

# 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.

## LTRPPBM Committee

M. Petersen, Chair  
K. Seckel, Vice Chair  
D. Alvarez  
J. D. Armstrong  
D. Erdman  
S. Faessel  
L. Fong-Sakai  
M. Gualtieri  
J. McMillan  
T. Quinn  
N. Sutley

## **Subcommittee on Long-Term Regional Planning Processes and Business Modeling - Final**

Meeting with Board of Directors \*

**March 27, 2024**

**9:30 a.m.**

Agendas, live streaming, meeting schedules, and other board materials are available here: <https://mwdh2o.legistar.com/Calendar.aspx>. If you have technical difficulties with the live streaming page, a listen-only phone line is available at 1-877-853-5257; enter meeting ID: 862 4397 5848. Members of the public may present their comments to the Board on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference 1-833-548-0276 and enter meeting ID: 815 2066 4276 or click <https://us06web.zoom.us/j/81520664276pwd=a1RTQWh6V3h3ckFhNmdsUWpKR1c2Zz09>

**Wednesday, March 27, 2024  
Meeting Schedule**

**09:30 a.m. LTRPPBM**

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

Teleconference Locations:

Douglas/Hicks Law • 5120 W. Goldleaf Circle, #140 • Los Angeles, CA 90056

525 Via La Selva • Redondo Beach, CA 90277

3008 W. 82nd Place • Inglewood, CA 90305

1005 S. Cardiff Street • Anaheim, CA 92806

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\* 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 Subcommittee on Long-Term Regional Planning Process and Business Modeling Meeting for February 29, 2024 (Copies have been submitted to each Director, Any additions, corrections, or omissions) [21-3165](#)

**Attachments:** [03272024 LTRPPBM 2A \(02292024\) Minutes](#)

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

**3. SUBCOMMITTEE ITEMS - CAMP4W TASK FORCE**

- a. Member Agency Managers Task Force Members [21-3166](#)

Cesar Barrera, City of Santa Ana  
 Nina Jazmadarian, Foothill Municipal Water District  
 Shivaji Deshmukh, Inland Empire Utilities Agency  
 Dave Pedersen, Las Virgenes Municipal Water District  
 Anatole Falagan, Long Beach Water Department  
 Anselmo Collins, Los Angeles Department of Water and Power  
 Harvey De La Torre, Municipal Water District of Orange County  
 Dan Denham, San Diego County Water Authority  
 Kristine McCaffrey, Calleguas Municipal Water District  
 Tom Love, Upper San Gabriel Valley Municipal Water District  
 Craig Miller, Western Municipal Water District  
 Joe Mouawad, Eastern Municipal Water District  
 Stacie Takeguchi, Pasadena Water and Power

- b. Climate Adaptation Master Plan for Water - Draft Year One Report [21-3155](#)

**Attachments:** [03272024 LTRPPBM 3b C-L](#)  
[03272024 LTRPPBM 3b Presentation](#)

**4. FOLLOW-UP ITEMS**

NONE

**5. FUTURE AGENDA ITEMS**

**6. 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. Committee agendas may be obtained on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>. 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 <https://mwdh2o.legistar.com/Calendar.aspx>.

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**

**SUBCOMMITTEE ON LONG-TERM REGIONAL PLANNING PROCESSES AND  
BUSINESS MODELING**

**February 29, 2024**

Chair Petersen called the meeting to order at 1:32 p.m.

Members present: Directors Erdman (AB2449 “just cause”), Faessel (teleconference posted location), Fong-Sakai (teleconference posted location), Gualtieri, McMillan (teleconference posted location), Petersen, Quinn, Seckel, and Sutley (entered after roll call).

Members absent: Directors Alvarez and Armstrong.

Other Board Members present: Directors Bryant, Fellow (teleconference posted location), Garza, Jung (teleconference posted location), Lefevre (teleconference posted location), Miller (teleconference posted location), Morris, and Peterson (teleconference posted location)

Committee Staff present: Crosson, Kasaine, Quilizapa, and Salgado.

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

Darcy Burke distributed Elsinore Valley Municipal Water District letter dated February 7, 2024. This item will be made part of the record.

**CONSENT CALENDAR ITEMS -- ACTION**

**2. CONSENT CALENDAR OTHER ITEMS - ACTION**

- A. Approval of the Minutes of the Subcommittee on Long-Term Regional Planning Processes and Business Modeling for January 18, 2024 (Copies have been submitted to each Director, Any additions, corrections, or omissions)

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

The vote was:

Ayes: Directors Erdman, Faessel, Fong-Sakai, McMillan, Petersen, Quinn, Seckel, and Sutley.

Noes: None

Abstentions: Director Gualtieri

Absent: Directors Alvarez and Armstrong

The motion for Item 2A passed by a vote of 8 ayes, 0 noes, 1 abstain, and 2 absent.

**END OF CONSENT CALENDAR ITEMS**

**3. SUBCOMMITTEE ITEMS - CAMP4W TASK FORCE**

- a. Subject: Task Force Discussion

Cesar Barrera, City of Santa Ana  
Nina Jazmadarian, Foothill Municipal Water District  
Shivaji Deshmukh, Inland Empire Utilities Agency  
Dave Pedersen, Las Virgenes Municipal Water District  
Anatole Falagan, Long Beach Water Department  
Anselmo Collins, Los Angeles Department of Water and Power  
Harvey De La Torre, Municipal Water District of Orange County  
Dan Denham, San Diego County Water Authority  
Anthony Goff, Calleguas Municipal Water District  
Tom Love, Upper San Gabriel Valley Municipal Water District  
Craig Miller, Western Municipal Water District  
Joe Mouawad, Eastern Municipal Water District  
Stacie Takeguchi, Pasadena Water and Power

Presented by: No presentation was given.

Task Force Members present: Member Agency Manager Members Barrera, Denham, Collins, De La Torre, Deshmukh, Falagan, Jazmadarian, Litchfield, Love, Miller, Mouawad, Pedersen, Rojas, and Takeguchi.

- b. Subject: Review Climate Adaptation Master Plan for Water Time-Bound Targets  
Presented by: Elizabeth Crosson, Chief Sustainability, Resilience, and Innovation Officer

Ms. Crosson presented the committee with an overview of the Climate Adaptation Master Plan for Water Time-Bound Targets. Her presentation included a process that will establish a focus on the development and use of Time-Bound Targets and provide an overview of how they integrate into the Climate Adaptation Master Plan for Water process.

The following Directors and Member Agency Managers asked questions and provided comments:

1. Petersen
2. Pedersen
3. Peterson
4. Fong-Sakai
5. Falagan
6. Miller
7. Sutley
8. Takeguchi

9. Love
10. Mouawad
11. De La Torre
12. Deshmukh
13. Seckel
14. Quinn

Staff responded to Directors' and Member Agency Managers comments and questions.

c. Subject: Update on Member Agency Dashboard with Climate Projections

Presented by Demetri Polyzos, Water Resource Management Section Manager  
Jennifer Coryell, Hazen and Sawyer

Ms. Crosson introduced Demetri Polyzos and Jennifer Coryell (Hazen and Sawyer) to present to the committee an update of the Member Agency Dashboard with Climate Projections forthcoming updates and climate future projections. The beta dashboard is available to Joint Task Force Members, Board Members, and Member Agency Managers.

The following Directors and Member Agency Managers asked questions and provided comments:

1. Seckel
2. Fong-Sakai
3. Mouawad

Staff responded to Directors' and Member Agency Managers comments and questions.

#### **4. FOLLOW-UP ITEMS**

Ms. Crosson requested the committee for additional written comments for the Time-Bound Targets by March 13, 2024.

#### **5. FUTURE AGENDA ITEMS**

None

#### **6. ADJOURNMENT**

The next meeting will be held on March 18, 2024.

The meeting adjourned at 4:22 p.m.

Matt Petersen  
Chair



**BOARD OF DIRECTORS**

Chance Edmondson, President  
Harvey R. Ryan, Vice President

Jack T. Ferguson, Treasurer  
Darcy M. Burke, Director  
Andy Morris, Director

**GENERAL MANAGER**

**LEGAL COUNSEL**  
**DISTRICT SECRETARY**

Greg Thomas  
Best, Best & Krieger  
Christy Gonzalez, Acting

February 7, 2024

ELECTRONIC MAIL

Chairman Adán Ortega  
Metropolitan Water District of Southern California  
700 N. Alameda Street  
Los Angeles, CA 90012

**SUBJECT: CLIMATE ADAPTATION MANAGEMENT PLAN FOR WATER (CAMP4H2O)**

Dear Chairman Ortega:

We appreciate the opportunity to provide CAMP4H2O comments and process inputs. We appreciate the transparent process and inclusiveness at all levels of Metropolitan. For background, Elsinore Valley Municipal Water District (EVMWD) is a public water agency providing water, wastewater, and recycled water services to a population of approximately 170,000 in south-western Riverside County, with one third of our customers in disadvantaged communities. EVMWD is a retail agency served by the Western Municipal Water District, a Metropolitan Water District of Southern California Member Agency. Approximately thirty-five percent of our drinking water supply is obtained from EVMWD's own local groundwater and surface water sources, with the remainder being imported through Western Water from Metropolitan.

Thank you for embarking on this extremely important endeavor, as southern California, the state, as well as good portion of the western United States continue to deal with climate stresses and changing weather patterns. The last fifteen-years have been marked by record rains and snow as well as multi-year dry spells, forcing water systems and water managers to respond to these events with antiquated planning tools, science, and aging infrastructure. We believe that it will take a variety of projects and some policy changes, to ensure all Californians, agriculture, and the environment have enough water so life can flourish. For EVMWD, this is why your Climate Adaptation Management Plan for Water (CAMP4H2O) efforts are both necessary and timely. Your Board Committee structure and the use of a Task Force specifically are key to developing a comprehensive, regionally accepted plan, and moving that effort forward.

**Time Bound Targets**

We respectfully submit the following comments for your consideration, specifically the plan criteria and evaluation options. First and foremost, the primary focus of this plan should be on water supply and water quality, including source water protection, water quality, treatment, and delivery in a dynamic and unpredictable climate. As noted previously, we are

experiencing climate whiplash, and given these uncertainties, along with Metropolitan’s mission, our primary focus should be on delivering safe, reliable, resilient, adaptable, affordable, and equitable water supplies, regardless of conditions. Though the other Time Bound Targets, both Resource-Based and Policy-Based, are important, they are secondary. When the Board focuses on these four main attributes (Reliability, Resilience, Financial Sustainability & Affordability, as well as Increased Adaptability & Flexibility), Equity and Environmental Co-benefits will be accomplished.

Category 3 - We did not see any significant difference between the short-term and long-term local supply production targets. It would be anticipated that the long-term goals would continue to increase. Additionally, how were these numbers determined? What would Metropolitan’s role be related to local agency supply creation? Example, if a retail agency moved forward with indirect or direct potable reuse from their local reclamation facility, or even desalination, whether from ocean or brackish, what would Metropolitan’s role be in that effort and how could you count that as a short or long-term target? Perhaps reference local agency planning documents for specific targets and incorporate.

Category 7 - Water quality is our top priority. As it related to resource-based targets, we suggest this be a system improvements target. Nitrification issues specifically were called out which relate to flow and source water quality. System improvements address both of those issues.

**Time Bound Resource Targets Recommendations**

No.	Category	Near-term	Mid-term	Long-term
1	Core Supply	No Change	No Change	No Change
2	Storage	No Change	No Change	No Change
3 & 8	Local Supply & Productions	Please refer to planning documents such as UWMPs and IRPs	Please refer to planning documents such as UWMPs and IRPs	Please refer to planning documents such as UWMPs and IRPs
4	Flexible Supply	Clarify this is not accumulative numbers	Clarify this is not accumulative numbers	Clarify this is not accumulative numbers
6 & 7	System Improvements	No Change to existing content; consider additional issues that system improvements would address	No Change to existing content; consider additional issues that system improvements would address	No Change to existing content; consider additional issues that system improvements would address

Category 8 - would recommend deleting this category, as it seems to be the same as Category 3. What is the difference between these two categories? Wouldn’t local agency new supply development amounts be accounted for in overall regional supply? Again, Category 3 seems to capture this effort.



Categories 10-14 – First, these four categories are retail agency related, thus how would Metropolitan measure this or even need to track? Agencies are already overly burdened with State Water Resources Control Board and other state/federal agencies reporting requirements; this would be a duplication and unnecessary demand. Our recommendation would be to combine these into one category such as Conservation/Water Use Efficiency and set a specific water-savings goal amount in Acre-feet (i.e., 20,000 AFY), and then define that Key Performance Indicator (KPI) total by each term (ST, MT, LT). That would track as Member Agencies inform Metropolitan of their future-year demands based on efficiency investments. Also, some agencies like those in the Inland Empire are continuing to grow, and some conservation investments would be offset by new homes construction. These four categories reside with your Member Agencies, or more specifically, with their **retail** agencies. Additionally, a variety of conservation standards may change at the state level, which would require continuous adjustments on targets, so using a target goal of meeting 100% compliance with SWRCB standards is not a measurable KPI. Water-use efficiency is a retail agency requirement (there are no wholesaler requirements in any of the proposed conservation standards), and similar to Metropolitan programs sponsored/supported in the past, we recommend Metropolitan provide retail agencies water-use efficiency program implementation funding, based on their unique demographic or local needs, as it makes fiscal and financial sense. By determining these targets in regional Acre Feet, an apples-to-apples financial comparison can be provided to other resource investments. For example, is it more cost effective to build local storage than to invest in additional water conservation programs where the local customers have hardened their water use demands? By keeping the KPI consistent, better financial investment comparisons can be made.

