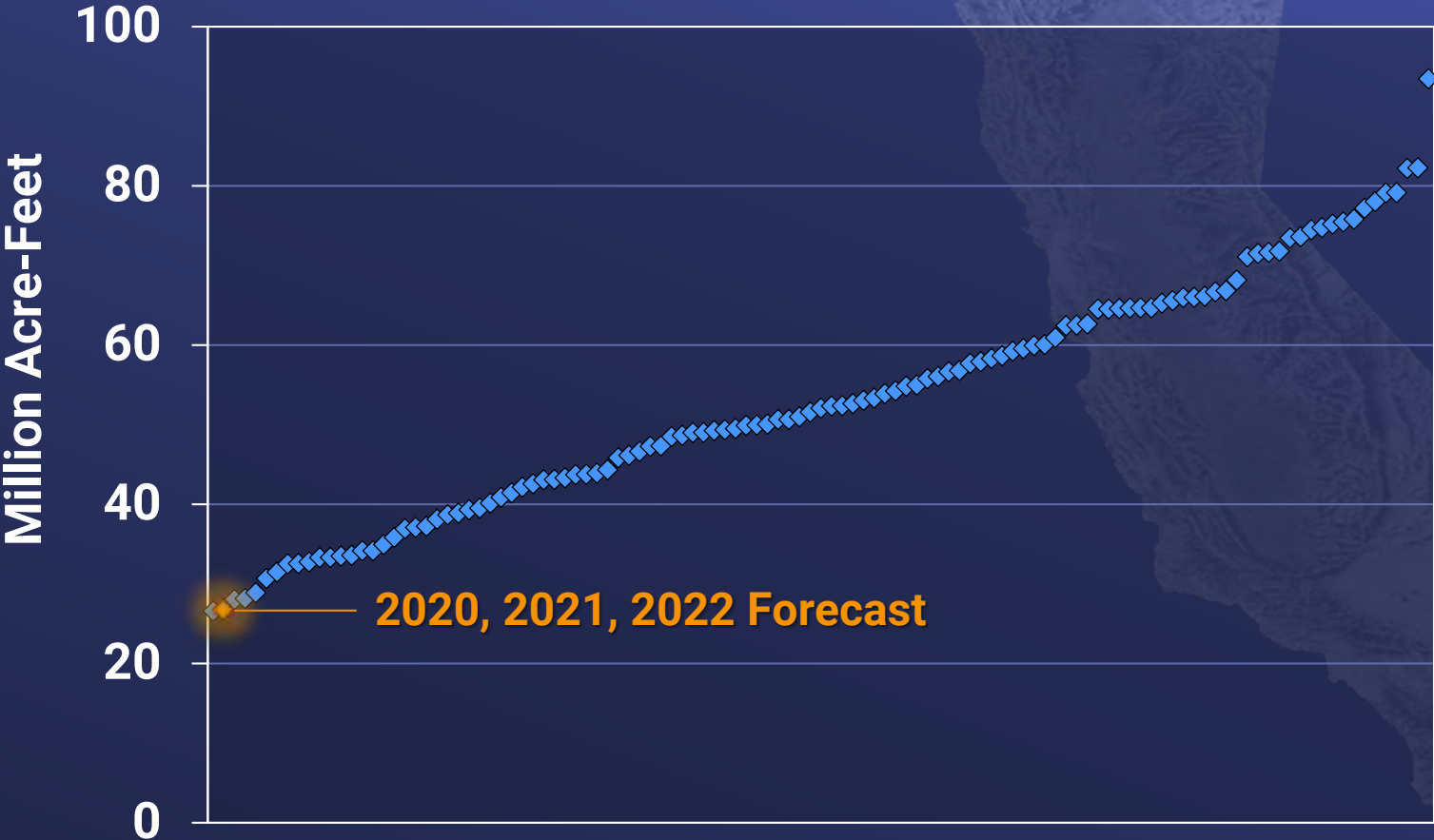




Northern California

WY 2020-2022
Projected to be
the Second
Lowest on
Record

Sacramento River Runoff
3 Consecutive Year Total Ranking

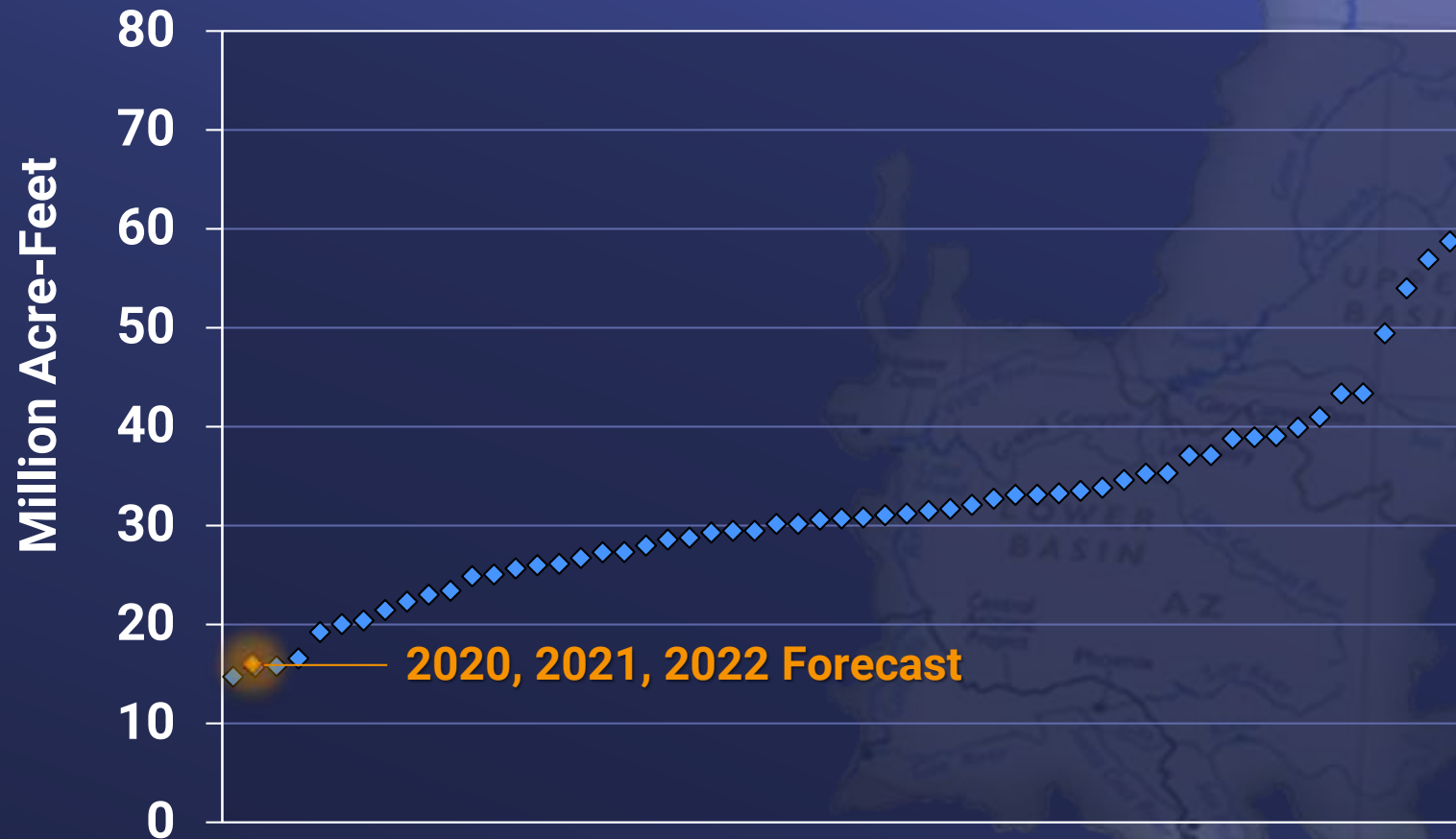




