The Metropolitan Water District of Southern California

Agenda

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

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

Adjourned Water Planning and Stewardship Committee - Final - Revised 1

Meeting with Board of Directors *

August 15, 2022

1:00 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 1-877-853-5257; enter meeting ID: 831 5177 2466. 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 (833) 548-0276 and enter meeting ID: 815 2066 4276.

Monday, August 15, 2022 Meeting Schedule

09:30 a.m. Adj. F& I
10:30 a.m. Adj. E&O
12:30 p.m. Adj. C&L
01:00 p.m. Adj. WP&S
03:00 p.m. Adj. OWC

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

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

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

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

2. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Meeting of the Bay-Delta Committee held January 25, 2022 and Water Planning and Stewardship Committee held July 12, 2022 — **21-1388**

Attachments: 08152022 WPS 2A-1 Minutes
08152022 WPS 2A-2 Minutes

3. CONSENT CALENDAR ITEMS - ACTION

Zoom Online

7-11 Approve Metropolitan's membership in the California Water Data Consortium and authorize annual membership dues of $20,000 per year; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA **21-1356**

Attachments: 08162022 WPS 7-11 B-L
08152022 WPS 7-11 Presentation

7-12 Authorize payments, by a two-thirds vote, of up to $3.75 million for participation in the State Water Contractors for FY 2022/23; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA **21-1357**

Attachments: 08162022 WPS 7-12 B-L
08152022 WPS 7-12 Presentation

7-13 Adopt resolution affirming Metropolitan's call to action and commitment to regional reliability for all member agencies; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [REVISED SUBJECT] **21-1382**

Attachments: 08162022 WPS 7-13 B-L
08152022 WPS 7-13 Presentation

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

4. OTHER BOARD ITEMS - ACTION

NONE

5. BOARD INFORMATION ITEMS

9-2 Review of Policy Principles Regarding the Sacramento-San Joaquin River Bay-Delta **21-1380**

Attachments: 08162022 WPS 9-2 B-L
08152022 WPS 9-2 Presentation

6. COMMITTEE ITEMS

a. Update on Water Surplus and Drought Management and Water Shortage Emergency Condition **21-1392**

Attachments: 08162022 WPS 6a Report
08152022 WPS 6a Presentation

7. MANAGEMENT REPORTS

a. Colorado River Manager's Report **21-1389**

b. Bay-Delta Manager's Report **21-1390**

Attachments: 08152022 WPS 7b Presentation

c. Water Resources Management Manager's Report **21-1391**

Attachments: 08152022 WPS 7c Presentation

8. FOLLOW-UP ITEMS

NONE

9. FUTURE AGENDA ITEMS

10. ADJOURNMENT

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

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

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

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

BAY-DELTA COMMITTEE

January 25, 2022

Committee Chair Ackerman called the teleconference meeting to order at 10:30 a.m.

Members present: Chair Ackerman, Vice Chair Faessel, Directors Apodaca, Atwater, Blois, Cordero, Kurtz, Lefevre, McCoy, Morris, Peterson, Pressman, and Sutley.

Members absent: Director Repenning.

Other Board Members present: Chairwoman Gray, Directors Abdo, De Jesus, Dick, Erdman, Fellow, Fong-Sakai, Goldberg, Jung, Luna, Miller, Ramos, Record, Smith, and Tamaribuchi.

Committee Staff present: Arakawa, Hagekhalil, Horton, Upadhyay, Winn, and Zinke.

1. OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE COMMITTEE ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

1. Caty Wagner, Sierra Club California, spoke in opposition to the Delta Conveyance Project (DCP), and supports local solutions.
2. Nancy Boscoes spoke in opposition to the DCP and supports local water resources and conservation.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEMS – ACTION

A. Approval of the Minutes of the Meeting of the Bay-Delta Committee held on November 23, 2021

3. CONSENT CALENDAR ITEMS – ACTION

None

Director Sutley made a motion, seconded by Director Pressman to approve the consent calendar consisting of item 2A:

The vote was:

Ayes:	Directors Ackerman, Apodaca, Atwater, Blois, Cordero, Faessel, Kurtz, Lefevre, McCoy, Morris, Peterson, Pressman, and Sutley.
Noes:	None

Abstentions: None

Absent: Director Repenning.

The motion passed by a vote of 13 ayes, 0 noes, 0 abstention, 1 absent.

END OF CONSENT CALENDAR ITEMS

4. OTHER BOARD ITEMS – ACTION

None

5. BOARD INFORMATION ITEMS

None

6. COMMITTEE ITEMS

a. Subject: Update on Delta Stewardship Council Activities

Presented by: Jennifer Nevills, Bay-Delta Initiatives Principal Resource Specialist

Ms. Nevills provided background information on the Delta Reform Act and the Delta Stewardship Council's organizational structure. She presented collaboration highlights and updated the committee on key activities, such as Delta Plan Amendments, Delta Plan Certification of Consistency, and Delta Adapts – Creating a Climate Resilient Future.

The following Director provided comment or asked a question.

1. Lefevre

Staff responded to the Director's question.

b. Subject: Update on Delta Conveyance

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

Ms. Hawk provided key updates on the California Department of Water Resources Planning process. She also reported on the December 2021 Stakeholder Engagement Committee meeting, the January 2022 Delta Conveyance Design and Construction Authority meeting, and the January 2022 Delta Conveyance Finance Authority meeting.

The following Director provided comments or asked a question.

1. Ackerman

Staff responded to the Director's question.

7. MANAGEMENT REPORTS

a. Subject: Bay-Delta Manager's Report

Presented by: Steve Arakawa, Bay-Delta Initiatives Manager

Mr. Arakawa presented an overview of the Proposition 1 California Department of Fish and Wildlife Multi-Benefit Restoration Planning Grant. He noted the objectives and identified the grant manager, the facilitators, stakeholder advisory participants, and the expert engagement participants. Mr. Arakawa mentioned that he plans to bring back a more detailed update later this year.

The following Directors provided comments or asked a question.

1. Luna
2. Record

Staff responded to the Directors' question.

Director Record also thanked Committee Chair Ackerman for her leadership and acknowledged that this is the last Bay-Delta Committee Meeting.

8. FOLLOW-UP ITEMS

None

9. FUTURE AGENDA ITEMS

None

Meeting adjourned at 11:19 a.m.

Linda Ackerman
Chair

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

WATER PLANNING AND STEWARDSHIP COMMITTEE

July 12, 2022

Chair Atwater called the teleconference meeting to order at 1:31 p.m.

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

Members absent: Directors Ackerman and Luna.

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

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

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))

Public speakers included:

1. Ellen Mackey, Environmental Specialist, Metropolitan Water District of Southern California, spoke on racism within Metropolitan and its Board of Directors, and asked the Board to reject the Chair's request to waive applicable provisions of the Administrative Code and the General Counsel's request to keep The Shaw Law Group's findings confidential.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEM – ACTION

A. Approval of the Minutes of the Meeting of the Bay-Delta Committee held January 25, 2022; and Water Planning and Stewardship Committee held June 13, 2022

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

The vote was:

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

Noes: None

Abstentions: None

Absent: Directors Ackerman, Kurtz, Luna, and Petersen.

The motion for item 2A as it related to the Water Planning and Stewardship Committee meeting minutes passed by a vote of 12 ayes, 0 noes, 0 abstain, and 4 absent.

The motion for item 2A as it related to the Bay-Delta Committee meeting minutes failed by a vote of 6 ayes, 0 noes, 0 abstain, and 2 absent.

Note: Staff will seek approval of these Bay-Delta Committee meeting minutes at the next Water Planning and Stewardship Committee meeting.

3. CONSENT CALENDAR ITEM – ACTION

None

END OF CONSENT CALENDAR ITEMS

4. OTHER BOARD ITEMS – ACTION

None

5. BOARD INFORMATION ITEMS

None

6. COMMITTEE ITEMS

a. Subject: Update on Water Surplus and Drought Management and Water Shortage Emergency Condition

Presented by: Noosha B. Razavian, Associate Resource Specialist

Ms. Razavian reported on the regional water supply overview - including the supply and demand balance. She also gave an update on the conservation efforts in the State Water Project-dependant area, and Emergency Water Conservation Program.

The following Directors provided comments or asked questions:

1. Peterson
2. Miller
3. Blois
4. Erdman
5. Ortega
6. Goldberg
7. Record

7. MANAGEMENT REPORTS

a. Subject: Colorado River Manager's Report

Presented by: Bill Hasencamp, Manager, Colorado River Resources

Mr. Hasencamp gave an update on Colorado River Basin States activity relating to infrastructure protection plans for Lake Powell and Lake Mead; Metropolitan's 20-year conservation of Colorado River surplus water.

The following Directors provided comments or asked questions:

1. Smith
2. Lefevre
3. Abdo
4. Peterson

General Manager Adel Hagekhalil provided comments related to Metropolitan's role in the Colorado River Basin water conservation.

b. Subject: Bay-Delta Manager's Report

Presented by: Steve Arakawa, Manager, Bay-Delta Initiatives

Mr. Arakawa gave an update on Delta Conveyance and Bay Delta Policies.

c. Subject: Water Resource Management Manager's Report

Presented by: Brad Coffey, Manager Water Resouce Management

Brad Coffey reported on Water Resource Management staff activity on the Annual Water Demand Assessment Report that is part of a legislative package, and the California Water Data Consortium.

8. FOLLOW-UP ITEMS

None

9. FUTURE AGENDA ITEMS

None

10. ADJOURNMENT

Next meeting will be held on August 15, 2022.

Meeting adjourned at 2:38 p.m.

Richard Atwater
Chair

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

8/16/2022 Board Meeting

7-11

Subject

Approve Metropolitan's membership in the California Water Data Consortium and authorize annual membership dues of $20,000 per year on an ongoing basis; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The California Water Data Consortium (Consortium) is a nonprofit organization supporting the state's implementation of the Open and Transparent Water Data Act of 2016. The Consortium facilitates collaboration between state agencies, the water industry, and other stakeholders. Metropolitan co-founded the Consortium in 2019 and helped lead its development. In 2020, Metropolitan invested $200,000 to fund the Consortium's launch and its early operations.

The Consortium plans to transition to a funding model based on membership dues supplemented with other revenue sources. Staff proposes to become a member of the Consortium and pay annual membership dues of $20,000 per year beginning in fiscal year 2022/23. These funds were included in the approved FY 2022/23 and FY 2023/24 budget and will be included in future budgets. Membership in the Consortium benefits Metropolitan and the member agencies by: (1) better aligning water data reporting to state agencies; (2) enhancing access to state agency data; and (3) improving water data management within California.

Details

Background

In 2016, the Governor signed AB 1755, known as the Open and Transparent Water Data Act (Water Data Act). The Water Data Act called for improving the sharing, accessing, and management of water data by state agencies. AB 1755 required the Department of Water Resources, the State Water Resources Control Board, and the Department of Fish and Wildlife to develop data sharing protocols and implement a statewide water data clearinghouse. The Office of Planning and Research convened an Advisory Council in 2018 to accelerate its implementation. The Advisory Council recommended and then initiated the formation of the Consortium in 2019.

California Water Data Consortium

The Consortium supports the state agencies implementing AB 1755 by acting as a liaison with water agencies and other stakeholders. The Consortium's mission includes:

- Complementing state agency efforts
- Establishing a neutral space for collaboration
- Providing value to stakeholders
- Fostering trust through public engagement
- Building consensus on the use of water data

The Consortium manages programs and budgets through a Board of Directors, a Steering Committee, an Executive Director, support staff, and stakeholder workgroups (**Attachment 1**). In addition to serving on the Consortium's Board, Metropolitan participates in Consortium subcommittees and pilot studies.

Consortium Activities

The Consortium implements open water data pilot studies and holds numerous outreach events. The three pilot studies currently underway include:

- **Urban Water Data Pilot**: A collaboration with state agencies identifying opportunities to align current water supply and use data reported by local and wholesale water agencies to reduce reporting burdens.
- **Groundwater Accounting Platform and Data Reporting Platform:** A partnership with state agencies and the Environmental Defense Fund advancing an open-source groundwater accounting platform.
- **Lidar Project:** A workgroup with state, federal, and local agencies along with other stakeholders exploring opportunities to collaborate on procuring and sharing Lidar data.

The Consortium has committed to promoting a diverse and engaged water data community to support its open water data initiatives. This includes establishing an Equity Workgroup, a "Data for Lunch" webinar series, and public workshops soliciting feedback from stakeholders. Descriptions of the Consortium's pilot projects and outreach activities are contained in **Attachment 2.**

Membership

Initial start-up funding for the Consortium came from foundations and local agencies such as Metropolitan. Metropolitan invested $200,000 in the Consortium in 2020 for this purpose. Moving forward, the Consortium plans to fund ongoing activities like the pilot studies with a combination of member dues, research grants, contributions from foundations such as the Water Foundation, and in-kind services.

The Consortium's membership guidelines for water agencies and irrigation districts are under development. The draft guidelines are tied to an organization's size with three tiers ranging from $5,000 to $20,000:

Tier	Dues
Small	$5,000
Medium	$10,000
Large	$20,000

Based on these guidelines, staff recommends funding the Consortium with an annual membership of up to $20,000 on an ongoing basis. This would help fund the Consortium's ongoing activities and support additional opportunities for improving California's water data reporting, sharing and access.

Policy

By Minute Item 51826, dated December 10, 2019, the Board expressed support for establishing the California Water Data Consortium and approved funding of $200,000 to make Metropolitan a founding member.

By Minute Item 50442, dated April 12, 2016, the Board authorized the General Manager to express support for AB 1755, if amended, (Dodd, D-Woodland) – The Open and Transparent Water Data Act.

Metropolitan Water District Administrative Code Section 11102: Payment of Dues

Metropolitan Water District Administrative Code Section 11103: Participation in Projects or Programs Serving District Purposes

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State of CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Approve Metropolitan's membership in the California Water Data Consortium and authorize payment of dues of $20,000 per year on an ongoing basis.

Fiscal Impact: Funds in the amount of $20,000 would be paid for membership in the Consortium annually. Membership in the Consortium is included in Water Resource Management's FY 2022/23 and FY 2023/24 budget, and will be included in future budgets.

Business Analysis: Membership in the Consortium allows Metropolitan to provide sustained funding support for the Consortium's pilot programs and related initiatives. These activities benefit Metropolitan and the member agencies. Staff would continue to participate in Consortium committees and stakeholder processes.

Option #2

Do not approve Metropolitan's membership in the California Water Data Consortium.

Fiscal Impact: Metropolitan would forgo paying annual dues of $20,000 per year. Staff would seek other opportunities for supporting Consortium activities through sponsorships and in-kind services on a case-by-case basis.

Business Analysis: Metropolitan would miss an opportunity to sustainably co-fund the Consortium's efforts to improve water data management within California.

Staff Recommendation

Option #1

Brad Coffey 7/28/2022
Brad Coffey *Date*
Manager, Water Resource Management

8/1/2022
Adel Hagekhalil *Date*
General Manager

Attachment 1 – California Water Data Consortium Organization (effective July 2022)
Attachment 2 – California Water Data Consortium Activities

Ref# wrm12682882

California Water Data Consortium Organization (effective July 2022)

The California Water Data Consortium (Consortium) organizational structure includes a governing Board, a Steering Committee, an Executive Director with support staff, and project Work Groups. Tara Moran is the Consortium's Executive Director. Additional information is available on the Consortium's website Home - California Water Data Consortium (cawaterdata.org).

Board

The Consortium's nine-member Board of Directors is composed of water leaders representing water agencies, irrigation districts, foundations, academic institutions, and consultants. Current board members are listed in Table 1.

Table 1. California Water Data Consortium Board (Board member terms run for three years)

Adrian Covert, Board Chair	Bay Area Council
David Orth, Board Vice-Chair	New Current Water and Land LLC
Joone Lopez, Board Treasurer	Moulton Niguel Water District
Eric Averett	Homer LLC
Rick Callender	Valley Water
Debbie Franco	Water Solutions Network
Meredith Lee	UC Berkeley
Mike Myatt	Water Foundation
Deven Upadhyay	Metropolitan Water District of Southern California

Steering Committee and Workgroups

Members of the Steering Committee include representatives from state agencies and a diverse set of stakeholders. The Steering Committee develops and recommends studies and projects for the Board to consider. Steering Committee members are selected by the Board through a recruitment process. Workgroup chairs implement pilot studies as directed. Current Steering Committee members are shown in Table 2.

Table 2: Steering Committee (Steering Committee member terms run for two years)

Steering Committee: California State Agencies	
Joaquin Esquivel	State Water Resources Control Board
David Harris	Natural Resources Agency
Nick Martorano	Water Quality Monitoring Council
Joy Bonaguro	Government Operations Agency
Christina McCready	Department of Water Resources
Steering Committee: Water Data Stakeholders	
Drew Atwater	Moulton Niguel Water District
Deb Agarwal	Lawrence Berkeley National Laboratory
Mike Antos	Stantec Consulting
Martha Davis	Inland Empire Utilities Agency (retired)

California Water Data Consortium Activities

The California Water Data Consortium (Consortium) advances innovative projects demonstrating the value of open and transparent water data. These projects will accelerate the adoption of new technologies and methods for improved data access and quality, resulting in benefits to stakeholders through streamlined water data reporting complemented by better water decisions and outcomes.

Pilot Projects

Urban Water Reporting Project: In partnership with the Department of Water Resources, State Water Resources Control Board, and urban water suppliers, the Consortium is identifying opportunities to improve the current water supply and use data reported by local and wholesale water agencies to reduce reporting burdens. The project will also explore opportunities for expanding access to more timely data necessary for managing water resources in California. The project supports drought mitigation efforts by aligning data reporting across existing drought-related urban water reporting programs supporting water shortage contingency planning and water supply and demand assessments. On June 6, the Consortium held a project workshop with over 50 stakeholders represented, including Metropolitan.

Groundwater Accounting Platform and Data Reporting Project: In partnership with the Department of Water Resources, State Water Resources Control Board, and Environmental Defense Fund, the Consortium is advancing an open-source groundwater accounting platform. This project supports several drought mitigation measures, including scenario planning to support groundwater recharge and identifying domestic wells susceptible to drying under persistent drought. It will facilitate long-term groundwater sustainability planning under the Sustainable Groundwater Management Act (SGMA) and includes the co-development of groundwater data reporting protocols.

LiDAR Project: The LiDAR workgroup is a cross-sector and cross-jurisdictional partnership consisting of local, state, and federal agencies along with NGOs. The LiDAR project increases collaboration and coordination of LiDAR data collection to facilitate data sharing, reduce project costs, and ensure interoperability across datasets. The Consortium effort compliments a cross-agency state effort led by the Department of Conservation to expand access to LiDAR data statewide.

Outreach

The Consortium is committed to maintaining an engaged water data community. In addition to ongoing Consortium Steering Committee and project meetings, the activities described below provide additional opportunities for Consortium members and the public to build relationships and foster innovative ideas in advancing open water data in California.

Equity Workgroup. A Consortium workgroup for state and non-state partners to advance racial equity, inclusion, and justice in Consortium projects.

Data for Lunch. An online webinar for researchers, organizations, and others to learn and share about new and emerging water-related datasets or technologies that are changing water management in California and beyond. The Consortium has hosted seven Data for Lunches since 2020.

Public Workshops. The Consortium hosts online public workshops each year to provide updates on the Consortium's work and solicit feedback on next steps.

Water Planning and Stewardship Committee

California Water Data Consortium Membership

Item 7-11

August 15, 2022

Outline


Background (AB 1755)
California Water Data Consortium
Proposed Membership
Recommendation

AB 1755, Dodd

The Open and Transparent Water Data Act (2016)

Requires State Agencies to:

- Develop water data protocols
- Implement data sharing platform

Advisory Council

- Recommended formation of Consortium
- Launched the Consortium in 2019

California Water Data Consortium

Formation & Purpose

Established in 2019

- Role: supports State agencies implementing AB-1755 by serving as a liaison with water suppliers and other stakeholders

Initially Raised $1.4 million

- Funded launch and initial operations
- Metropolitan invested $200,000

California Water Data Consortium

Organization

Board of Directors
- Nine members
- By invitation

Steering Committee
- State agencies
- Non-state partners

Staff
- Executive Director
- Program & Operations staff

Workgroups
- Data users
- Technical

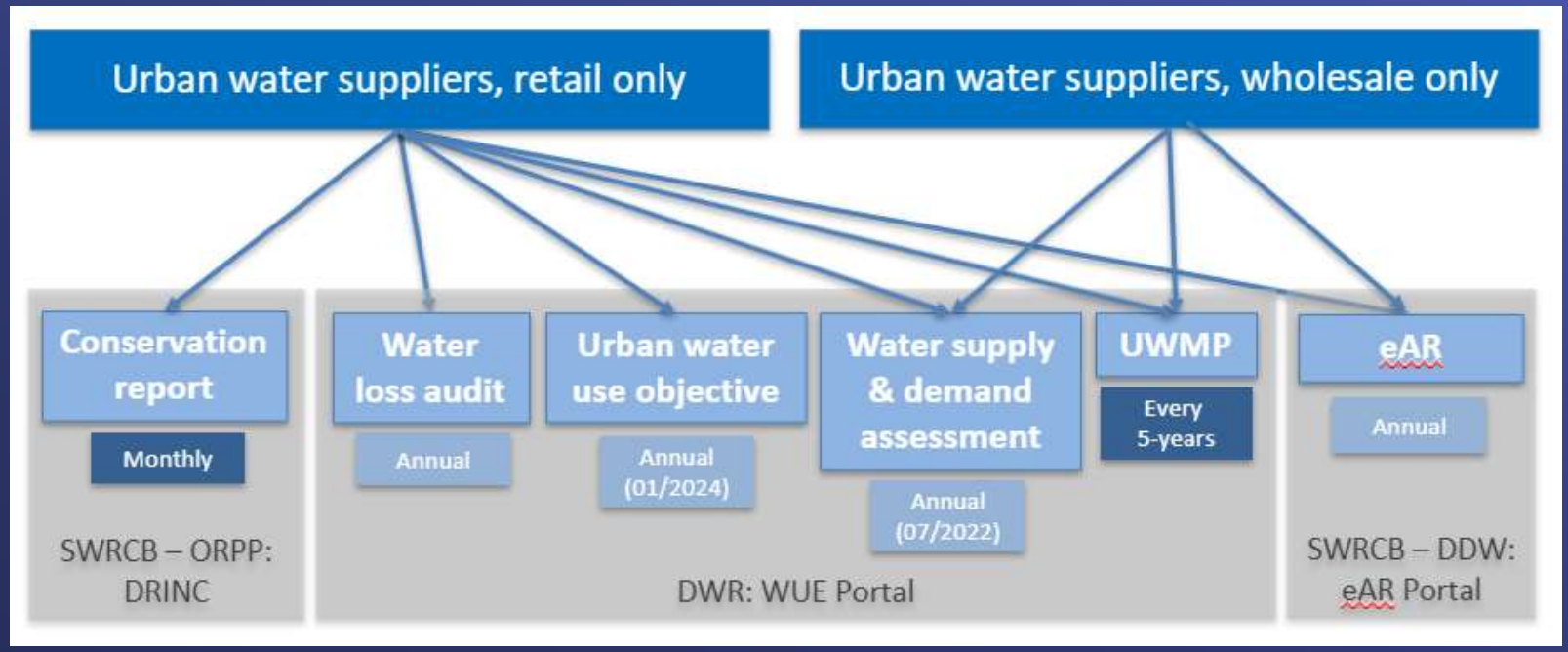
The Need for Open Water Data

- Allows for the development of standardized protocols, which ensure accessible, consistent, and timely data
- Fosters transparency, data sharing, collaboration and innovation via an integrated data management approach
- Supports a more resilient and data-enabled future for water resource planning

California Water Data Consortium

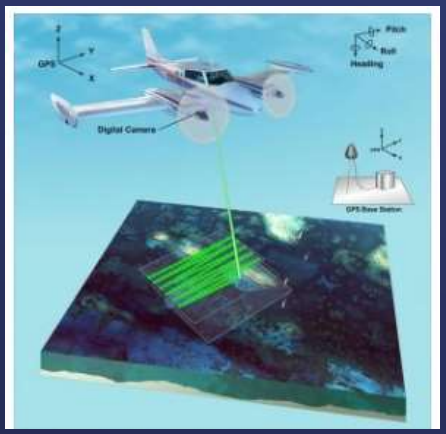
Projects

Urban Water Reporting



Groundwater Accounting and Data Reporting

LiDAR



California Water Data Consortium

Outreach Activities

Data For Lunch

Public Workshops

Equity Workgroup

Proposed Contribution

(Membership)

Transitioning to long-term funding

- Proposed dues based on size

Small	$5,000
Medium	$10,000
Large	$20,000

Budgeted in WRM for FY23 and FY24

- Supports Metropolitan objectives
- Provides venue for collaboration with State agencies
- Signals Metropolitan leadership

Board Options

Option #1

- Approve Metropolitan's membership in the California Water Data Consortium and authorize payment of dues of $20,000 per year on an ongoing basis.

Option #2

- Do not approve Metropolitan's membership in the California Water Data Consortium.

Staff Recommendation

Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

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

8/16/2022 Board Meeting

7-12

Subject

Authorize payments, by a two-thirds vote, of up to $3.75 million for participation in the State Water Contractors for FY 2022/23; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

This action requests authorization to continue funding and participation in the State Water Contractors (SWC). Participation in this organization allows Metropolitan to advocate for the effective management of the State Water Project (SWP), particularly related to operations and activities in the Bay-Delta. The SWC provides a unified voice among the contractors to provide input to the California Department of Water Resources (DWR) on management of the SWP.

The requested authorization amount is up to $3.75 million, which is less than the $4.07 million included in Metropolitan's fiscal year (FY) 2022/23 budget.

Details

State Water Contractors

The SWC is a nonprofit association of 27 public agencies from northern, central, and southern California with contracts to purchase water from the SWP. The SWC's role and activities provide input into DWR's policy and decision-making process. The SWC effectively represents the interests of Metropolitan and the other contractors in discussions with DWR and through interactions with other state, federal, and local entities. The SWC's work efforts and associated revenue collections encompass five areas:

1. Dues Fund – Provides funding for SWC activities, including general operating expenses, to support activities such as DWR cost management, ensuring sufficient infrastructure and water supply reliability, and water quality.
2. Energy Fund – Provides funding for SWC staff and consultants working with DWR to develop and implement energy strategies to obtain cost-effective energy for the SWP.
3. Bay-Delta Fund – Supports SWC participation in Bay-Delta fish monitoring, environmental review processes, coordinated activities with the Central Valley Project, protection of existing operations, collecting scientific data, and planning for the future.
4. Delta Conveyance Project Fund – Supports SWC involvement in the Delta Conveyance Project planning activities, such as assisting in the development of permit and environmental documentation and policy and technical support on project benefits.
5. Municipal Water Quality Investigations (MWQI) Specific Project Committee – Provides SWP contractors with water quality information as it relates to drinking water regulations through conducting specialized scientific studies, research, and investigations.

The united voice of the SWC provides value in achieving favorable outcomes. Refer to **Attachment 1** for a more detailed report on SWC accomplishments in FY 2021/22 and **Attachment 2** for objectives for FY 2022/23.