Category 15 – this is a very ambitious goal. Is Metropolitan planning on building solar or green energy plants to reach this goal or support alternative clean energy sources such as nuclear energy, hydrogen, or even continuation of clean, gas-fired energy generation, as this is the most reliable energy? A diversified, reliable, and affordable energy portfolio will be required that can power Metropolitan needs now and well into the future. This may also be very expensive in the short term so finding funding offsets will be important.

Category 16 – where does the Colorado River fit into this, as there is no mention of it? The Colorado River is a stressed system, however, still one of Metropolitan's vital supply sources. Please continue to invest or at least consider intentional storage or other similar projects or programs.

Category 17 - This is a very nebulous target. We support goals of using local resources to the maximum extent, as well as improving the lives of disadvantaged and low-income, customers, and have developed our own programs to make sure no one falls through the cracks. The Diamond Valley Lake (DVL) project is a great example of local community investment where a designated percentage of resources were purchased locally, labor was sourced locally, and the community benefitted. Using this as a model, policy should be developed that supports workforce development, local businesses, education, water use efficiency programs,

environmental health, and overall community investments. DVL was a great community equity model and could be replicated.

Categories 18 and 19 – Metropolitan needs to focus on investing in their systems, especially when it comes to water quality. System reliability and operational efficiency impacts reliability, resiliency, public health as well as our most vulnerable customers. Why are there no mid-term or long-term goals? Is the intent that the short-term targets continue through mid and long-term?

### Time Bound Policy Targets Recommendations

No.	Category	Near-term	Mid-term	Long-term
<b>3 &amp; 8</b>	Local Supply & Productions	Please refer to planning documents such as UWMPs and IRPs	Please refer to planning documents such as UWMPs and IRPs	Please refer to planning documents such as UWMPs and IRPs
<b>10-14</b>	Water Use Efficiency, Landscape Efficiency GPCD, Non-Functional Turf	Should be combined into one category and clearly defined in Acre Ft as a REGIONAL Goal	Should be combined into one category and clearly defined in Acre Ft as a REGIONAL Goal	Should be combined into one category and clearly defined in Acre Ft as a REGIONAL Goal
<b>15</b>	GHG Reductions	Identify Clean Energy Portfolio options and potential funding sources	Develop Clean Energy Portfolio options and continue to seek potential funding sources	Develop Clean Energy Portfolio options and continue to seek potential funding sources
<b>16</b>	Imported Water Resilience	Add Colorado River improvements, investments, partnerships, and programs	Add Colorado River improvements, investments, partnerships, and programs	Add Colorado River improvements, investments, partnerships, and programs
<b>17</b>	Community Equity	Develop policy based on the DVL Project model where local community investment resulted in improved community economic benefit.	Implement policy based on the DVL Project model where local community investment results in improved disadvantaged and community economic benefit.	Expand the community investment policy based on the DVL Project model where local community investment results in improved regional economic benefit.
<b>18 &amp; 19</b>	Water System Resilience	No Change	Please define Specific, Measurable, Achievable, Reasonable, Timely Goals (SMART)	Please define Specific, Measurable, Achievable, Reasonable, Timely Goals (SMART)

As far as the Evaluative Criteria Scoring Options listed on slide 18 of the January 18, 2024, presentation, we recommend the following:

- Move public health benefits as Scoring Matrix 3 that is currently under Equity to Reliability. Public Health for all of Metropolitan’s entire customer base should be the number one priority, along with providing reliable and resilient water supply, which is why public health benefits fits better under Reliability.
- Equity and Environmental Co-benefits Criteria to be weighted as 10 points each.
- Reliability would be weighted at 25 points; and
- Financial Sustainability and Affordability weighted at 20 points. Making water affordable for ALL customers ultimately supports equity.

**Evaluative Criteria Scoring Recommendations**

<b>Evaluative Criteria</b>	<b>Score</b>	<b>Scoring Metric 1</b>	<b>Scoring Metric 2</b>	<b>Scoring Metric 3</b>	<b>Scoring Metric 4</b>
<b>Reliability</b>	25	Advances Supply Reliability	Consistency in various hydrological conditions	Public Health Benefits	
<b>Resilience</b>	20	Increases Existing Infrastructure/ Water Source Resilience	Project’s Ability to Withstand Climate Impacts	Addresses an Identified Climate Vulnerability	
<b>Financial Sustainability &amp; Affordability</b>	20	Financial Leverage	Unit Cost		
<b>Adaptability &amp; Flexibility</b>	15	Increases flexibility of existing assets	Operational ease and complexity of implementation	Average Annual Rate Impact	
<b>Equity</b>	10	Measurable Economic benefit for Underserved Communities (DVL model)	Community engagement Scale	Scalability	Workforce Development
<b>Environmental Co-Benefits</b>	10	Greenhouse Gas Emissions Benefits	Ecosystem Services	Habitat/Wildlife Benefits	

Finally, given Climate Adaptation Management planning complexity, there appears to be a disconnect between sustainability efforts and water resources. We respectfully recommend

this effort be more collaborative at the staff level by **actively engaging** Metropolitan's recognized and industry-admired Water Resources and Planning Department, Water Quality, Operations, and Legal. All of Metropolitan's member agencies, and their sub-retail agencies, create and/or submit a multitude of plans (Urban Water Management Plan, Water and Wastewater Master Plans, Integrated Resources Plans, etc.) that provide very detailed analysis and projections of water demands and how the demands will be met. These projections get rolled up to Metropolitan, and thus regional demand forecasts are developed. Metropolitan has historically provided the gap between local supply and projected regional demand. From the outside looking in, these targets and related evaluative criteria did not include the experience, information, and expertise from your highly-regarded water-related staff. As Metropolitan wrestles with the Time-Bound Target and Resource-Based Targets matrices, the various categories listed, and their associated short, mid, and long-term targets being developed, this expertise is invaluable.

Thank you for allowing us to provide these comments and input to the planning effort. We have confidence that Metropolitan will consider these comments, adjust the plan accordingly noting the primary focus on water supply reliability, resilience, and affordability. We believe collectively these will enable the economy to thrive, ensure food security and availability as well as build resiliency for future generations just as those that came before us did for us today.

Sincerely,



Darcy M. Burke  
Board Director



Greg Thomas  
General Manager

DB/GT/se



***Subcommittee on Long-Term Regional Planning Processes and  
Business Modeling***

3/27/2024 Subcommittee Meeting

3b

**Subject**

Climate Adaptation Master Plan for Water - Draft Year One Report

**Executive Summary**

In February 2023, the Board directed staff to integrate water resources, climate, and financial planning into a Climate Adaptation Master Plan for Water (CAMP4W or Master Plan). Specifically, the Master Plan will include: (1) Climate and Growth Scenarios; (2) Time-Bound Targets; (3) A Framework for Climate Decision-Making and Reporting; (4) Policies, Initiatives, and Partnerships; and (5) Business Models and Funding Strategies. CAMP4W will increase Metropolitan’s understanding of the climate risks to water supplies, infrastructure, operations, workforce, and financial sustainability. CAMP4W will also develop decision-making tools and long-term planning guidance for adapting to climate change to strengthen Metropolitan’s ability to fulfill its mission.

This committee item presents the first installment of the Draft Climate Adaptation Master Plan for Water Year One Progress Report (Draft Report). The Draft Report documents progress since February 2023 and sets up next steps for 2024, including discussion of Metropolitan’s business model and funding strategies, proposed Go Projects, policy recommendations, partnership opportunities, and an adaptive management framework. Progress to date includes work to establish the values and priorities of the Board and Member Agencies, components of a Climate Decision-Making Framework, Time-Bound Targets, and the process for identifying projects and programs for evaluation. The attached Draft Report includes the Table of Contents, Executive Summary, and sections on Background and Need and the Climate Decision-Making Framework. The additional chapters will be presented in draft form ahead of the April CAMP4W Task Force Meeting.

**Fiscal Impact**

Not applicable

**Applicable Policy**

By Minute Item 52776, dated April 12, 2022, the Board adopted the 2020 Integrated Water Resources Plan Needs Assessment.

By Minute Item 52946, dated August 15, 2022, the Board adopted a resolution affirming Metropolitan’s call to action and commitment to regional reliability for all member agencies.

By Minute Item 53381, dated September 12, 2023, the Board approved the use of Representative Concentration Pathway (RCP) 8.5 for planning purposes in the Climate Adaptation Master Plan for Water.

**Related Board Action(s)/Future Action(s)**

Not applicable

## Details and Background

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### Background

#### Draft CAMP4W Year One Progress Report

The Draft CAMP4W Year One Progress Report (Draft Report) documents Metropolitan's progress to date and provides next steps for finalizing a Draft Master Plan in December 2024. Since February 2023, the Board and Member Agencies have regularly and substantially engaged with Metropolitan staff to understand and assess climate risks, set priorities and goals for climate adaptation, and develop a Climate Decision-Making Framework to inform the Board's investment decisions. Working Memos #1-6, Board and Member Agency discussions and comment letters, public input, technical modeling, and analysis are compiled in the Draft Report. Additional input will be incorporated based on Task Force discussions and comment letters before requesting Board concurrence with a Final Year One Progress Report at the Finance and Asset Management Committee Meeting in May 2024.

The attached Draft Report includes the Table of Contents, Executive Summary and the Background and Climate Decision-Making Framework sections. This committee item discussion will focus on those drafted sections as well as the "Development of Adaptation Strategies" section. The additional sections will be presented in draft form ahead of the April CAMP4W Task Force Meeting. The Year One Progress Report includes two focus areas: (1) Progress to Date; and (2) Next Steps for 2024 (see below).

Included below are updates to components of the Climate Decision-Making Framework based on recent discussions and input.

#### Time-Bound Targets

During the December, January, and February CAMP4W Task Force Meetings, task force members and Metropolitan staff discussed the role of Time-Bound Targets within the CAMP4W process and the development of the Climate Decision-Making Framework. Time-Bound Targets establish specific policy and resource management goals to guide climate adaptation investments and advance Metropolitan's core mission. Through near-, mid- and long-term targets, Metropolitan will measure progress towards the CAMP4W objectives of resilience, reliability, financial sustainability, affordability, and equity. Targets are intended to address multiple categories of climate adaptation efforts, including core supply, conservation and efficiency, infrastructure, storage, flex supply, water quality, equity, and affordability.

The Draft Report includes a refined list of Time-Bound Targets based on Board, Member Agencies, and public input on Working Memo #6. The Task Force will have the opportunity to add additional targets in the Draft Master Plan by the end of 2024.

#### Signposts

The Draft Report also includes a preliminary list of Signposts that will be used to monitor real-world conditions and inform adjustments to Evaluative Criteria and Time-Bound Targets, including core supply, flex supply, storage, and conservation and efficiency programs. Signposts represent metrics that can be monitored regularly to update assumptions and modeling over time. Initial Signposts include metrics related to population, economic health, local agency supply, demand management efforts, regulatory updates, and climate change indicators and can be updated or augmented at any time.