Upper Colorado River Basin

WY 2020-2022
Projected to be
the Second
Lowest on
Record

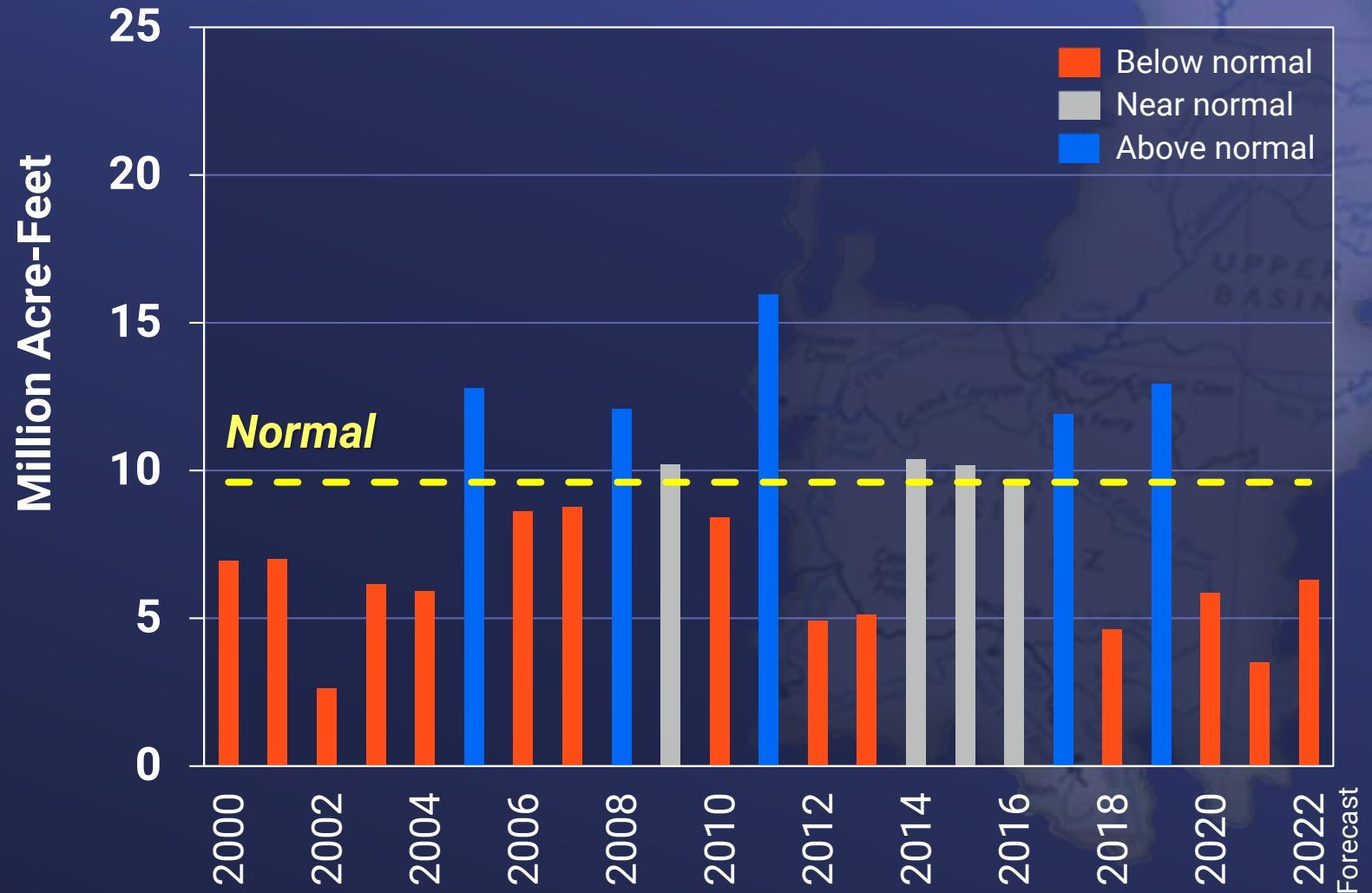
Ranking Powell Unregulated Inflow for 3 Consecutive Years