Summary of Payment Distribution

The table below summarizes the current and proposed costs for participation in the SWC:

SWC Payments	FY 2022/23	FY 2021/22
Dues Fund	$ 1,698,105	$ 1,423,818
Energy Fund	$ 234,971	$ 241,211
Bay-Delta Fund	$ 1,108,684	$ 910,740
Delta Conveyance Project Fund	$ 449,955	$ 801,578
MWQI	$ 260,000	$ 179,985
Total:	**$ 3,751,715**	**$ 3,557,332**

The cost increase from FY 2021/22 is primarily due to legal support for Bay-Delta activities and additional funding for outreach consulting. In total, Metropolitan's payment to the SWC for FY 2022/23 is approximately $314,000 below what was included in Metropolitan's budget. In large part, this is due to the SWC reducing the collection of reserves in the Delta Conveyance Project fund for anticipated legal costs.

The MWQI Specific Project Committee is preparing its calendar year 2023 activities and budget to be approved in December 2022. When approved, Metropolitan will pay its share of costs. Staff requests approval to pay up to $260,000 for funding the Committee. This amount is consistent with the FY 2022/23 budget.

Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Metropolitan Water District Administrative Code Sections 11102 and 11103: Payment of Dues and Participation in Projects or Programs Serving District Purposes.

Metropolitan Water District Act Section 126: Dissemination of Information (requires a two-thirds vote)

By Minute Item No. 45348, the Board, at its May 13, 2003, meeting, authorized entering into an agreement with the State Water Project Joint Powers Authority.

By Minute Item No. 47735, the Board, at its December 9, 2008, meeting, authorized the General Manager to execute the Delta Habitat Conservation and Conveyance Program Memorandum of Agreement and three related funding and management agreements.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State of CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

By a two-thirds vote, authorize the General Manager to make payments of up to $3.75 million to the State Water Contractors for FY 2022/23.

Fiscal Impact: Expenditures for participation in SWC in FY 2022/23 would be up to $3.75 million, funded within the FY 2022/23 budget. The authorization is approximately $314,000 less than the approved FY 2022/23 budget for participation in the SWC.

Business Analysis: Metropolitan benefits from the SWC representing positions with DWR, legislators, regulatory, and third-party groups that advance its SWP strategic initiatives.

Option #2

Do not authorize the General Manager to make a payment to the State Water Contractors for FY 2022/23.
Fiscal Impact: Savings up to $3.75 million
Business Analysis: Metropolitan would be less effective in advancing its SWP strategic initiatives if the membership is not approved. Metropolitan would need to develop alternative means to manage the risk of higher costs or greater operational restrictions on supply deliveries.

Staff Recommendation

Option # 1

7/25/2022
Brad Coffey *Date*
Manager, Water Resource Management

7/29/2022
Adel Hagekhalil *Date*
General Manager

Attachment 1 – FY 2021/22 High Priority Accomplishments of the State Water Contractors

Attachment 2 – FY 2022/23 High Priority Objectives of the State Water Contractors

Ref# wrm12683599

FY2021/22 High Priority Accomplishments of the State Water Project Contractors

WATER SUPPLY

Delta Conveyance Technical/Policy Support

- Developed information needed for the Board packages for the Delta Conveyance Project (DCP) second tranche of supplemental planning funding.
- Participated in DCP technical and policy discussions with the Department of Water Resources (DWR) and provided member agencies' perspectives.
- Provided monthly updates to keep the participants appraised of the DCP activities and policy issues.

Delta Conveyance Permitting

- Maintained significant engagement with DWR on Delta Conveyance environmental planning and permitting.
- Appraised member agencies and coordinated on the DCP environmental planning efforts through weekly meetings.
- Reviewed the administrative draft sections of the EIR.

Update to the Bay-Delta Water Quality Control Plan (WQCP)

- Continued to collaborate with DWR, California Department of Fish and Wildlife (CDFW), California State Water Resources Control Board (SWRCB), California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), United States Bureau of Reclamation (USBR), and other water users to develop a Memorandum of Understanding for the proposed Voluntary Agreement outlining flow and habitat actions, key legal parameters, and decision making for consideration by the SWRCB in the Water Quality Control Plan update.
- Continued to lead water user efforts to define the early implementation actions and identify additional steps needed for SWRCB evaluation.

Drought Planning

- Collaborated with DWR management, State Water Project (SWP) operators, and member agencies' management and staff on the drought planning for water year (WY) 2022.
- Worked with DWR to obtain funding for the member agencies' drought projects.
- Engaged with Delta watermaster and SWRCB staff on potential illegal diversion of the stored water and provided feedback on the State Board's water unavailability methodology.

INFRASTRUCTURE

Infrastructure Reliability

- Continued to lead discussions within the Operations, Maintenance, and Engineering (OME) Committee and directly with DWR management/executives to emphasize member agencies' interest in the reliability of SWP infrastructure and track the myriad of ongoing projects resulting from condition assessments or forced outages.

- Worked with DWR to provide coordination and communication with the West Branch members during the lowering of Castaic Reservoir to accommodate construction of the necessary seismic fortification work for the outlet tower access bridge.
- Retained a consultant to develop a general maintenance plan to help facilitate future South Delta channel maintenance for the removal of silt accumulations to benefit SWP deliveries, the environment, and farming irrigation in the region.

Capacity Retention

- Continued to lead discussions and represent the interest of member agencies within the OME Committee and directly with DWR management/executives to emphasize the importance of maintaining the capacity of the SWP.
- Performed extensive coordination with DWR and member agencies related to subsidence of the California Aqueduct, which is the single largest, most expensive long-term capacity threat to the SWP. Represented member agencies' interest in the consulting review board meetings and the development of DWR's subsidence remediation strategic plan formation. Participated in coordination meetings with DWR, USBR, San Luis & Delta-Mendota Water Authority, and Friant Water Authority. Continued to pursue funding options.
- Tracked short-term capacity issues related to weeds, water quality, and incidents and damages to the SWP delivery infrastructure.
- Formed and facilitated the SWP Storage Expansion Workgroup to study concepts and opportunities for future increases in SWP storage facilities.

Infrastructure Safety

- Continued to lead discussions and represent the interest of member agencies within the OME Committee and directly with DWR management/executives to track projects, policies, and expenditures related to DWR's upgrade projects on both physical and cyber security of the SWP and infrastructure safety as it relates to the public and DWR employees.
- As a result of the heightened focus on dam safety following the Oroville spillway incident, continued quarterly meetings of the Dam Safety Committee, a subcommittee under the OME Committee, were held. The meetings served as a forum for member agencies to obtain more in-depth updates on DWR's expanding dam safety program and specific details on the recently elevated inspections and evaluations, engineering assessments, and modernizations of all SWP dams.

Infrastructure Affordability

- Continued to lead discussions and represent the interest of member agencies within the OME Committee and directly with DWR management/executives to emphasize the importance of SWP infrastructure affordability with emphasis on a realistic capital improvement planning approach using DWR's new Asset Management Program. Performed annual reviews of the budgets and prioritization of all Operations and Maintenance (O&M) extraordinary and capital SWP-related projects. Held bimonthly reviews/discussions on individual project charters, which included cost magnitude and changes, cause and effects of changes in scope and timeline, cost categorization, and Central Valley Project (CVP) cost sharing where applicable. Performed quarterly reviews of O&M and Engineering Division plan versus actual budget tracking.

- Engaged with DWR on the affordability workshop. Organized a series of discussions between members and DWR management/executives to articulate members' concerns about the proposed positions in budget augmentations proposals, which would add permanent additional O&M expenses to the SWP.
- Continued to work closely with DWR and members' staff and lobbyist to seek opportunities to obtain funding to help reasonably offset SWP expenses.

BUSINESS PROCESSES

Budgets

- Continued to work on advancing the Process of Affordability concepts and enhancing budget information provided during DWR's annual Financial Management Conferences with the Joint SWC-DWR Affordability Workgroup.

Financial Projections

- Continued to provide financial modeling to assist Contractors in decision making and planning. This included updating the SWC SWP Forecasting Model, the SWC 10-year Energy Forecasting Model, and the Contract Extension Cost Compression Model.
- Continued to develop and enhance SWC SWP budget reports within the Tableau dashboards to improve forecasting and trend analysis of billing components.

Financial Resources, Revenue Requirements, and Investments

- Provided a starting draft of the DCP Contract Amendment based on the March 2021 Agreement in Principle, which included the terms for billing and cost recovery for the DCP facilities, to the SWC-DWR Legal Team.
- Developed a committee charter for the Audit and Finance Committee.

ENERGY

Senate Bill (SB) No. 49 (Energy: Appliance Standards and SWP Assessment) Report

- Engaged with DWR on the development and completion of the SB No. 49 Report. Provided feedback on all nine tracks, including the potential for future discussions on items related to water delivery flexibility and siting of renewable energy resources. Conducted outreach to legislators and other leaders, including voicing support for elements of the report before the California Water Commission.

Co-Author Energy Roadmap with the DWR

- In conjunction with DWR and members, co-developed a draft of the roadmap and reviewed it. The Energy Roadmap contains eleven sections, including the historical energy management of the SWP, past successful collaborations, core values of protecting the SWP's mission of delivering water, an interim action plan, and a communications plan to educate other stakeholders, leaders, and interested parties.

SCIENCE

Endangered Species Act (ESA), California Endangered Species Act (CESA), and WQCP Environmental Compliance

- Continued to coordinate with DWR on implementation of the Incidental Take Permit (ITP), including participation in various subgroups, discussion of adaptive management opportunities, and resolution of operational and other issues as they arose.
- Worked with DWR to hold the Environmental Coordination Committee meetings quarterly.
- Worked with DWR to hold the DWR-SWC Environmental Science Work Group meetings quarterly.

OUTREACH

SWC Position Awareness

- Participated in media interviews for stories on various water issues impacting California and the SWP, allowing for the SWC to clearly outline its position and priorities on local, state, and national issues.
- Participated in panel discussions, conferences, and briefings with stakeholders, legislators, and regulatory agencies to discuss the SWP and other relevant issues, including energy, state and federal legislation and initiatives, the Delta and the environment, reliance on the SWP, Delta Conveyance, Voluntary Agreements, and other upcoming projects and priorities.
- Continued to distribute statements and press releases on priority issues, including SWP contract amendments, the Delta Conveyance project, Voluntary Agreements, key legislation, climate, and drought conditions.
- Developed and distributed an informational and educational White Board video in collaboration with the DWR Save Our Water team to illustrate the importance of conservation during the current drought.

SWC MANAGEMENT

Accounting

- Maintained internal financial records and provided regular reports to management and the Board of Directors.

FY2022/23 High Priority Objectives of the State Water Project Contractors

Objective	Description
Water Supply	
Delta Conveyance Technical/Policy Support	Provide technical and policy support to State Water Contractors (SWC) members that are Delta Conveyance Project (DCP) participants on benefits and permitting.
Delta Conveyance Permitting	Support development of necessary permits and environmental documentation related to the Delta Conveyance Facility.
Drought Planning	Given the dire hydrologic conditions for the last two consecutive years, help with the State Water Project (SWP) drought planning and keeping SWC members appraised frequently. • Work with Department of Water Resources (DWR) staff and SWC members to identify and implement near-term Delta and/or upstream operations strategies to minimize impacts to SWP water supply. • Work with DWR staff and SWC members to plan for a potentially dry water year 2023. • Track development of updated forecast modeling. • Track and participate in State Water Resources Control Board (SWRCB) activities.
Update to the Bay-Delta Water Quality Control Plan (WQCP)	Participate in Voluntary Agreement development and discussions, and related activities. Support governance and science basis analyses.
Water Supply and Operations Improvements	Work towards defining flexible California Endangered Species Act (CESA) and Endangered Species Act (ESA) requirements, if possible, as part of the upcoming reconsultation on the Central Valley Project (CVP)-SWP long-term operations. Identify potential risks to SWP and develop strategies to minimize the exposure.
Infrastructure	
Infrastructure Reliability	Work with DWR in the effort to maintain and improve reliability of the aging SWP Infrastructure with a focus on: • Continue to work on the development/documentation/implementation of an asset management plan and capital improvement program. • Develop a tracking/communication process to better understand the roll-out and addition of future SWP-funded positions and the resulting benefits. • Assess maintenance management systems to better identify vulnerabilities, the required risk mitigation strategies, and management policy and objectives. Advocate for appropriate priorities and affordability.
Capacity Retention	Work with DWR to determine impacts and potential remedies to both delivery capacity and storage within SWP reservoirs with a focus on: • Subsidence in the San Joaquin Valley, machine outages, power outages, regulatory requirements, weeds/debris, and water quality. • Advocate for projects, repairs, procedures, and studies to assure that capacity is restored or preserved to assure long-term operational capacity that meets realistic needs under the current demands and export restrictions. • Work with the SWC Storage Workgroup to develop a white paper that summarizes the need, opportunity, and concepts for possible future expansion of SWP storage capacity.
Infrastructure Safety	Work with DWR and member agencies to plan and ensure SWP infrastructure safety with a focus on: • Track SWP seismic vulnerability studies and begin planning/preparing for realistic response and recovery. • Expanded focus and regulatory requirements on dam safety. • Track Oroville Dam Comprehensive Needs Assessment project development in addition to other SWP Dam Safety projects to assure timely remediation. • Fire modernization project for all SWP plants.

Objective	Description
Infrastructure Affordability	Work with DWR and member agencies on measures to improve SWP infrastructure affordability with a focus on: • Support business practice efforts for affordability process development, as well as the annual Bulletin132 budget development, to assure proper alignment with the aforementioned objectives. • Improve illustration of future costs attributed to each infrastructure objective. • Seek opportunities and work with members to obtain outside State and Federal funding for repairs and modification for co-owned facilities and for damages sustained beyond normal SWP operations.
Business Processes	
Budgets	Monitor and promote DWR's development and management of an SWP budget to minimize annual variances and optimize reasonable revenue requirements • Process of Affordability Project (Forecast Budget Years 1-3) • Monitor DWR's Positions Budget Change Proposals
Financial Projections	Monitor and promote DWR's analysis, development, and management of SWP's cost trends to maximize operational readiness at an optimal cost level ensuring long-term affordability • Forecast Operations and Maintenance and Variable projections • Process of Affordability Project (20-Year Forecast)
Financial Resources, Revenue Requirements, and Investments	Monitor and assess DWR's State Water Project financial performance regarding operational goals, budgets, financial targets, and forecasts to maximize use of available revenues and optimize determination of revenue requirements. • Contract Extension Amendment including cost compression • Audit-Finance Committee Roadmap including Statement of Charges Workshops
Energy	
Senate Bill No. 49 (Energy: Appliance Standards and SWP Assessment) Report	Collaborate with DWR to brief stakeholders on the content of the report and advocate for appropriate sources of funding for identified tracks.
Energy Roadmap	Co-develop with DWR a strategic plan known as the "Energy Roadmap" to develop energy policy principles for SWP investment and operational strategies.
Science	
Endangered Species Act (ESA), California Endangered Species Act (CESA), and WQCP Environmental Compliance	Collaborate with DWR to improve the Environmental Science Workgroup to facilitate planning and implementation of required habitat, mitigation, and monitoring. • Work with DWR to hold Environmental Coordination Committee meetings at least quarterly and develop requested information relative to costs and efficacy of required monitoring and other actions. • Engage the Environmental Science Work Group and hold meetings at least quarterly. • Work towards defining requirement offramps for science elements and seek permit amendments. • Ensure costs are split equitably with the United States Bureau of Reclamation (USBR).
Outreach	
Position Awareness	Proactively drive SWC messaging and legislative positions to the media, key stakeholders, legislators, and regulatory agencies to elevate the organization's position on priority issues.
SWC Management	
Accounting	Oversee all financial and accounting operations. Establish financial policies, procedures, controls, and reporting systems to ensure the accuracy and integrity of financial data.
Treasury	Ensure SWC retains adequate liquidity to meet the needs of its primary business operations and respond to organizational threats, as needed.

Water Planning and Stewardship Committee

Authorize Payments Totaling $3.75 million to State Water Contractors

Item 7-12

August 15, 2022

Background Information

State Water Contractors

Established 1982

- 27 Members
  - 22 Urban contractors
  - 4 Agriculture contractors
  - 1 Urban and agricultural contractors
- 9 Board members

Background Information

State Water Contractors

Organization

- Focus on policy, advocacy, and legal issues and project implementation
  - Pursue reliable and cost-effective management of the State Water Project (SWP)
  - Unified voice on SWP issues
  - Provide legal support

Background Information

State Water Contractors

Major Activities in FY 2021/22

- Drought planning
- Delta Conveyance Project
- Cost affordability
- Energy roadmap

Background Information

State Water Contractors

Major Initiatives in FY 2022/23

- Drought planning
- Delta Conveyance Project
- Cost affordability
- Infrastructure reliability and safety

Metropolitan's Payment to State Water Contractors

	MWD $	Basis
Dues Fund $3.73M	$1.70M	Table A and water delivery
Bay-Delta Fund $3.50M	$1.11M	Table A with credit for staff contributions
Delta Conveyance Project Fund $0.84M	$0.45M	Presumed participation in project
Energy Fund $0.35M	$0.23M	Energy use
Municipal Water Quality Investigation	$0.26M*	Table A of participating contractors

* Based on MWD's FY 2022/23 budget

Summary

- Important organization that provides support and advocacy for the State Water Contractors
- Requested payment authorization amounts are less than budgeted
  - SWC - $3.75 million
  - MWD's approved budget - $4.07
- Board approved by two-thirds vote required

Board Options

- **Option #1**

  By a two-thirds vote, authorize the General Manager to make payments of up to $3.75 million to the State Water Contractors for FY 2022/23.

- **Option #2**

  Do not authorize the General Manager to make a payment to the State Water Contractors for FY 2022/23.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

8/16/2022 Board Meeting

7-13

Subject

Adopt resolution affirming Metropolitan's call to action and commitment to regional reliability for all member agencies; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The Metropolitan Water District of Southern California endeavors to provide an adequate and reliable supply of high-quality water to meet the region's present and future needs in an environmentally and economically responsible way. As an example from 1930, Metropolitan's first Board Chair, W.P. Whitsett, provided a guiding principle for developing regional water supply reliability: "Whatever is done should be done for the benefit of the whole, and whatever is done for the benefit of the whole should be shared by all the parts."

Nearly a century after those aspirational words, a record-breaking drought has descended on the Southwest, and Southern California's water reliability is in crisis. This year, supply from the State Water Project (SWP) was cut to 5 percent of Metropolitan's total allocation for the second consecutive year—resulting in a 3-year water supply substantially below the California Department of Water Resources' worst-case projection. These conditions starkly highlight an infrastructure and water supply vulnerability that must now be addressed. Simply put, there is not enough pipeline connectivity or operational flexibility for imported supply and existing regional storage to meet the needs of six member agencies with a combined population greater than six million.

Because of this supply shortage and limits to its infrastructure, Metropolitan cannot provide equivalent supply reliability from one corner of the service area to another. In response, Metropolitan's Board declared a water shortage emergency and imposed a water conservation program in April of this year for the six SWP-dependent agencies. The impacted agencies include Calleguas Municipal Water District, Inland Empire Utilities Agency (IEUA), Las Virgenes Municipal Water District, the City of Los Angeles, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District.

These six SWP-dependent agencies have limited connection to Metropolitan's existing infrastructure, storage, and supplies. This constraint forced them to take mandatory and painful water supply cuts from their expected SWP use by an average of 35 percent—with some facing reductions up to 73 percent. If these agencies cannot limit their use of Metropolitan's supply from the SWP, then they face stiff volumetric penalties of $2,000 per acre-foot (AF) or the first-ever total ban on outdoor irrigation. Meanwhile, under statewide regulation, the 20 member agencies outside of this area must implement demand-reduction actions under Level 2 of their Water Shortage Contingency Plans. These actions are locally determined to achieve only a 10 to 20 percent water reduction (without volumetric penalties).

This disparity is unacceptable to Metropolitan and its member agencies. By adopting the proposed Resolution in Attachment 1, the Board would prioritize a policy to provide 100 percent and equitable reliability to all member agencies. Metropolitan would thus commit to taking all necessary actions to give the SWP-dependent member agencies a level of infrastructure and water supply reliability equivalent to that of Metropolitan's other member agencies. Equitable access will be achieved through the expedited and prioritized implementation of a balanced set of projects and programs that improve existing infrastructure, imported and local supplies, and demand management.

Details

Problem Statement

Given the overlapping effects of infrastructure and water supply constraints, Metropolitan staff, in coordination with the SWP-dependent agencies, collectively worked to describe the current water reliability crisis. The joint problem statement follows:

> ***Due to limited infrastructure, Metropolitan cannot provide the SWP-dependent agencies equitable access to water supply and storage assets during severe droughts.***

Simply put, there is not enough pipeline connectivity and operational flexibility between imported supplies and storage assets and not enough water resource diversity for Metropolitan to equitably satisfy the needs of all member agencies. The following sections describe the limits of Metropolitan's existing infrastructure, the current water supply conditions, the impacts to the member agencies, and the existing policy background which drives the need for further action.

Infrastructure Condition

In normal years, Metropolitan serves the SWP-dependent areas from two different branches of the California Aqueduct. The East Branch from Silverwood Lake feeds IEUA, Three Valleys, and Upper San Gabriel Valley. In contrast, Calleguas, Las Virgenes, and Los Angeles are served predominantly by the West Branch from Castaic Lake. These six agencies are referred to as "SWP-dependent" because they rely on either an annual allocation from DWR or on previously stored SWP supplies.

Importantly, infrastructure constraints prevent these agencies from accessing sufficient supply from the Colorado River Aqueduct, or from storage in Diamond Valley Lake or Lake Mead.[1] On the western side, Calleguas, Las Virgenes, and Los Angeles can access relatively small amounts of Colorado River or stored supplies through the Greg Avenue facility, a 50 cubic feet per second (cfs) pumping plant that lifts water into the East Valley Feeder and moves it northwest. By comparison, the total demands of these westside agencies can be 14 times more (requiring approximately 700 cfs on a short-term basis) from the SWP system (if available).

A similar condition exists on the eastern portion of the SWP-dependent area. For IEUA, Three Valleys, and Upper San Gabriel Valley, the Rialto Pipeline can carry about 600 cfs from the Devil Canyon facility downstream of Silverwood Lake. No Colorado River or stored supplies can be delivered to these agencies via the Rialto Pipeline, although they have limited access to other feeders carrying Colorado River supplies.

The infrastructure constraints seen by these six agencies prompted the Board to authorize various projects to improve access. In December 2021, the Board amended the existing Capital Investment Plan (CIP) to start water supply reliability improvements in the Rialto Pipeline service area.[2] Specifically, the action authorized work to expand delivery of alternative supplies from Diamond Valley Lake and possibly the Colorado River Aqueduct to the eastern SWP-dependent area, thus preserving the saved SWP supply for the west side.

In February 2022, the Board amended the CIP to include planning and implementation of possible infrastructure improvements for west side reliability. This action authorized preliminary investigations including a feasibility study, hydraulic modeling, and developing a conceptual suite of options to improve supply reliability. These projects include expanded Greg Avenue Pumping and new pumping facilities along the Sepulveda Feeder to push Colorado River water north from the central pool into the western area. In total, up to 150 cfs of additional capacity were targeted in this first set of west-side CIP projects. Further studies will evaluate other potential conveyance projects to move additional supply into the west side.

Metropolitan and its member agencies are currently engaged in a collaborative effort to identify additional infrastructure and supply projects that can improve reliability for the SWP-dependent areas. Some ideas are short term, while others will come to fruition only after a decade or more. Conceptual designs are fast-tracked

[1] At the beginning of 2022, Metropolitan had 2.0 million AF of storage in Lake Mead Intentionally Created Surplus and in Diamond Valley Lake, Lake Mathews, and Lake Skinner.

[2] These projects, and preliminary feasibility work for a new project for westside pump stations, were approved as part of the current biennium budget.

whenever a project appears to provide a near-term solution with few downsides. Initial portfolios of these projects will be presented to the Board in September 2022. Staff will seek Board approval for one of the portfolios and for associated implementation actions in February 2023. The portfolio evaluation will include technical studies supporting their recommendation.

Water Supply Condition

Climate change—this century's growing crisis—plunged the Southwest into a "perfect drought"[3,4] not seen since the medieval age.[5] What is more, human-caused warming turned what otherwise would have been a bad drought into a catastrophic one. Since the early 1990s and through extensive resource planning and investment, Metropolitan mitigated the shock of "20th Century" droughts (i.e., droughts predicted by using 1922 – 2017 hydrology). Constructing the Diamond Valley Lake system, driving down per-capita water use by 40 percent, and investing heavily in local supplies all improved the regional capacity to withstand expected droughts.

Always fickle but occasionally abundant, the watersheds supplying the SWP system have long been uncertain. Water deliveries from the SWP have been impacted by both prolonged droughts and federally mandated pumping restrictions. In 2007, Federal Judge Oliver Wanger issued a decision that overturned a federal scientific study intended to protect Delta smelt in the Sacramento-San Joaquin Delta. This marked the beginning of a series of back-and-forth decisions by Judge Wanger and the Federal 9th Circuit Court of Appeals seeking to balance the needs of Delta smelt against the "significant effects on the human environment" from pumping restrictions. These actions reduced the amount of water exported from the Delta by the SWP and by the Central Valley Project (CVP). In drier years, as a combined result of State Water Resources Control Board (SWRCB) Decision 1641 and federal biological opinions, the Public Policy Institute of California estimated that Delta exports averaged about 1.5 million AF per year lower, for similar inflows, since 2008 as compared to 1995-2007.[6]

Today, the SWP watersheds have received well-below-average precipitation and runoff for three years in a row. This resulted in the lowest three-year combined deliveries of allocated water in the history of the SWP. In fact, SWP deliveries are currently 40 percent lower than the worst three-year period projected by DWR modeling as recently as 2020. Even with this reduced delivery, DWR and the U.S. Bureau of Reclamation still sought a series of Temporary Urgency Change Petitions (TUCPs) to change water flow or facility operations to move water through the Delta.[7]

The most recent Integrated Water Resource Plan (IRP) Assessment[8] expanded on prior planning efforts and developed scenarios to pre-experience four plausible futures we might see through mid-century. These scenarios included significant erosion of supply from both the SWP and the Colorado River. This board-adopted assessment called for enhanced access to core supplies and storage, and to make new storage accessible to the SWP-dependent areas. Unfortunately, the challenging future envisioned by the IRP scenarios arrived all too early. This adds urgency to the need for a concerted response now.

Impact on Member Agencies

During the last major drought in 2012-2016, the Board implemented an updated Water Supply Allocation Plan[9] (WSAP) to manage shortages. The WSAP established a baseline use for all member agencies, determined regional shortage levels, and imposed a surcharge for water use above a predetermined allotment by agency. However, the WSAP was not designed or intended for the circumstances experienced during the current drought emergency.

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[3] MacDonald, G., K. Kremenetski and H. Hidalgo (2008). Southern California and the perfect drought: Simultaneous prolonged drought in southern California and the Sacramento and Colorado River systems..
[4] Woodhouse, C., D. Meko and E. Bigio (2020). A long view of Southern California water supply: Perfect droughts revisited.
[5] Williams, A., B. Cook and J. Smerdon (2022). Rapid intensification of the emerging southwestern North American megadrought in 2020–2021.
[6] Gartrell, G., J. Mount and E. Hanak (2022). Tracking where water goes in a changing Sacramento–San Joaquin Delta.
[7] SWRCB (2022). Order approving temporary urgency changes to water right license and permit terms relating to Delta water quality objectives.
[8] MWDSC (2022). Adopt the 2020 Integrated Water Resources Plan Needs Assessment.
[9] MWDSC (2014). Approve adjustments to Metropolitan's Water Supply Allocation Plan.