**Draft Outline of CAMP4W Year One Progress Report**


<ol style="list-style-type: none"> <li>1. EXECUTIVE SUMMARY</li> <li>2. CAMP4W PURPOSE, NEED AND OUTCOME             <ol style="list-style-type: none"> <li>a. Summary of Metropolitan’s System, Assets and Member Agencies</li> <li>b. Purpose and Need of Climate Adaptation Planning</li> <li>c. Summary of Planning Efforts to Date</li> <li>d. CAMP4W Process Overview</li> </ol> </li> <li>3. CLIMATE DECISION-MAKING FRAMEWORK             <ol style="list-style-type: none"> <li>a. Overall Climate Decision-Making Framework Process                 <ol style="list-style-type: none"> <li>i. Evaluative Criteria</li> <li>ii. Time-Bound Targets</li> <li>iii. Signposts</li> </ol> </li> </ol> </li> <li>4. DEVELOPMENT OF ADAPTATION STRATEGIES             <ol style="list-style-type: none"> <li>a. CAMP4W Projects and Programs</li> <li>b. Sources for Project Identification                 <ol style="list-style-type: none"> <li>i. Vulnerability and Risk Assessments</li> <li>ii. Drought Mitigation Action Plan</li> <li>iii. Hazard Mitigation Plan</li> <li>iv. Resource Studies</li> <li>v. Other CIP Development</li> </ol> </li> <li>c. Project and Program Evaluation Process                 <ol style="list-style-type: none"> <li>i. Climate Modeling</li> <li>ii. Project / Portfolio Evaluation</li> <li>iii. Financial Considerations</li> </ol> </li> </ol> </li> </ol>	<p><b>Progress to Date</b></p>
<ol style="list-style-type: none"> <li>5. BUSINESS MODEL AND AFFORDABILITY             <ol style="list-style-type: none"> <li>a. Role of Long-Range Finance Plan</li> <li>b. Business Model Options</li> <li>c. Addressing Affordability</li> </ol> </li> <li>6. POLICIES, INITIATIVES AND PARTNERSHIPS             <ol style="list-style-type: none"> <li>a. Initial Policy Recommendations</li> <li>b. Partnership Opportunities</li> <li>c. Programs and Initiatives to Pursue</li> <li>d. Community Engagement</li> </ol> </li> <li>7. ADAPTIVE MANAGEMENT             <ol style="list-style-type: none"> <li>a. Adaptive Management Framework</li> <li>b. Identification of Go Projects and Programs</li> <li>c. Signposts and Monitoring</li> <li>d. CAMP4W Reporting and Updates</li> </ol> </li> </ol>	<p><b>Next Steps for 2024</b></p>

**CAMP4W Task Force and Committee Meeting Schedule and Discussion Topics Through May 2024**

March 27, 9:30 am - 12:30 pm	<b>CAMP4W Task Force</b> (LTRPPBM Subcommittee)	Draft Year One Progress Report (Exec Summary, Purpose and Need, Climate Decision-Making Framework, Developing Adaptation Strategies)
April 8/9	Finance and Asset Management Committee	Draft Year One Progress Report (Info Item)
April 8/9	Equity, Inclusion and Affordability Committee	Report on Water Affordability Panels and Recommended Actions
April 24, 9:30 am - 12:30 pm	<b>CAMP4W Task Force</b> (LTRPPBM Subcommittee)	Draft Year One Progress Report (Business Model and Funding Strategies, Policies, Partnerships, Adaptive Management)
May 13/14	Finance and Asset Management Committee and Board	Draft Year One Progress Report (Action Item)

CAMP4W Task Force Meetings (LTRPPBM Subcommittee) are currently scheduled for the fourth Wednesday, 9:30 am - 12:30 pm throughout 2024.

  
 \_\_\_\_\_ 3/22/2024  
*Elizabeth Crosson* Date  
 Chief Sustainability, Resilience, and  
 Innovation Officer

  
 \_\_\_\_\_ 3/22/2024  
*Adel Hagekhalil* Date  
 General Manager

**Attachment 1 – Draft CAMP4W Year One Progress Report (TOC, Executive Summary, Sections 1-2)**

**Attachment 2 – March 2024 Member Agency Comment Letters**

Ref# sri12691822



DRAFT



# CAMP4W

Climate Adaptation  
Master Plan for Water

## Year One Progress Report



Metropolitan Water  
District of Southern  
California

APRIL 2024



# Table of Contents

<b>Executive Summary</b>	<b>ES-1</b>
Purpose and Need	<b>ES-2</b>
Climate Decision-Making Framework Overview	<b>ES-5</b>
Summary of CAMP4W Adaptive Management Elements	<b>ES-5</b>
Evaluative Criteria	<b>ES-6</b>
Time-Bound Targets	<b>ES-7</b>
Signposts	<b>ES-8</b>
<b>1. CAMP4W Background, Need, and Outcome</b>	<b>1-1</b>
1.1 Summary of Metropolitan's System, Assets, and Member Agencies	<b>1-1</b>
1.2 Purpose and Need for Climate Adaptation Planning	<b>1-2</b>
1.3 Summary of Planning Efforts to Date	<b>1-4</b>
1.4 CAMP4W Process Overview	<b>1-7</b>
<b>2. Climate Decision-Making Framework</b>	<b>2-1</b>
2.1 Overall Climate Decision-Making Framework Process	<b>2-1</b>
2.2 Adaptive Management	<b>2-2</b>
2.2.1 Evaluative Criteria	<b>2-3</b>
2.2.2 Time-Bound Targets	<b>2-4</b>
2.2.3 Signposts	<b>2-5</b>
<b>3. Development of Adaptation Strategies</b>	<b>3-1</b>
3.1 CAMP4W Projects and Programs	
3.2 Source for Project Identification	
3.2.1 Vulnerability Assessment Recommendations	
3.2.2 Drought Mitigation Action Planning	
3.2.3 Hazard Mitigation Planning	
3.2.4 Resource and Program Development towards Targets	
3.2.5 System Reliability Planning	
3.2.6 Other CIP Development Projects	
3.3 Project and Program Evaluation Process	
3.3.1 Climate Modeling to Assess Impacts and Benefits	
3.3.2 Financial Considerations	
3.3.3 Portfolio Evaluation	
<b>4. Business Model and Affordability</b>	<b>4-1</b>
4.1 Role of Long-Range Finance Plan	
4.2 Business Model Options	
4.3 Addressing Affordability	

<b>5. Policies, Initiatives and Partnerships</b>	<b>5-1</b>
5.1 Initial Policy Recommendations	
5.2 Partnership Opportunities	
5.3 Programs and Initiatives to Pursue	
5.4 Community Engagement	
<b>6. Adaptive Management</b>	<b>6-1</b>
6.1 Adaptive Management Framework	
6.2 Identification of Go Projects and Programs	
6.3 Signposts and Monitoring	
6.4 CAMP4W Reporting and Updates	
<b>Appendices</b>	
Appendix A: Glossary of Terms	
Appendix B: Working Memoranda	

**Adapting to Extreme Conditions brought on by a Changing Climate.**

Flood  
**Fire** El Niño  
 Atmospheric River  
 Earthquake  
**Drought**  
 La Niña Salinity  
 Sea-Level Rise  
 Wind  
**Heat**

# Acknowledgements

This progress report for the Climate Adaptation Master Plan for Water would not be possible except for the dedication of Task Force Members, Metropolitan's Staff, and consultants.

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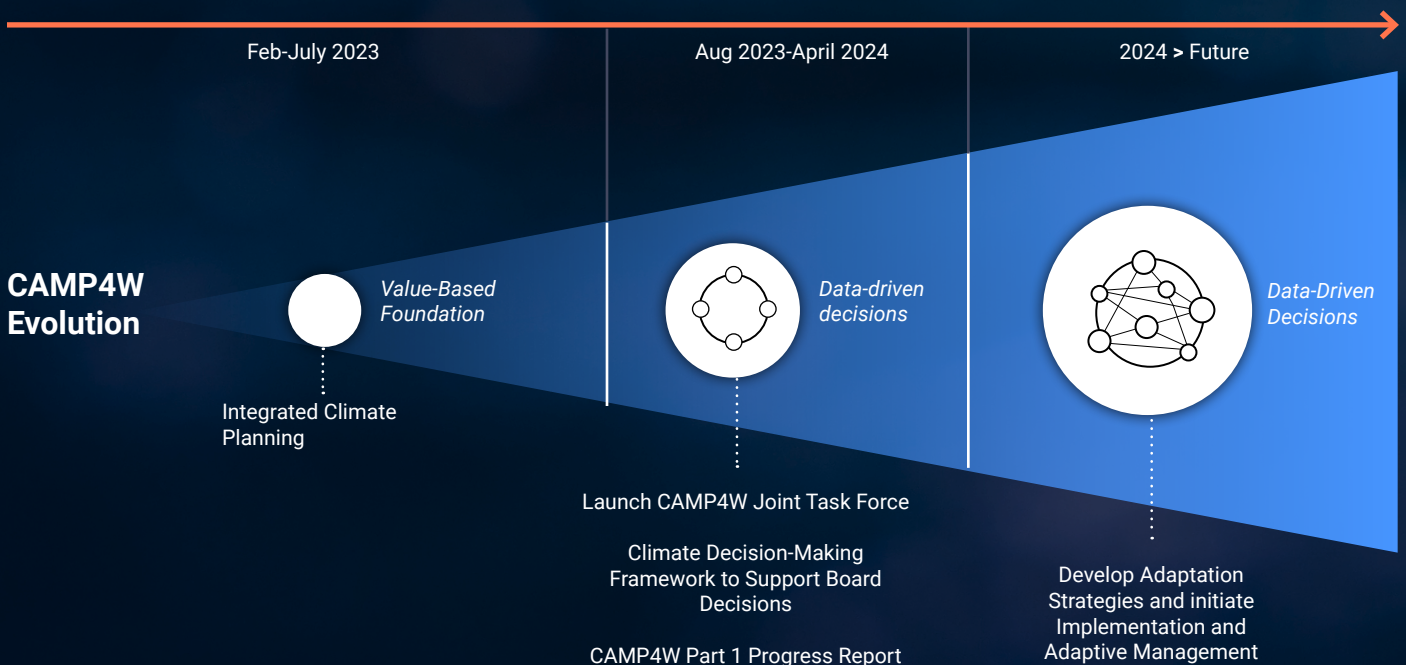
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# Executive Summary

## CAMP4W Problem Statement

Extreme weather conditions in recent years have presented Southern Californians with an unsettling preview of the challenges ahead – weather whiplash is abruptly swinging the state from periods of severe and extended drought to record-setting wet seasons. There is no question that climate change is here and putting mounting pressure on the year-to-year management of all our available water resources. To ensure the continued reliability of water supplies for the communities we serve, Metropolitan is developing a Climate Adaptation Master Plan for Water (CAMP4W), that will increase Metropolitan’s understanding of the climate risks to water supplies, infrastructure, operations, workforce, and financial sustainability. It will provide a roadmap that will guide our future capital investments and business model as we confront our new climate reality in the years and decades ahead.

This CAMP4W Year One Progress Report presents an overview of the work Metropolitan has done to date and maps out the work to be done through the remainder of 2024 and beyond.



## CAMP4W Joint Task Force Charter






On November 21, 2024, Metropolitan’s Board of Directors chartered a Joint Task Force of Board Members and Member Agency Managers to oversee the development of the CAMP4W process and Master Plan. CAMP4W was designed to include the following components:

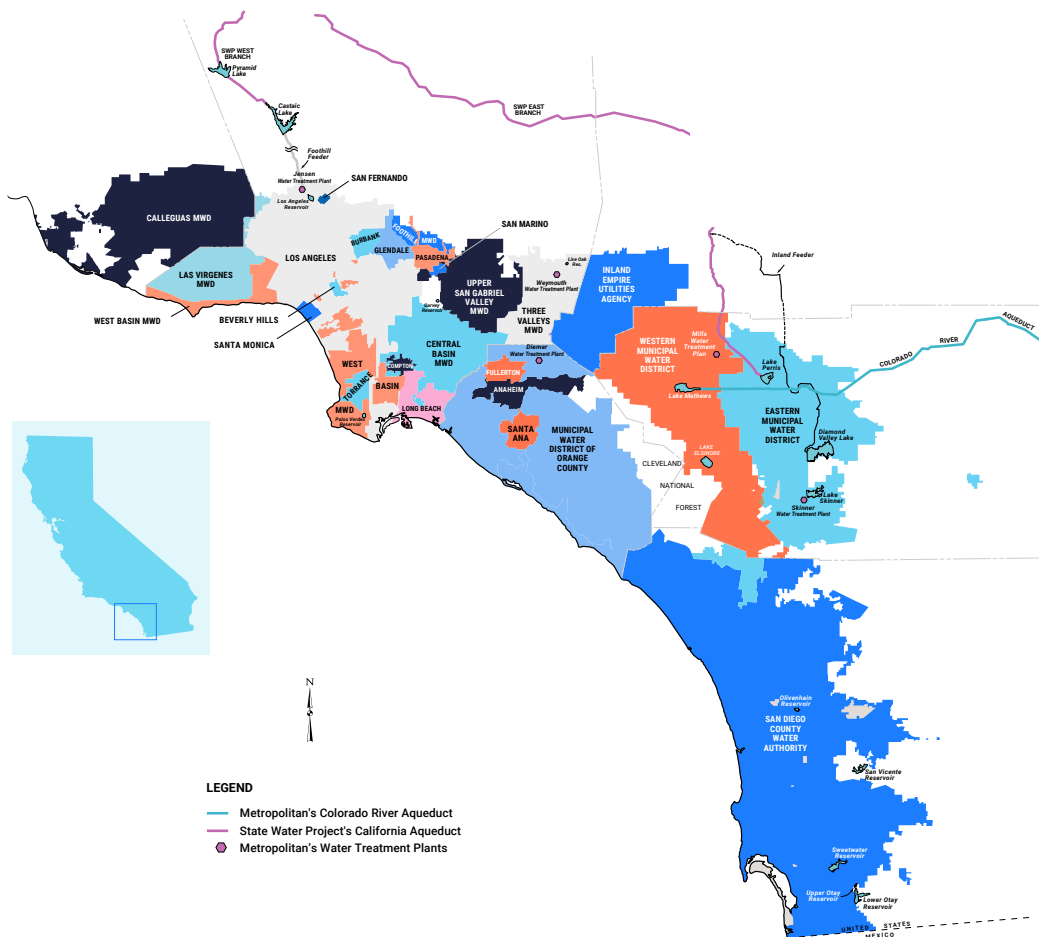
- **Climate and Growth Scenarios:** Utilize climate scenarios—based on RCP 8.5 as set by the board and regularly updated to reflect real-world conditions and climate risks—to assess and set ranges of variability of water supplies from the State Water Project, the Colorado River, and regional hydrology as well as regional growth scenarios that indicate demands of different Member Agencies.
- **Time-Bound Targets:** Set targets to achieve by 2026, 2032, and 2045 for efficiency, conservation (including GPCD across the entire service area), system interconnection, water supply, equity and affordability, and other targets as needed and identified.
- **Framework for Climate Decision-Making and Reporting:** Establish a Climate Decision-Making Framework for the Board of Directors to align Metropolitan’s project-level investments with a set of Evaluative Criteria developed to match the values and priorities of the Board while complementing Member Agencies’ individual plans and investments. The framework is part of an adaptive management approach and provides a platform for regular reporting—at least annually—on progress toward the targets and other indicators established by the master plan.
- **Policies, Initiatives, and Partnerships:** Implement policies, initiatives, and regional partnerships that will achieve the resource-based and policy-based targets in order to address the range of potential regional supply gaps among Member Agencies.
- **Business Models and Funding Strategies:** Assess and recommend business model options and rate enhancements—as well as strategies to secure funding at the State and Federal levels—that help achieve the targets while ensuring long term financial sustainability, equity, and affordability.