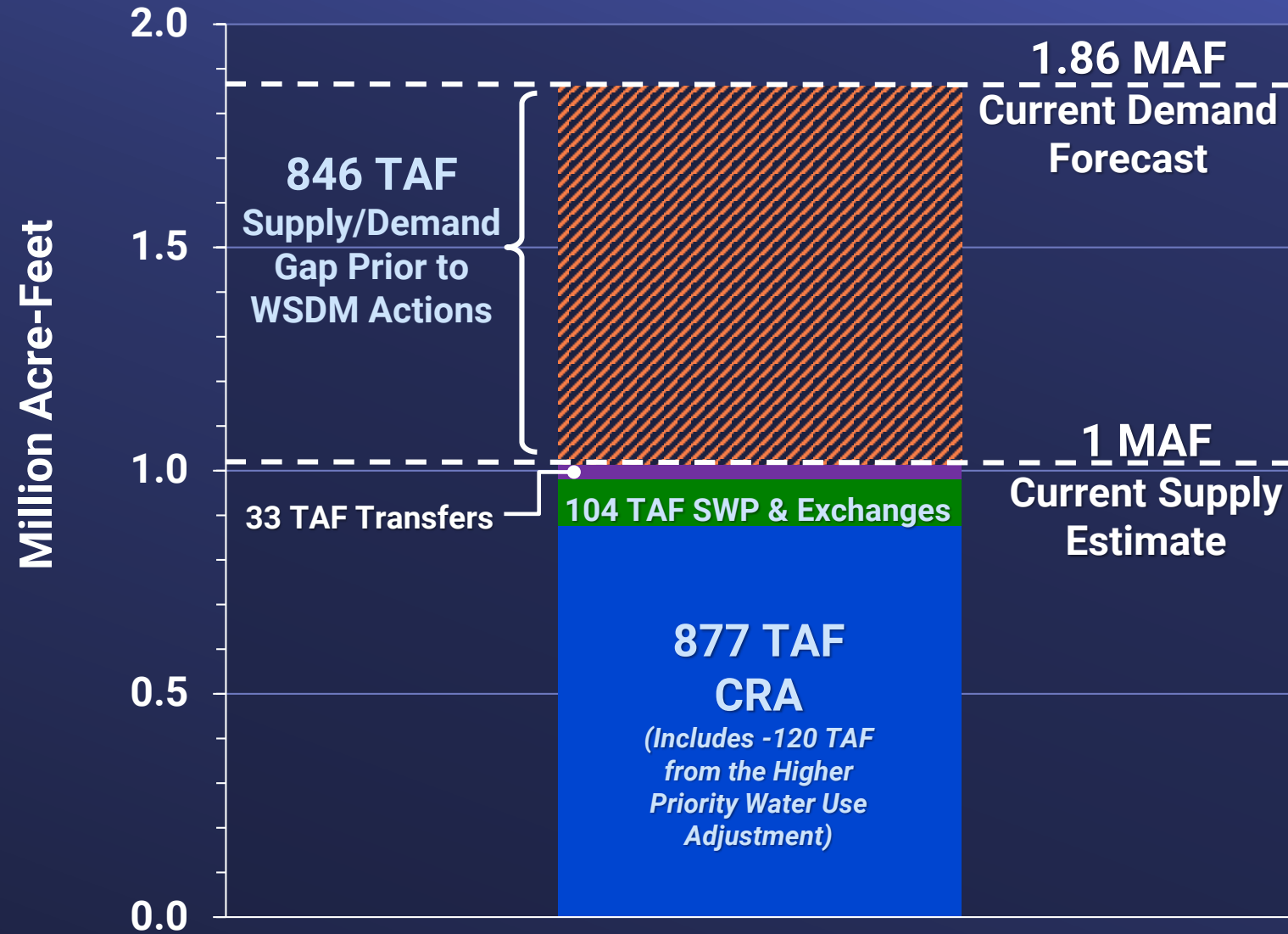
Upper Colorado River Basin

Below Normal
Runoff
Prevalent in
the Last Two
Decades

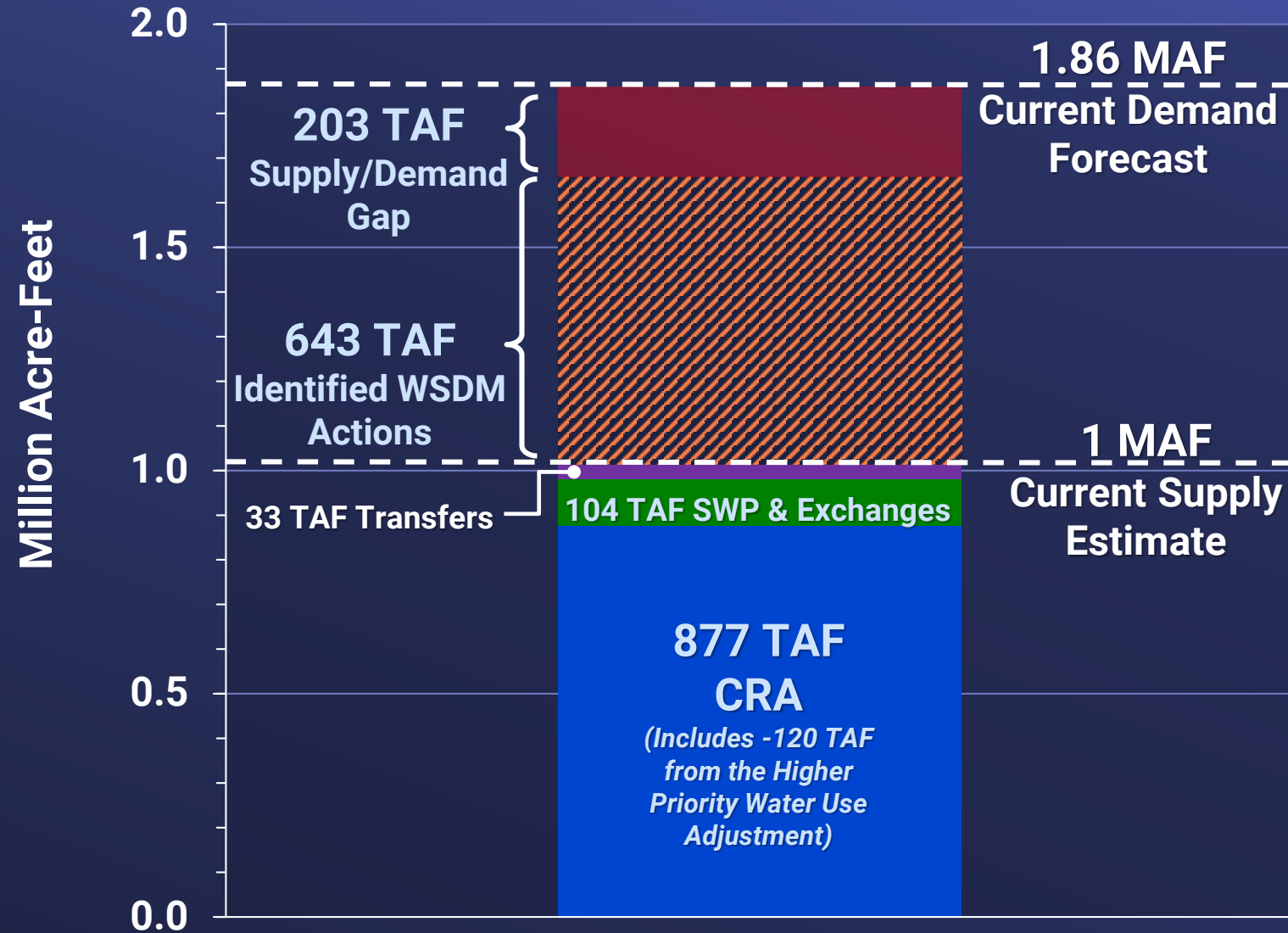
Annual Powell Unregulated Inflow



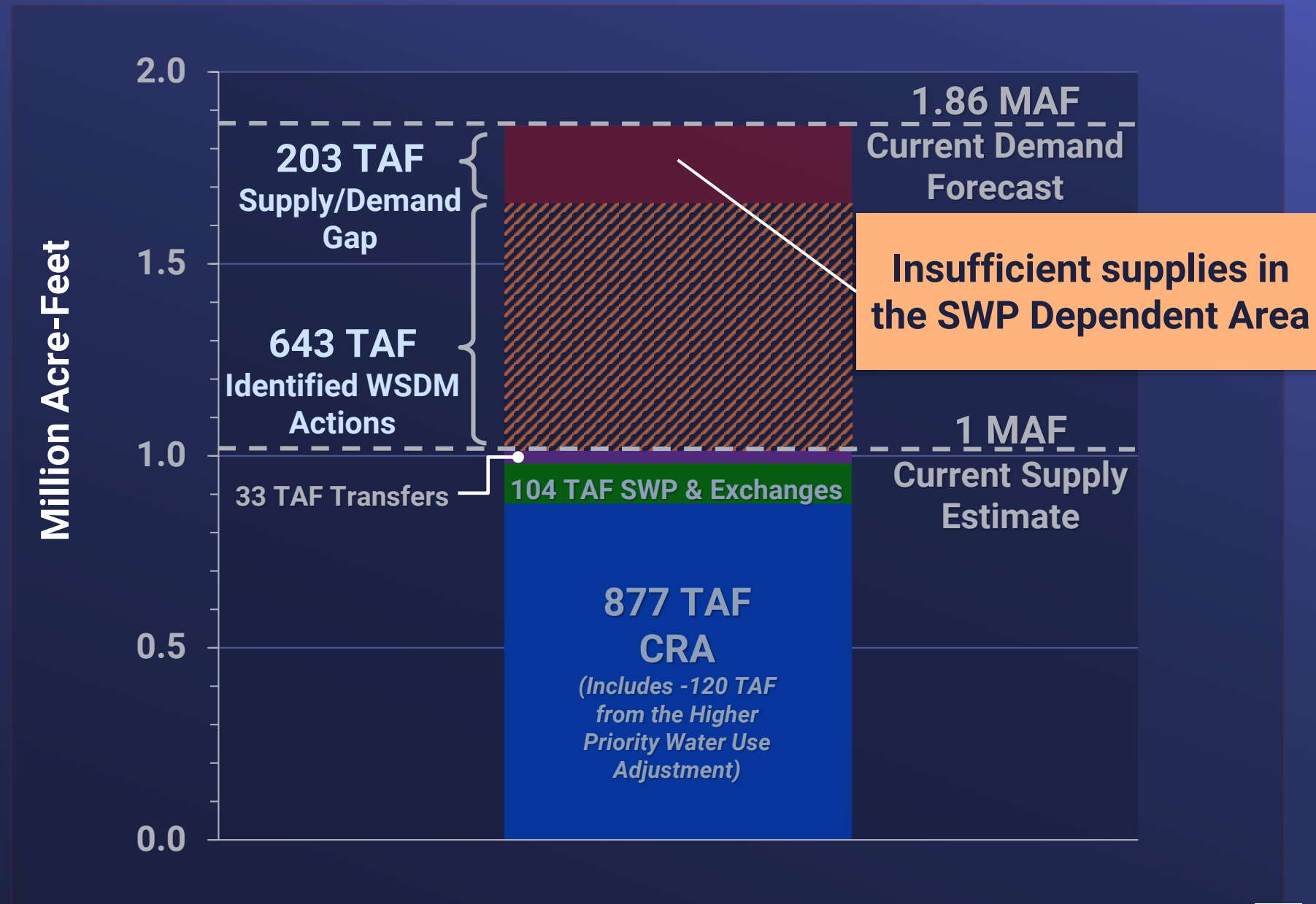
Regional Supply Demand Balance



Regional Supply Demand Balance