Rather than reconstructing the WSAP for rapidly developing emergency conditions, in April 2022, the Board (1) declared that a Water Shortage Emergency Condition existed in the SWP-dependent area; (2) adopted an Emergency Water Conservation Program to preserve available supply for the greatest public benefit by reducing non-essential water use; and (3) expressed support for the Governor's Executive Order N-7-22.[10]

As a result of the Board's April 2022 action, six member agencies serving about one-third of Southern California's population were required to mandate emergency drought restrictions or reduce use to specific volumetric limits by June 1, 2022, to stretch the severely limited SWP supply. The depth and urgency of the drought restrictions imposed by the Board through emergency action are painful, and they garnered substantial local and national media attention, public engagement, and the attention of elected officials.

This constraint forced the six agencies to take mandatory water supply cuts from their expected SWP use by an average of 35 percent—with some facing reductions up to 73 percent. If these agencies cannot limit their use of Metropolitan's supply from the SWP, then they face stiff volumetric penalties of $2,000 per AF or the first-ever total ban on outdoor irrigation which could dramatically change the outdoor landscape of local communities. The reductions in water use and the possibility of fines also exert financial pressure on the member agencies, as well as forced member agencies and their customers to draw down local supply reserves, at least in the shorter term.

For the other 20 member agencies in the service area, the SWRCB adopted an emergency regulation based on Governor Newsom's executive order. This regulation requires all urban water agencies to implement demand-reduction actions under Level 2 of their Water Shortage Contingency Plans. These actions are locally determined to achieve only a 10 to 20 percent water reduction (without volumetric penalties). Based on preliminary submittals of data from urban water agencies across the state, the California Urban Water Agencies (CUWA) estimates that demand reductions of 8-10 percent were met under this framework in June and July.

Because Metropolitan's supply and infrastructure capabilities were insufficient to meet even the human health and safety needs[11] of the SWP-dependent areas—much less than the normally-expected demands—Metropolitan sought additional supply from DWR. DWR granted Metropolitan's request for Human Health and Safety (HH&S) supply with conditions: Metropolitan must impose mandatory conservation and must also pay back any water borrowed for this purpose within five years. For 2022, this debt is expected to be 133,000 AF.

Finally, Metropolitan also sought supplemental HH&S supply from DWR to reduce the risk of wildfires in state-designated Very High Fire Hazard Safety Zones. Unfortunately, DWR denied Metropolitan's request and stated that "if landscaping within a defensible space cannot be reliably watered – due to conditions such as extreme drought – then dead and dying vegetation should be removed to reduce fire risk." Thus, the inability to connect these areas of high fire hazard to an adequate water supply may permanently change the character of the outdoor landscape (even if the landscape otherwise used water efficiently).

Policy and Reliability Foundation

Metropolitan has long endeavored to provide for the current and future needs of its member agencies and the communities they serve. Some of Metropolitan's historical policies supporting this objective include:

1. Metropolitan's enabling legislation provided broad powers for "developing, storing, and distributing water for domestic and municipal purposes."
2. In 1931, Metropolitan policy established, "Neither surface nor subsurface storage shall be created to the advantage of any area within the limits of the District, or elsewhere, unless such storage is a necessary and economical part of the general engineering plans which may be accepted."[12] The development of Metropolitan's conveyance and distribution infrastructure thus focused on this approach.
3. In 1967, and in response to the expanding needs of the member agencies, Metropolitan's General Counsel offered that, "neither the Metropolitan Water District Act nor any other law provides or permits the existence of 'second-class' unit municipalities of the District, either by direct action or by indirect action

[10] Newsom, G. (2022). Executive Order N-7-22.
[11] The human health and safety needs are defined by SWRCB regulations and are set at 55 gallons per capita per day (gpcd).
[12] MWDSC (1931). Statement of Policy of The Metropolitan Water District of Southern California.

of the Board of Directors."[13] Metropolitan's intent was—through sufficient supply, storage, and distribution infrastructure—to meet the expected water demands of its member agencies.

4. In 1991, Metropolitan established its current mission to "provide the service area with adequate supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way."[14]

5. In 1996, Metropolitan adopted its first Integrated Water Resource Plan.[15] The IRP included an analysis of Metropolitan's projected Capital Improvement Program and water resource actions. The capital improvements were intended to provide the necessary infrastructure to achieve the water supply resource targets through regional storage, water quality, and system reliability improvements. The 1996 IRP also established targets for local resource development and demand management actions to improve reliability. A basic assumption of the 1996 IRP was that without substantial investment in the SWP, the lowest dry-year supplies available to Metropolitan by 2020 would be 154,000 AF—50 percent higher than available in 2021 and 2022. The adaptive IRP was subsequently updated in 2004, 2010, and 2015.

6. In 2008, Metropolitan's Board adopted a Water Supply Allocation Plan (WSAP) for use when regional shortages exist.[9] The WSAP was activated three times (2009, 2010, and 2015) to manage shortage conditions felt across the entire service area.

7. In 1988[16], 1996[17], and 2007[18], Metropolitan published system overview and integrated area studies. These studies were undertaken in large part to achieve this principle: "District facilities will be selected, sized, and located so that water from the Colorado River and the State Water Project may be delivered in the most effective and economical manner and in the best interests of the area taken as a whole."[16] In 2007, the Integrated Area Study acknowledged that "Metropolitan strives to treat all areas as equitably as possible although precise equality of service is not possible (e.g., there will always be geographic inequities)."[18] Equity was to be maximized by developing "sufficient system capacity to ensure the delivery of water identified in the IRP…"[19]

8. In 2022, Metropolitan adopted the 2020 Integrated Water Resources Plan Needs Assessment.[8] Although earlier studies also foreshadowed a reliability challenge,[20,21] this latest IRP assessment directly incorporated scenario planning to address wide-ranging uncertainties and to pre-experience alternative and plausible futures through 2045. The IRP assessment included numerous findings that called for enhanced accessibility to core supplies and storage, and also new storage accessible to the SWP-dependent areas. Unfortunately, the challenging future projected by the IRP scenarios and the other studies arrived early.

9. Also in 2022, the Board approved the General Manager's strategic priorities for the current biennial budget period. One of the five priorities (Adapt) led with the goal of providing each member agency with an equivalent level of water supply reliability through adaptive implementation of the IRP findings.[22]

Based on this brief review of the historical policy background, Metropolitan's clear intent was to provide equitable reliability across its service area through a balanced combination of infrastructure, storage, demand

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[13] MWDSC (1967). Report to Water Problems Committee on District Policy Re: Design and Use of Feeder Lines and Authorization of Service Connections.
[14] MWDSC (1991). Proposed Mission Statement.
[15] MWDSC (1995). Approval of the Integrated Resources Plan.
[16] MWDSC (1988). Distribution System Overview Study.
[17] MWDSC (1996). Southern California's Integrated Water Resources Plan.
[18] MWDSC (2007). Integrated Area Study.
[19] MWDSC (2007). Results of the Integrated Area Study planning process.
[20] Groves, D., E. Bloom, R. Lempert, J. Fischbach, J. Nevills and B. Goshi (2014). Developing Key Indicators for Adaptive Water Planning.
[21] Groves, D. and R. Lempert (2017). Evaluating the Robustness of Metropolitan's Integrated Resources Plan to Future Climate and Other Uncertainties. Santa Monica, Calif., RAND Corporation.
[22] MWDSC (2022). Approve the General Manager's Strategic Priorities.

management, and water supply programs. In the context of climate change, historical hydrology has proven an inadequate guide to supplies available from the State Water Project and the Colorado River.

Unfortunately, imported supply losses outstripped the ability of Metropolitan's portfolio to compensate. Further, Metropolitan could not provide equitable service as intended in the 2007 Integrated Area Study described in policy item no. 7 above. As such, the proposed resolution condenses the intent of this suite of historical policies, focuses on their urgency, and advances resiliency. New proposed policy statements include:

- ***All member agencies must receive equivalent water supply reliability through an interconnected and robust system of supplies, storage, and programs.***
- ***Metropolitan will reconfigure and expand its existing portfolio and infrastructure to provide sufficient access to the integrated system of water sources, conveyance and distribution, storage, and programs to achieve equivalent levels of reliability to all member agencies.***
- ***Metropolitan will eliminate disparate water supply reliability through a One Water integrated planning and implementation approach to manage finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.***[23]

Call to Action

Metropolitan commits to ensuring equitable access to supply and storage assets by building infrastructure, increasing local supply availability, expanding partnerships, and advancing water use efficiency. Metropolitan's Board of Directors, therefore, affirms a Call to Action and directs the General Manager, in collaboration with the member agencies, to:

- Drive a decision towards a portfolio of specific projects and programs to address the problem statement noted above. The selected portfolio must include infrastructure improvements to deliver available water supplies to the SWP-dependent areas. The portfolio must also be balanced through new storage and supply programs and local supply development and management.
- Bring the recommended portfolio and associated implementation plans forward for Board approval in February 2023. Board approval should include modifying the CIP to include the new projects.
- Reprioritize CIP projects, spending plans, and Board approvals as needed to expedite work on critical and time-sensitive elements to address the supply and infrastructure inequity.
- Utilize alternative project delivery methods such as design-build, progressive design-build, or the construction manager/general contractor to counteract the negative impacts of severe and ongoing drought and the continuing impacts of climate change.[24]
- Provide quarterly reports to the Board on the status of the drought emergency projects.

Further, the Board directs the General Manager to take on these actions through a One Water approach, with robust Board oversight through the implementation phase of the IRP. Four elements of action include:

1. Upgrade water infrastructure to ensure equitable access to supply and storage assets.
2. Increase long-term water savings through water use efficiency and the transforming of non-functional turfgrass into a more appropriate Southern California landscape.
3. Advance development of local supplies for recycled water, groundwater recovery, stormwater capture, and desalination.

[23] Paulson, C., W. Broley and L. Shephens (2017). Blueprint for One Water.
[24] This call to action is contingent on the passage of California Assembly Bill No. 1845 (Calderon; D-Whittier).

4. Align imported supply planning and actions for the full potential impacts of climate change, using the best available science. These actions include stabilizing those supplies through conveyance improvements, storage infrastructure and programs, water-loss prevention, and voluntary transfers.

Metropolitan recognizes that although the current drought emergency may seemingly ease in the future with one or two wet years, the possibility of recurrent and severe droughts cannot be ignored. The resolution establishes that the Board intends staff to pursue these improvements until the clear-and-present infrastructure problem is resolved.

Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52481, dated August 17, 2021, the Board adopted a resolution which declared a "Condition 2 – Water Supply Alert."

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

By Minute Item 52626, dated December 14, 2021, the Board amended the CIP to include water supply reliability improvements in the Rialto Pipeline service area.

By Minute Item 52703 dated February 8, 2022, the Board amended the CIP to include water supply reliability for the western service area.

By Minute Item 52802, dated April 12, 2022, the Board declared a Water Shortage Emergency Condition, adopted an Emergency Water Conservation Program, and expressed support for the Governor's Executive Order N-7-22.

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 it involves continuing administrative activities, such as general policy and procedure making, which will not cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not defined as a project under CEQA because it involves organizational or administrative activities of governments that will not result in direct or indirect physical changes in the environment (Section 15378(b)(5) of the State CEQA Guidelines).

Metropolitan, as the Lead Agency, will be responsible for complying with the requirements of CEQA and the State CEQA Guidelines for any future project related to this resolution prior to approval of such project. As specific projects are proposed, Metropolitan staff will conduct CEQA review as applicable and prepare the appropriate environmental documentation for each project.

CEQA determination for Option #2:

None required

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the Resolution shown in **Attachment 1** committing to regional reliability for all member agencies.

Fiscal Impact: Unknown but significant expense to add new infrastructure and water supply programs to ensure equitable reliability across the service area.

Business Analysis: Adopting the resolution would set a course to ensure each member agency can access the regional water supply benefits intended for all.

Option #2

Modify the Resolution in **Attachment 1** to expand or limit the direction to the General Manager to address the inequitable access to water supply and storage assets.

Fiscal Impact: Unknown fiscal impact

Business Analysis: Adjusting the proposed resolution may accelerate or slow Metropolitan's activities to address current conditions.

Option #3

Do not adopt the Resolution in **Attachment 1**

Fiscal Impact: Unknown fiscal impact of water shortage

Business Analysis: If the resolution were not adopted, Metropolitan staff would continue to seek reliability improvements under existing policy and direction.

Staff Recommendation

Option #1

Brad Coffey 8/8/2022

Brad Coffey *Date*
Manager, Water Resource Management

8/9/2022

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Resolution of the Board of Directors of the Metropolitan Water District of Southern California Affirming a Call to Action and a Commitment to Regional Reliability for All Member Agencies

Ref# wrm12687181

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

**AFFIRMING A CALL TO ACTION AND A
COMMITMENT TO REGIONAL RELIABILITY
FOR ALL MEMBER AGENCIES**

1) **WHEREAS, Metropolitan seeks to provide water supply reliability to its Member Agencies.**

   a) Metropolitan's enabling legislation provides broad powers for "developing, storing, and distributing water for domestic and municipal purposes."

   b) The Board in 1931 established, "Neither surface nor subsurface storage shall be created to the advantage of any area within the limits of the District, or elsewhere, unless such storage is a necessary and economical part of the general engineering plans which may be accepted."

   c) The Board in 1991 established its current mission to "provide the service area with adequate supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way."

   d) The Board in 1996 adopted its first in a series of Integrated Water Resource Plans (IRPs) to identify infrastructure and supply programs to achieve 100 percent reliability.

   e) The Board in 2008 adopted a water supply allocation plan (WSAP) for use when regional shortages exist to manage shortage conditions felt across the entire service area.

2) **WHEREAS, Metropolitan's infrastructure today cannot provide equivalent water supply reliability to all Member Agencies.**

   a) Metropolitan's distribution system was designed decades ago to operate by gravity and to serve large portions of the service area from a single supply system.

   b) Past reliability efforts focused largely on increasing supply availability rather than connecting member agency demand to multiple imported sources

   c) Infrastructure constraints prevent the State Water Project (SWP)-dependent agencies from accessing sufficient amounts of supply from the Colorado River Aqueduct, or from storage in Diamond Valley Lake or Lake Mead

   d) Metropolitan's actions to operate existing infrastructure to distribute water across the service area, such as the rehabilitation of the Greg Avenue pumping plant, can only meet a small portion of SWP dependent-area needs.

3) **WHEREAS, infrastructure constraints created substantial and disparate impacts between Member Agencies.**

   a) Under the Emergency Water Conservation Program, six out of 26 member agencies, serving about one-third of Southern California's population, were required to severely constrain outdoor water use or comply with strict volumetric limits beginning on June 1, 2022.

   b) These affected member agencies must cut their use of Metropolitan's SWP supply by up to 73 percent, or face volumetric penalties of $2,000 per acre-foot or a first-ever total ban on outdoor irrigation.

c) Meanwhile, other member agencies face lesser requirements under statewide regulation to implement demand reductions under Level 2 of their Water Shortage Contingency Plans, locally determined to achieve up to 20 percent water use reduction, and without volumetric penalties.

4) WHEREAS, Severe drought curtailed Metropolitan's State Water Project Supplies.

a) Beginning in water year 2020 (October 1, 2019, to September 30, 2020), the watersheds supplying the California State Water Project (SWP) received below-average precipitation. The California Department of Water Resources (DWR) classified water years 2020 - 2022 as dry or critically dry.

b) The three-year sequence of water years 2020 - 2022 (October 1, 2019, through September 30, 2022) is projected to be the driest on record in California for statewide precipitation. Precipitation in Northern California during the three months from January through March 2022 was the driest on record for that region.

c) On March 18, 2022, DWR reduced the SWP Table A allocation for 2022 from 15 to only five percent of contract amounts. Table A allocations for 2020 and 2021 were 20 and five percent, respectively. The last three years marks the lowest three-year combined deliveries of allocated water in the history of the SWP.

5) WHEREAS, Metropolitan and its Member Agencies have taken specific actions to preserve SWP supplies.

a) Metropolitan's member agencies have, where feasible, operated their systems to reduce dependency on Metropolitan's supply delivered through service connections fed from the SWP system.

b) On August 17, 2021, by Minute Item 52481, Metropolitan's Board adopted a resolution declaring a "Condition 2 – Water Supply Alert" to preserve Metropolitan's supply for the region.

c) On November 9, 2021, by Minute Item 52581, Metropolitan's Board adopted a resolution recognizing the statewide drought emergency, declaring specified emergency conditions to exist within portions of its service area, and calling on member agencies to take various actions to preserve Metropolitan's supply from the SWP.

d) On April 26, 2022, by Minute Item 52802, Metropolitan's Board adopted a resolution declaring a Water Shortage Emergency Condition and established an Emergency Water Conservation Program for member agencies within the SWP-Dependent Area.

6) WHEREAS, Metropolitan has sought additional water for the Human Health and Safety needs of the residents in the SWP-dependent areas.

a) Supply and infrastructure capabilities within the SWP Dependent Area became insufficient in 2022 to meet basic human health and safety needs, as defined by State Water Resources Control Board regulations and based on 55 gallons per capita per day.

b) Although DWR granted Metropolitan's request for additional supply for unmet Human Health and Safety water needs, this water comes under certain conditions: Metropolitan must impose mandatory conservation and must also repay any water borrowed for this purpose within five years.

7) AND WHEREAS, Metropolitan and the affected Member Agencies jointly agree on this problem statement:

a) Due to limited infrastructure, Metropolitan cannot provide the SWP-dependent member agencies equitable access to water supply and storage assets during severe droughts.

1) **NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of The Metropolitan Water District of Southern California hereby affirms the following:

   a) Southern California's water reliability is in crisis because of record-breaking drought and insufficient pipeline connectivity for imported supplies and existing regional storage to serve all member agencies.

   b) The disparity in water supply reliability between member agencies is unacceptable.

   c) Serving any member agency from only one supply source creates a long-term and unacceptable risk.

2) **BE IT FURTHER RESOLVED** that the Board intends to provide equitable reliability across the service area through a balanced combination of infrastructure, storage, demand management, and water supply programs. These three policy statements affirm this intent:

   a) All member agencies must receive equivalent water supply reliability through an interconnected and robust system of supplies, storage, and programs.

   b) Metropolitan will reconfigure and expand (1) its existing portfolio to provide sufficient access to the integrated system of water sources, conveyance and distribution, storage, and (2) programs to achieve equivalent levels of reliability to all member agencies.

   c) Metropolitan will eliminate disparate water supply reliability through a One Water integrated planning and implementation approach to manage finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.

3) **BE IT FURTHER RESOLVED** that the urgency of this inequity requires a Call to Action where the General Manager is directed to:

   a) Identify a portfolio of projects and programs, in coordination with the member agencies, to address the problem statement in this resolution. The selected portfolio must include infrastructure improvements to deliver available water supplies to the SWP-dependent areas. The portfolio must also be balanced through new storage and supply programs and local supply development and management.

   b) Bring a recommended portfolio and implementation plan for Board approval in February 2023.

   c) Reprioritize CIP projects and spending plans as needed to expedite work on critical and time-sensitive elements to address the supply and infrastructure inequity. If available, use alternative project delivery methods to deliver the projects.

   d) Provide quarterly reports on the status of the drought emergency projects.

4) **BE IT FURTHER RESOLVED** that the Board directs the General Manager to address these actions through a One Water approach with robust Board oversight through the implementation phase of the IRP. The cornerstone elements of the actions must include the following:

   a) Upgrade water infrastructure to ensure equitable access to supply and storage assets.

   b) Increase long-term water savings through water use efficiency and transformation of non-functional turfgrass into a more appropriate Southern California landscape.

   c) Advance development of local supplies for recycled water, groundwater recovery, stormwater capture, and desalination.

d) Align imported supply planning and actions for the full potential impacts of climate change, using the best available science. These actions include stabilizing those supplies through conveyance improvements, storage infrastructure and programs, water-loss prevention, and voluntary transfers.

5) **BE IT FURTHER RESOLVED** that the Board recognizes that the urgency of these improvements may appear to diminish when this present drought eases. The Board affirms that the General Manager must continue to pursue these infrastructure investments even if temporary relief is provided and the water supply conditions improve.

6) **BE IT FURTHER RESOLVED** that the General Manager is hereby directed to continue the actions and activities specified in Board Resolution 9313 (August 17, 2021), 9289 (November 9, 2021), and 9305 (April 26, 2002), except as expanded or limited herein.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California at its meeting held on Aug. 15, 2022.

_____

Secretary of the Board of Directors
of The Metropolitan Water District
of Southern California

Water Planning and Stewardship Committee

Call to Action & Commitment to Regional Reliability for All Member Agencies

Item 7-13

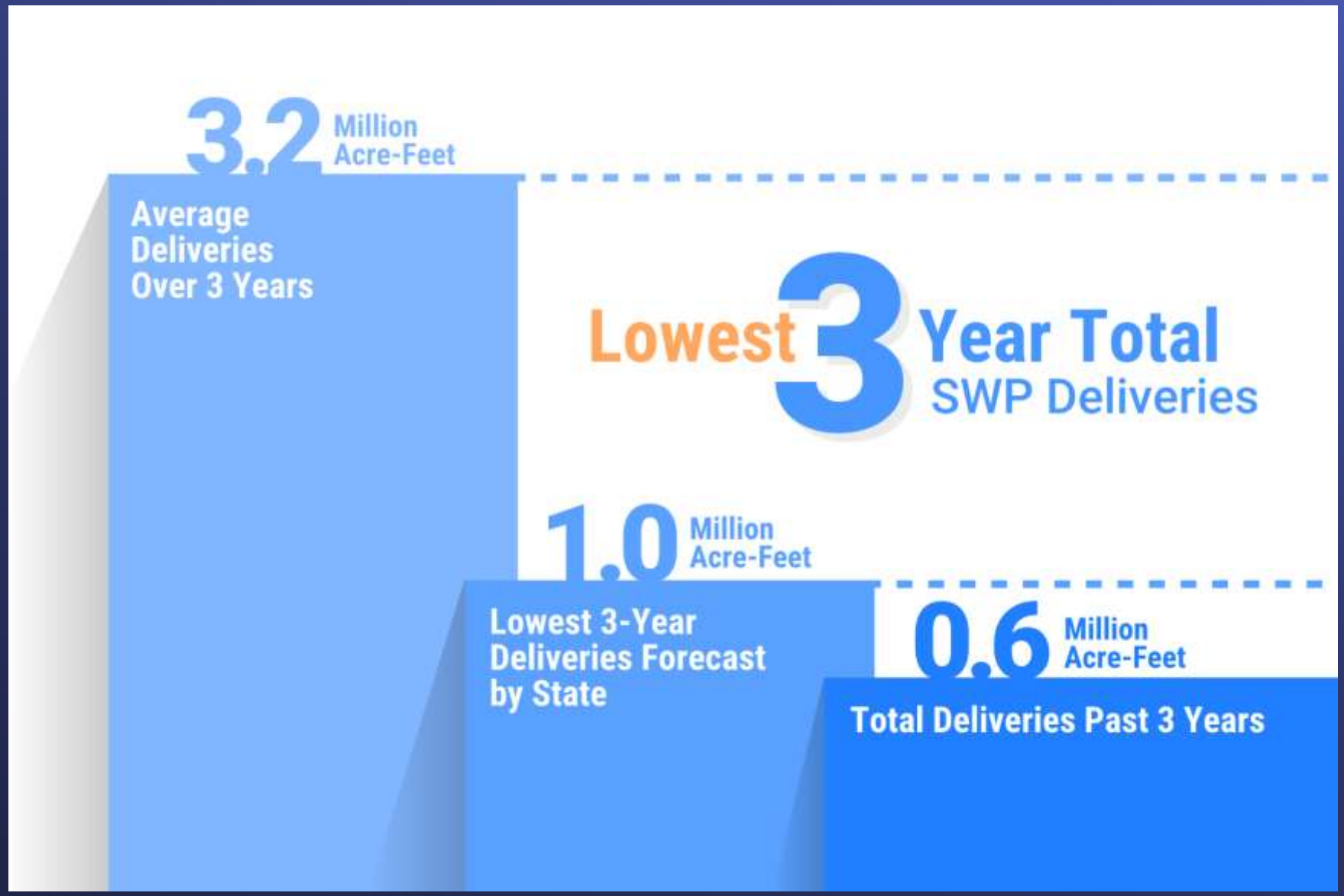
August 15, 2022

Today's Board Action

Call to Action & Commitment to Regional Reliability for All Member Agencies

- Adopt resolution declaring
  - Southern California's water reliability crisis
  - Intent to provide equitable reliability through three policy statements
  - Urgency of action
  - Needed elements of the solution