## Reflecting the Values and Goals of the Joint Task Force through the CAMP4W Themes

**Stronger together.** Working collaboratively is a cornerstone of the CAMP4W process. The Task Force has committed itself to prepare Metropolitan and its Member Agencies for an uncertain future by developing a process for evaluating and prioritizing capital investments and programs that support a reliable and resilient supply of water resources. Founded on the themes of **reliability, resilience, financial sustainability, affordability, and equity**, CAMP4W will foster collaboration throughout the region by applying a “stronger together” approach.

				
<p><b>Reliability</b></p> <p>Ability to consistently meet Member Agency water demands.</p>	<p><b>Resilience</b></p> <p>Ability to withstand and recover from disruptions.</p>	<p><b>Financial Sustainability</b></p> <p>Revenues sufficient to cover expenses over the short- and long-term.</p>	<p><b>Affordability</b></p> <p>Relative cost burden and elastic ability to access (pay for) service and support Member Agency efforts to provide affordable supply to their customers.</p>	<p><b>Equity</b></p> <p>Fair, just, and inclusive.</p>



As Metropolitan embarks on preparing for the future through **planning under deep uncertainty**, it is as important as ever that we make informed, educated, and intentional decisions on where and how we invest. We must balance the need to be prepared for the future, with the need to balance costs and not over build or create stranded assets. As an agency responsible for supplying water to our 26 Member Agencies, who serve the 19-million person service area across 5,200 square miles, the impacts of our decisions are far reaching.

### PLANNING UNDER DEEP UNCERTAINTY

Worldwide, agencies are grappling with the impacts of climate change on our planet, resources, infrastructure, and workforce. In the past, analyses heavily relied on historical data to anticipate what might come in the future. With climate change, looking at the past to predict the future is less reliable. We must plan differently and be prepared for a level of volatility that we did not face in the past. It is as important as ever to be nimble in our planning, decision-making, and implementation process. For this, Metropolitan is employing an Adaptive Management Approach.



### ADAPTIVE MANAGEMENT

Metropolitan recognizes that planning under deep uncertainty requires flexibility and adaptability and acknowledges that future projections represent a range of possible outcomes with varying levels of resource development needs. Adaptive management allows Metropolitan to make investment decisions incrementally and refining decisions over time, based on evolving information and real-world conditions following the Climate Decision-Making Framework.



### THE CLIMATE DECISION-MAKING FRAMEWORK

The Climate Decision-Making Framework provides a process for evaluating projects to inform the Board's decision-making about investments. Key metrics used in the process include **Evaluative Criteria** that projects and programs are evaluated under, while striving to achieve established **Time-Bound Targets**. We regularly must track real-world **Signposts** to identify if the conditions under which the Time-Bound Targets were developed remain relevant or need to be adjusted.



### EVALUATIVE CRITERIA

A defined set of criteria used to establish a score for projects and programs which support the board's decision-making process. Evaluative Criteria are used in collaboration with the Time-Bound Targets and Signposts to support investment decisions.



### TIME-BOUND TARGETS

A series of resource development targets and policy-based targets that establish goals to be achieved in the near-, mid-, and long-term. Time-Bound Targets are set based on current planning targets (current real-world conditions) and are updated based on Signposts.



### SIGNPOSTS

Real-world metrics that allow Metropolitan to monitor how projections align with the real world. Signposts will guide the revision of Time-Bound Targets over time, shaping project and program development and helping inform the Board's investment decisions at different project stages.





# Climate Decision-Making Framework Overview

The Climate Decision-Making Framework is intended to define a consistent, stepwise process of making project and program investment decisions. It is based on Metropolitan priorities and the need to remain reliable and resilient into the future, while considering financial sustainability, affordability, and equity. Figure 1 illustrates the Climate Decision-Making

Framework, which will continue to be refined and tested over the remainder of 2024 as the comprehensive CAMP4W is completed. Over time, Metropolitan will also have the opportunity to refine the framework in the future through the Adaptive Management process as conditions change and the region adapts.



Figure ES-1 Climate Decision-Making Framework

## Summary of Key Metrics in the Climate Decision-Making Process

The Climate Decision-Making Framework utilizes three key elements including Evaluative Criteria, Time-Bound Targets, and Signposts to support the decision process and allow Metropolitan to refine decisions over time through an adaptive management approach. Each of these three elements were developed to represent actionable metrics that support the Board as expressed in the CAMP4W Themes. The following pages summarize the Evaluative Criteria, Time-Bound Targets, and Signposts under each Theme. Section 2 provides additional discussion on each of the three elements.



Five CAMP4W Themes include **reliability, resilience, financial sustainability, affordability, and equity** and reflect the Board values. They serve as overarching guiding principles for the CAMP4W process and are reflected in the Evaluative Criteria, Time-Bound Targets, and Signposts.

# Evaluative Criteria

A defined set of criteria used to establish a score for projects and programs which support the board’s decision-making process. Evaluative Criteria are used in collaboration with the Time-Bound Targets and Signposts to support investment decisions.

 <p><b>RELIABILITY</b> 25 POINTS</p>	 <p><b>RESILIENCE</b> 25 POINTS</p>	 <p><b>FINANCIAL SUSTAINABILITY &amp; AFFORDABILITY</b> 20 POINTS</p>
<p>Supply Performance Equitable Reliability</p>	<p>Addresses known vulnerabilities Project’s ability to perform under climate impacts</p>	<p>Bond capacity Unit cost</p>
<p>Assess how a project or program performs under various hydrologic conditions, the extent to which it helps close gaps identified in the IRP Needs Assessment, and how it can address an inequity in supply reliability.</p>	<p>Evaluates how the project or program addresses known vulnerabilities and how it performs under climate impacts.</p>	<p>Considers the ability of a program to be funded through bonds and the overall cost of the program.</p>
 <p><b>ADAPTABILITY &amp; FLEXIBILITY</b> 10 POINTS</p>	 <p><b>EQUITY</b> 10 POINTS</p>	 <p><b>ENVIRONMENTAL CO-BENEFITS</b> 10 POINTS</p>
<p>Flexibility of existing assets Ease / Complexity Scalability</p>	<p>Programs for underserved communities Scale of community engagement Public health benefits Workforce development</p>	<p>Greenhouse gas emissions Benefits Ecosystem services Habitat / wildlife benefits</p>
<p>Considers how a project or program improves operational flexibility, the difficulty of implementation, and if a program is able to be phased. Flexibility addresses the capability of Metropolitan’s system to respond to changes in water supply, water quality, treatment requirements, or demands during planned and unplanned facility outages.</p>	<p>Consideration of underserved communities, scale of community engagement, public health, and workforce development.</p>	<p>Measures greenhouse gas emissions, ecosystem services, and benefits to habitat and wildlife.</p>

# Time-Bound Targets



## Resource-Based Targets

Numbers reflect additional supplies unless indicated otherwise

Below is a summary of the initial resource development targets and policy-based targets that will be expanded upon over the coming year.

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Core Supply <sup>1</sup>	N/A	Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 650 TAF for potential implementation by 2045. Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF
Storage	Identify up to 500 TAF for potential implementation by 2035		
Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY		



## Policy-Based Targets

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026	Implement additional 130 CFS capacity to SWPDA by 2032	Implement capacity, conveyance, supply, and programs for SWPDA by 2045
Local Agency Supply <sup>2</sup>	Maintain 2.09 to 2.32 MAF (under average year conditions)	2.12 to 2.37 MAF (under average year conditions)	2.14 to 2.40 MAF (under average year conditions)
Demand Management <sup>3</sup>	Implement structural conservation programs to achieve 300 TAF by 2045		
Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards <sup>4</sup>		
	GPCD target for 2030 <sup>5</sup>	GPCD target for 2035	GPCD target for 2045
Greenhouse Gas Reduction	N/A	40% below 1990 emission levels by 2030	Carbon Neutral by 2045
Surplus Water Management	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan's Storage Portfolio and WSDM action		

## Notes

**1** Core Supply sub-targets will be considered later this year and may include targets for groundwater remediation and stormwater capture.

**2** This initial target includes existing (and under construction) local agency supplies and can be augmented later this year to include new local agency supply.

**3** Used to offset the need for additional core supply and using 2024 as a baseline.

**4** Each retail water supplier will report progress to the State Water Board annually through a Water Use Objective (WUO) equaling the sum of efficiency budgets for a subset of urban water uses: residential indoor water use, residential outdoor water use, real water loss and commercial, industrial and institutional landscapes with dedicated irrigation meters. Each efficiency budget is calculated using a statewide efficiency standard and local service area characteristics (population, climate, etc.).

**5** Specific GPCD Time-Bound Targets will be identified later this year based on final SWRCB standards as well as Metropolitan's overall demand management target. The target will be designed to track water use efficiency trends by sector over time and will take local conditions, including climate, into consideration.

# Signposts

A key part of the Adaptive Management process involves reading the Signposts to understand the real-world conditions and determine if the Time-Bound Targets need to be revised, which would in turn impact investments. The complete CAMP4W will include a comprehensive and detailed list of Signposts that Metropolitan will be tracking. Below is a summary of the initial categories, which will be expanded upon over the coming year.

**Proposed Signposts Metrics Examples**

*Signposts should be measurable, updatable, and readily available*

**DEMAND**

- Population
- Demand Management
- Economy
- Regulations
- Local Agency Supply

**SUPPLY**

- Climate Change Indicators
- Storage
- Regulations



Annually, Metropolitan will “Read the Signposts” to provide the Board a summary of the current status of each Signpost. It will include a brief assessment of any trends and what the findings may indicate. This will help the Board with making investment decisions, evaluating progress and identifying any adaptive management actions.