Regional Supply Demand Balance



Summary

- Combined runoff for the last 3 years is projected to be one of the lowest on record for both imported supply watersheds
- A majority of the supply/demand balance will be satisfied with WSDM actions like storage withdrawals
- There is not enough supply to meet normal demands for the Metropolitan's SWP Dependent Area
- Metropolitan's Board declared a Water Shortage Emergency Condition and approved an Emergency Water Conservation Program in April 2022





Water Planning and Stewardship Committee

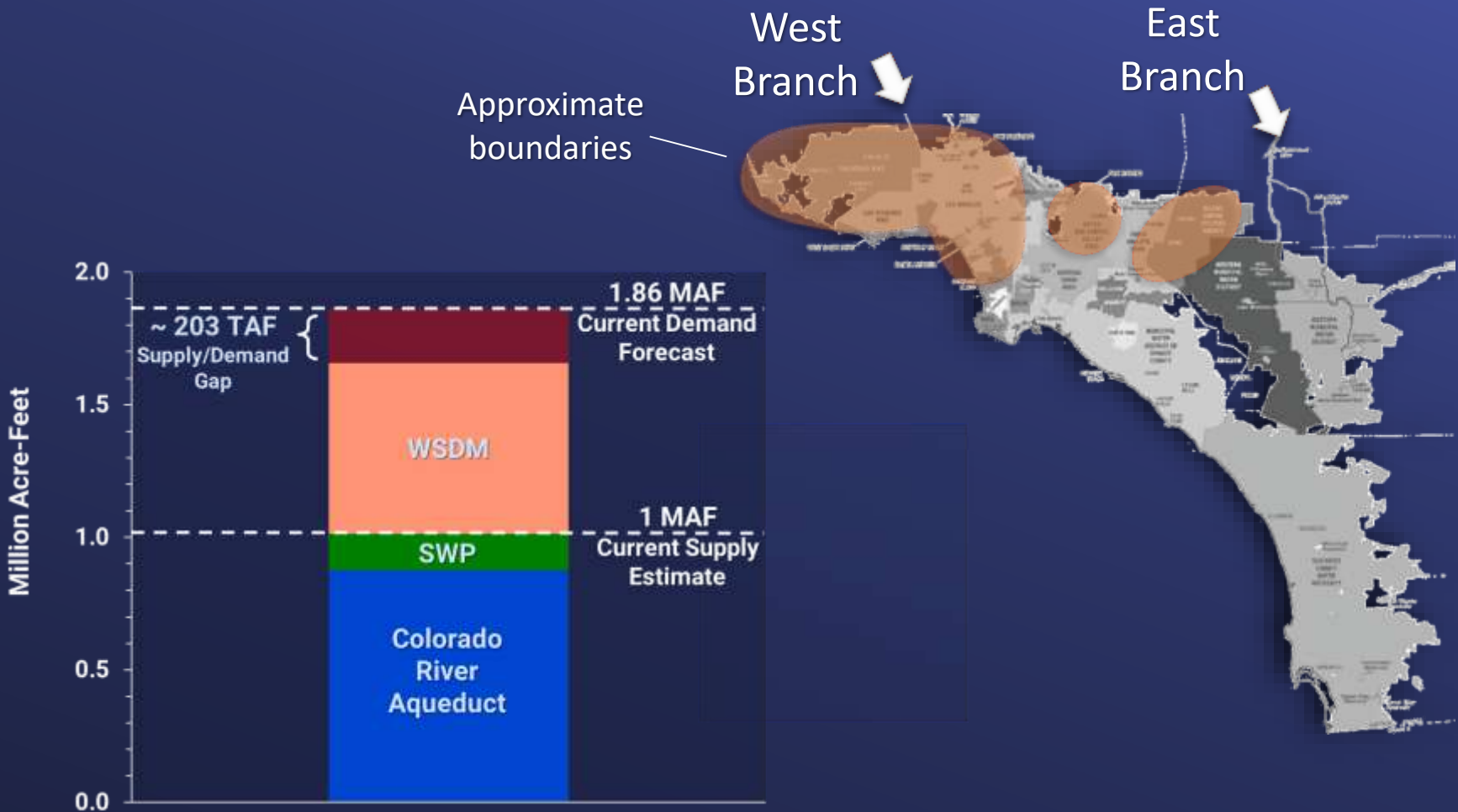
Update on Water Shortage Emergency Condition