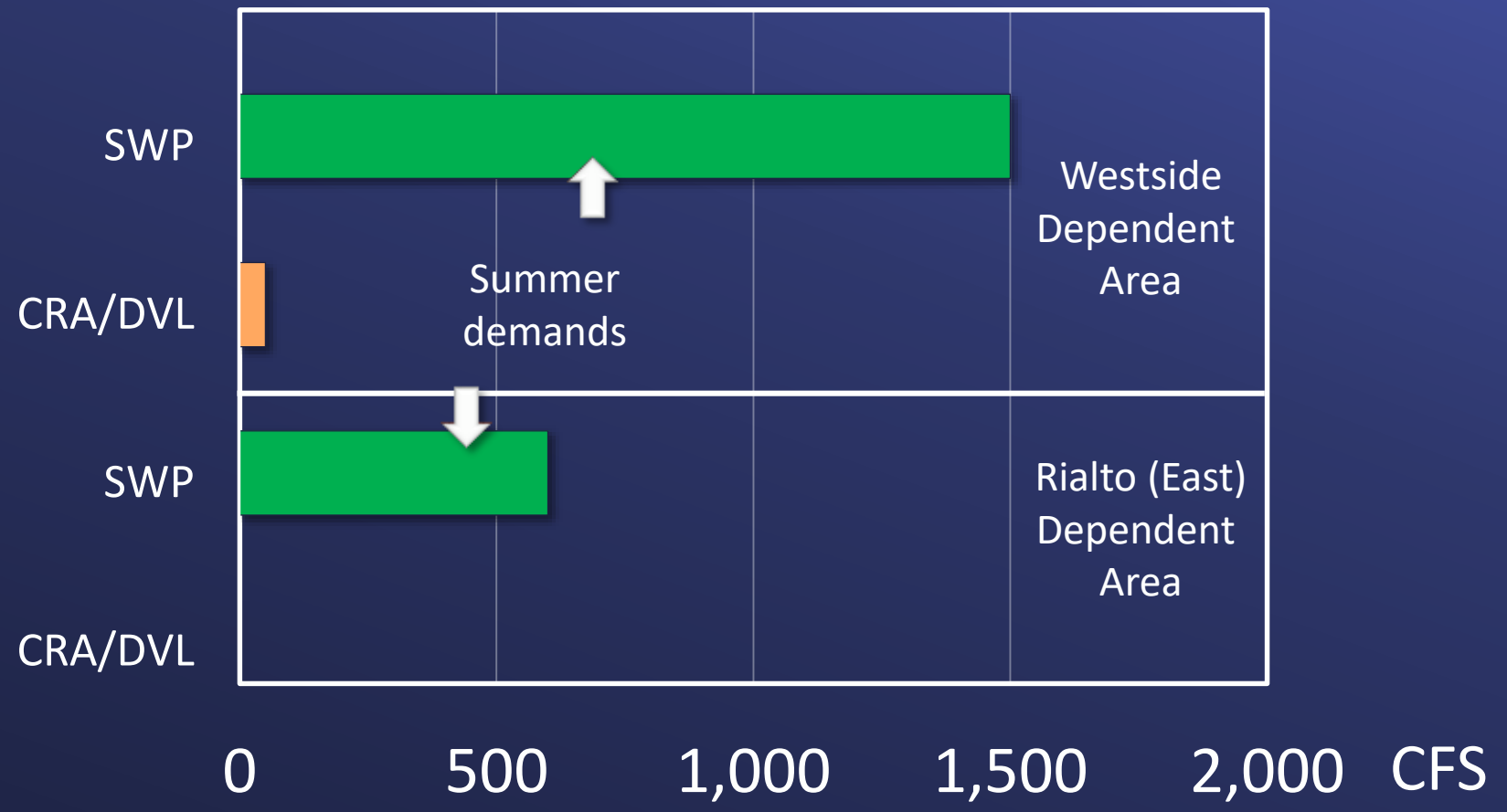
Severe Drought Depleted Water Supply



Existing infrastructure unable to connect supply/storage and demand

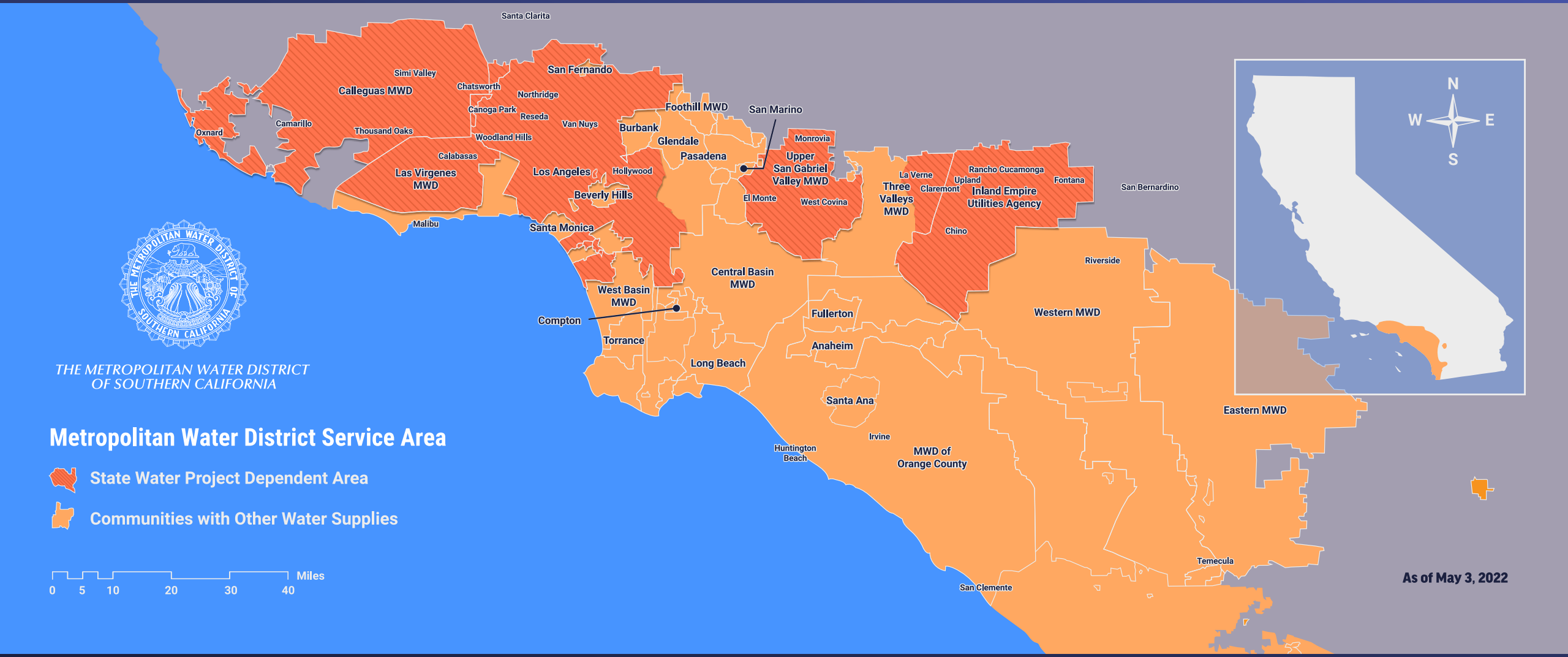
Relative Flow Capacity from SWP or Colorado River/DVL System

Infrastructure limits reliability when calling upon Colorado River/ Diamond Valley Lake

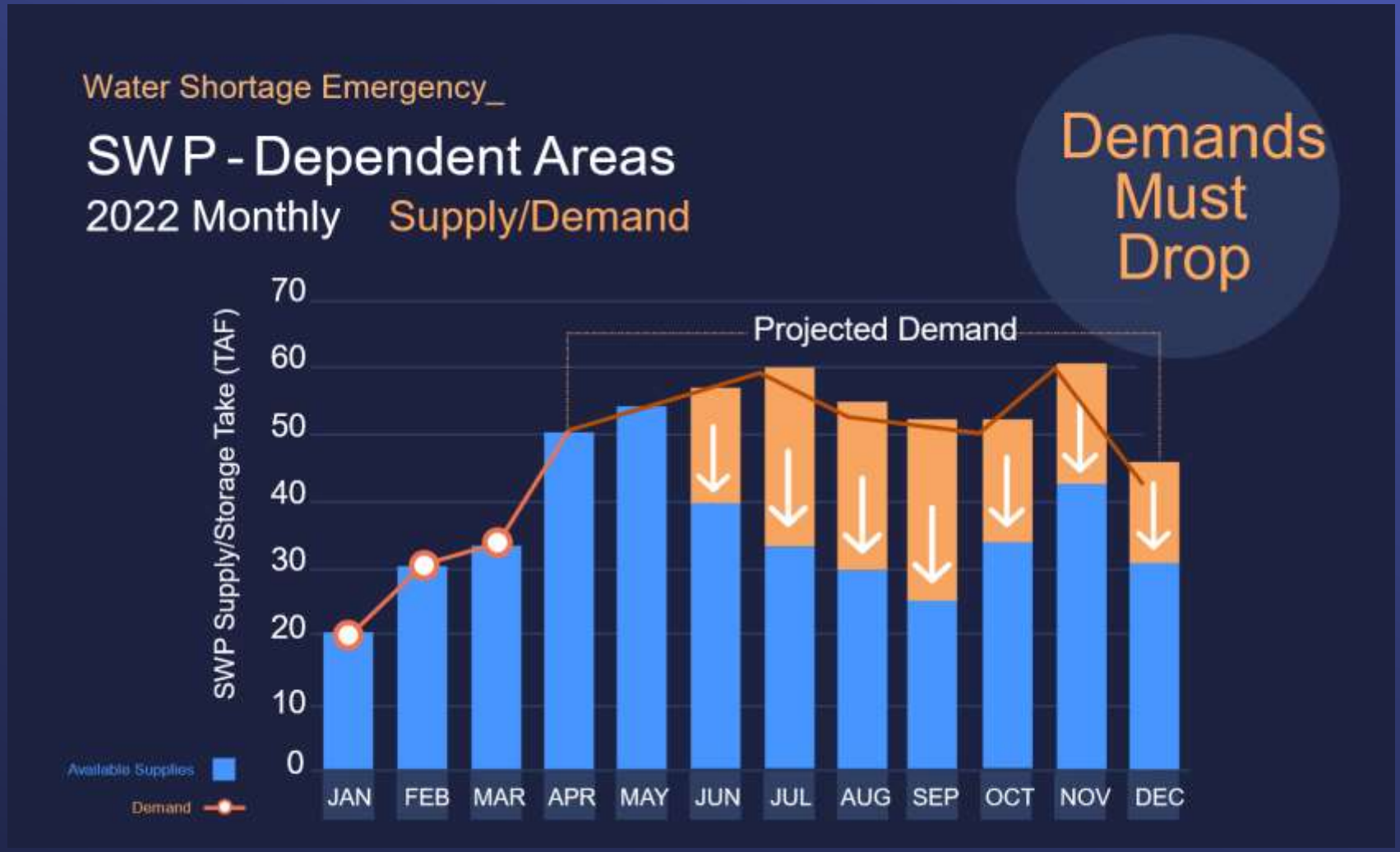


Existing infrastructure unable to connect supply/storage and demand

Supply Constrained in 2022 for SWP Dependent Area



SWP-dependent areas taking painful cuts, as high as 73%



Problem in Context

- Six agencies, serving six million people must cut their use of SWP by up to 73% (35% on average)
- Mandatory and painful water restrictions required with $2,000/AF penalties or total ban of outdoor watering
- Other areas face lesser requirements under statewide regulation
- This disparity is unacceptable

Call to Action & Commitment to Regional Reliability

Regional Reliability in Crisis

"Whatever is done should be done for the benefit of the whole and whatever is done for the benefit of the whole should be shared by all the parts."

Weymouth Mulholland Whitsett

Board Chair W.P. Whitsett
(Present Day Club, Riverside, 1930)

Problem Statement

Due to limited infrastructure, Metropolitan cannot provide the SWP-dependent agencies equitable access to water supply and storage assets during severe droughts.

Policy Background

- 1928 Broad powers for developing, storing, and distributing water
- 1931 No advantage to any area
- 1967 No "second-class" municipalities
- 1991 Mission statement
- 1996, 2004, 2010, 2015 Integrated Water Resources Plan
- 1988, 1996, 2007 System overview and integrated area studies
- 2008 Water Supply Allocation Plan
- 2022 IRP Needs Assessment, General Manager's Strategic Priorities

Policy Background

Metropolitan's clear intent was to provide **equitable reliability across its service area** through a **balanced combination** of infrastructure, storage, demand management, and water supply programs.

Policy Statements to crystalize intent and focus urgency

- Provide equivalent water supply reliability to all agencies through an interconnected and robust system of supplies, storage, and programs
- Reconfigure and expand existing portfolio and infrastructure to provide sufficient access to the integrated system and programs to achieve equivalent reliability for all member agencies
- Eliminate disparate water supply reliability through a One Water approach

Call to Action

- Drive a decision to a portfolio of projects and programs to address the problem
- Bring the portfolio and implementation plans forward for Board approval in February 2023
- Reprioritize to expedite critical work
- Utilize alternative project delivery methods
- Provide quarterly updates

Call to Action (cont.)

Action needed in four main areas

- Upgrade infrastructure to ensure equitable access to supply and storage assets
- Increase long-term water savings through water use efficiency and removal of non-functional turf
- Advance development of local supplies
- Align imported supply planning and actions for the full potential impacts of climate change

Board Options

Option #1

- Adopt the Resolution committing to regional reliability for all member agencies

Option #2

- Modify the Resolution to expand or limit the direction to the General Manager to address the inequitable access to water supply and storage assets

Option #3

- Do not adopt the Resolution

Board Options

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

8/15/2022 Board Meeting

9-2

Subject

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

Executive Summary

At the April 2021 Bay-Delta Committee meeting, staff was requested to provide a review of Metropolitan's Bay-Delta Policies. Metropolitan's overarching Bay-Delta Policies were last updated in 2006, with additional policy actions that occurred in the following few years regarding Delta Action Plan, Conveyance Criteria, Governance, and other policy areas (see description of these developments below). Since that time many significant factors have arisen related to statewide water resources management, including changed conditions in the Bay-Delta region and throughout Metropolitan's service area. Staff went through an extensive internal process to review and consolidate the existing Bay-Delta Policies and develop a draft Bay-Delta Policy Framework to facilitate discussion and input from the Board. Based on board feedback, staff have further revised the draft Bay-Delta Policy Framework into three policy objectives and nine policy principles that restate existing policy and include key updates based on emerging trends. This information letter provides an overview of existing Bay-Delta Policies and the process to consolidate, review and restate the Bay-Delta Policies based on Board feedback to date. Staff is seeking additional Board feedback regarding the restated Bay-Delta Policies in preparation for a board action in fall 2022 described in the information letter below.

Details

Since the adoption of Metropolitan's existing Bay-Delta Policies in the mid-1990s and early-to-mid 2000s, many significant factors have arisen related to statewide water resources management, including changed conditions in the Bay-Delta region and throughout Metropolitan's service area. In addition, the current policy structure, while comprehensive, is embodied in several board actions and can be challenging to reference and difficult for the Board, outside decision-makers, and the public to understand. The Board's future oversight and actions could be better supported by updating the Bay-Delta Policies to align with emerging trends, while clarifying and preserving topics that continue to be relevant to the Board's ongoing direction.

Background

Overview of Existing Bay-Delta Policies

Since the mid-1990s, Metropolitan's Board has taken a number of actions and adopted policy principles that support staff implementation of activities related to the Bay-Delta. These activities include day-to-day tasks, projects, policy and program development, program management, engagement with external parties, long-term planning, and key investments. Collectively, staff refer to this set of board policy actions as the "Bay-Delta Policies."

Pre 2006 – Bay-Delta Board actions and related policies: Key Metropolitan board-approved policies were adopted following the passage of the Central Valley Project Improvement Act (CVPIA) of 1992, which aimed to solve water conflicts by establishing a balance between requirements for fish and wildlife, agriculture, municipal, industrial and power interests.

***April 2006 – Board adoption of policy principles regarding long-term actions for the Sacramento-San Joaquin River Delta**.:* In recognition of then-recent events including Hurricane Katrina, the Jones Tract levee failure, declining fish species in the Delta, and renewed state efforts to protect the Delta, the Board adopted 13 policy principles that reflected the importance of the Delta to Metropolitan. These policy principles included a Delta Mission Statement.

Based on the four central themes, 13 specific policy principles were adopted to ensure long-term challenges in the Delta could be successfully met.

***June 2007 – Board support, in principle, of the proposed framework for Metropolitan's Delta Action Plan**:* Following Board adoption of the 13 policy principles for the Delta, development of Metropolitan's Delta Action Plan began. At its April 2007 Board of Directors Retreat, the Board discussed a proposed framework for directing Metropolitan's staff action on Delta-related issues.

September 2007 – Board adoption of criteria for conveyance options in implementation of the Long-Term Delta Action Plan: In September 2007, Metropolitan's Board adopted six key policy criteria for considering the water supply conveyance options being developed by the State of California: (1) provide water supply reliability; (2) improve export water quality; (3) allow flexible pumping operations in a dynamic fishery environment; (4) enhance the Delta ecosystem; (5) reduce seismic risks; and (6) reduce climate change risks.

August 2008 and January 2009 – Board approval of Delta Governance Principles and support of the Final Delta Vision Implementation Report: In August 2008, the Board adopted Delta Governance Principles in response to the governance strategy established by the Governor's Blue-Ribbon Task Force. The Governor's Blue-Ribbon Task Force adopted a Delta Vision Plan to describe an overarching vision for the future of the Delta, followed by a subsequent Delta Vision Strategic Plan.

Current Update Process

Overview of Process to Consolidate, Review, and Update the Bay-Delta Board Policies

At the April 2021 Bay-Delta Committee meeting, staff was directed to review and propose updates to Metropolitan's Bay-Delta policies. In November 2021, staff followed up with a presentation to the Bay-Delta Committee that provided a high-level overview of the history of Metropolitan's Bay-Delta Policies and a proposed process to review and consider updates to those policies.

Internal Review and Development Process

During the fall of 2021 and into early 2022, staff went through a process to review and consolidate the existing Bay-Delta actions and policies described above. Staff subject matter experts throughout Metropolitan provided input on key policy areas to identify changed conditions and emerging trends.

Based on that process, a background information document was developed and transmitted to the Water Planning and Stewardship committee prior to the April 2022 committee meeting to serve as background and a reference and to promote continued discussion. It provided an overview of existing Bay-Delta policies, a description of the policy update process, and proposed next steps. The background document also included two attachments that provided additional detailed information, a staff paper on emerging trends and a document summarizing feedback received in staff workshops.

Bay-Delta Review of Policy Principles – Session #1

The first review with the Board of the Bay-Delta Policy Principles was held at the May 2022 Water Planning and Stewardship Committee meeting (the item was deferred from the previous month due to Committee time constraints). Staff provided background on existing board-adopted Bay-Delta Policies and the internal staff review process. Staff then described the six key policy areas that were identified in the internal review and development process and how those key policy areas were used to develop a policy framework and draft policy principles. Further, staff provided examples of how the policy framework could be used in different policy applications. The following lists the components of the draft Bay-Delta Policy Framework that was presented by staff at that time, including six key policy areas and specific policy principles:

***Draft* Bay-Delta Policy Framework (initial version)**

Policy Area 1: Statewide Water Resources Management • Promote statewide climate adaptation solutions for water resources • Encourage statewide investments in regional water resources • Support long-term Delta sustainability and multi-benefit outcomes
Policy Area 2: Bay-Delta Science, Watershed Management, and Land Use • Provide for sustainable environmental protections • Consider all watershed elements: upper watershed and in-Delta • Implement and support sustainable Delta land uses
Policy Area 3: Bay-Delta Operational Resilience • Actively pursue actions to ensure flexible water operations • Ensure equitable and informed water resource management • Actively ensure water quality is protected
Policy Area 4: Bay-Delta Infrastructure Reliability • Pursue infrastructure improvements which address climate change • Support water supply actions and investments for seismic resiliency • Seek flexible operational and supply reliability infrastructure solutions
Policy Area 5: Community Investments and Partnerships • Pursue cost-effective and equitable financial investments • Support public engagement statewide and within Metropolitan's service area • Participate and develop collaborative partnerships
Policy Area 6: Statewide Water Resources Management Supports Metropolitan's One Water • Recognize the importance of SWP in supporting local supplies • Use storage and transfers to effectively manage Delta supplies • Pursue actions that improve reliability for SWP-dependent areas

Review of Policy Principles – Session #2

Staff received additional feedback at the second review of the Bay-Delta Policy Principles at the June 2022 Water Planning and Stewardship Committee meeting. Metropolitan staff also received feedback from member agencies through discussions with Metropolitan staff, member agency meetings, and requests for staff to provide updates at member agency board meetings. In response,

staff updated and consolidated the draft Bay-Delta Policy Framework into three Bay-Delta policy objectives, three policy areas, and nine specific policy principles below.

***Revised* Bay-Delta Policy Objectives and Framework**

Objective 1: Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach *Objective 2: Support Statewide and Regional Actions that Improve Bay-Delta Sustainability* *Objective 3: Address the Risks Associated with Climate Change*
Policy Area 1: Science and Watershed Management 1A Protect and restore aquatic species and habitats based on best available science 1B Partner in watershed-wide approaches to develop comprehensive solutions 1C Advance responsible stewardship of Metropolitan's Delta islands
Policy Area 2: Water Supply Reliability and Resilience 2A Protect water supply reliability and water quality 2B Invest in actions that provide seismic and climate resiliency 2C Seek flexible operations, water management actions, and infrastructure solutions
Policy Area 3: Partnerships and Cost-Effective Investments 3A Maintain and pursue cost-effective financial investments 3B Foster broad and inclusive engagement of Delta interests and beneficiaries 3C Promote innovative and multi-benefit initiatives

Input from the office of the General Manager, External Affairs, Water Resource Management, Real Estate, Finance, and Legal was also solicited and is reflected in this draft Bay-Delta Policy Objectives and Framework, which is attached to this board information letter (**Attachment 1**) along with an overview document (**Attachment 2**). The overview document summarizes how to navigate the framework, key descriptors of each element of the framework, and examples that illustrate how the policy principles might be applied.

Next Steps

Staff is soliciting feedback from the Committee this month for board action in Fall 2022. The revised Bay-Delta policy objectives and policy principles include key updates consistent with emerging trends: (1) strengthening policies as they relate to risks associated with climate change; (2) redefining cost-effective investments to advance partnerships and seek funding for both climate adaptation for water supply and public benefits; and (3) broadening and including engagement with Delta interests and beneficiaries. The forthcoming board action will provide the Board an option to adopt the restated Bay-Delta Policies (three policy objectives and nine policy principles) to supersede previous Bay-Delta Policies. Alternatively, an option will also be presented to accept and file the draft Bay-Delta Policies as a staff report, and staff will continue to operate under previous board-adopted policies and actions.

Policy

By Minute Item 41504, dated July 13, 1995, the Board adopted principles guiding development of an urban position on amendment of the Central Valley Project Improvement Act (P.L. 102-575).

By Minute Item 45753, dated May 11, 2004, and Minute Item 46637, dated April 11, 2006, the Board adopted a set of Delta policy principles to ensure a solid foundation for development of future Metropolitan positions and to provide guidance to Metropolitan staff.

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

By Minute Item 47232, dated September 11, 2007, the Board adopted criteria for support of conveyance options in implementation of a long-term Delta improvement plan.

By Minute Item 47605, dated August 19, 2008, the Board approved the Ad Hoc Subcommittee recommendations as outlined in the board letter.

By Minute Item 47769, dated January 13, 2009, the Board expressed a support position regarding the Final Delta Vision Implementation Report.

Fiscal Impact

Fiscal Impact: None

Stephen N. Arakawa 8/8/2022
Stephen N. Arakawa *Date*
Manager, Bay-Delta Initiatives

8/10/2022
Adel Hagekhalil *Date*
General Manager

Attachment 1 – Revised Bay-Delta Policy Objectives and Framework

Attachment 2 – Emerging Trends

Ref# eo12682561

Attachment 1: *Revised* Bay-Delta Policy Objectives and Framework

Overview

The *Revised* Bay-Delta Policy Objectives and Framework is a consolidation and restatement of existing Bay-Delta Policies; however, it also takes into consideration recent trends relevant to Metropolitan's interests. This document describes each of the three revised Bay-Delta Policy Objectives and Bay-Delta Framework (nine policy principles) with relevant examples listed under each of the nine policy principles.

The Bay-Delta Policy Objectives define Metropolitan's overarching goals to protect reliable, high quality water supplies in an environmentally sensitive manner, consistent with Metropolitan's Mission Statement. The Bay-Delta Framework includes nine policy principles intended to advance the Bay-Delta policy objectives. Once adopted, the Bay-Delta Policy Objectives and Framework collectively will guide Metropolitan staff and will inform future Board actions.

Revised Bay-Delta Policy Objectives		
Promote a Sustainable Bay-Delta Within Metropolitan's One Water Approach **Support Statewide and Regional Actions that Improve Bay-Delta Sustainability** **Address the Risks Associated with Climate Change**		
***Revised* Bay-Delta Policy Framework**		
Science and Watershed Management	**Water Supply Reliability and Resilience**	**Partnerships and Cost-Effective Investments**
Protect and restore aquatic species and habitats based on best available science	Protect water supply reliability and water quality	Maintain and pursue cost-effective financial investments
Partner in watershed-wide approaches to develop comprehensive solutions	Invest in actions that provide seismic and climate resiliency	Foster broad and inclusive engagement of Delta interests and beneficiaries
Advance responsible stewardship of Metropolitan's Delta islands	Seek flexible operations, water management actions, and infrastructure solutions	Promote innovative and multi-benefit initiatives

Bay-Delta Policy Objectives

Objective 1: Promote a Sustainable Bay-Delta Within Metropolitan's One Water Approach

Supplies from the Bay-Delta watershed are integral to implementing Metropolitan's One Water Approach, an integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs. Bay-Delta supplies are foundational to the One Water approach as they meet demands in Metropolitan's service area (including the SWP Dependent Area) and acts as source water for local supply projects such as water recycling and groundwater basin replenishment.

Objective 2: Support Statewide and Regional Actions that Improve Bay-Delta Sustainability

Ongoing statewide and regional investments in ecosystem restoration, flood control, water supplies. multi-benefit projects in the Bay-Delta, and upstream watersheds are essential to building and maintaining resilient water supplies from the Bay-Delta. Effective implementation of state policies related to reduced reliance, water use efficiency, the Sustainable Groundwater Management Act, and initiatives such as the governor's Water Resilience Portfolio will be essential. Likewise, additional funding and permitting efficiencies can help expedite regional and local supply development, and projects that supply ecologically beneficial flows in the Bay-Delta or Bay-Delta watershed.

Objective 3: Address the Risks Associated with Climate Change

Climate change is impacting California's water resources: sea levels are rising, snowpack is decreasing, and water temperatures are increasing. Droughts are expected to become more frequent and more severe, and storm intensities are expected to increase. These climate change trends are anticipated to continue, posing a prolonged threat to the Bay-Delta and Metropolitan's water supplies. An integrated federal, state, regional, and local approach to developing and managing water supply programs and projects is critical to managing for the future with climate change impacts that are occurring.

Bay-Delta Policy Framework

Policy Area 1: Science and Watershed Management

1A Protect and restore aquatic species and habitats based on best available science

Sustainable and resilient water supplies rely, in part, on the health of the Delta ecosystem. As populations of native aquatic wildlife continue to trend downwards, rigorous and peer reviewed science protects the environment and Metropolitan's water supply by supporting informed decision-making.

Examples include: Metropolitan staff authored papers on topics including Delta Smelt Habitat, Salmon Growth, and Delta Stressors, the Lower Yolo Tidal Marsh Restoration Project, and participation in the Collaborative Science and Adaptive Management Program and inter-agency consultations on coordinated long term operations of the State Water and Central Valley Projects.

1B Partner in watershed-wide approaches to develop comprehensive solutions

With much of the state's water supply originating in the mountains, the health and management of the upper watersheds are critically important to California's water quality and water supply.

Examples include: potential partnerships and opportunities in the upper watershed focused on the long-term potential for climate change adaptation (including adjustments for loss of snowpack), reduction in the impacts of variable precipitation patterns on runoff, and improvements in water quality and water temperature.

1C Advance responsible stewardship of Metropolitan's Delta islands

The Delta Islands provide a unique opportunity for research, innovation, and collaboration with other stakeholders to develop sustainable strategies for Delta land use and environmental stewardship. Staff is engaged in specific processes and opportunities for responsible long-term stewardship of Metropolitan's Delta islands properties. Further advancements on Metropolitan's Delta Islands would comport with both the Bay-Delta Policy Framework and the Board's adopted Climate Action Plan.

Examples include: levee enhancements that protect the freshwater pathways to the State Water Project south-Delta pumps, pilot projects and scientific investigations to evaluate strategies for carbon sequestration, floating organic marshes that can support sensitive fish species, sustainable agriculture that halts or reverses subsidence, experiments to improve measurement of water diversions and water use, compensatory mitigation, habitat restoration for native aquatic species, native fish species preservation, and reduction in stressors affecting state and federal listed fish species.

Policy Area 2: Water Supply Reliability and Resilience

2A Protect water supply reliability and water quality

Two of the core tenets of Metropolitan's mission statement are to provide reliable and high-quality water supplies to its service area. The Delta is a major pathway for the source of water for most of the state and the sustainability of Delta water supplies is a critical element of Southern California's water reliability. This reliability is protected through science-based regulatory frameworks, long term water supply planning, collaborative partnerships, and pursuing water supply infrastructure solutions.

Delta water quality should be protected for public health and managing salinity. Measures that reduce the salinity of Delta supplies will help meet regional salinity objectives of urban and agricultural agencies throughout California. This includes benefits to Metropolitan's service area to enhance management of Southern California groundwater basins and to develop additional recycled water.

Examples include: Water supply and quality initiatives including new Delta conveyance, Voluntary Agreements to implement State Water Resources Control Board Water Quality regulations, Delta Regional Monitoring Program, CV-SALTS, and Delta Nutrient Research Plan

2B Invest in actions that provide seismic and climate resiliency

Earthquakes in the Delta region, sea level rise and subsidence can result in levee failure and saltwater intrusion into the Delta from the San Francisco Bay and the ocean. Changing weather patterns will result in longer periods of drought and more intense storms and storm periods. Resiliency requires continued participation and investment in actions including flood emergency planning, levee improvements, water storage, and water supply management.