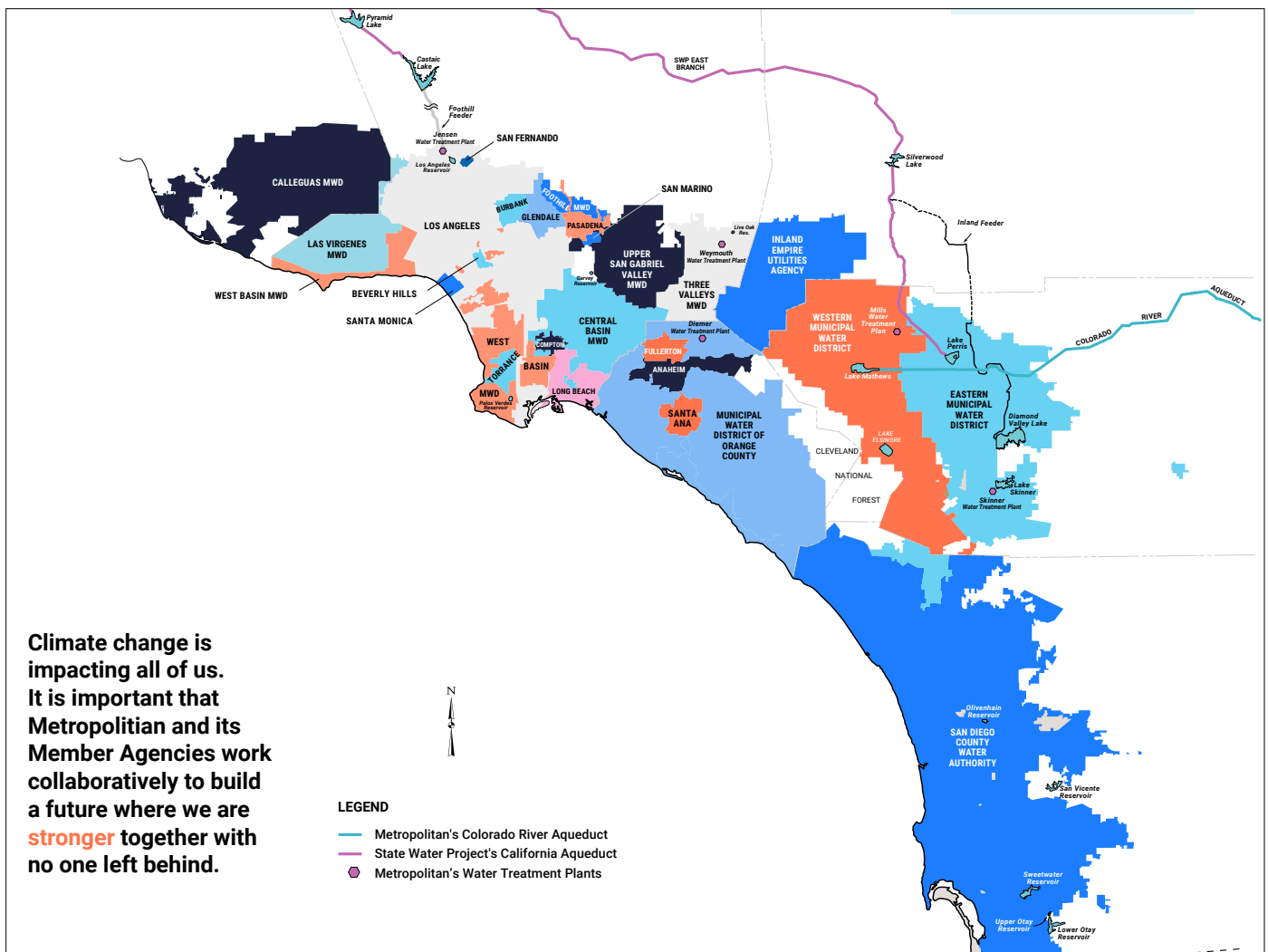
# CAMP4W Background, Need, and Outcome

## 1.1 Summary of Metropolitan’s System, Assets, and Member Agencies

Metropolitan’s mission 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. To do this, Metropolitan delivers approximately 1.5 billion gallons of water daily to its 26 Member Agencies, who serve the 19-million person service area across 5,200 square miles. Metropolitan operates and maintains an expansive range of reservoirs, five water treatment plants, hydroelectric facilities, 830 miles of pipelines including large-diameter pipelines and tunnels and about 400 service connections.

Metropolitan’s 26 Member Agencies, presented on the map, vary widely in terms of their size, whether they are retailers or wholesalers, the climate they experience, and their percent dependence on Metropolitan.

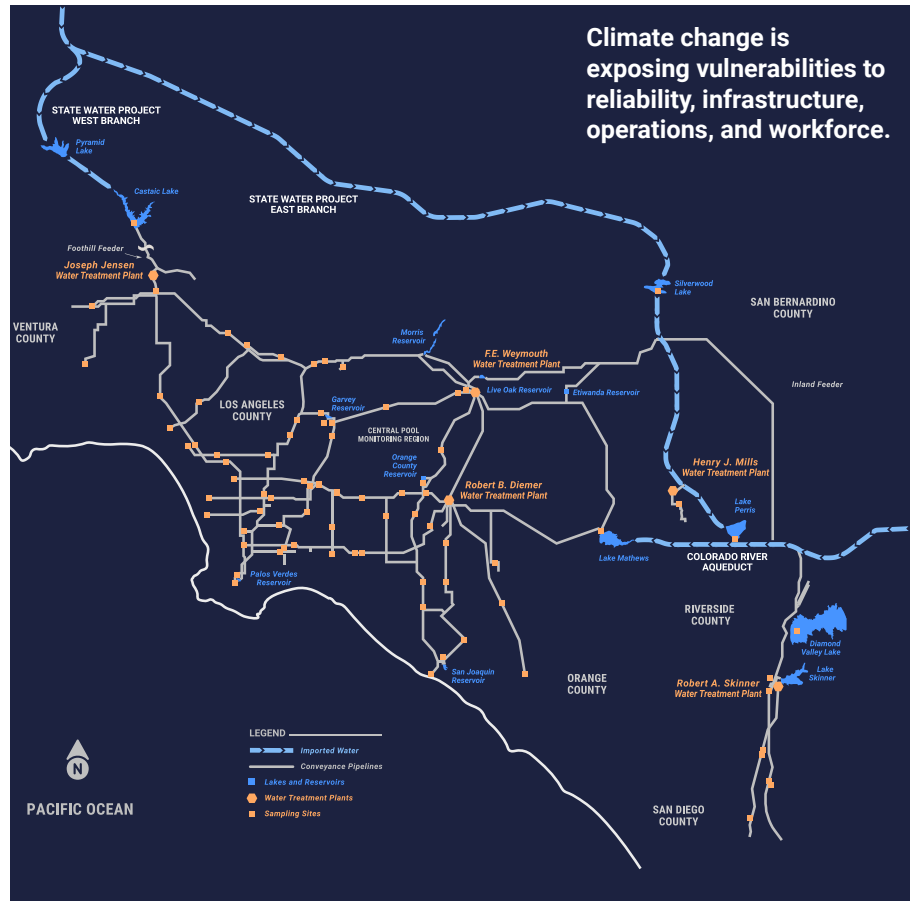
Southern California’s water supplies are facing major long-term threats, brought on by climate change, emerging contaminants and evolving ecological needs. Three consecutive years of recent drought left State Water Project dependent areas with shortages, threatening the health and wellbeing of our residents. Metropolitan is committed to helping the region overcome these challenges with careful planning, vision and leadership to ensure our communities have the water they need for generations to come.



# 1.2 Purpose and Need for Climate Adaptation Planning

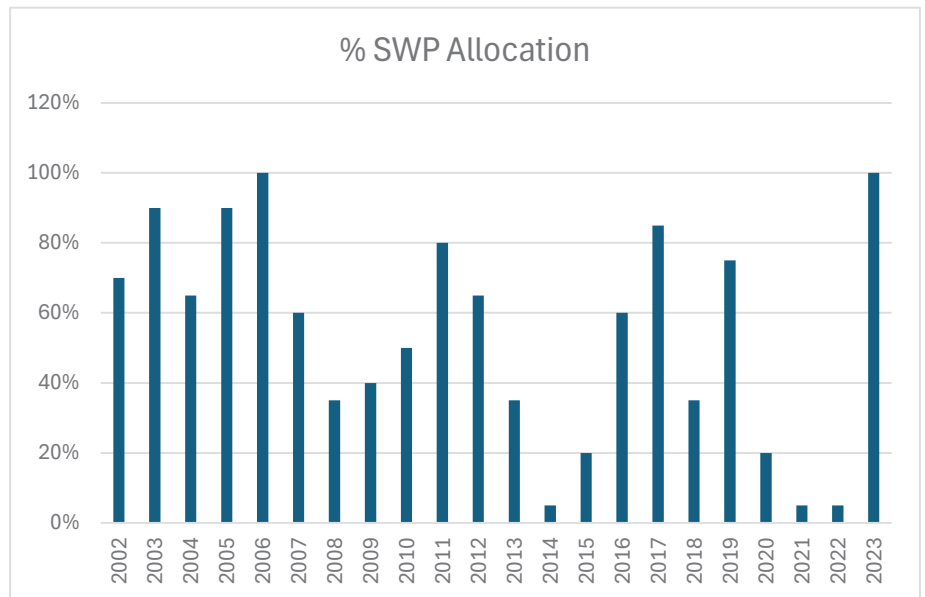
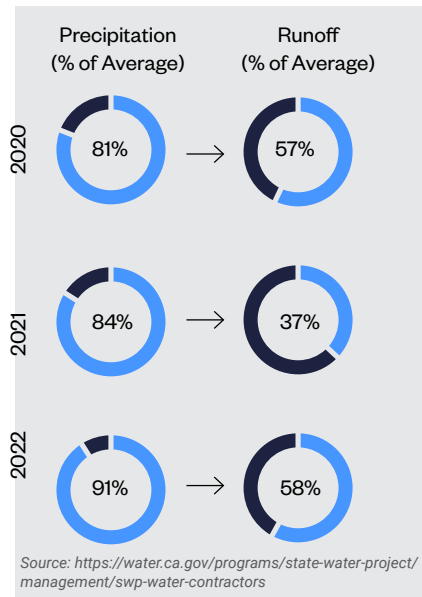
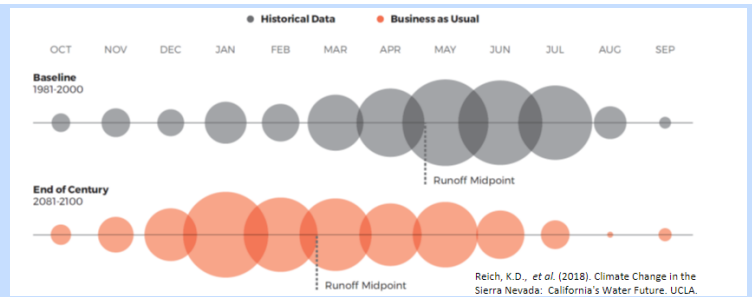
Worldwide, agencies are grappling with the reality that climate change is impacting our lives in a multitude of ways. Extreme weather events such as drought, flooding, wildfires, heat waves, and windstorms, as well as sea level rise and the compounded impacts of climate change on other hazards such as earthquakes, are driving decisions. Metropolitan faces these challenges and must prepare for the future.

Preparing for the future and providing a reliable supply of water to its Member Agencies is not new to Metropolitan. What the CAMP4W process addresses is the need to put climate change at the forefront, to intentionally look at all aspects of Metropolitan's system through that lens, and to recognize that hard decisions will need to be made and a transparent process will need to be in place.



## IMPACTS TO RUNOFF: CLIMATE CHANGE STRESSES THE WATERSHEDS FEEDING OUR STORAGE

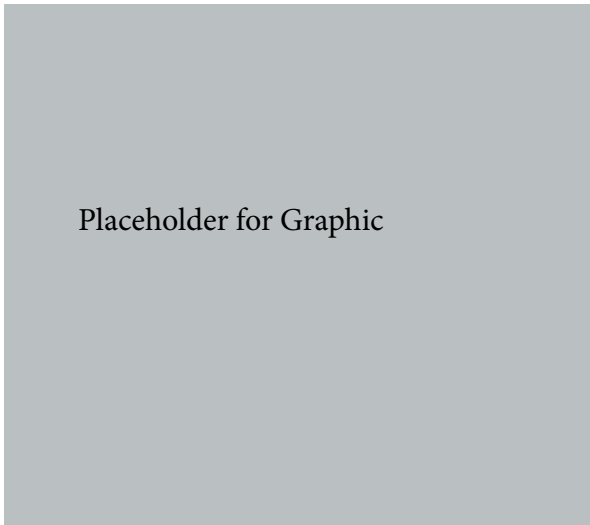
- Less snow/more rain
- More frequent and hotter fires
- More frequent and severe flooding
- Longer and drier dry periods



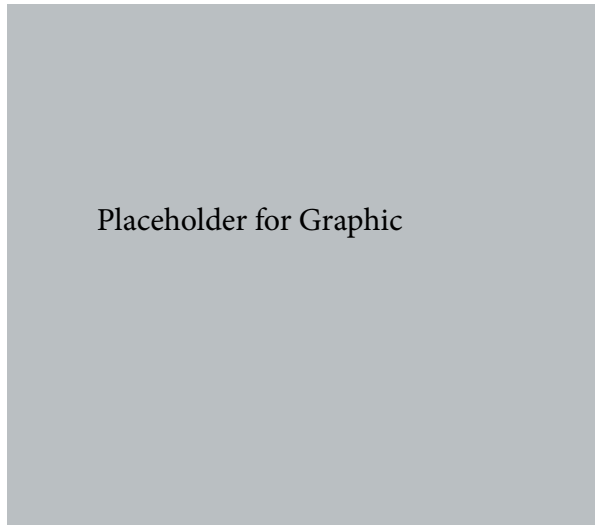
Reliability of runoff efficiency and supplies are decreasing

# Impacts Beyond Drought

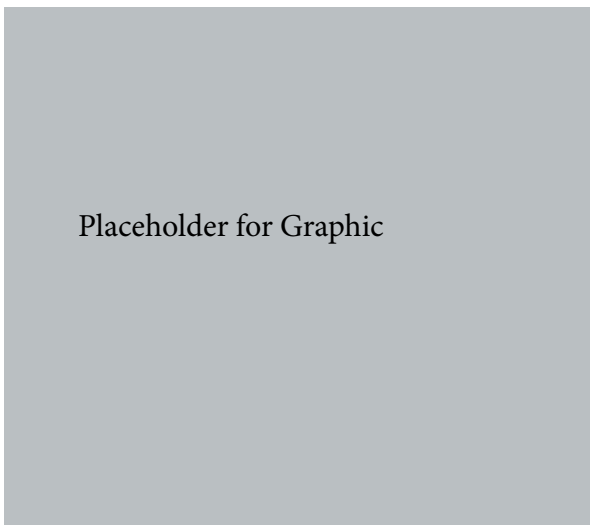
Metropolitan faces many challenges while operating in a changing climate.