Item 6e

May 9, 2022

Water Shortage Emergency Declared in the SWP dependent area

Insufficient Supply to Meet Normal Demands



Emergency Water Conservation Program

Compliance Paths

- Agencies have a choice on how to manage demands to available supplies
- Options allow affected SWP Dependent Area water suppliers to tailor their response to what best fits their situation

PATH 1

Enforce a one-day-a-week outdoor watering restriction

OR

PATH 2

Monthly volumetric limit enforced by penalties

FINAL Total Monthly Volumetric Limits

Agencies need to
find ways to reduce
or eliminate use of
SWP supplies

Agencies
Expected
to take
SWP
Supplies

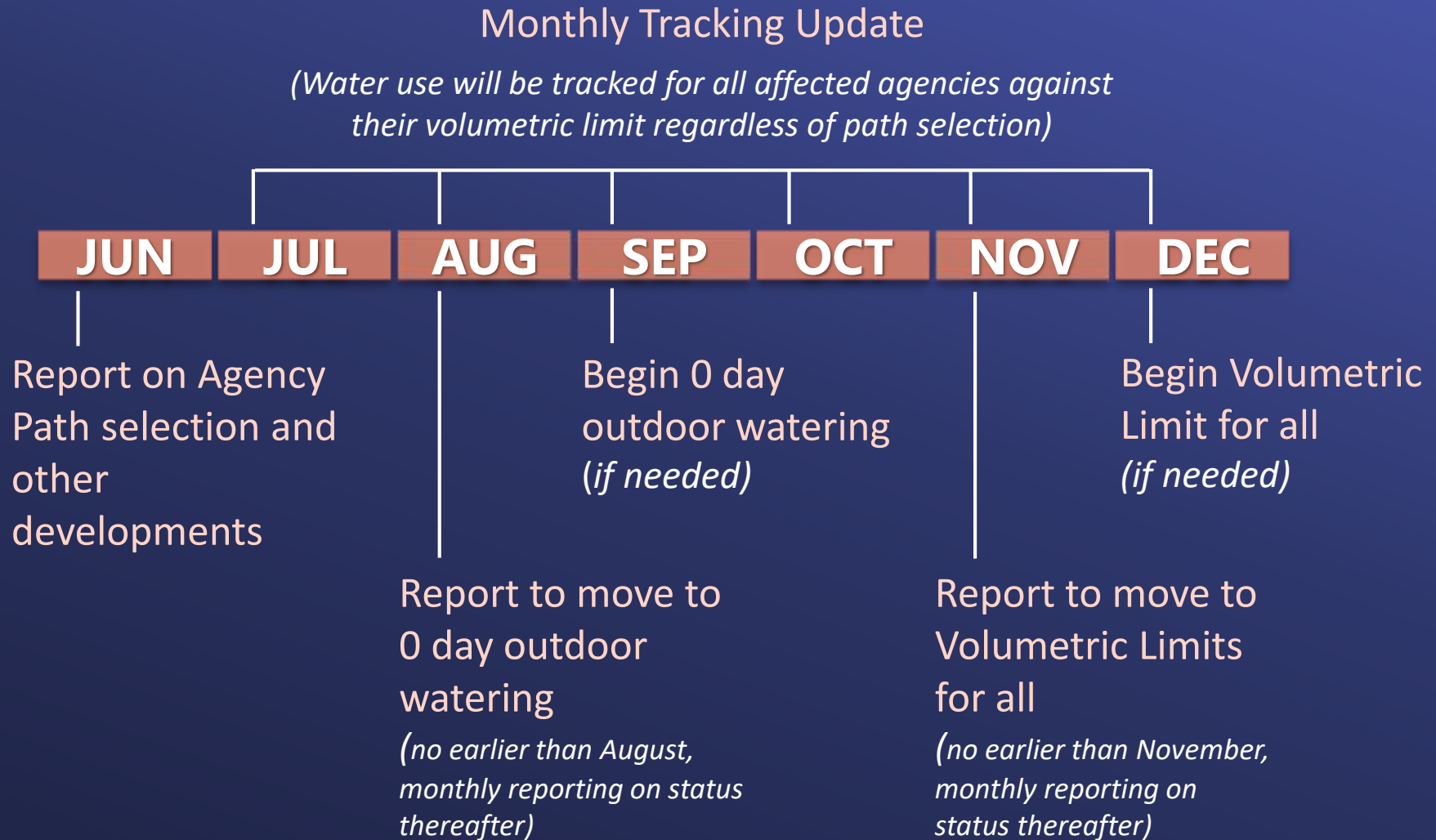
Agency	Volumetric Limit * (AF/month)
Calleguas MWD	4,334
Las Virgenes MWD	513
City of Los Angeles	21,706
IEUA	4,880
Three Valleys MWD	1,273
Upper San Gabriel Valley	2,099