Examples include: the DWR/USACE Delta Flood Emergency Integration Plan, the Governor's Water Resilience Portfolio, and new storage and conveyance projects.

2C Seek flexible operations, water management actions, and infrastructure solutions

Current operations of the State Water Project and Central Valley Project facilities are subject to prescriptive flow and other regulatory standards. Metropolitan staff is working with partners to advance technology and monitoring that could be used to develop more effective water project operations that are protective of aquatic wildlife, with the support of new technological capabilities and better real-time information systems.

Examples include: Improved atmospheric river and runoff forecasting, forecast-informed reservoir operations, improved fish monitoring, including steelhead, artificial intelligence, modeling of aquatic wildlife behavior, improved rapid genetic testing of salvaged salmonids, and the use of true adaptive management and structured decision-making processes.

Policy Area 3: Partnerships and Cost-Effective Investments

3A Maintain and pursue cost-effective financial investments

Completion and maintenance of large multi-benefit water supply projects require partnership and multiple funding sources to be cost-effective. Advancing partnerships and seeking multiple funding sources can offset or reduce expenditures associated with climate change adaptation for water supply and other public benefits, which are instrumental to future Metropolitan water supply reliability.

Examples include: repair of California Aqueduct subsidence, new Delta conveyance, Sites Reservoir, Pure Water and other local and regional projects.

3B Foster broad and inclusive engagement of Delta interests and beneficiaries

The Bay-Delta is a lifeline to multiple entities with diverse interests including tribes, public water agencies, local, state and federal agencies, non-governmental organizations and agricultural interests. Engagement can yield new perspectives on Bay-Delta related issues and identify opportunities for collaboration.

Examples include: Engaging in the development of a Community Benefits Program for the Delta Conveyance Project, participating in the multi-interest Collaborative Science and Adaptive Management Program, opportunities for projects on Metropolitan's Delta Islands, participating in State Water Project Contractors, serving on the Delta Protection Commission Advisory Committee, participating in the Plumas Watershed Forum, and Sites Reservoir Committee and subcommittee engagement.

3C Promote innovative and multi-benefit initiatives

The Delta region is at the intersection of many social, political, environmental and climate related factors. As a result, Delta issues are significantly complex, with a significant degree of uncertainty given the range of physical and biological factors that are involved. Metropolitan recognizes that new technologies and approaches are needed to address current and future challenges in the Bay-Delta.

Examples include: Collaborative and innovative solutions including the use of structured decision making, environmental DNA to detect aquatic species, the Reorienting to Salmon Recovery effort, the Bouldin Island Levee Setback Project, and the Delta Smelt and Native Species Preservation Project.

Bay-Delta Policies Update Process

Attachment 2: Emerging Trends

Policy Objective 1: Promote a Sustainable Bay-Delta Within Metropolitan's One Water Approach

Local Resources Sustainability

SWP Interrelationship with Local Resources

Current Trends

Production from existing local groundwater, surface water, and Los Angeles Aqueduct supplies have decreased over the last decades. New recycled water, seawater desalination, and groundwater recovery local supply projects have proven difficult to implement due to permitting and regulatory requirements, technical complexities, and costs. The development of new local supply production has fallen short of the planning goals described in Metropolitan's Integrated Water Resources Plan (IRP). Shortfalls in local supply production and development put additional pressure on other local supplies and imported water sources. The importance of new local supplies is described in the 2020 IRP Regional Needs Assessment, as follows:

- Maintaining existing and developing new local supplies is critical in helping manage demands on Metropolitan, which increases sustainability and reduces dependency on imported supplies.
- Impacts to reliability occur if local supply assumptions are not achieved.
- Additional actions may be needed should existing and future local supply levels deviate from IRP assumptions.

Groundwater supplies meet around 30 percent of total retail demands in Metropolitan's service area. Since 2000, regional groundwater production has declined by about 25 percent. Groundwater production has decreased due to reductions in replenishment from imported sources, reductions in recharge from local precipitation, and outdoor irrigation, water quality regulations, and emerging contaminants. Currently there is about 5.5 million acre-feet of storage space in the region's groundwater basins. At the current rate of decline, the region would reach 7 million acre-feet of storage space, a critical threshold for reduced groundwater production, in the next few years.

Over the past 20 years, the region has made substantial gains in recycled water development. However, future recycled water projects face challenges due to the declining availability and quality of wastewater effluent as a result of effective water conservation measures. Large recycled water reuse projects are becoming more established in Metropolitan's service area. A future prospect for many of these programs is to produce water for direct potable reuse as well as indirect potable reuse (groundwater augmentation). A number of large reuse projects are either in the planning stages or have already been implemented:

- Metropolitan and Los Angeles County Sanitation Districts: Pure Water Southern California (150 mgd)

- Los Angeles Department of Water and Power: Operation Next (~175 mgd)
- City of San Diego: Pure Water Program (+30 mgd)
- Orange County Water District: Groundwater Replenishment System (130 mgd)

State Water Project (SWP) supplies play a critical role in supporting existing and new local supply production from groundwater and recycled water in Metropolitan's service area. Replenishment from imported sources and recycled water are needed to maintain groundwater basin health in the region. Due to groundwater basin plan objectives set by the Regional Water Quality Control Boards, many basins are only able to use SWP supplies for groundwater recharge without additional treatment. In addition, state and Regional Water Quality Control Board regulations dictate total dissolved solids standards for recycled water used for groundwater recharge and reservoir augmentation, as well as for other non-potable uses.

Importance to Metropolitan

Local supply production and imported SWP supplies from the Delta are intrinsically linked. Ensuring sufficient Delta supplies as source water is key to the success of large recycling projects and maintaining sustainable groundwater production in Metropolitan's service area. Groundwater is the largest source of local supply in the region, and large recycled water projects have great potential for improving reliability in the region. In turn, increased regional self-reliance and reduced reliance on the Delta are achieved through the continued sustainability and development of local supplies and conservation. In addition, demonstrating reduced reliance is key to ensuring new water supply projects like the Delta Conveyance Project can show consistency with the Delta Plan, a prerequisite to construction.

Metropolitan's Supply Portfolio and Operations

Storage and Transfers/Exchanges

Current Trends

Over the past decades, Metropolitan's storage programs and the transfer and exchange of water from willing partners have played an integral role in maintaining water supply reliability. The 2020 IRP Needs Assessment key findings highlights some of the important roles of storage:

- Storage is a vital component in maintaining reliability under current and future conditions.
- Expanding existing or developing new storage programs may be needed to help balance new core supply development in order to meet potential future shortages.
- Storage programs with even modest put/take capacities can help reduce the need for transfers

Metropolitan has developed a large regional storage portfolio that includes both dry-year and emergency storage capacity. Storage is a key component of Metropolitan's overall resource management strategy. Storage enables the capture of surplus water in normal and wet years so that it can be used to meet demands in dry years. Since the last drought period of 2012-2015, Metropolitan was able to increase its total storage reserves from a low point of less than a million acre-feet in 2015 to over 3 million acre-feet at the beginning of the current drought period. In 2021, withdrawals from storage of around 600 thousand acre-feet played a critical role in meeting demands under a 5 percent SWP Table A allocation.

In recent years, the water transfer market's ability to provide dry-year reliability has been uncertain. The water transfer market in recent dry and critically dry years has had limited supply and high prices, and therefore the water market should not be relied upon as the primary source of water during future droughts. However, water transfers and exchanges in average and above-average water years may prove to be both plentiful and affordable. Due to investments in storage and distribution system conveyance, Metropolitan has the capability to purchase transfers or exchange supplies in normal and wet years.

The main constraint to moving water through the Delta to Metropolitan's storage facilities continues to be regulatory constraints at the SWP's export facilities in the south Delta. With projects such as new Delta Conveyance and Sites Reservoir, Metropolitan's ability to capture and move water in wetter water years would be expected to increase. With the recent Water Management Amendment to the State Water Contract, SWP Contractors are increasingly able to engage in short term transfers and developing exchanges with others. Wetter year exchanges provide an effective tool for Metropolitan to take and store water in years where competition for transfers is low and previously stored water can be used in dry years. Transfers and exchanges can also help facilitate partnerships in local water supply projects such as regional recycling with outside entities of the region. Transfers and exchanges could be made within the SWP to generate environmental flows and in recognition of multiple benefits to the Delta or upper watershed, as well as dry-year reliability (e.g., Chino basin).

Importance to Metropolitan

Storage and transfers and exchanges are critical to the long-term sustainability and effective management of Metropolitan's water resources portfolio. SWP supplies, which are highly susceptible to varying hydrological conditions, provide water for storage in normal and wet years for use in dry years. A flexible water transfer approach that can take advantage of water when it is available will help to stabilize and build storage reserves; the combination of storage and transfers/exchanges work together to manage water supplies more efficiently between years and help reduce demands on the Delta in dry years.

SWP Dependent Areas

Current Trends

Metropolitan's distribution system is large and complex, supplies and demands are not evenly distributed across the system. Historically, there has been enough system flexibility to manage this uneven distribution between supplies and demands, however in the extreme drought year of 2021, with only a five percent SWP allocation, this flexibility was put to the test. The SWP Dependent Area is the portion of Metropolitan's system that is typically entirely dependent on SWP supplies. The 2020 IRP Regional Needs Assessment recognizes the importance of taking actions that address issues associated with SWP Dependent Areas.

- Vulnerabilities in the SWP Dependent Areas are more severe given reduced reliability of SWP supplies. Actions identified in the implementation phase must prioritize addressing the SWP Dependent Area's reliability challenges.
- New core supplies and new/or existing storage must first address and reach SWP Dependent Areas.

- System flexibility and distribution system investments can increase SWP Dependent Areas' access to existing core supplies and storage.
- Shortages on the Colorado River Aqueduct limit the effectiveness of system distribution improvements.

Metropolitan was able to meet all SWP Dependent Area demands in 2021 by implementing a number of actions and coordinating closely with the member agencies. The new DVL-to-Mills plant operation and the new Operational Shift Cost-Offset Program expanded system flexibility and made it possible to bring alternative supplies to SWP Dependent Areas. Metropolitan purchased transfers and increased the yield of SWP Banking Programs. Member agencies conserved consumptive demands and deferred replenishment deliveries. Supplies were also drawn from SWP Carryover storage in San Luis Reservoir (storage carried over from previous water year in San Luis Reservoir for Metropolitan's use) and Flexible Storage in Castaic Lake (SWP water in Castaic Lake for use within Metropolitan's service area) to meet any remaining needs.

In November 2021, Metropolitan's Board recognized a statewide drought emergency and declared emergency conditions within Metropolitan service area. The Board acknowledged the record dry conditions of 2020 and 2021, prepared for potential continued dry conditions into 2022, and called on member agencies in the SWP Dependent Area to reduce water demands through all reasonable means, including increasing conservation, local supply use, water-use efficiency, and drought-related limitations. In April 2022, Metropolitan's Board approved the framework of an Emergency Water Conservation Program effective June 1, to reduce demands and preserve SWP supplies in the dependent areas.

Importance to Metropolitan

In 2021, the total demand on Metropolitan for SWP Dependent Areas was 771,000 acre-feet, which accounted for almost half of the 1.57 million acre-feet of total demands. Metropolitan is committed to ensure all portions of the service area attain a high level of reliability.

Policy Objective 2: Support Statewide and Regional Actions that Improve Bay-Delta Sustainability

Bay-Delta Sustainability

Current Trends

With increasing water scarcity and more competition for limited water resources, sustainability and multiple benefit outcomes have become increasingly important in the Delta. Long-term sustainability of the Delta and water supply reliability are directly linked.

The State Water Resources Control Board (Water Board) is proposing mandatory cuts to water diversions to produce flows its staff believe will benefit the environment as part of the Water Quality Control Plan (WQCP) update. Regulatory approaches rarely provide multiple benefits because regulatory agencies' authority limits the range of potential actions. As an alternative, the water users are promoting the Voluntary Agreements, which are supporting sustainable and multiple benefit actions, enabling a larger range of management actions not available through regulation of diversions

alone, including habitat restoration. In March of 2022, a Memorandum of Understanding for the Voluntary Agreements was signed by 16 entities, including Metropolitan, State Water Contractors, the Department of Water Resources, and the United States Bureau of Reclamation. About 20 years ago, Metropolitan was involved in the Environmental Water Account, which made water available through water purchases for environmental purposes. The Voluntary Agreements would include an even more ambitious and comprehensive suite of measures, including purchases of water for environmental flows from willing sellers, improved science and monitoring, adaptive management, and multi-benefit habitat restoration projects through collaboration instead of top-down flow-only mandates.

However, there are structural hurdles to achieving multiple benefits. For example, ecosystem projects are difficult to complete due to challenges in obtaining permits and, where applicable, moving through the Delta Plan certification of consistency process, which increases project timelines and costs. There have been some efforts to improve permitting efficiency, including the Governor's initiatives: "Cutting the Green Tape", the Biodiversity Executive Order and the recent CEQA exemption for habitat projects, all of which should be coordinated and fast-tracked. Given recent challenges with the Lookout Slough Tidal Habitat Restoration and Flood Improvement Project, which took more than a year to certify consistency with the Delta Plan, the Delta Plan policies and certification appeal process should be re-evaluated to ensure timely implementation of ecosystem projects. Emphasis on functional flows and adaptive management continue to be themes for water management.

Importance to Metropolitan

Long-term Delta sustainability is essential to supporting Metropolitan's integrated regional planning and supply portfolio. SWP) supplies are used to replenish Metropolitan's dry-year storage reservoirs, storage programs and local groundwater basins. SWP supplies support the long-term success of local supply development and maintenance. SWP supplies also support SWP Dependent area demands in the service area.

Statewide Integrated Water Resources

Current Trends

The new and continuing challenges of California's diverse and extreme hydrologic conditions require local agencies to use new and innovative methods for managing water. Growing populations, urban development patterns, changing regulations, and climate change require water managers to adopt a range of solutions. The costs, benefits, and impacts of implementing a range of water management strategies in project-specific locations could vary significantly depending on local objectives and project level complexities.

Metropolitan has a long history of innovation and support for local and regional water supply projects. Over the last several decades, Metropolitan has invested $1.5 billion in conservation rebates and programs, and local resources program incentives. These investments have resulted in 7.6 million acre-feet of cumulative conservation savings and local supply production. Where Metropolitan has been able to further leverage other funding sources, our ability to successfully complete local and regional projects has been further enhanced. For example, in 2018 Metropolitan co-funded six potable reuse projects and one agricultural reuse study with the Water Research Foundation (WRF). Metropolitan's nearly $1 million in co-funding supports WRF's $8 million Advancing Potable Reuse Initiative and matches $3.5 million in State Water Resources Control Board grant funding.

Solving water supply challenges in a changing environment requires a toolbox of approaches, including continued reliance on imported supplies, as well as local and regional projects. Local and regional supplies are needed to improve local resiliency, and significant investment in planning and implementation of local water supply projects is needed.

Importance to Metropolitan

State and federal investments in regional water supply planning and projects are vital to Metropolitan's ability to continue such investments and to support regional water resiliency, consistent with the state policy to reduce reliance on the Delta to meet California's future water supply needs.

Statewide Storage

Current Trends

Statewide storage resources have and will continue to play an increasingly important role in ensuring the reliability of supplies from the SWP. Historically, snowpack has played a critical role in managing California's water resources. On average snowpack supplies about 30 percent of California's water needs and serves as a "frozen reservoir" to store winter precipitation for use throughout the rest of the year.[1] Climate research conducted by the UCLA Center for Climate Science shows a potential decrease in Sierra snowpack volume of 30 to 64 percent by the end of the century. In addition, snowmelt is expected to occur 25 to 50 days earlier in the year. With more winter precipitation falling as rain and earlier snowpack melting, additional pressure will be placed on statewide storage to balance the state's needs for water supply, ecosystems, and flood-control.

With the anticipated losses of snowpack storage, changing runoff patterns and the need to implement Groundwater Sustainability Plans under SGMA, water managers are seeking ways to more actively manage surface water and groundwater supplies together. DWR is currently evaluating the potential benefits of Flood-Mar projects throughout the state. Flood-MAR involves harnessing flood water from rainfall or snow melt and redirecting it onto agricultural, working landscapes, and managed natural lands to recharge groundwater. Groundwater provides about 40 percent of the state's total water supply on average and serves as a buffer against the impacts of drought and climate change.

Federal, state, and local agencies are also working to find ways to better manage surface water reservoirs that balance the needs for flood control, water supply, and power generation. Opportunities to implement Forecast Informed Reservoir Operations (FIRO) are being identified and evaluated for several reservoirs across the state. FIRO is a reservoir-operations strategy that better informs decisions to retain or release water by integrating additional flexibility in operation policies and rules with enhanced monitoring and improved weather and runoff forecasts.

The SWP and CVP have water storage projects throughout much of the state. Both the SWP and CVP water delivery systems rely on runoff and surface reservoir storage releases in areas upstream of the Delta to deliver contracted water via the Sacramento and San Joaquin Rivers to Delta export pumps in

[1] https://water.ca.gov/News/News-Releases/2021/Dec-21/DWR-12-30-21-Snow-Survey#:~:text=On%20average%2C%20the%20Sierra%20snowpack,as%20California's%20%E2%80%9Cfrozen%20reservoir.%E2%80%9D

the south Delta. Regulatory standards in recent decades have changed how the SWP and CVP operate, considerably reducing the long-term average amounts of water conveyed through the south Delta. Additionally, increasing pressure has been placed on the CVP and SWP reservoir systems as a result of climate change as described above. Increased operational flexibility and integration with new projects like new Delta conveyance, and Proposition 1 projects, like Sites Reservoir, will be needed in the future as the timing and magnitude of flows change.

New storage programs are being developed statewide that offer opportunities for new partnerships, additional flexibility through transfers and exchanges, and water supplies for environmental needs. The Water Quality, Supply, and Infrastructure Improvement Act of 2014 known as Proposition 1, designated $2.7 billion for investment in public benefits associated with new water storage projects. The California Water Commission (CWC), through the Water Storage Investment Program (WSIP) is responsible for administering those funds. Only projects that improve the operation of the state's water system, are cost effective, and provide a net improvement in ecosystem and water quality conditions in the Bay-Delta are eligible for WSIP funding. Public benefits provided by a project may include water quality improvements, flood control benefits, emergency response, recreational opportunities, and ecosystem benefits. At least 50 percent of the total public benefits funded for a project must provide ecosystem improvements. The CWC has issued maximum conditional eligibility determinations (MCEDs), which is the amount of Proposition 1 funding available to a given project, for seven projects that collectively would boost California's water storage capacity by 2.77 million acre-feet. The projects range from expanding existing reservoirs to boosting groundwater storage to building 21st century surface storage facilities.

Importance to Metropolitan

Effective statewide management of surface water and groundwater resources will be essential in maintaining the reliability of SWP and other supplies in the face of climate change.

Policy Objective 3: Address the Risks Associated with Climate Change

Climate Change

Current Trends

Climate change is affecting California in many ways, several of which impact our water resources: sea levels are rising, snowpack is decreasing, and water temperatures are increasing. In the future, droughts are expected to become more frequent and more severe, and storm intensities are expected to increase. Compounding the hydrologic conditions is the increased wildfire risk to upper watersheds and headwaters. These changes affect our ability to meet crucial water management objectives such as ensuring reliable water supply and quality, managing floods, and protecting ecosystem functions. These climate change trends are anticipated to continue, posing a prolonged threat to Metropolitan's SWP supply, transfer/exchange supplies, local supply production, and long-term reliability of Colorado River supplies.

Several approaches for addressing climate change are underway, including: new water storage projects like Sites Reservoir and Los Vaqueros Expansion, the Delta Conveyance Project, habitat restoration projects (both in the Delta and upper watershed), water conservation, local regional projects, and science initiatives. Key state-led water related planning efforts include the Governor's

Water Resilience Portfolio, Biodiversity Executive Order, State Water Resources Control Board's Water Quality Control Plan ("WQCP"), Delta Stewardship Council's ("DSC's") Delta Plan, and DSC's Delta Adapts. These state-led plans, and policies will shape future regulations for water supply, water quality, and environmental protection and implementation of climate adaptation strategies statewide.

Importance to Metropolitan

Climate change poses a risk to both Metropolitan's local and imported water supplies, including the Bay-Delta and local water supplies. To ensure a reliable water supply for Metropolitan, Bay-Delta climate adaptation solutions are needed, such as infrastructure reliability, ecosystem management and flood protection.

Policy Area 1: Science and Watershed Management

Bay-Delta Science

Aquatic Species

Current Trends

Since the 1980s, there has been increasing regulation of the SWP. These regulations include multiple biological opinions (BiOps) under the federal Endangered Species Act (ESA), incidental take permit (ITP) under the California Endangered Species Act (CESA), and the 1995 Water Quality Control Plan and its implementing water rights decision, D-1641. Several native fish species in the Bay-Delta are listed under the ESA and/or CESA, including Delta smelt, longfin smelt, Chinook salmon, green sturgeon, and steelhead. The Bay-Delta Water Quality Control Plan also protects fish and wildlife as one of several beneficial uses of water. As a result of these regulations and others, there has been a decrease in long-term average SWP and Central Valley Project (CVP) export supplies.

The SWP operates in an environment vastly different from the conditions under which native aquatic species evolved. Physical, hydrological, and biological alterations present novel conditions that result in stressors on Delta species that predate the SWP. During the last 200 years, human activities have dramatically altered and reshaped the habitat upon which species depend for survival by walling off millions of acres of floodplain, draining hundreds of thousands of acres of tidal marsh and riparian habitat, and managing the Suisun Marsh for fresh-water marsh duck hunting. These activities, as well as proliferation of invasive non-native species, discharges of agricultural and urban pollutants, ocean harvest of salmon, and poor ocean conditions have reduced and continue to reduce the listed native fish species' likelihood of survival and recovery. The population of key species, which are of commercial, recreational and cultural value, have implications on decisions related to real time water project operations and ultimately water supply.

Scientific literature supports that there is no single cause of the recent declines in the abundance of some species, rather there are multiple stressors (e.g., temperature, contaminants, habitat loss or degradation, climate change) interacting in ways that are not fully understood. Methods and modeling tools for studying effects of project operations on species have advanced over the last decade, while tools and methods to study the effects of non-flow stressors on aquatic species are lagging. Changes in the magnitude and timing of flows into and through the Delta have changed over time due to major physical alterations of the Delta, as well as increasing water use throughout the

watershed. These changes will continue as a result of climate change and other factors. Over the last decade, entrainment effects of the SWP and CVP have been low. Thus, there is an urgent need to improve scientific understanding of the multiple and synergistic non-flow stressors on sensitive fish to inform effective water management policies and regulations.

There are multiple collaborative processes underway today to enhance science investigations, addressing management questions, improve adaptive management, and improve decision-making. The complexity and extent of regulatory processes has increased, and the need for sound science to support decision-making has increased.

Importance to Metropolitan

ESA and CESA listing of Delta fish species has resulted in increasingly more stringent regulations on the SWP operations from both the state and federal fish agencies and the State Water Resources Control Board. These regulatory requirements impact Metropolitan's water supply reliability. Addressing science and management actions related to listed fish species supports Metropolitan's water supply reliability.

Delta Ecosystem / EcoRestore / Habitat Restoration

Current Trends

Today's Delta hardly resembles what it did 150 years ago. During the Gold Rush, Delta channels were straightened, fertile floodplains lost, and riparian forests were replaced by steep levees. The Delta's hundreds of thousands of acres of rich tidal marshlands were reclaimed for agriculture and duck hunting, and with economic growth came invasive plants and animals.

EcoRestore is a State initiative to help coordinate and advance at least 30,000 acres of habitat in the Sacramento-San Joaquin Delta. The program provides a broad range of habitat restoration projects, including aquatic, subtidal, riparian, floodplain, and upland ecosystem. There is 25,000 acres associated with existing mandates for habitat restoration, pursuant to federal BiOps to support native fish species, including tidal marsh, floodplain, and fish passage improvements. These projects are funded by the state and federal water contractors to meet regulatory requirements. There is 5,000 acres of habitat restoration enhancements throughout the Delta supported by Prop. 1 grants. Funding will come primarily through the Delta Conservancy, the Department of Fish and Wildlife, and the Department of Water Resources (DWR).

The EcoRestore program currently includes 32 multi-benefit projects that are in planning, construction or are completed, at a cost of nearly $500 million to date. Completion of these projects is estimated to cost $750 - $950 million, with approximately 50% of costs from SWP and 50% from other sources. These projects trend towards increased emphasis on science, robust monitoring, modeling, and Adaptive Management/Structured Decision-Making. Holistic nature-based solutions may have potential to improve ecosystem services, while also addressing habitat, drought, water quality, wildfires, and carbon sequestration.

Importance to Metropolitan

Sustainable and resilient water supplies rely, in part, on the health of the Delta ecosystem. Requirements for restoring habitat for Delta smelt, Chinook Salmon, and other species are included in

the BiOps and ITP for operation of the SWP. If the Voluntary Agreements move forward as an alternative implementation approach for the current Water Quality Control Plan update, habitat restoration will be an important component to protect water quality and beneficial uses of water. Protection and restoration of important Delta ecosystems is included in numerous state initiatives including the Delta Vision, Delta Adapts, California Biodiversity Initiative, California Water Action Plan, and Water Resilience Portfolio.

Watershed Management

Upper Watershed/Forestry Management

Current Trends

With much of the state's water supply originating in the mountains as precipitation on forested landscape, the health and management of the upper watersheds are critically important to California's water quality and water supply. High intensity, large scale fires significantly degrade the watershed leading to erosion, flash flooding, resulting in downstream sediment deposition which can impact habitat and water storage.

More than half of the watershed area above Lake Oroville has been burned over the last three years (2019-2021). The North Complex Fire (2020) and the Dixie Fire (2021) alone burned nearly 1.3 million acres in the Feather River watershed. The erosion that may result from these fires could impact storage at Lake Oroville. The potential near-term risk includes impacts to water quality and reservoir operations on the SWP that could impact water supply and habitat components for key species as well as increased risk of flooding. Watershed management and restoration needs to be implemented to protect areas already burned and lessen the risk to remaining areas. Long-term watershed restoration opportunities should be evaluated specifically those that: may provide climate change adaptation, compensate for loss of snowpack, may reduce the impacts of variable precipitation patterns on runoff, water quality and water temperature. The role of healthy watershed soils to increase holding capacity of the system and provide water supply benefits and species protection in an uncertain climate future should also be evaluated.

Partnerships will be essential for implementing watershed protection and restoration activities. There are many beneficiaries in the Feather River watershed that could participate in protection and restoration activities. DWR and State Water Contractors (SWC) would be key watershed partners with Metropolitan for the challenges described above. State initiatives such as the California Biodiversity Initiative and the Water Resilience Portfolio also provide potential opportunities for partnership and funding.

Importance to Metropolitan

Upper watershed protection will be a key adaptation strategy for maintaining and protecting a sustainable Delta under climate change over the long-term. Potential benefits of watershed management include water supply, water quality, attenuated runoff variability, avoided cost of fire impacts and habitat protection for key species.

Responsible Stewardship of Delta Islands

Current Trends

Land management in the Delta centers around agriculture. Over time, Delta islands have lost as much as 25 feet of land surface elevation due to oxidation, erosion, and burning of rich organic peat soils. This ongoing land subsidence, coupled with sea level rise and potential seismic events, increases risks to the levee system, water supply reliability, and Delta ecosystems. Land subsidence in the Delta is also a major source of greenhouse gases (GHG's).