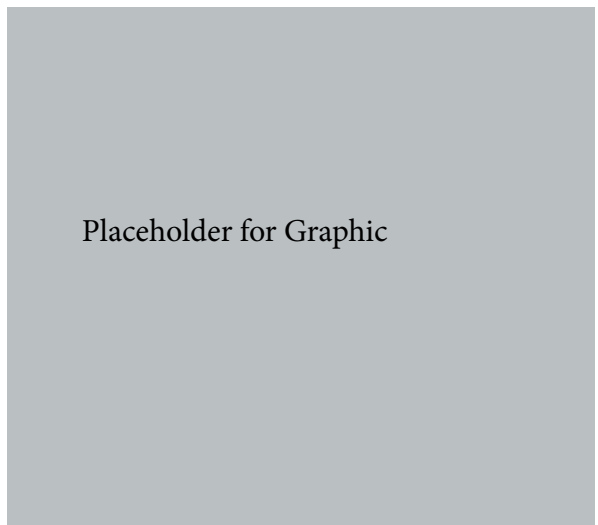
**Wildfire**



**Extream Heat**



**Flooding**



**Sea Level Rise**

# 1.3 Summary of Planning Efforts to Date

## IRP Needs Assessment

Metropolitan’s robust integrated planning process and evaluation of projected future conditions has guided Metropolitan for decades, starting with the 1996 Integrated Water Resources Plan (IRP). Member Agency data has been an integral part of the process, facilitated by Metropolitan’s annual outreach to each Member Agency. While Metropolitan has consistently evaluated future uncertainty, the 2020 IRP Needs Assessment saw Metropolitan take its future planning processes into an expanded direction with the inclusion of **scenario planning**.

Metropolitan developed four scenarios (A, B, C and D, see Figure 1-2), which serve to represent the range of potential drivers that impact the region’s supply and demand including economic conditions, population growth, regulatory requirements, and climate impacts to name a few. Based on the modeling done during the IRP Needs Assessment (Figure 1-2), the range in the water supply gap was determined, as shown in Table 1. This analysis forms the basis for the Adaptive Management metrics discussed in Section 2.2.



## SCENARIO PLANNING

Recognizing that a multitude of factors contribute to the demands on Metropolitan and the availability of its supplies, Scenario Planning allows us to examine the boundaries of what is reasonably likely to occur in the future since scenario planning “bookends” the range of possible future needs. By understanding what the supply gap could be under a variety of conditions, Metropolitan is able to decide what direction to plan towards. Next, using the Adaptive Management Approach, Metropolitan will be able to adjust planning targets as real-world conditions reveal where along the spectrum our needs are trending, which will inform incremental investment decisions.



In 2024, Metropolitan’s Board voted to plan toward Representative Concentration Pathway (RCP) 8.5, which acknowledges a need to prepare for a more extreme climate impacted future. RCP 8.5 is expressed in Scenarios C and D. By planning toward Scenario D and implementing based on real-world conditions Metropolitan will balance the need to be prepared while limiting the risk of stranded assets if conditions change.

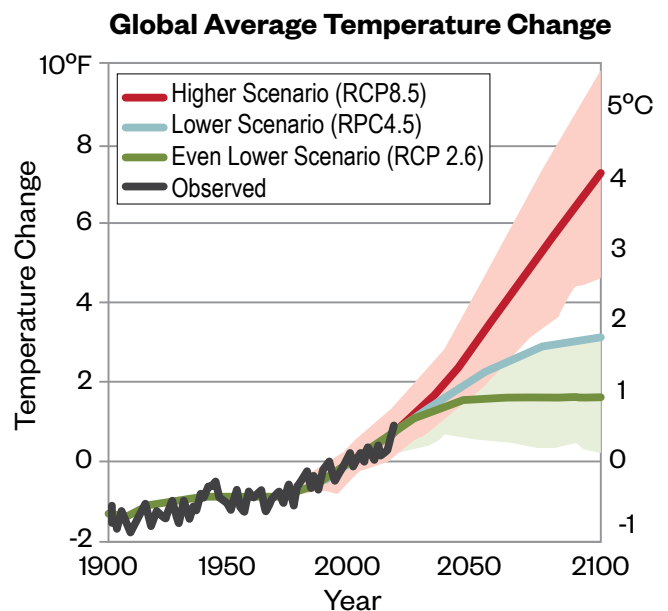


Figure 1-1 Global Average Temperature Change



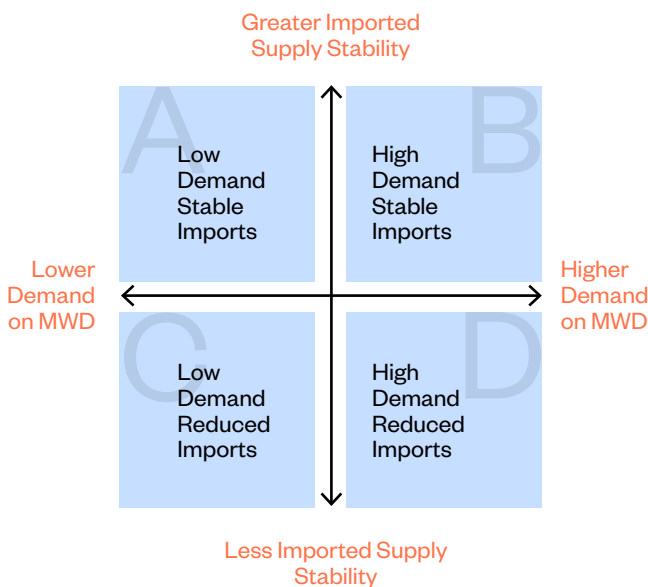
### IRP NEEDS ASSESSMENT IDENTIFIED THREE CATEGORIES OF SUPPLY

**Core Supply:** A supply that is generally available and used every year to meet demands under normal conditions and may include savings from efficiency gains through structural conservation.

**Flexible Supply:** A supply that is implemented on an as-needed basis and may or may not be available for use each year and may include savings from focused, deliberate efforts to change water use behavior.

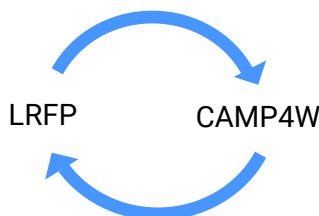
**Storage:** The capability to save water supply to meet demands at a later time. Converts core supply into flexible supply and evens out variability in supply and demand.

Figure 1-2 Summary of IRP Scenarios A, B, C, D



### Long-Range Finance Plan

To address the reliability gaps identified in the IRP Needs Assessment, Metropolitan has begun the multi-phased, multi-year Long-Range Financial Plan (LRFP) development process. The initial LRFP Needs Assessment (LRFP-NA) (Phase 1) currently underway builds upon the IRP Needs Assessment and is consistent with the goals and objectives of the CAMP4W process pertaining to resiliency, reliability, financial sustainability, affordability, and equity.



**Iterative process:** the LRFP will be revised based on the CAMP4W outcomes, and the LRFP assessment will inform the outcomes of CAMP4W.

Table 1: How Much Core Supply Do We Need Based on How Much Storage We Develop?

If we build this much storage...	We will need this much additional core supply... (conservation reduces demands and "counts" toward core supply needs)			
	IRP Scenario A	IRP Scenario B	IRP Scenario C	IRP Scenario D
0 TAF	No supply or storage requirements	100 TAF	50 TAF	650 TAF
100 TAF		70 TAF	15 TAF	600 TAF
250 TAF		30 TAF	15 TAF	550 TAF
500 TAF		30 TAF	15 TAF	500 TAF

\* TAF=thousand acre-feet; 1 acre-foot is the amount of water that would cover an acre of land at 1-foot depth

### UNCERTAINTY AND THE ESTABLISHMENT OF ASSUMPTIONS

There is **inherent uncertainty** whenever an assumption is made, and in the IRP Needs Assessment, each scenario is defined by numerous assumptions. **Scenario planning and adaptive management capture that uncertainty** in the space between each scenario – the spectrum along which real-world conditions are likely to unfold. Each scenario presents a data point along that spectrum, where any number of variables could shift the outcome in one direction or another.

By adapting and modifying investment decisions over time, **Metropolitan will align implementation with real-world conditions** to reduce the risk of over or under developing resources.

### THE LONG-RANGE FINANCIAL PLAN – NEEDS ASSESSMENT

The LRFP-NA is Phase 1 of the LRFP that provides high-level guidance on the rate impacts and funding opportunities. The LRFP-NA is designed to:

- Provide high-level financial analysis of rate and tax impacts under the IRP scenarios.
- Discuss the primary capital financing and funding methods Metropolitan has at its disposal.
- Introduce potential financial tools that could become components of a tailored financial strategy.
- Catalogue Metropolitan's key policies related to the capital markets.

The next phase of the LRFP will consider additional capital needs to address other vulnerabilities in addition to drought and assess the impacts of specific projects.

## Vulnerability Assessments, Hazard Mitigation, and Emergency Response

**Climate Vulnerability and Risk Assessment:** In conjunction with this process, Metropolitan has prepared a Climate Vulnerability and Risk Assessment (CVRA) to investigate how it is currently incorporating climate change risk into its planning and operational activities. The CVRA will inform the CAMP4W process by identifying how Metropolitan is currently managing risk associated with climate change and provide structural recommendations that will enable it to better adapt.

**Strategic Infrastructure Resilience Planning:** The SIRP is a multi-hazard and multidisciplinary plan that will address Metropolitan's ability to manage an event or risk as it unfolds, covering the water and electric power systems owned and operated by Metropolitan. Focus will be on restoring any lost or reduced services to member agencies in a timely manner following an event. The timeliness of service restoration will focus on the member agency's public health and safety needs and the regional socio-economics as related to water use.

**Local Hazard Mitigation Planning:** Metropolitan is developing a Local Hazard Mitigation Plan (LHMP) as part of

its ongoing reliability efforts. The LHMP will document the risks from natural hazards such as earthquakes, drought, and wildfires and identify goals and strategies for mitigating those risks. The LHMP is vital to help maintain Metropolitan's mission to provide its service area with reliable supplies even in emergencies caused by unplanned natural events.

### Facility Reliability Assessments and Emergency Response

**Planning:** Metropolitan invests in maintaining a reliable system and in its capability to respond to emergencies and restore service. MWD has formal emergency response plans that include staff, materials, and facilities needed to repair systems and restore service. The exercising and assessment of these plans identify projects that increase the resilience and sustainability of Metropolitan's infrastructure. These plans are regularly exercised and periodically assessed.

Additionally, Metropolitan conducts regular system reliability assessments to identify vulnerabilities that can lead to unplanned outages and proposes options to reduce these vulnerabilities.

Projects that are identified in this process that are not R&R projects will be evaluated in the CAMP4W process.



# 1.4 CAMP4W PROCESS OVERVIEW

In February 2023, the Board directed staff to integrate its water resources, climate, and financial planning into a Climate Adaptation Master Plan for Water (CAMP4W). Metropolitan conducted a series of workshops with the Board and held regular meetings with Member Agency Managers throughout 2023. To further facilitate the development of the CAMP4W in a timely and transparent manner, a Joint Task Force was chartered by the Board in October 2023. The Task Force is made up of Board members and Member Agency Managers, and is supported by Metropolitan staff. Staff have been developing the CAMP4W through iterative steps to allow for Board and Member Agency input at each step. The process involved outreach and engagement efforts, to encourage public input.

CAMP4W involves a multi-year iterative process in which various aspects of the process build upon one another (Figure 1-3). The initial development tasks outlined for the Task Force includes the development of this report through April 2024. The development of the remaining CAMP4W components will continue throughout the remainder of 2024.