Agencies
Not
Expected
to take
SWP
Supplies

City of Burbank	512
City of San Fernando	55
West Basin MWD	215
Western MWD	297

* includes HH&S supply approved by DWR and Metropolitan SWP Supply

Timeline of Activity and Decision Points



Emergency Water Conservation Program Monitoring

- Collect daily flow data from appropriate member agency service connections
- Report data to affected member agencies on a weekly basis
- Compile data monthly and compare to volumetric limits
 - Decision support for moving to more stringent measures
 - Penalty Assessment

Emergency Water Conservation

Penalty Enforcement

Path 1 - One-Day-a-Week

- No penalty assessed if the following are satisfied by June 1, 2022
 - Adopt a resolution or ordinance restricting outdoor watering to one day per week
 - Submit an enforcement plan and obtain MWD approval
- Otherwise, a \$2,000/AF penalty assessed for water use above monthly volumetric limit

Path 2 - Volumetric Limits

- \$2,000 /AF assessed for water use above monthly volumetric limit

Emergency Water Conservation

Appeal Process

- Penalties assessed monthly
- Appeals process will be for monthly penalties *actually* incurred
 - Penalties incurred will be added to member agency monthly bill starting in July
- Penalties adjusted at end-of-year based on total water use compared to total volumetric limit

Summary and Next Steps

- Member agencies are currently choosing their path
- MWD staff is finalizing administrative and logistical preparations
- June report will provide update on path selection and other key developments
- Water use tracking will begin June 1 and reported to Board July – December
- Reporting incorporated into WSDM reports





• 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 April 2022.

Purpose

Informational

Detailed Report

Actions to Protect Lake Powell Critical Elevation

The Department of the Interior's April 8 letter to the Governors' representatives of the Colorado River Basin States (Basin States) requested reducing Glen Canyon Dam releases from 7.48 million acre feet (MAF) to 7.0 MAF this water year in order to reduce the risks of Lake Powell declining below elevation 3,490 feet, including risks to dam infrastructure, power generation, and the ability to access water supply for the City of Page, Arizona and the LeChee Chapter of the Navajo Nation. The Basin States issued a response letter on April 22 indicating support for the proposal that the U.S. Bureau of Reclamation (Reclamation) implement the 480,000 acre-foot (AF) reduction to the 2022 water year release from Glen Canyon Dam to reduce the risks the Basin faces and urged Reclamation to evaluate any needed maintenance or feasible modifications to water delivery or hydropower generation infrastructure at the facility. The Basin States requested that such temporary reductions in releases from Glen Canyon Dam be implemented in a manner that is operationally neutral for tier and release determinations made pursuant to the 2007 Interim Guidelines, the 2019 Drought Contingency Plan, and Minute 323. Specifically requesting that operational determinations be made as if the 480,000 AF had been released from Glen Canyon Dam in the 2022 water year. A Department of the Interior response to the Basin States' letter is expected soon. Implementation of the reduced releases from Glen Canyon Dam may begin after the Department of the Interior's responds to the Basin States' April 22 letter.

The Upper Colorado River Commission and Reclamation posted the Upper Basin's Drought Response Operation Plan for 2022. In this plan, an additional 500,000 AF of water will be released from Flaming Gorge reservoir by April 2023 to help support the elevation of Lake Powell. With the reduced Lake Powell releases to Lake Mead and the increased releases from Flaming Gorge reservoir, the risk of Lake Powell falling below minimum power pool in the next two years will be substantially reduced.

Metropolitan Confirms Storing 25,000 AF of water for Imperial Irrigation District (IID) in 2021

Following approval of the settlement agreement between IID and Metropolitan, staff from the agencies reviewed the data and confirmed that IID conserved at least 25,000 AF of water in 2021 in addition to the water needed to meet its transfer commitments. Under the terms of the settlement agreement, Metropolitan will store that water in Lake Mead in an Intentionally Created Surplus sub-account, which IID can access in a future year to avoid an overrun. The extra conservation helped decrease the decline in Lake Mead in 2021.



● Bay-Delta Management Report

Summary

This report provides a summary of activities related to the Bay-Delta for April 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, 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

During a Special Board of Directors meeting on April 8, the Delta Conveyance Design and Construction Authority Board of Directors approved a resolution to extend virtual board and committee meetings pursuant to AB 361.

The regularly scheduled April 21 meeting of the Delta Conveyance Finance Authority was cancelled.