Soil loss has been driven by oxidation from dewatering and conventional agricultural practices, wind and rain erosion, and burning of peat. Rewetting soils through reestablishment of wetlands, floating marsh, or planting rice can sequester carbon and reduce or reverse soil loss. Regenerative agricultural also has potential to sequester carbon and reverse subsidence, while retaining agriculture on the islands. In addition to sequestering carbon, reversing subsidence, and contributing to reliability of levees and water supply, these nature-based solutions have potential to improve ecosystem services, such as habitat, water quality, reduced temperatures, more efficient nutrient and water cycling, and farm profitability. In 2016, Metropolitan purchased approximately 20,400+ acres in the Delta (Bouldin/Bacon Islands, Holland (portion)/Webb Tracts, and western portion of Chipps Island). In 2021, Metropolitan sold its interest in Chipps Islands (243 acres) to DWR. These properties have a total of about 56.16 miles of levees that are maintained and monitored through four Reclamation Districts (RD #756, RD #2025, RD #2026, and Rd #2028). Currently Metropolitan leases farmable acres to five sublets while Metropolitan develops long-term opportunities.

Long-term opportunities for responsible stewardship on Metropolitan's Delta islands properties include pilot projects and scientific investigations to evaluate strategies for carbon sequestration, floating organic marshes, sustainable agriculture, compensatory mitigation, mitigation banks, habitat restoration for native aquatic species, native fish species preservation, and reduction in stressors on listed fish species. These types of activities could include collaboration with local, state and federal agencies, university researchers, in Delta neighbors and other interests. These types of activities could inform future more responsible land management decisions in the Delta.

Importance to Metropolitan

Delta islands ownership makes Metropolitan a direct stakeholder in the Delta. The Delta Islands provide a unique opportunity for research, innovation and collaboration with other stakeholders to develop sustainable strategies for Delta land use. Reducing risks to the levee system is key to managing risks from changing climate, water supply reliability, preservation of agriculture, and protection of important habitats in the Delta. Nature-based solutions can increase carbon sequestration and restore important ecosystem services such as efficient water and nutrient cycling, improved water quality and water holding capacity, and temperature modulation.

Policy Area 2: Water Supply Reliability and Resilience

Flexible Operations

Current Trends

Current operations of the SWP and CVP water diversion facilities in the south Delta are subject to prescriptive flows and numeric regulatory standards to protect listed fish species and other aquatic organisms. However, these standards do not consider the natural variability of runoff patterns, tidal cycles, turbidity, temperature and other factors that significantly affect fish migration and salvage of

fish at the state and federal water diversion facilities. To minimize fish salvage, efforts are being made to fund and implement real-time fish monitoring/tracking to inform state and federal agencies regarding entrainment risk and export rate. Advancements in technology and monitoring should be pursued and incorporated into real-time operations criteria. Example technologies to consider include the following:

- Improved AR forecasting and runoff forecasting
- Forecast-informed Reservoir Operations (FIRO)
- Improved fish monitoring including steelhead
- AI modeling of aquatic wildlife (USGS)
- Improved rapid genetic testing of salvaged salmonids
- Use of true Adaptive Management and Structured Decision-Making processes

Importance to Metropolitan

Under more restrictive and prescriptive Delta operations, opportunities to move water are being missed. More dynamic operations would allow for additional capture and storage of water when excess flows are present, and it is safe to do so. There is a need to protect, incorporate and coordinate more flexible/real-time operating criteria where possible in upcoming regulatory processes, including ongoing consultation on the Long-Term Operation of the CVP and SWP, the Incidental Take Permit for the Long-Term Operation of the SWP, the Water Quality Control Plan for the Bay-Delta, potential Voluntary Agreements, and for new projects coming online like New Delta Conveyance. Flexibility will also be needed to pursue transfers/exchanges and other creative supply opportunities.

Water Rights/Measurements and Reporting

Current Trends

The State Water Resources Control Board's ("Water Board") issued water diversion curtailments in the 2012-2016 drought and the ongoing 2020-2022 drought. The Water Board is issuing water diversion curtailments more often than has occurred historically, and this trend is expected to continue. Metropolitan and the State Water Contractors have been supportive of the Water Board issuance of water curtailments to protect stored water supplies.

In 2014, the State Water Contractors filed a complaint against in-Delta water users that were unlawfully diverting stored water supplies. While the Water Board did not pursue the complaint, the complaint significantly contributed to the technical and policy discussion about unlawful diversions. Metropolitan also supported Senate Bill 88, which was legislation, now law, requiring the direct measurement and reporting of water diversions. This law was important because the Water Board has difficulty calculating the supply of water available for diversion because of a lack of sufficient information about the actual quantity of water diverted and used at each of the thousands of water diversions throughout the watershed, making enforcement very difficult.

Metropolitan purchased approximately 20,000 acres in the western Delta (Bouldin/Bacon Islands and Holland/Webb Tracts) in 2016. These properties have up to 91 siphons that divert water from the adjacent waterways on-island for agriculture purposes. Consistent with SB 88, Metropolitan is in the process of metering a total of 88 siphons and reporting the appropriative and riparian water diversion use to the Water Board Delta Watermaster annually.

In addition, the Delta Watermaster has introduced an Alternative Compliance Plan of utilizing OpenET that uses a series of satellite imageries to estimate crop consumptive use through evapotranspiration measures. It has not been shown that Open ET can comply with Water Code section 1840 et seq for mandatory reporting of direct diversions. While Metropolitan has demonstrated its compliance plan of installing meters on each of its siphons (prioritized by most use and highest capacity use), Metropolitan has agreed to support the Water Master's efforts to validate Open ET regarding accuracy at the water diversion level in few remaining areas where meters have not been installed.

Importance to Metropolitan

When the watershed is dominated by ocean water and previously stored water releases, the diverters in the lower watershed and Delta are diverting stored water supplies that they have no right to divert. As a result, the SWP must release more stored water to continue to meet D-1641, thereby effecting the availability of SWP supplies for delivery to Metropolitan and the other water contractors.

As a landowner, Metropolitan must comply with mandatory reporting requirements regarding water diversion and use. As such, Metropolitan has made a significant investment in meters to demonstrate the feasibility of the technology. Metropolitan has an interest in making sure the Water Board has the information it needs to protect stored water supply from unlawful diversions, as well as find cost effective and accurate approaches for reporting compliance.

Conveyance

Delta Conveyance

Current Trends

The Delta is at the center of California's water distribution system. Two-thirds of California's water originates in the Sierra Nevada Mountains as snowpack, eventually flowing through the Delta. In the Delta watershed, there are thousands of water diversions that rely on this supply, including the SWP and the CVP. Delta conveyance refers to the vast network of waterways in the Delta that move fresh water to users within the watershed, as well as statewide including the Bay Area and southern California. The New Delta Conveyance Project, as currently proposed, moves water from an additional point of diversion on the Sacramento River through a tunnel under the Delta to the existing SWP export facilities, and is operated in coordination with the State Water Project's existing facilities.

The plan to route water around the Delta to the State Water Project is not new. It was originally part of the Master Plan for the SWP but was not included in the initial construction. The proposal was considered in the 1980s, and more recently in the Bay Delta Conservation Plan and California Water Fix. The New Conveyance Project is smaller than the previous proposals, with a single 6,000 cubic feet per second (cfs) tunnel.

New Delta Conveyance is important to the SWP because the State Water Project relies on the Delta's natural channels to convey water, making it vulnerable to sea level rise and earthquakes. Upgrading the State Water Project infrastructure protects against these threats and secures the longevity of the State Water Project and the future reliability of State Water Project supplies. The purpose of the New Delta Conveyance Project is to modernize the aging State Water Project infrastructure in the Delta to restore and protect the reliability of State Water Project water deliveries in a cost-effective manner,

consistent with the state's Water Resilience Portfolio. And in doing so, allow the Department of Water Resources to address sea level rise and climate change, minimize water supply disruption due to seismic risk, and provide operational flexibility to the State Water Project to allow it the ability to better meet fishery and water quality regulatory requirements.

Importance to Metropolitan

Southern California's plan for a reliable water supply future depends on a reliable SWP supply and conveyance system with the capability to move water into storage in wet periods and more flexibility to manage around fishery needs.

The primary DCP benefits were compared to future conditions consistent with the Notice of Preparation objectives of climate resiliency, seismic resiliency, water supply reliability, and operational resiliency.

There are member agencies in Metropolitan's service area, specifically in Ventura County, parts of northwestern Los Aneles County, the San Gabriel Valley, and some Inland Empire areas, whose supplemental imported water supply (eastern Sierra/northern Sierra) depends entirely on water that comes from the SWP. Water from the SWP is also important for mixing with Colorado River supplies due to its lower salinity content and it is important for Metropolitan's groundwater banking activities.

Statewide Conveyance

Current Trends

The California Aqueduct was built to account for natural subsidence however groundwater pumping during extreme drought events have been causing the aqueduct to subside much quicker and deeper than anticipated. During the extreme drought of 2014-2017, some areas experienced over 2 feet of non-recoverable subsidence and costly rehabilitation and recovery projects are being prepared. Recent observations indicate that subsidence during the current drought is still ongoing but at a slower pace than the previous drought.

California enacted the Sustainable Groundwater Management Act (SGMA) in 2014 as a regulatory solution to help stabilize groundwater basins across the state and to sustain investments in subsidence recovery moving forward. SGMA directs local agencies to work together to create Groundwater Sustainability Plans (GSPs) with a goal of long-term basin sustainability by 2040. GSPs in critically over-drafted basins were due to DWR in January 2020 and medium/high priority GSPs were due by January 2022. DWR has reviewed the GSPs and the California Aqueduct Subsidence Program, a DWR program not involved with the review of the GSPs, is engaging with the groundwater sustainability agencies (GSAs) to include in their GSPs reasonable subsidence rates and projects to reduce subsidence.

Importance to Metropolitan

Current subsidence results in increased operations and maintenance costs, the reduction of delivered water during peak periods and the reduced ability to shift power loads. Short-term rehabilitation projects are expected to cost about $450 million and are already ongoing, while costs for long-term recovery projects are in the billions of dollars order of magnitude.

Metropolitan has submitted letters of comment to several GSAs regarding their GSPs, recommending that the GSAs maintain groundwater extraction at safe yield levels, especially near the California

Aqueduct. Metropolitan also recommended that GSAs work with the DWR California Aqueduct Subsidence Program to incorporate monitoring and regular reporting of land surface elevations.

Seismic Risk/Emergency Preparedness/Delta Freshwater Pathway

Current Trends

Seismic hazard evaluations within the Delta are a subject of interest from public, private and academic entities because key Delta channels are currently used to convey water supplies from northern California to areas south of the Delta. Consequently, there are a number of initiatives currently underway that support seismic resiliency in the Delta.

Metropolitan staff worked with DWR to complete strategic and tactical flood emergency response documents in the Delta region, including the DWR Delta Flood Emergency Management Plan (DFEMP), the California Governor's Office of Emergency Services (CalOES) Northern California Catastrophic Flood Response Plan (NCCFMP), and the DWR/USACE Delta Flood Emergency Integration Plan. These documents provide broad policy and strategic guidance to support flood fight implementation of large-scale flood emergencies and tactical guidance to support ongoing flood fight operations in the Delta region, including development of the Emergency Freshwater Pathway in the event of major levee and island failures which could otherwise suspend water exports extensively.

The DFEMP and related documents are subjected to field or tabletop exercises to confirm or identify deficiencies in DFEMP implementation methods, for the purposes of improving plan preparedness, response, and recovery. DFEMP field implementation methods are applied against levee configurations influenced by changes in levee, island, and flood elevations, and sea level effects of climate change, which are the subject new Delta levee standards under evaluation by Reclamation Districts. Seismic hazard and seismic levee stability analysis are conducted to confirm levee performance and facilitate DFEMP responsiveness. Watershed fire control and channel sedimentation removal measures under the CalOES NCCFMP ensure river channel readiness for reservoir releases that support initial operations of the Emergency Freshwater Pathway.

DWR currently maintains significant quantities of emergency rock stockpiles and large sheet pile for the closure of deep levee breaches in the Delta region. These stockpiles are being monitored to ensure adequate capabilities in the event of major levee failures. Stockpiles are also in place for the restoration of levee freeboard in the event levee slumping during a major earthquake event.

Importance to Metropolitan

The water supply from the Sacramento-San Joaquin Rivers Delta serves up to a third source of water supply for Metropolitan's service area and its Member Agencies. In addition, these supplies provide for good water quality that is blended within Metropolitan's service area in order to meet water quality regulatory requirements.

Emergency preparedness in the Delta is important because conditions can exist where moderate to severe earthquakes in or near the Delta region, can result in multiple levee and island failures. This would result in saltwater intrusion into the Delta to the extent freshwater exports would not be possible for extended periods of time. Emergency preparedness is essential to address this threat to Metropolitan's water supply and water quality reliability. The DWR DFEMP and its Emergency

Freshwater Pathway, along with its related documents, provides capability to resume significant exports in less than six months.

Bay-Delta Water Quality

Current Trends

The SWP and the federal CVP have primary regulatory responsibility for meeting water quality standards for salinity and outflow in the Delta through Water Right Decision 1641. At the same time, Metropolitan relies on the SWP and Delta to provide drinking water with acceptable levels of salinity, bromide, organic carbon and nutrients, as well as emerging water quality concerns like endocrine disruptors and toxins from harmful algae blooms, to support local water resources programs including blending with Colorado River water, water recycling and groundwater recharge. To manage the regulatory burden placed on the SWP and Metropolitan's water supplies, it is important to include source control for water quality so the SWP will not be responsible for using valuable stored water supplies to dilute contaminants discharged by others.

Metropolitan has a long history of working to improve water quality in the Delta through participation in many forums, including Central Valley Regional Water Quality Control Board (Regional Board) programs such as the Delta Regional Monitoring Program, CV-SALTS, Delta Nutrient Research Plan, Irrigated Lands Regulatory Program, and waste discharge permitting processes. As a member of the California Urban Water Agencies (CUWA), Metropolitan was instrumental in raising awareness of the water quality impacts of municipal wastewater discharges to the Delta, including discharges from the Sacramento Regional County Sanitation District (Regional San), and participated in the permitting processes to provide technical information and science studies to support more stringent permit requirements. The Regional Board adopted a more stringent discharge permit for Regional San in 2010 that includes limits on nutrients and tertiary filtration requirements. Regional San launched a major wastewater treatment plant upgrade that includes the installation of biological nutrient removal treatment that has been operational since April 2021. This treatment upgrade removes 99% of the ammonia from the wastewater and substantially reduces the load of nitrogen from the treatment plant. Regional San is scheduled to complete their wastewater treatment plant upgrade with the installation of tertiary filtration by 2023. Metropolitan has also funded numerous water quality monitoring and science investigations to better identify and define water quality concerns in the Delta.

Importance to Metropolitan

Water quality conditions in the Delta and SWP are important to protect Metropolitan's drinking water quality, to support local resources programs in Metropolitan's service area, and protect the Delta ecosystem.

Water Energy Nexus

Current Trends

Water and energy are often managed separately, despite the important links between the two. Water is used in the production of nearly every major energy source. Likewise, energy is used in multiple ways and at multiple steps in water delivery and treatment systems, as well as wastewater collection and treatment.

About 12%of California's total energy use is related to water. Energy is required to pump water from underground aquifers, convey water from one place to another, treat drinking water, and for customer end-uses such as heating and cooling. The SWP is one of the largest single consumers of electricity in the state, but also generates a large amount of electricity at its reservoirs and generating stations. The hydropower generated is a renewable energy source that reduces the GHG emissions of generating power.

In recent years, California's energy grid has faced more frequent challenges due to climate change fueled heat waves and wildfires. In addition, California's dramatic increase in solar and wind generation and complex GHG reduction policies are creating new and growing challenges for the state's grid operator and electric utilities. The SWP has historically provided significant support to California's electricity grid and is playing an increasingly essential role in helping to integrate weather-dependent renewable resources. The SWP offers demand response through the Participating Load Agreement, which allows the California Independent System Operator to interrupt and curtail the SWP's power load, or dispatch SWP power generation assets when those actions may be needed to relieve system emergencies or ensure reliability across the grid.

In addition, DWR is analyzing what further operational changes, capital investments or system retrofits may be possible for the SWP to help address California's changing water and energy needs. And the Natural Resources Agency, in collaboration with the California Energy Commission and DWR, are studying the opportunities and constraints related to the SWP and its potential contributions to achieving the state's climate goals in its implementation of SB 49 (Skinner, 2019).

Importance to Metropolitan

Meeting the resource challenges of the 21st century will require a more integrated approach to managing water and energy. Metropolitan's water supply relies on having reliable energy to provide pumping at the State Water Project facilities.

Policy Area 3: Cost Effective Investments and Partnerships

Cost Effective and Beneficial Solutions

Current Trends

Metropolitan cannot complete large multi benefit projects without partners and multiple funding sources, thereby making these projects cost effective. There are several beneficial and cost-effective projects currently being proposed that include, but are not limited to, the following:

Sites Reservoir

Sites is being proposed as a 1.3 to 1.5 million acre-feet off stream reservoir located in Glenn and Colusa counties, 60-miles north of Sacramento. Sites first emerged as part of the second stage of the SWP proposed in the 1980s, which included multiple water related projects. In 1996, Sites was further analyzed as part of the CALFED Bay Delta Program. It was also included in the Phase 8 settlement of the implementation of the 2000 Water Quality Control Plan. In 2020, Sites was identified as a priority in the Governor's Water Resilience Portfolio. $80 million federal share of planning and engineering costs of Sites Reservoir has been approved, which ensures a dedicated portion of the Project benefits

to satisfy the federal government's interests in meeting the future water needs of the environment, farms and cities across California. Funding for planning and development of Sites Reservoir is provided by participating agencies, with construction costs up to 50% potentially paid for by Prop 1 Water Bond funds, and potentially 25% of costs to be borne by federal government. More than 30 water agencies from across California, including Metropolitan, have signed on to provide funding for their share of the construction and operation costs of Sites Project in exchange for a proportionate percentage of the annual water supplies.

Delta Conveyance

Delta Conveyance is a project that has existed in multiple forums over many decades. More recently, the effort to permit a new point of diversion on the Sacramento River was included in the Bay Delta Conservation Plan process, and then the California Water Fix project. The New Conveyance project would construct a single 6,000 cfs tunnel with intakes on the Sacramento River to be operated jointly with the existing State Water Project's existing water diversion facilities in the south Delta. The New Conveyance project would enhance State Water Project operational flexibility when operations in the south Delta are limited by regulatory constraints and prepare for the long-term effects of climate change and sea level rise.

Delta Levees

The Delta Levees System Integrity Program protects the public and water supply for 27 million people while enhancing Delta habitat. This funding will support activities including State Operations and Local Assistance grants for levee maintenance, repairs, improvement, habitat mitigation, and enhancement projects in the Sacramento-San Joaquin Delta. The DLIS program is of critical importance for achieving the goals in the California Water Resiliency Portfolio, DWR's Strategic Plan, and the Delta Plan. The funding ensures the state's continued investment in the Delta and contributes toward achieving the co-equal goals by providing a more reliable water supply for California while protecting, restoring, and enhancing the Delta ecosystem.

Flood Emergency Preparedness

The Delta Grants & Flood Emergency Preparedness, Response, & Recovery Program support local assistance grants and two existing positions to improve regional self-reliance by enhancing existing flood emergency preparedness, response, and recovery capabilities of local agencies within the Delta. This funding will support existing positions to manage $5 million in grants used to improve regional self-reliance by enhancing existing flood emergency preparedness, response, and recovery capabilities of local agencies in the Delta. The funding will also support existing staffing to manage projects and perform maintenance on State Delta Emergency Facilities that increase the state's capability to efficiently store, manage, and quickly deploy its material inventories when necessary to support flood emergency response in the region.

Levee failures in the Delta and the resulting increase in freshwater salinity levels could have catastrophic consequences statewide for infrastructure, the environment, and water supply. Local communities may not be equipped with adequate plans, skills, and materials needed for a front-line response. DWR is requesting additional funding for this program as it must continue to improve its emergency preparedness, support local communities, and respond to threats to the state's freshwater supply posed by catastrophic flooding in the Delta.

EcoRestore

EcoRestore is a state initiative to help coordinate and advance at least 30,000 acres of habitat restoration. It includes 32 multiple benefit projects that are in the planning, construction, or completion phases at an estimated cost of $750-$950 million, with approximately 50% coming from the SWP and 50% coming from other sources.

Importance to Metropolitan

The key benefits of these projects include protecting and enhancing SWP supplies, which improves drought-year supply reliability, secures additional sources for SWP dependent areas and low salinity groundwater recharge. Levee and ecosystem projects protect the Delta environment and the available water supply, while local projects support a diverse water portfolio. Through multiple partners and funding sources these large projects are achievable to water supplies.

Inclusive Engagement

Current Trends

Public engagement is an important element to several Bay-Delta related programs, projects and collaborative efforts. Soliciting valuable input from various interests allows for greater understanding and broader perspectives to be explored. Engaging in a public setting also allows for transparency and can also promote inclusivity of multiple parties simultaneously, which can also enhance trust. This engagement can also lead to an enhanced deliberative public process. Governmental decisions made through public engagement can also garner the benefit of having early input in advance of implementing the action. There are several Bay-Delta initiatives underway today that demonstrate the importance of public engagement. The Stakeholder Engagement Committee, a committee of the Delta Conveyance Authority, was established to solicit key input from Delta stakeholders and interests related to the conceptual footprint design of the proposed Delta Conveyance project. Another example includes the California Department of Fish and Wildlife Prop 1 grant for the Delta Islands, an effort underway today to solicit feedback from several external experts and key interests related to land use options for the Metropolitan Delta Islands. Another example includes the Community Benefits Framework, under contemplation by DWR, which has included outreach to several in-Delta interests. This Framework is anticipated to become a tangible Community Benefits Program with the approval and advancement of the proposed delta conveyance project.

Importance to Metropolitan

With water supply imported from the high sierras, through the Delta to Southern California, public engagement remains an integral to developing thoughtful solutions in partnership with communities statewide.

Collaborative Partnerships

Current Trends

Collaborative Science

Over the last decade, the Metropolitan has been increasing its involvement in the development of science to inform management questions related to water project operations, seismic hazards, species protection and water quality. Metropolitan has been steadily increasing the number of published and peer reviewed studies that Metropolitan funds, and that its staff coauthor. Most of these studies are part of a collaboration with state and federal fish agencies, academic institutions, the Department of Water Resources, the Bureau of Reclamation, the Delta Science Program, the State Water Contractors, San Luis and Delta Mendota Water Authority, and environmental organizations.

Since 2011, Metropolitan has been part of the Collaborative Science Adaptive Management Program (CSAMP), which was organized at the end of litigation as a forum for working through scientific differences and uncertainties in collaboration with state and federal agencies, water districts, and environmentalists with the purpose of minimizing future conflict. With the technical and monetary support of Metropolitan, as well as other funding partners, CSAMP has completed multiple studies and served as a forum for discussing scientific perspectives.

Metropolitan also participates in many multi agency technical forums that address numerous issues related to the implementation of the State Water Project's incidental take permits and the Interagency Ecological Program's monitoring of species and water quality. Metropolitan regularly works with other government agencies and environmentalists to implement adaptive management of the SWP through structured decision making, which is a collaborative approach to assessing management actions in an open and transparent way. More recently, Metropolitan has been active in a multi entity process that is developing a framework for salmon recovery, and in supporting Delta researchers seeking state Proposition 1 funds.

Through these efforts, Metropolitan has been able to focus research in areas that had been historically ignored in the Delta and to support innovative approaches to Delta science investigations.

Importance to Metropolitan

Through collaborative efforts, Metropolitan expands its ability to have a voice in regulatory efforts that impact its water supply and to move forward with important science investigations with multiagency support. Some of the science developed through Metropolitan's efforts have shifted and expanded the discussions surrounding the biological impacts of the State Water Project and have developed alternative State Water Project operations that minimize impacts to water supply.

Integration and Innovation Land / Water Interface / Multi-benefit

Current Trends

The Delta region is at the intersection of many social, political, environmental and climate related factors, as a result, Delta issues are significantly complex uncertain and ambiguous. Developing Delta solutions will require innovation to be most effective. Policies which embrace uncertainty will lead to greater innovation and integration. Fostering innovative Delta solutions will require a commitment to adaptive management as new science and engineering discoveries emerge. Metropolitan has been involved in the development of several innovations in the Bay-Delta, including the use of environmental DNA, SmeltCam and effective population size, which are methods to monitor species distribution and abundance. Metropolitan has also supported the use of Structured Decision Making and life cycle modeling, which are approaches to management and decision-making that makes

decisions more transparent and quantifiable. Another example of recent innovation is Metropolitan's Delta smelt and Native Species Preservation Project, to evaluate the suitability of utilizing the Delta island properties currently owned by Metropolitan to support Delta smelt supplementation efforts. Continued innovation in the future will be key to developing Delta solutions.

Importance to Metropolitan

Metropolitan's ability to provide water in a sustainable and reliable manner is dependent on a healthy Delta ecosystem. The development of integrated Delta solutions will require a commitment to a fully integrated approach using the latest and evolving science and engineering solutions. New scientific discoveries can lead to new and innovative solutions with better integration and benefits for a wide variety of stakeholders. A commitment to the development and use of decision support tools is also important for developing Delta solutions.

Water Planning and Stewardship Committee

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

Item 9-2
August 15, 2022

Policy Principles Review

Agenda

- Recap and Overview
- Revised Bay-Delta Policy Framework
- Example Policy Application
- Next Steps

Recap and Overview

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 Review with WP&S Committee												
Board Info and Action Items							REPORT				INFO	ACTION

Why Update the Bay-Delta Policies?