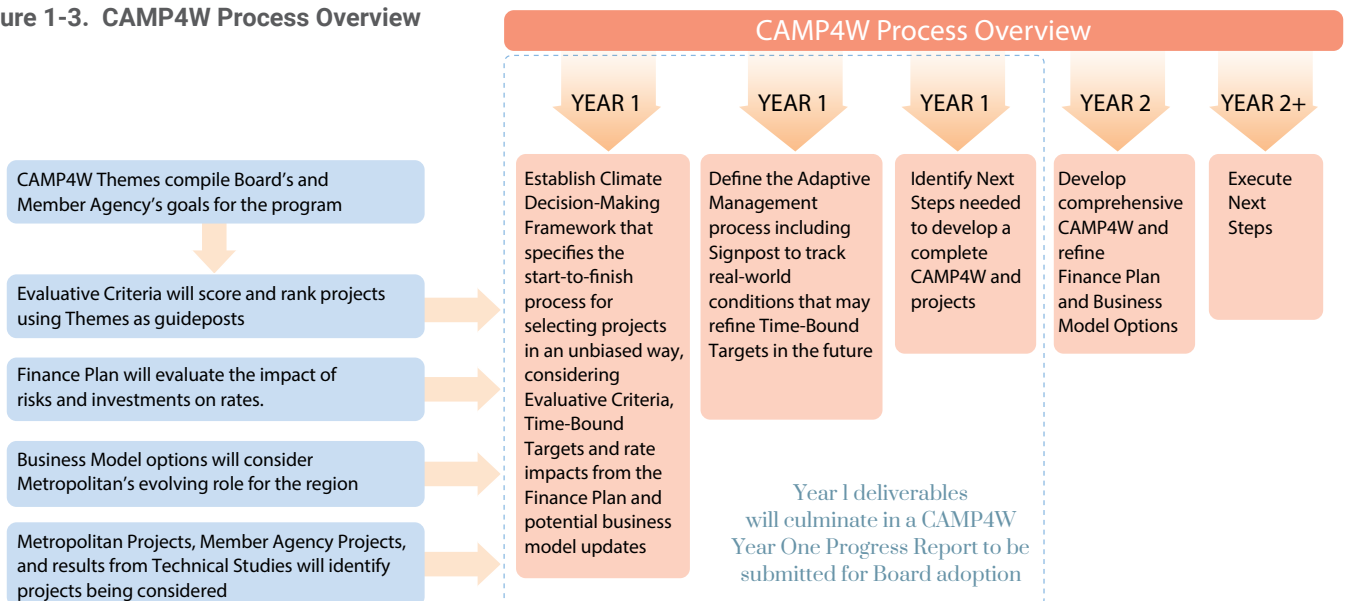
Preliminary objectives (that will be refined through the process) include:

- Increase the resiliency and reliability of Southern California’s water supplies
- Build greater equity into our regional water storage and delivery systems, so that all our 26 Member Agencies have access to reliable water supplies, even in severe drought periods
- Pursue collaborative cost-sharing partnerships and promote affordability initiatives as we make the necessary investments to adapt Southern California’s water infrastructure to the demands of the 21st century
- Clearly understand the Member Agency network of water resource supplies and infrastructure to determine opportunities to provide additional connectivity
- Understand the climate risks and vulnerabilities the network is facing
- Identify adaptation strategies that strengthen the network and reduce vulnerabilities
- Identify opportunities to expand water resources,
- Identify opportunities for strategic sharing of resources and infrastructure across Member Agencies to maximize all potential local supply options
- Develop a financial strategy to fund capital investments and equitably share both water supplies and costs among Member Agencies
- Develop a business model that supports Metropolitan’s role into the future



CAMP4W will increase Metropolitan’s understanding of the climate risks to **water supplies, infrastructure, operations, workforce, and financial sustainability**. CAMP4W will also develop decision-making tools and long-term planning guidance for adapting to climate change, to strengthen Metropolitan’s ability to fulfill its mission.

Figure 1-3. CAMP4W Process Overview



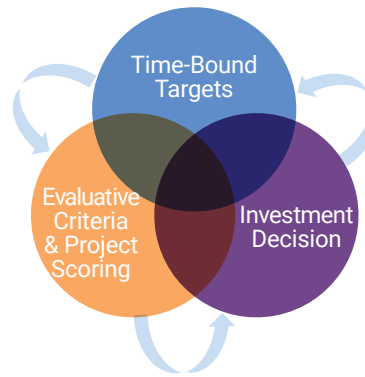
# Climate Decision-Making Framework

## 2.1 Overall Climate Decision-Making Framework Process

The Climate Decision-Making Framework establishes the process by which projects and programs will be evaluated through CAMP4W to inform the Board's investment decisions. Figure 2-1 presents this process and identifies key considerations. To support the Adaptive Management process, which is at the cornerstone of CAMP4W, three key areas have been developed as part of the Year One effort. These include the Evaluative Criteria, Time-Bound Targets, and Signposts which are discussed in this section.

### Part of the Decision-Making Process

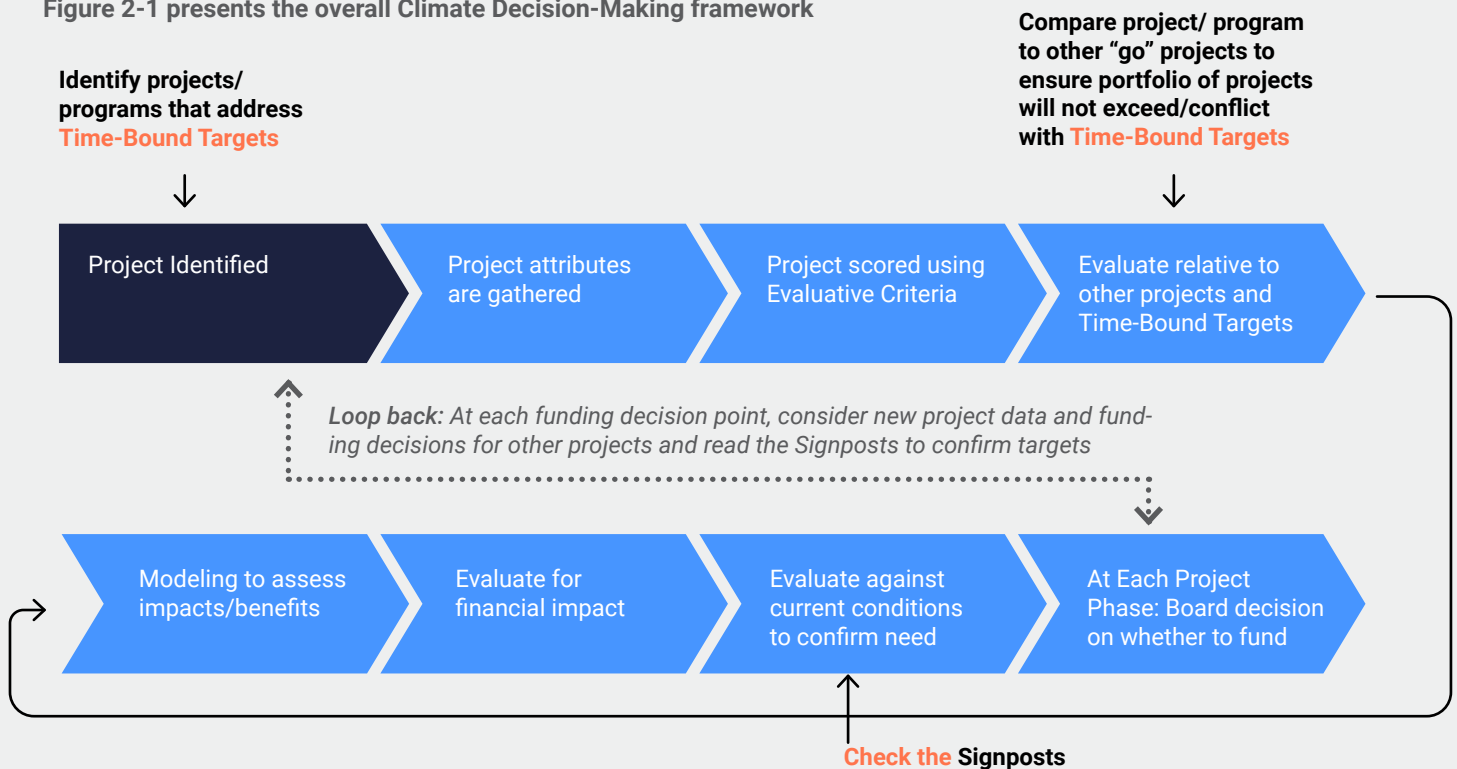
*Time-Bound Targets guide project development and inform scoring of projects*



### Adaptive Management

1. Provides a framework for decision support through time. Iterative process over time to
  2. balance the risk of shortage and overinvesting. Updates resource
  3. development needs and Time-Bound Targets based on updated projections and Signposts
- ▼ Signposts inform how conditions are changing

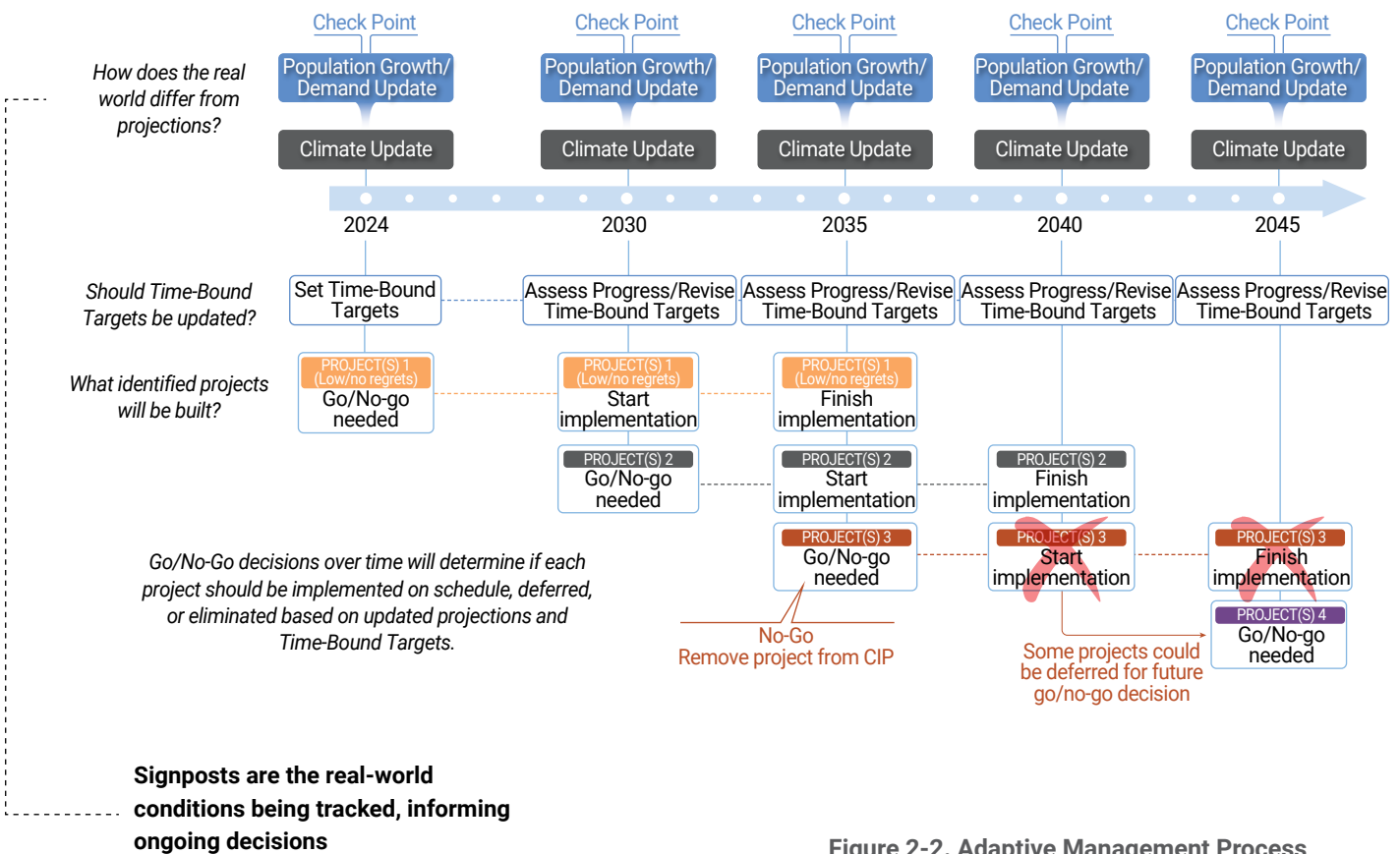
Figure 2-1 presents the overall Climate Decision-Making framework



## 2.2 Adaptive Management

As a living document, CAMP4W will be adjusted based on changing conditions to support Board decisions and provide the most up to date information available. More comprehensive updates will occur at intervals agreed upon by the Joint Task Force, potentially driven by the frequency of updates to the California Climate Change Assessment and/or the release of the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports, or other frequency similar to the historical IRP updates. Through this adaptive management process, the Board will have multiple points along each project’s trajectory to make informed decisions on investments as projects move from one phase to the next (Figure 2.2)

### Adaptive Management Process Planning for Rapid Change and Adjusting based on Real World Conditions



## 2.2.1 Evaluative Criteria

Evaluative Criteria are a key part of the Climate Decision-Making process. Figure 2-3 presents the proposed Evaluative Criteria that will be workshopped with the Board and Member Agencies through 2024.

### Evaluative Criteria

Evaluative Criteria are being developed based on the CAMP4W Themes of reliability, resilience, financial sustainability, affordability, and equity.



Figure 2-3. Evaluative Criteria

## 2.2.2 Time-Bound Targets

Figure 2-4 presents an initial set of Time-Bound Targets which will be refined over 2024 and may include additional categories of targets.



### Resource-Based Targets

Numbers reflect additional supplies unless indicated otherwise

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Core Supply <sup>1</sup>	N/A	Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 650 TAF for potential implementation by 2045. Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF
Storage	Identify up to 500 TAF for potential implementation by 2035		
Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY		



### Policy-Based Targets

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026	Implement additional 130 CFS capacity to SWPDA by 2032	Implement capacity, conveyance, supply, and programs for SWPDA by 2045
Local Agency Supply <sup>2</sup>	Maintain 2.09 to 2.32 MAF (under average year conditions)	2.12 to 2.37 MAF (under average year conditions)	2.14 to 2.40 MAF (under average year conditions)
Demand Management <sup>3</sup>	Implement structural conservation programs to achieve 300 TAF by 2045		
Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards <sup>4</sup>		
	GPCD target for 2030 <sup>5</sup>	GPCD target for 2035	GPCD target for 2045
Greenhouse Gas Reduction	N/A	40% below 1990 emission levels by 2030	Carbon Neutral by 2045
Surplus Water Management	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan's Storage Portfolio and WSDM action		

Figure 2-4 Time-Bound Targets

### Notes

**1** Core Supply sub-targets will be considered later this year and may include targets for groundwater remediation and stormwater capture.