Sites Reservoir

At their April meetings, the Sites Project Authority Board and the Sites Reservoir Committee were presented an update to the Amendment 3 project agreement approval process (agencies approving continuation of funding for completion of planning process), including estimated participation levels. Current participants have all reported back and there is approximately 1,000 acre-feet of unsubscribed capacity. There is an approved “waiting list” for new participants who have submitted letters of interest prior to March 31. Sites Reservoir staff will reach out to existing participants for interest in making voluntary reductions to accommodate increased U.S. Bureau of Reclamation (Reclamation) investment and “waiting list” capacity.

Near-Term Delta Actions

Regulatory Activities

On April 4, the State Water Resources Control Board (State Water Board) approved in part the Temporary Urgency Change Petition that DWR and Reclamation jointly filed in March in response to critically dry conditions in the Bay-Delta watershed. The State Water Board Order allows temporary changes for Delta outflow and Delta salinity requirements during the April 1 to June 30, 2022, timeframe.

Staff continued to participate in the collaborative groups called for in the 2019 Biological Opinions for the State Water Project (SWP) and Central Valley Project, and in the 2020 Incidental Take Permit for long-term operation of the SWP, to address science needs and inform management and operation of the water projects. In April, staff continued collaboration with the state and federal agencies to develop conceptual models for steelhead that can inform development of a monitoring program and directed studies for steelhead populations within the San Joaquin Basin. Staff also worked with the Delta Coordination Group to implement an expert elicitation to evaluate the impacts of the Summer-Fall Habitat Actions on the occurrence of contaminants and their effects on

Board Report (Bay-Delta Management Report)

Delta smelt and their prey. The results of the expert elicitation will be used in the Structured Decision-Making effort for 2022 to evaluate the North Delta Food Web Subsidy Action and the Suisun Marsh Salinity Control Gate Action.

Science Activities

Staff continued participating in the Collaborative Science and Adaptive Management Program (CSAMP), including participation on the Collaborative Adaptive Management Team. In April, activity focused on discussion of a draft CSAMP Progress Report and priorities for the next year. CSAMP also received briefings on the impacts of thiamine deficiency on Central Valley salmon and on the Delta Science Program's Science Action Agenda.

Staff continued collaboration with non-government environmental organizations and public water agencies on the CSAMP Salmon Recovery Initiative. In April, the project team continued 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 second large presentation, over 100 interested parties including tribal groups, conservation groups, water agencies, and state and federal agencies joined the meeting. The project team is now in the information collecting phase to collect information on existing projects to benefit salmon and potential habitat restoration. 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 co-authored a scientific paper 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 Prop 1 grant with cost-share from Metropolitan. The paper published on March 30 in the journal *Environmental Science & Technology* ([Dietary Exposure to Bifenthrin and Fipronil Impacts Swimming Performance in Juvenile Chinook Salmon \(*Oncorhynchus tshawytscha*\) | Environmental Science & Technology \(acs.org\)](#)) evaluated the swimming performance of Chinook salmon exposed to environmentally relevant concentrations of two pesticides commonly used in the Central Valley. The study found that juvenile salmon exposed to the pesticides had significantly reduced swimming performance and had impacts to their metabolism. These types of effects may have significant impacts on juvenile salmon abilities to avoid predators and forage for food.

Metropolitan Bay Delta Conservation Plan/California WaterFix & EcoRestore/Delta Conveyance Project (BDCP/CWF-CER/DCP) Expenditures

The following is a summary of Metropolitan's cumulative BDCP/CWF-CER/DCP expenditures updated for the quarter ending March 2022. This report includes the total internal costs related to the BDCP, the CWF-CER alternatives and the subsequent DCP efforts with the state administration.

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

Total (July 2005 – March 2022)

BDCP/CWF-CER/DCP Internal MWD	Total Costs (16.75 yrs.)
Labor & Benefits ⁽¹⁾	\$ 36.41M
Professional Services	\$ 7.13M
Travel	\$ 1.79M
Other ⁽²⁾	\$ 0.18M
SUBTOTAL	\$ 45.51M
Administrative Overhead	\$ 13.27M
TOTAL	\$ 58.78M

⁽¹⁾ Labor costs include salary, leave and non-leave benefits

Board Report (Bay-Delta Management Report)

⁽²⁾ Other includes charges for materials and supplies, trainings & seminars, conferences & meetings, reprographics, and other incidental expenses

Quarterly Summary (April 2021 – March 2022)

	FY20-21 Q4	FY21-22 Q1	FY21-22 Q2	FY21-22 Q3
	Apr-Jun 2021	Jul-Sep 2021	Oct-Dec 2021	Jan-Mar 2022
Labor	0.353M	0.301M	0.286M	0.244M
Professional Services	0.009M	0.003M	0.009M	0.045M
Travel	0.001M	0.000M	0.000M	0.000M
Other	0.000M	0.000M	0.000M	0.000M
SUB-TOTAL	0.363M	0.304M	0.295M	0.289M
Admin. Overhead	0.131M	0.104M	0.100M	0.086M
TOTAL	0.494M	0.408M	0.395M	0.375M

The following is a summary of the Delta Conveyance Finance Authority costs for member's share of administrative expenses:

Quarterly Summary (April 2021 – March 2022)

	FY20-21 Q4	FY21-22 Q1	FY21-22 Q2	FY21-22 Q3
	Apr-Jun 2021	Jul-Sep 2021	Oct-Dec 2021	Jan-Mar 2022
TOTAL	0.002M	0.004M	0.002M	0.003M