Existing Bay-Delta Policies

- 4 Policy themes (2006)
- 13 Policy Principles
- Short-, Mid-, Long- Term Framework (2007)
- 6 Conveyance Criteria (2007)
- Delta Action Plan (2007)
- Delta Governance Principles (2008)
- Delta Vision Implementation (2009)

Draft Bay-Delta Policies Framework

- 6 Policy Areas
  - 18 Policy Principles

Revised Bay-Delta Policies Framework

- 3 Policy Objectives
- 3 Policy Areas
  - 9 Policy Principles

Revised Framework

DRAFT Bay-Delta Policy Framework: Policy Areas and Principles

1 Statewide Water Resource Management	2 Bay-Delta Science, Watershed Management and Land Use	3 Bay-Delta Operational Resilience	4 Bay-Delta Infrastructure Reliability	5 Community Investments and Partnerships	6 Statewide Water Resource Management Supports One Water Metropolitan
Promote statewide climate adaptation solutions for water resources	Provide for sustainable environmental protections	Actively pursue actions to ensure flexible water operations	Pursue infrastructure improvements which address climate change	Pursue cost effective and equitable financial investments	Recognize importance of SWP in supporting local supplies
Encourage statewide investments in regional water resources	Consider all watershed elements: upper watershed and in-Delta	Ensure equitable and informed water resource management	Support water supply actions and investments for seismic resiliency	Support public engagement statewide and within MWD service area	Use storage and transfers to effectively manage Delta supplies
Support long-term Delta sustainability and multi-benefit outcomes	Implement and support sustainable Delta Land uses	Actively ensure water quality is protected	Seek flexible operational and supply reliability infrastructure solutions	Participate and develop collaborative partnerships	Pursue actions that improve reliability for SWP dependent areas

Bay-Delta Policy Objectives

- Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach
- Support Statewide and Regional Actions that Improve Bay-Delta Sustainability
- Address the Risks Associated with Climate Change

Bay-Delta Policy Framework		
Science and Watershed Management	**Water Supply Reliability and Resilience**	**Partnerships and Cost-Effective Investments**
Protect and restore aquatic species and habitats based on best available science	Protect water supply reliability and water quality	Maintain and pursue cost-effective financial investments
Partner in watershed-wide approaches to develop comprehensive solutions	Invest in actions that provide seismic and climate resiliency	Foster broad and inclusive engagement of Delta interests and beneficiaries
Advance responsible stewardship of Metropolitan's Delta islands	Seek flexible operations, water management actions, and infrastructure solutions	Promote innovative and multi-benefit initiatives

Example Policy Applications

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
- Inform future proposed board actions
- Final Board deliberation and actions would still be addressed individually

Example Application

Bay-Delta Policy Objectives
▪ Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach ▪ Support Statewide and Regional Actions that Improve Bay-Delta Sustainability ▪ Address the Risks Associated with Climate Change

Bay-Delta Policy Framework		
Science and Watershed Management	**Water Supply Reliability and Resilience**	**Partnerships and Cost-Effective Investments**
Protect and restore aquatic species and habitats based on best available science	Protect water supply reliability and water quality	Maintain and pursue cost-effective financial investments
Partner in watershed-wide approaches to develop comprehensive solutions	Invest in actions that provide seismic and climate resiliency	Foster broad and inclusive engagement of Delta interests and beneficiaries
Advance responsible stewardship of Metropolitan's Delta islands	Seek flexible operations, water management actions, and infrastructure solutions	Promote innovative and multi-benefit initiatives

Delta Islands – Delta Smelt and Native Species Preservation Project

Example Application

Bay-Delta Policy Objectives

- Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach
- Support Statewide and Regional Actions that Improve Bay-Delta Sustainability
- Address the Risks Associated with Climate Change

Bay-Delta Policy Framework

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Delta Conveyance Project

Example Application

Bay-Delta Policy Objectives

- Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach
- Support Statewide and Regional Actions that Improve Bay-Delta Sustainability
- Address the Risks Associated with Climate Change

Bay-Delta Policy Framework

Science and Watershed Management	Water Supply Reliability and Resilience	Partnerships and Cost-Effective Investments
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Emergency Freshwater Pathway ☑

Example Application

Bay-Delta Policy Objectives

- Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach
- Support Statewide and Regional Actions that Improve Bay-Delta Sustainability
- Address the Risks Associated with Climate Change

Bay-Delta Policy Framework

Science and Watershed Management	Water Supply Reliability and Resilience	Partnerships and Cost-Effective Investments
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Advance responsible stewardship of Metropolitan's Delta islands	Seek flexible operations, water management actions, and infrastructure solutions	Promote innovative and multi-benefit initiatives

Delta Islands – Lease Exclusively for Permanent Crops

Example Application

Bay-Delta Policy Objectives

- Promote a Sustainable Bay-Delta within Metropolitan's One Water Approach
- Support Statewide and Regional Actions that Improve Bay-Delta Sustainability
- Address the Risks Associated with Climate Change

Bay-Delta Policy Framework

Science and Watershed Management	Water Supply Reliability and Resilience	Partnerships and Cost-Effective Investments
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Pure Water – Reducing Reliance on Imported Supplies

Next Steps

Action Item
Fall 2022

Incorporate Board Feedback into Bay-Delta Policy Framework and Principles

Finalize Policies for Board Action

Memorialize Policies in a Written Report

Fall Action Item


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

• Water Surplus and Drought Management Update *Conditions as of 8/2/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of August 2, 2022. The report also tracks the hydrologic conditions for water year (WY) 2021-2022.

Imported supply available to help meet demand is currently estimated to be 1.19 million acre-feet (MAF) which includes 257 thousand acre-feet (TAF) of State Water Project (SWP) supply and 929 TAF of Colorado River supply. Metropolitan's SWP supply includes 133 TAF of human health and safety supply from the Department of Water Resources. The current demand on Metropolitan is estimated to be 1.73 MAF. Since last month's report, the annual estimate of member agencies' consumptive demand decreased by 39 TAF mainly due to the region's ongoing conservation efforts including drastic water-use reductions by the SWP Dependent Area member agencies under the Emergency Water Conservation Program. Since the inception of the Program on June 1st, affected member agencies used 37 percent less than what was expected without emergency conservation and 4 percent less supply than their volumetric limits to date. And because of these savings to date, agencies under the first compliance path (Path 1) will continue with current 1-day-a-week watering restrictions for the month of September. Since supply is less than demand, Metropolitan will satisfy this gap through storage withdrawals.

Conservation efforts across the region are growing and must continue to strengthen, especially through the summer months. For the member agencies under the Emergency Water Conservation Program, Metropolitan is prepared to take additional actions which includes banning all outdoor watering for Path 1 agencies should conservation efforts wane or supply conditions worsen. Additionally, the Upper Feeder Pipeline shutdown will increase the anticipated use of SWP supply outside of the SWP Dependent Area for approximately two weeks in September. This shutdown will enable Metropolitan to perform critical repairs to the pipeline that delivers Colorado River water to the region. During the shutdown, the Weymouth Treatment Plant will transition from treating Colorado River supply to SWP supply. Therefore, Metropolitan is calling on member agencies that will receive supply from the Weymouth Treatment Plant during the shutdown to eliminate all outdoor watering.

Though the SWP Dependent Area is currently the most stressed, Metropolitan and the state is calling upon all residents and businesses throughout the region to step up conservation efforts. These conservation efforts will be crucial as conditions on the Colorado River deteriorate; at the time of this report, it remains uncertain as to how much water Metropolitan will be able to withdraw from its Intentionally Created Surplus (ICS) account stored in Lake Mead to help satisfy demands for next year. As such, Metropolitan staff are beginning to develop allocation methods for the entire region should regionwide mandatory reductions be needed.

Purpose

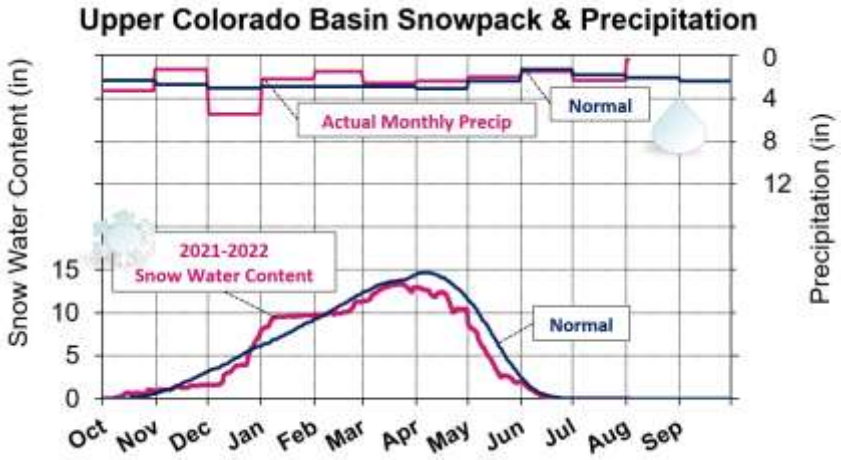
Informational

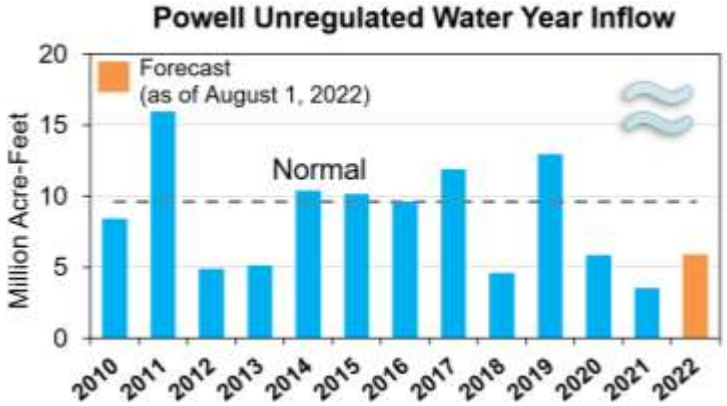
Attachments

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
Attachment 3: Emergency Water Conservation Program Performance

Detailed Report

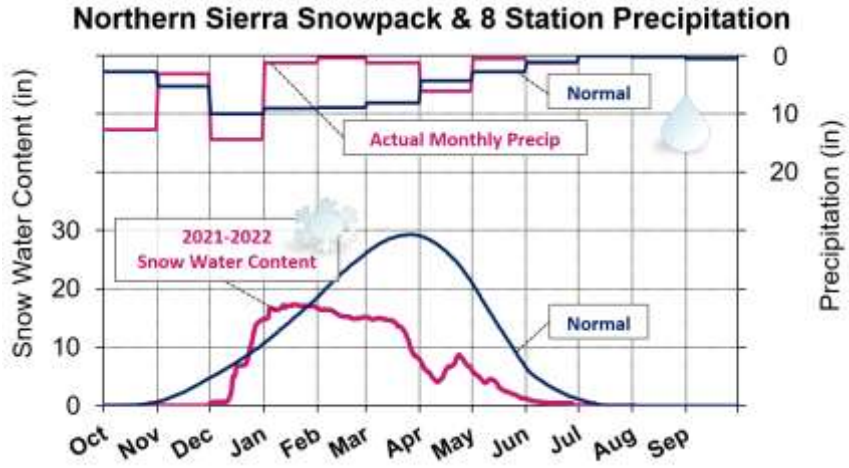
This Water Surplus and Drought Management (WSDM) report updates water supply and demand conditions for CY 2022 and developing hydrologic conditions for WY 2021-2022.

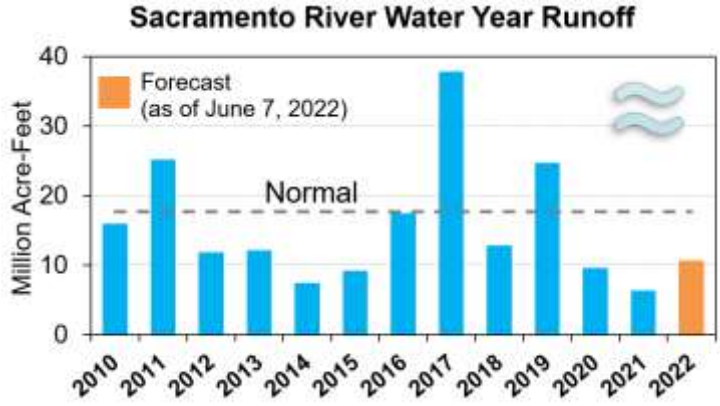




Upper Colorado River Basin

- ❄ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- 💧 Near normal precipitation to date (25.0 inches or 98% of normal).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 61% of normal.



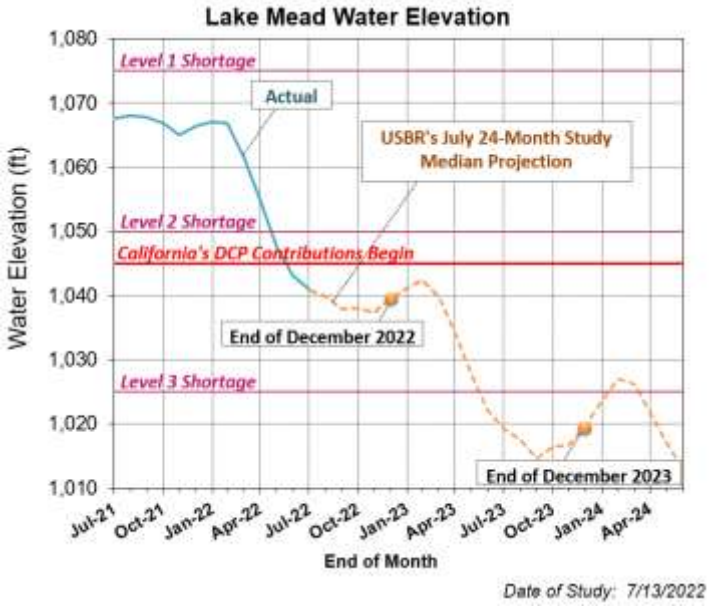


Sacramento River Basin

- ❄ Snowpack water content peaked low and early in mid-January (17.2 inches or 61% of normal April 1).
- 💧 Below normal precipitation at the 8 Station to date (41.3 inches or 79% of normal).
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 60% of normal.

CRA Supplies	Acre-Feet
Basic Apportionment	*550,000*
IID/ MWD Conservation Program	*105,000*
CVWD - 2nd Amendment, Exchange of Additional Water	*25,000*
PVID Fallowing Program	*25,000*
Exchange w/ SDCWA (IID/Canal Lining)	*280,000*
Exchange w/ USBR (San Luis Rey Tribe)	*16,000*
Lower Colorado Water Supply Project	*9,000*
Bard Seasonal Fallowing Program	*3,000*
Quechan Diversion Forbearance	*6,000*
Quechan Seasonal Fallowing Program [1]	*0*
Higher Priority Water Use Adjustment [2]	*-91,000*
Total CRA Supplies [3]	**929,000**

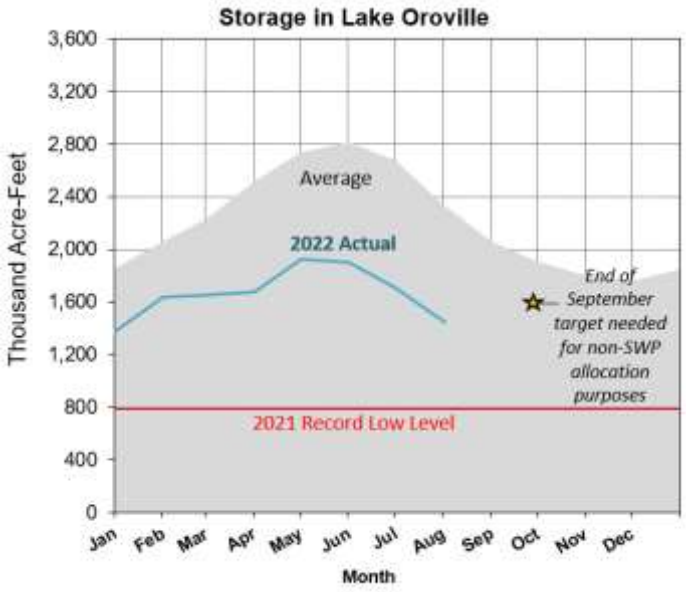
[1] Rounded to the nearest thousand.
[2] Per USBR Forecast (8/2/22).
[3] Total may not sum due to rounding.



- Lake Mead storage is currently 7.0 MAF or elevation 1040.8 feet (27 percent of total capacity).
- 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 to fill the CRA.
- USBR's July 24-Month Study continues to show Lake Mead's water elevation declining over the next two years.
- Operations of Lakes Powell and Mead are uncertain in 2023. The triggers for shortage and Drought Contingency Plan (DCP) contributions could change based on current discussions in response to USBR's call for additional conservation volumes of 2 MAF to 4 MAF in CY 2023. The graph shows physical elevations and existing triggers.

SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	*96,000*
Article 21	*0*
Port Hueneme [1]	*0*
SWC Buyers Group Transfers [2]	*6,000*
Yuba Accord Dry-Year Purchase Program [2]	*14,000*
MWDOC/IRWD Partnership	*4,000*
Purchase of SDCWA's Semitropic Supply	*4,000*
Human Health & Safety Supply	*133,000*
Total SWP Supplies [3]	**257,000**
Total Supplies (CRA + SWP) (Prior to storage actions)	**1,186,000**

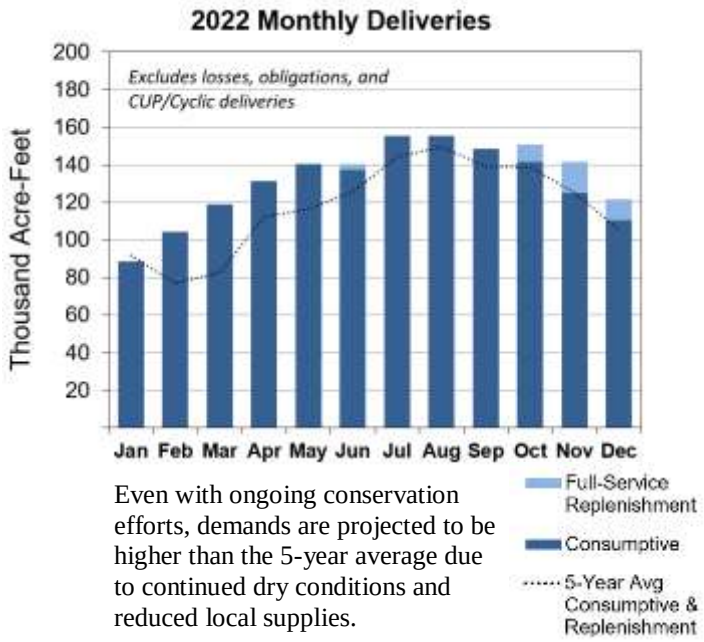
[1] Rounded to the nearest thousand.
[2] Current estimate subject to change based on buyer/seller participation and losses.
[3] Total may not sum due to rounding.



- In addition to the 5 percent Table A allocation, DWR is providing 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. DWR has approved 133 TAF of HH&S supply for Metropolitan thus far. Metropolitan began receiving deliveries of HH&S supplies in June. DWR denied a recent request by Metropolitan for additional HH&S supplies for wildfire prevention.
- Lake Oroville is currently at 1.44 MAF (41 percent of total capacity) or 62 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive [1]	*1,567,000*
Member Agency Replenishment	*40,000*
Coachella Valley Water District Agreement	*15,000*
Return to Imperial Irrigation District [2]	*44,000*
Exchange w/ San Luis Rey Tribe	*16,000*
System and Storage Losses	*50,000*
Cyclic Deliveries	*0*
Total Demands [3]	**1,732,000**

[1] Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
[2] Per USBR Forecast (8/2/22).
[3] Total may not sum due to rounding.

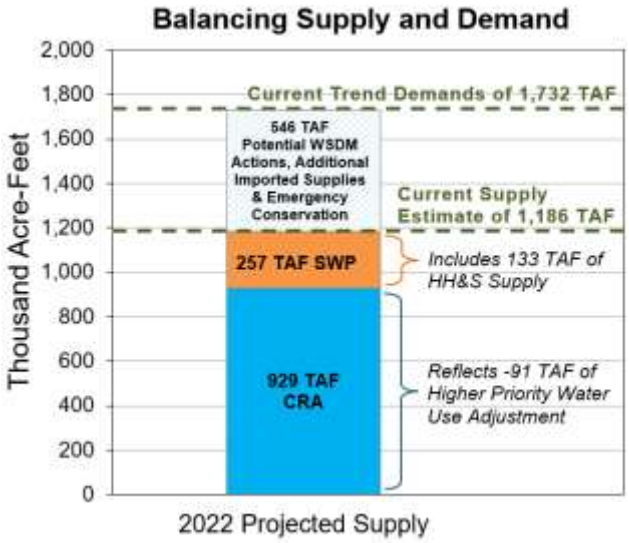


Even with ongoing conservation efforts, demands are projected to be higher than the 5-year average due to continued dry conditions and reduced local supplies.

MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	*1,186,000*
Total Demands	*1,732,000*
Current Balance Estimate [2]	**-546,000**

[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.
- Implementing the Emergency Water Conservation Program in the SWP Dependent Area.
- Receiving deliveries of HH&S supply from DWR to help meet demands in the SWP Dependent Area.

2022 WSDM Storage Detail

WSDM Storage	1/1/2022 Estimated Storage Levels	CY 2022 Take Capacity [1]	2022 Total Storage Capacity
Colorado River Aqueduct Delivery System	**1,252,000**	**255,000**	**1,657,000**
Lake Mead ICS	1,252,000 [2]	255,000 [3]	1,657,000
State Water Project System	**636,000**	**188,000**	**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	51,000 [7]	350,000
Kern Delta Storage Program	149,000	33,000	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**	**11,000**	**1,181,000**
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	11,000	800,000
Total	**3,357,000**	**880,000**	**5,963,000**
Emergency	750,000	0	750,000
Total WSDM Storage (AF) [9]	**2,607,000**	**880,000**	**5,213,000**

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

[2] Reflects USBR's final accounting for 2021, released in May 2022. This amount is net of the water Metropolitan stored for IID in Lake Mead in an ICS sub-account, which IID can access to avoid an overrun.

[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]
CR Total (AF)	**802,000**
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	262,000 [2]
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 [3]
Coachella Valley Water District Agreement	210,000 [4]
SWP Total (AF)	**352,000**
DWR Flex Storage	219,000 [5]
Human Health & Safety	133,000 [6]
Total (AF)	**1,154,000**

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

[2] IID can request return in any year, conditional on agreement terms. Future return is projected to be reduced by 44,000 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] Flexible storage withdrawals from Castaic Lake and Lake Perris must be returned within five calendar years. Metropolitan is required to return 170,000 AF by 2026 for withdrawals in 2021. Metropolitan is planning to withdraw 49,000 AF in 2022 and will need to return this amount by 2027.

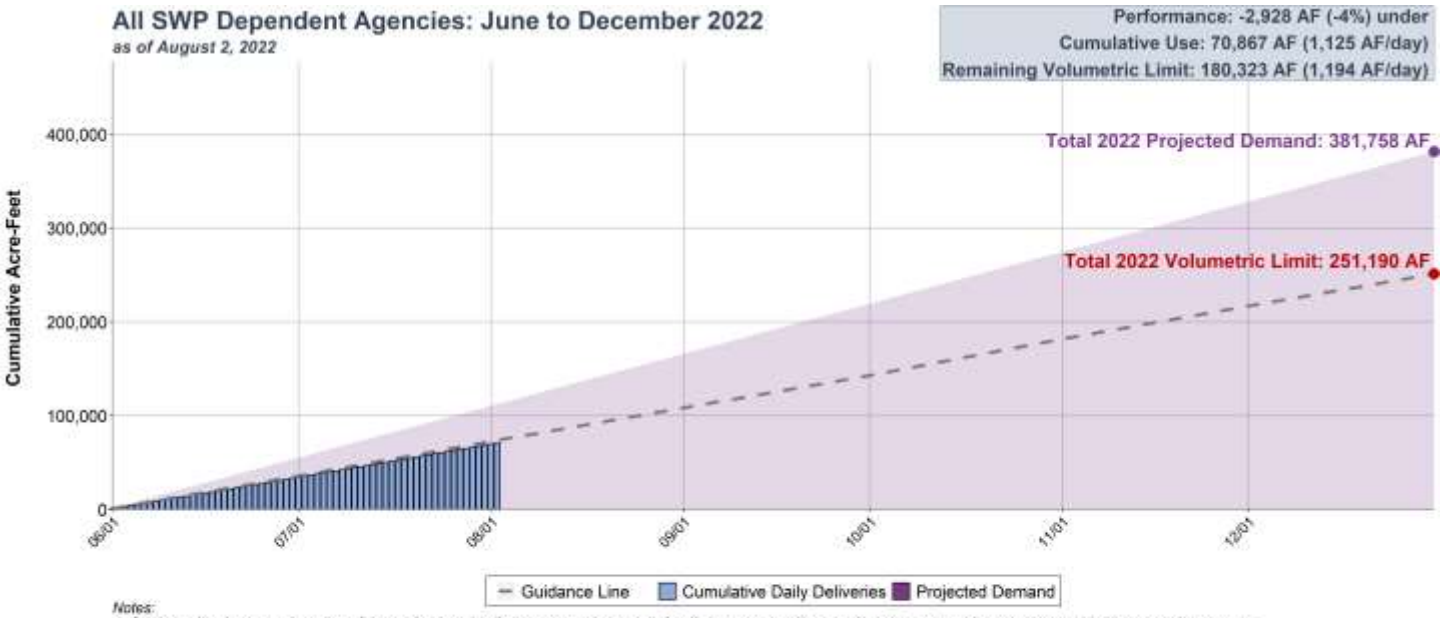
[6] Metropolitan's scheduled CY 2022 Human Health & Safety deliveries. Any water taken must be returned by 2027.

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.

Emergency Water Conservation Program Performance



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

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

Water Planning and Stewardship Committee

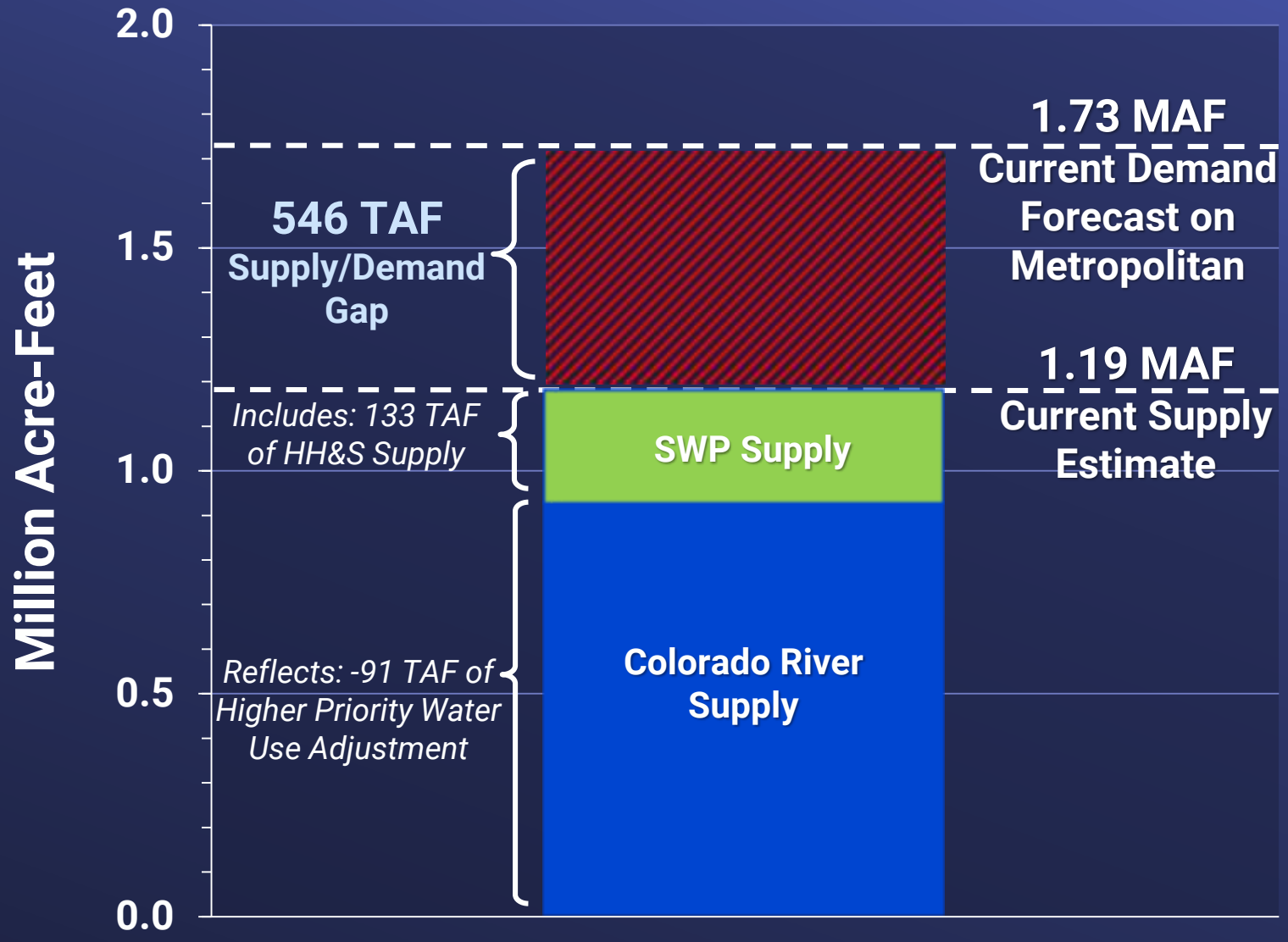
Update on WSDM and Status of Emergency Water Conservation Program

Item 6a
August 15, 2022

WSDM Update

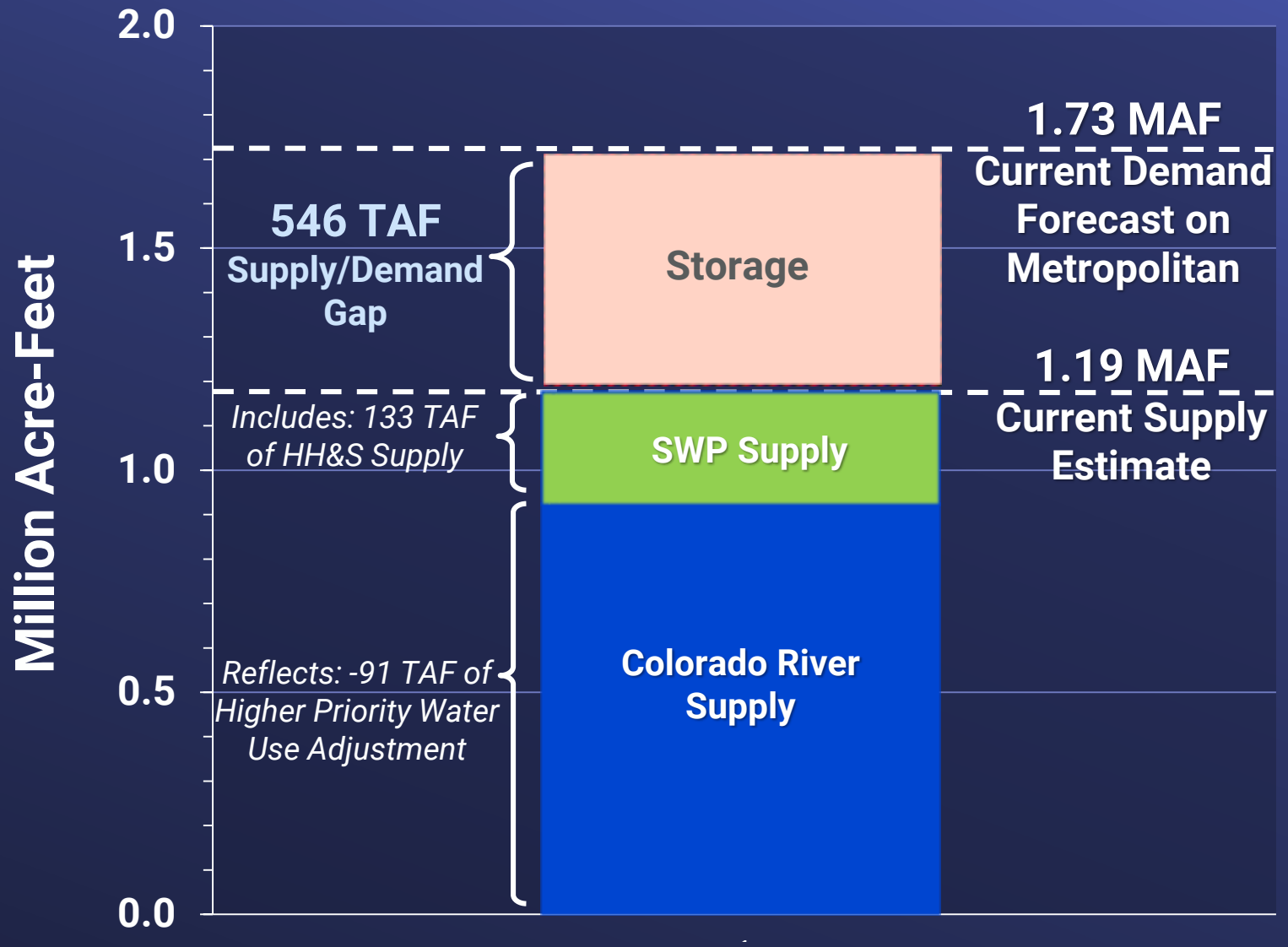
WSDM Supply Demand Balance

Regional View



WSDM Supply Demand Balance

Regional View



Emergency Water Conservation Program Update

Emergency Water Conservation Program

July Update

- July Path Compliance

PATH 1	PATH 2
Las Virgenes MWD Three Valleys MWD Calleguas MWD*	City of Los Angeles Inland Empire Utilities Agency Upper San Gabriel Valley MWD

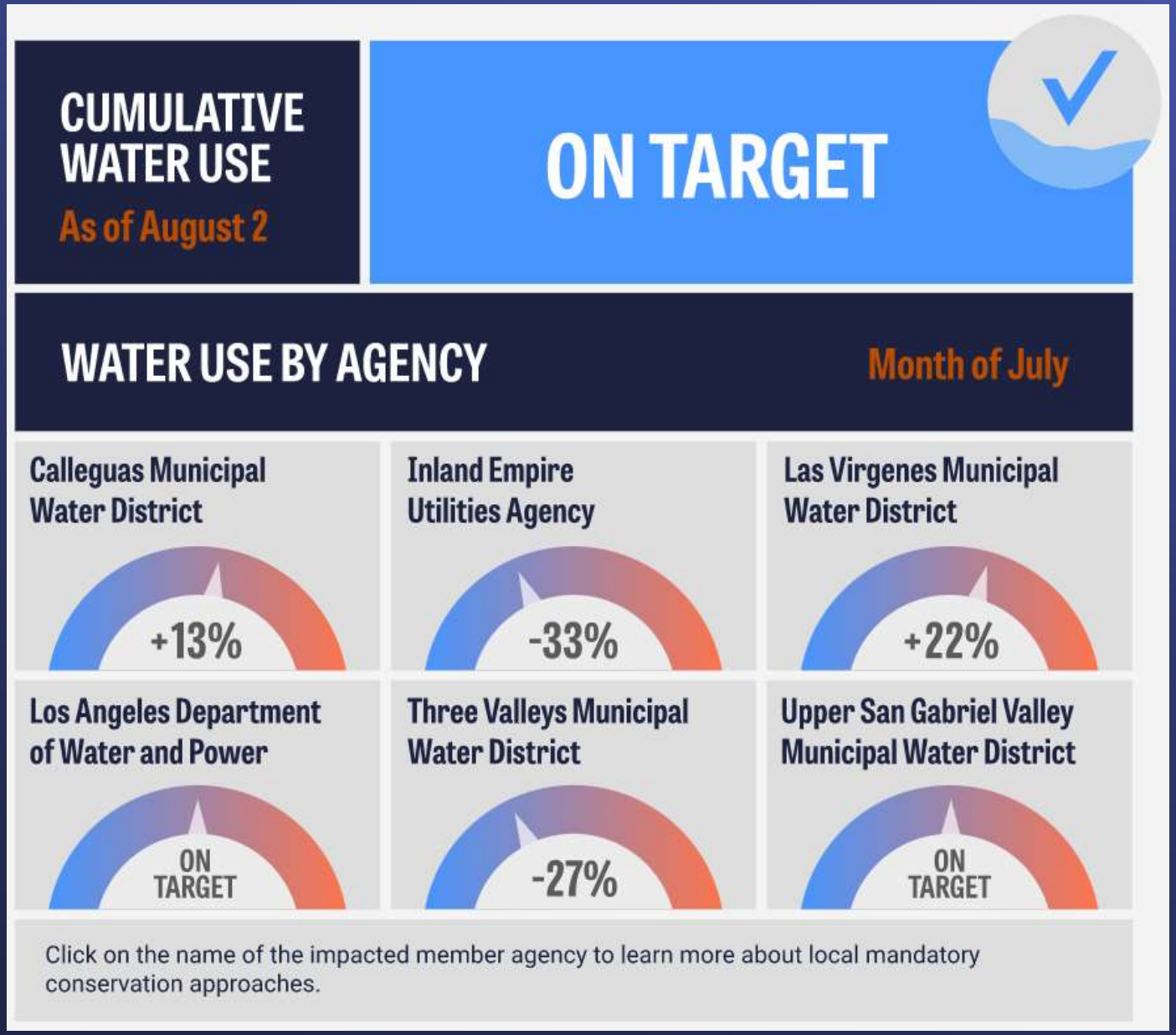
**5 of 19 Calleguas water purveyors are Path 2*

- No penalties issued for any Path 2 member agencies for the months of June and July
- Path l one-day-a-week watering continues through month of September
- No supplemental water from DWR for wildfire prevention

Emergency Water Conservation Program

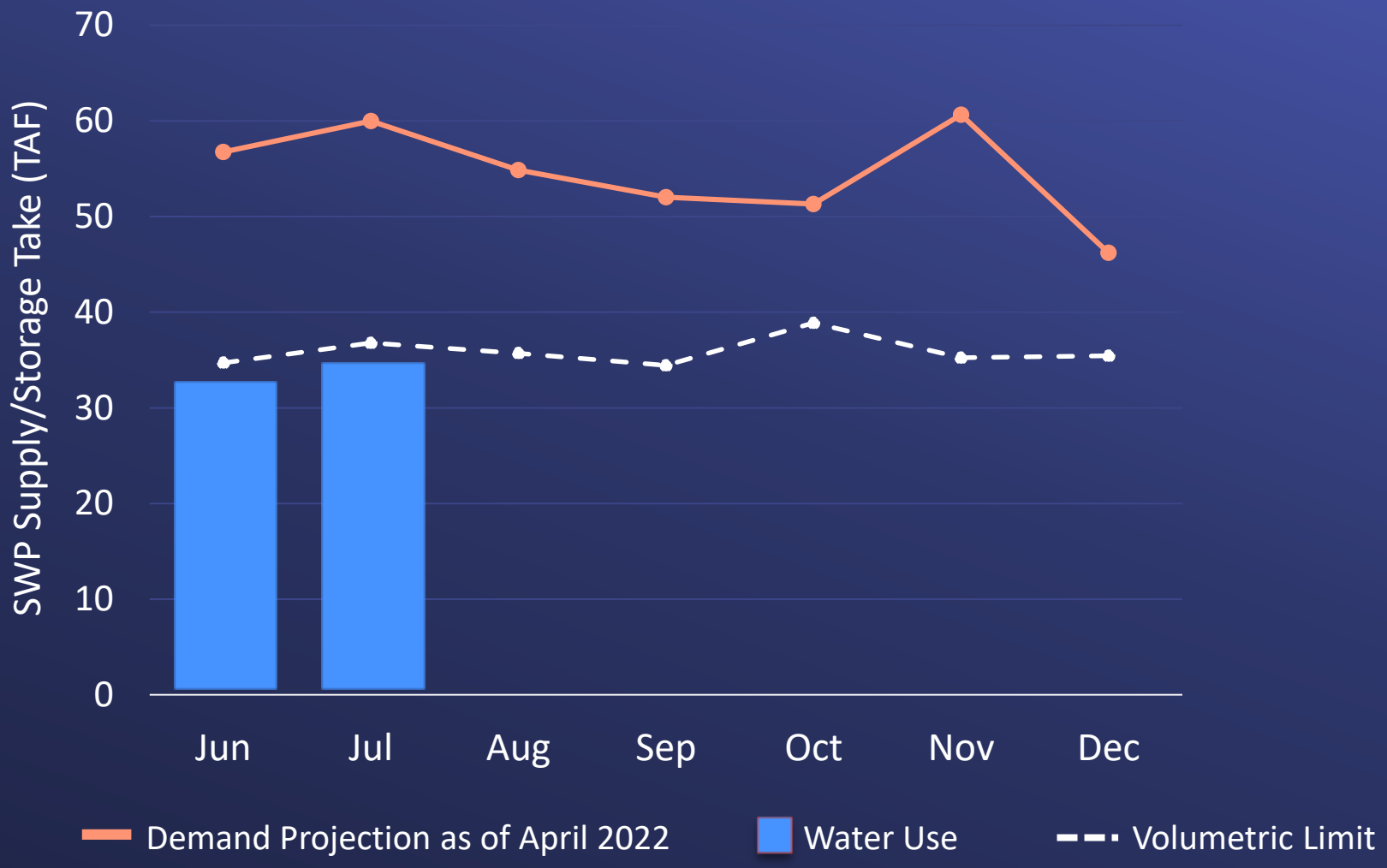
External Tracking

https://www.mwdh2o.com/how-we-plan/drought/



Emergency Water Conservation Program

SWP Dependent Area Demands on Metropolitan



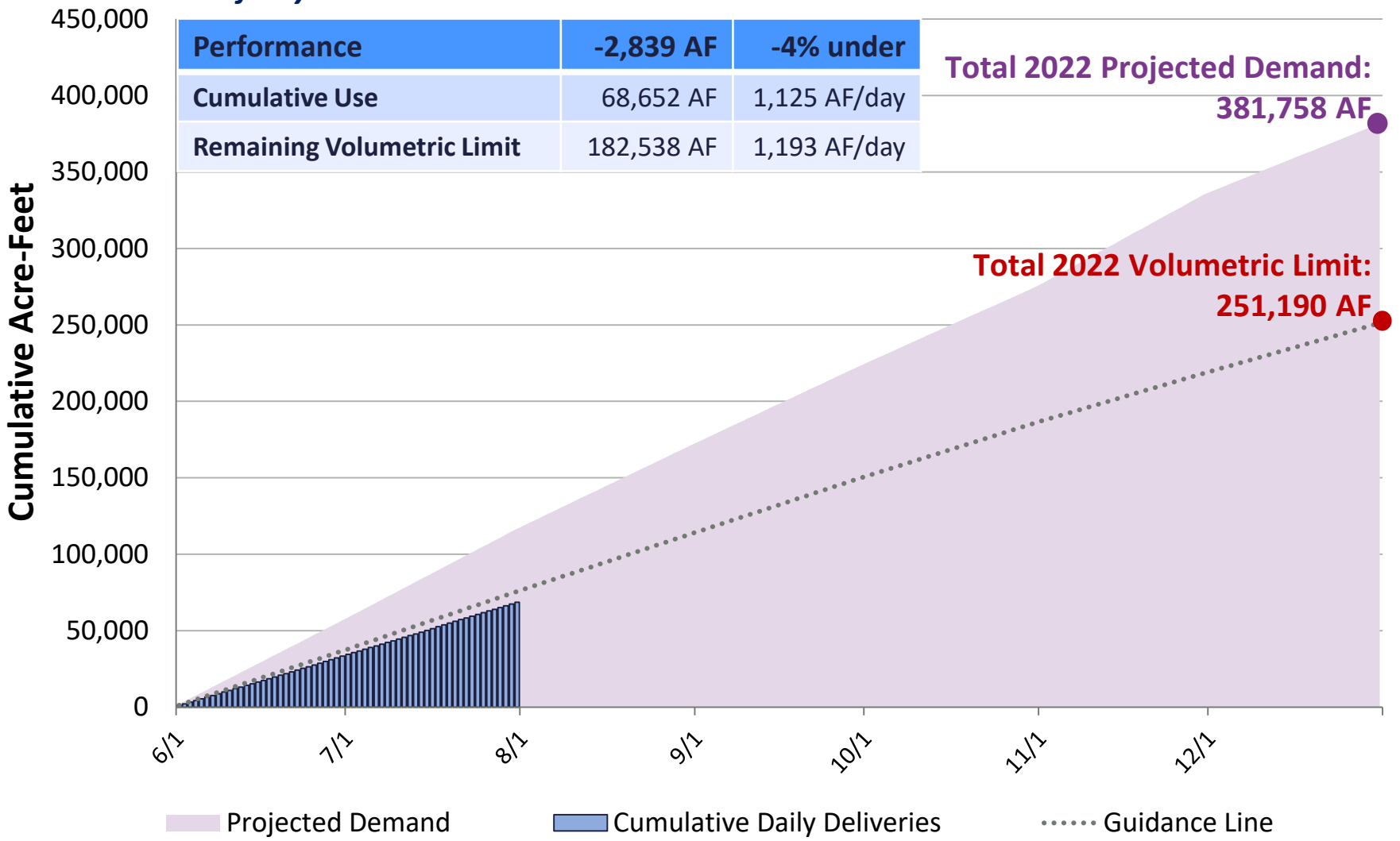
All SWP Dependent Agencies Weekly Water Use Tracking

June to December 2022

All SWP Dependent Agencies: June to December 2022

as of July 31

Performance	-2,839 AF	-4% under
Cumulative Use	68,652 AF	1,125 AF/day
Remaining Volumetric Limit	182,538 AF	1,193 AF/day



**Demand projection as of April 26, 2022*

Timeline of Activity and Key Decision Points

Weekly Tracking Update

(Water use will be tracked for all affected agencies against their volumetric limit regardless of path selection)

JUN | **JUL** | **AUG** | **SEP** | **OCT** | **NOV** | **DEC**

Commencement of Emergency Conservation Water Program

Report to move to zero-day outdoor watering *(no later than August if needed in September, monthly reporting on status thereafter)*

Begin zero-day outdoor watering *(if needed)*

No move to zero-day outdoor watering for month of September

Timeline of Activity and Key Decision Points

Weekly Tracking Update

(Water use will be tracked for all affected agencies against their volumetric limit regardless of path selection)

Commencement of Emergency Conservation Water Program

Report to move to zero-day outdoor watering

Begin zero-day outdoor watering *(if needed)*

Report to move to Volumetric Limits for all

(no later than November if needed in December, monthly reporting on status thereafter)

Begin Volumetric Limit for all *(if needed)*

Emergency Water Conservation Program

Decision to move to more stringent measures for Path 1 Compliance

- Monitoring reports
  - Track agencies water use against their volumetric limits
  - Discuss demand reduction progress with member agencies weekly
- Ongoing WSDM re-evaluation of SWP Dependent Area supply/demand balances
- Other Factors
  - System limitations

Additional Updates

Upper Feeder Shutdown

- Shutdown anticipated to begin September 6th
  - Approximate duration of two weeks
- Shutdown will increase use of SWP supplies
  - Affected member agencies are those who receive water from Weymouth
- Metropolitan will call for a complete ban on outdoor watering for the affected member agencies
  - Ongoing coordination with member agencies and PIOs on outreach and messaging
    - Includes outreach on social media, press conference/releases, outdoor watering tips, etc.

Additional Updates

Colorado River

- August 9th Special Board meeting highlighted dire conditions on Metropolitan's Colorado River supplies
  - Actions to reduce use of Colorado River water may begin as early as next year
- Water supply shortages on both SWP and Colorado River supplies may result in additional regionwide water demand reductions beginning in 2023

Emergency Water Conservation Program

Next Steps

- Continue to evaluate member agency path compliance and potential penalties
- Continue transmittal of weekly reports
  - Weekly report reflecting data from June 1 – August 16 tentatively scheduled for transmittal on August 17, 2022
- Ongoing coordination
  - Upper Feeder Shutdown
  - Other system limitations impacts
  - Monthly reporting to the Board

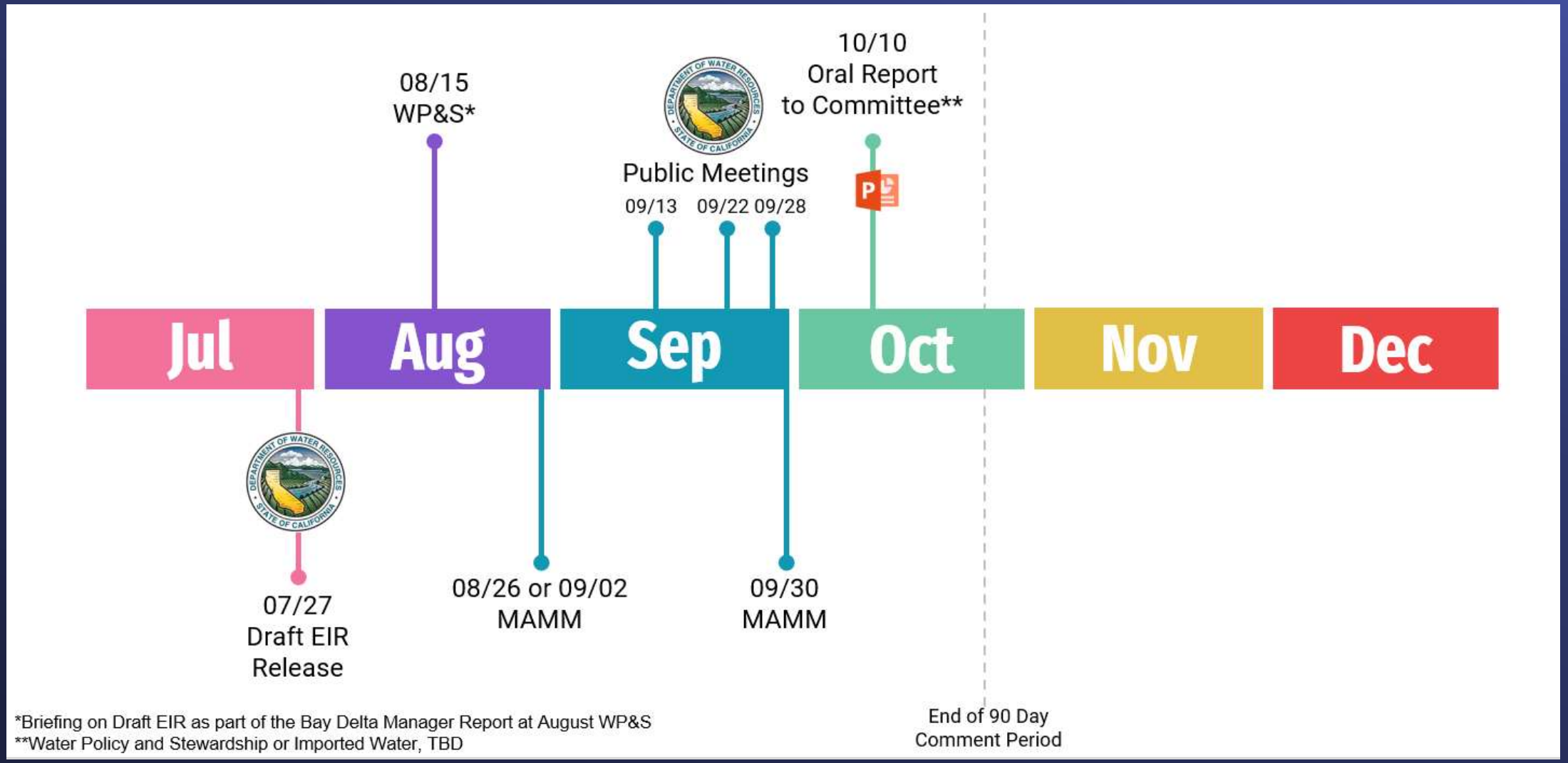

THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Water Planning and Stewardship Committee

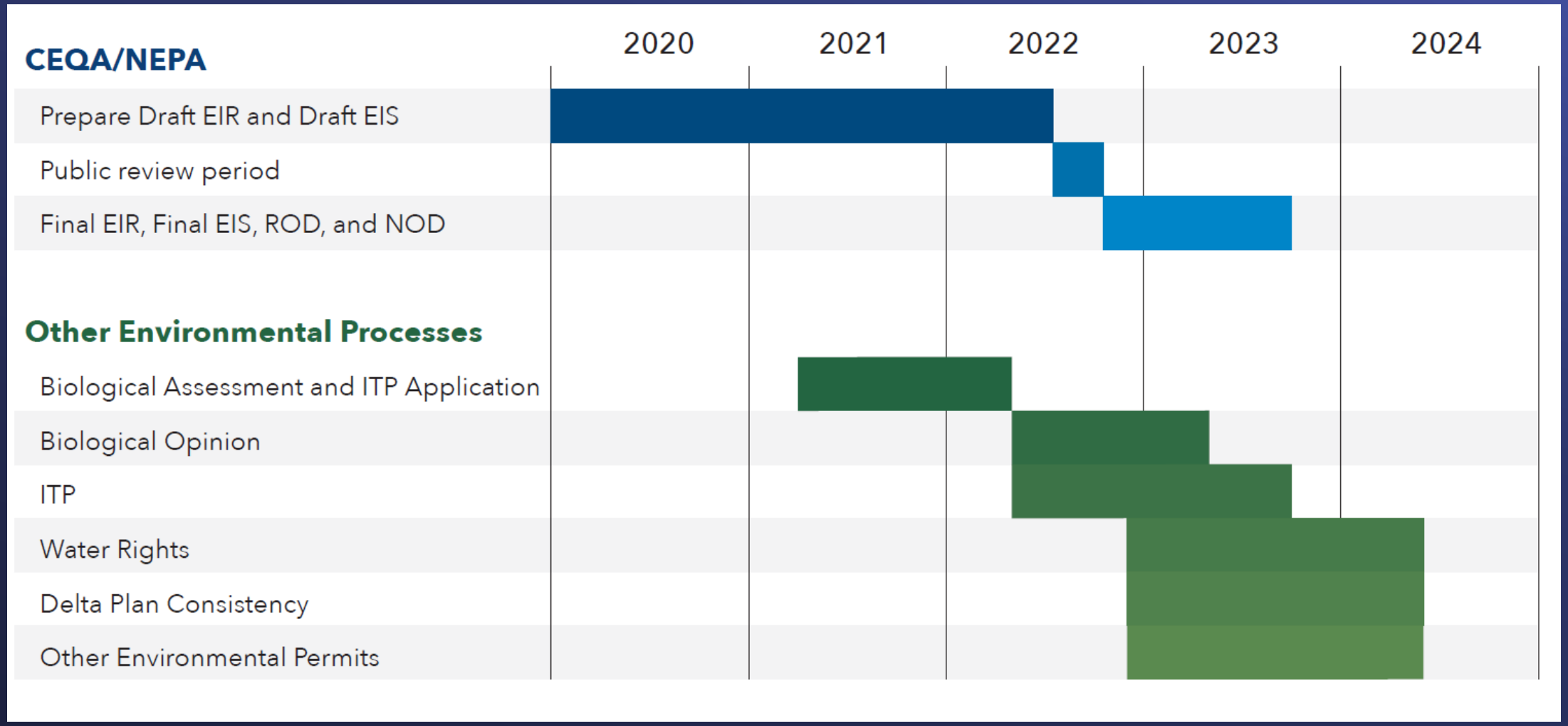
Bay Delta Manager's Report

Item 7b
August 15, 2022

Delta Conveyance Project Draft EIR
Key Dates



Delta Conveyance Project
DWR Tentative Schedule



Delta Conveyance Project

Useful Links

https://www.deltaconveyanceproject.com/

Draft EIR Download Page with Executive Summary

Video Series on Reading and Reviewing the Draft EIR

Downloadable Fact Sheets


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Water Planning and Stewardship Committee

Water Resource Management Manager's Report

Item 7-c

August 15, 2022

Reverse Cyclic Program (RCP)

General Manager determined supply conditions warrant activation

- At Metropolitan's discretion, member agencies may purchase water in CY 2022 for delivery in a future wet year to help preserve Metropolitan's SWP supplies.
- Metropolitan may complete the deferred deliveries within 5 years of the purchase date.
- Execution of agreements with member agencies
  - Agreement with Calleguas Municipal Water District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