**2** This initial target includes existing (and under construction) local agency supplies and can be augmented later this year to include new local agency supply.

**3** Used to offset the need for additional core supply and using 2024 as a baseline.

**4** Each retail water supplier will report progress to the State Water Board annually through a Water Use Objective (WUO) equaling the sum of efficiency budgets for a subset of urban water uses: residential indoor water use, residential outdoor water use, real water loss and commercial, industrial and institutional landscapes with dedicated irrigation meters. Each efficiency budget is calculated using a statewide efficiency standard and local service area characteristics (population, climate, etc.).

**5** Specific GPCD Time-Bound Targets will be identified later this year based on final SWRCB standards as well as Metropolitan's overall demand management target. The target will be designed to track water use efficiency trends by sector over time and will take local conditions, including climate, into consideration.

## 2.2.3 Signposts

A key part of the Adaptive Management process involves reading the Signposts to understand the real-world conditions and determine if the Time-Bound Targets need to be revised, which would in turn impact investments. The complete CAMP4W will include a comprehensive and detailed list of Signposts that Metropolitan will be tracking. Figure 2-5 provides a summary of the initial categories, which will be expanded upon over the coming year.

Figure 2-5 Signposts

### Proposed Signposts Metrics Examples

*Signposts should be measurable, updatable, and readily available*

#### DEMAND

Population

Demand Management

Economy

Regulations

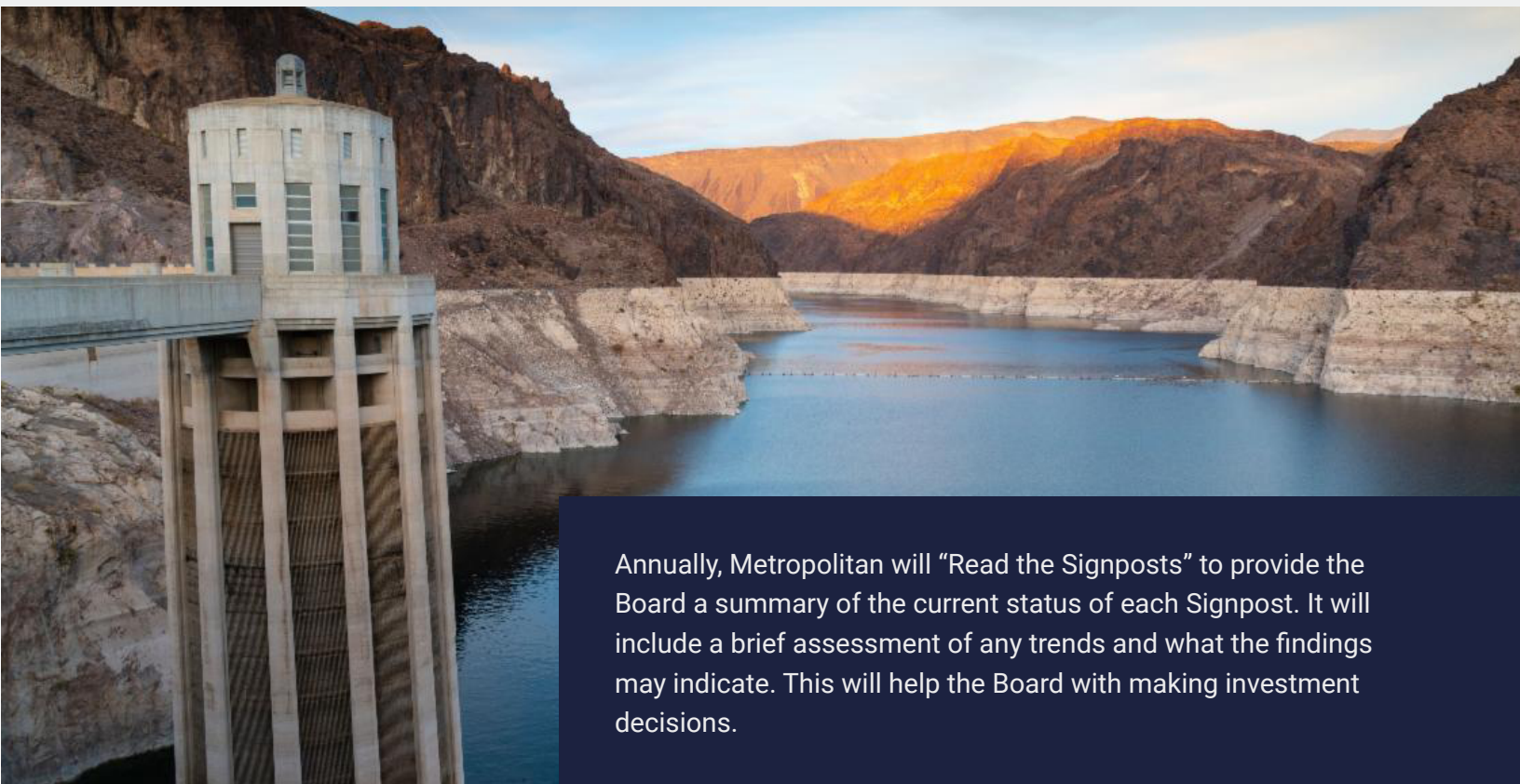
#### SUPPLY

Climate Change Indicators

Storage

Regulations

Local Agency Supply



Annually, Metropolitan will “Read the Signposts” to provide the Board a summary of the current status of each Signpost. It will include a brief assessment of any trends and what the findings may indicate. This will help the Board with making investment decisions.



**SECTION 3**

# Development of Adaptation Strategies

Section to be provided at a later date

**SECTION 4**

# Business Model and Affordability

Section to be provided at a later date

# Policies, Initiatives and Partnerships

Section to be provided at a later date

# Adaptive Management

Section to be provided at a later date

# Table of Contents

## Attachment 2 - March 2024 Member Agency Comment Letters

**City of Anaheim ..... Section 1**

**Elsinore Valley Municipal Water District..... Section 2**

**Inland Empire Utilities Agency ..... Section 3**

**Los Angeles Department of Water and Power ..... Section 4**

**Las Virgenes Municipal Water District..... Section 5**

**City of Burbank Water and Power**  
**Eastern Municipal Water District**  
**Foothill Municipal Water District**  
**City of Glendale**  
**Long Beach Utilities**  
**Municipal Water District of Orange County**  
**Pasadena Water and Power**  
**City of Santa Monica**  
**Upper San Gabriel Valley Municipal Water District**  
**Three Valleys Municipal Water District**  
**Western Municipal Water District..... Section 6**

**San Diego County Water Authority ..... Section 7**

**From:** [Philip Bogdanoff](#)  
**To:** [Camp4Water](#)  
**Cc:** [Craig Parker](#)  
**Subject:** Comments on Revised CAMP4W Time-Bound Targets - City of Anaheim  
**Date:** Wednesday, March 13, 2024 4:24:27 PM

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Ms. Crosson,

We would like to thank you for the on-going opportunity to present Anaheim's insights on the CAMP4W process, specifically, the revised Time-Bound Targets that were discussed at the Joint Task Force meeting on February 29, 2024. We appreciate the time and effort that staff has invested in reviewing and responding to previous comments provided on the Time-Bound Targets. We commend staff on streamlining the number of Time-Bound Targets down to Three (3) Resource-Based Targets and Seven (7) Policy-Based Targets. We feel that we are collectively getting closer to a complete and succinct list of Targets that best align with achieving Metropolitan's core mission and priorities. We respectfully provide the following comments to further streamline the Time-Bound Targets.

**Time-Bound Targets (6) Regional Water use Efficiency and (8) Average Regional Gallons Per Capita Per Day (GPCD)**

There appears to be significant overlap between the proposed "Regional Water use Efficiency" and "Average Regional Gallons Per Capita Per Day (GPCD)" Time-Bound Targets. As noted in the documentation, the State Water Resources Control Board (SWRCB) is in the process of establishing Water Use Efficiency (WUE) Standards that would also include a potable water irrigation ban of non-functional turf. These proposed WUE Standards are very aggressive and will drive the reduction in potable water usage within MET's service area. In many cases, compliance with the standards would require double-digit reductions in potable water use for many Member Agencies. Additionally, the proposed WUE Standards give Member Agencies a specific and measurable target related to water conservation. Therefore, it seems redundant to establish a goal for regional compliance with the WUE Standards and a specified GPCD reduction.

As stated above, the compliance with the proposed WUE Standards will be a challenge for many Member Agencies. The SWRCB's Water Use Objective Exploration Tool shows that the required Statewide reduction in water usage to meet the draft 2035 standards is approximately 11-15% (depending on assumptions). When comparing the proposed GPCD reduction targets to the WUE Standards, a proposed 20% reduction by 2035 seems overly aggressive. It's not clear as to how the 10% and 20% GPCD reduction targets were established and/or how these targets would be coordinated with the WUE Standards.

Additionally, establishing a regional GPCD target could be problematic for many of MET's Member Agencies. There are several factors that impact a Member Agency's average GPCD. These may include location, climate, land use, demographics and local economy just to name a few. MET and Member Agency managers and staff have a solid understanding of these factors and how they impact the average GPCD. However, the general public and the media may not fully understand or appreciate how GPCD could vary across MET's service area. For this reason, a regional GPCD target could be widely misunderstood and/or miscommunicated to the public. The concern is that this could place an additional burden on Member Agencies to provide a justification for why they may not be meeting MET's regional target.

For these reasons, we recommend that the Time-Bound Target related to GPCD be eliminated with the understanding that the desired water use reduction will be achieved and monitored through compliance with the Water Use Efficiency Standards.

**Time-Bound Target (7) Water Use Efficiency (used to offset need for additional Core Supply)**

As mentioned above, we feel that the appropriate amount and location of water use reduction (conservation) will be achieved through compliance with the Water Use Efficiency Standards. Similar to the discussion above, there appears to be significant overlap between compliance with WUE Standards and Water Use Efficiency targets. We would like to request that MET provides additional insight as to how the volumetric target was determined and how it would fit into the reduction achieved through compliance with the WUE Standards. To provide additional clarify, we also request that this target be more specifically defined and more clearly aligned with the Resource-Based Supply and Use Efficiency based targets. For example, if this target is envisioned to be a direct offset for new Core Supply, then we feel that this should be more clearly defined under Core Supply. Or if compliance with the WUE Standards would contribute to this target, and thereby offsetting new Core Supply, then this relationship should also be more clearly defined.

Please feel free to contact me if you have any questions.

Best Regards,

Philip

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Philip Bogdanoff, PE  
Water Planning and Resources Manager  
714.765.4420  
[pbogdanoff@anaheim.net](mailto:pbogdanoff@anaheim.net)



**ELSINORE  
VALLEY**

MUNICIPAL WATER DISTRICT

**BOARD OF DIRECTORS**

Chance Edmondson, President  
Harvey R. Ryan, Vice President

**GENERAL MANAGER**

**LEGAL COUNSEL**  
**DISTRICT SECRETARY**

Darcy M. Burke, Director  
Andy Morris, Director

Greg Thomas  
Best, Best & Krieger  
Christy Gonzalez, Acting

March 14, 2024

ELECTRONIC MAIL

Chairman Adán Ortega  
Metropolitan Water District of Southern California  
700 N. Alameda Street  
Los Angeles, CA 90012

**SUBJECT: TIME BOUND POLICY & RESOURCE TARGETS: CLIMATE  
ADAPTATION MANAGEMENT PLAN FOR WATER (CAMP4H2O)**

Dear Chairman Ortega:

We appreciate the opportunity to provide CAMP4H2O comments and process inputs. We appreciate the transparent process and inclusiveness at all levels of Metropolitan, as well as noting some of our previous comments were considered. For background, Elsinore Valley Municipal Water District (EVMWD) is a public water agency providing water, wastewater, and recycled water services to a population of approximately 170,000 in south-western Riverside County, with one third of our customers in disadvantaged communities. EVMWD is a retail agency served by the Western Municipal Water District, a Metropolitan Water District of Southern California Member Agency. Approximately thirty-five percent of our drinking water supply is obtained from EVMWD's own local groundwater and surface water sources, with the remainder being imported primarily through Western Water and a small component from Eastern MWD from Metropolitan.

Thank you for embarking on this extremely important endeavor, as southern California, the state, as well as good portion of the western United States continue to deal with climate stresses and changing weather patterns. The last fifteen-years have been marked by record rains and snow as well as multi-year dry spells, forcing water systems and water managers to respond to these events with antiquated planning tools, science, and aging infrastructure. We believe that it will take a variety of projects and some policy changes to ensure all Californians, agriculture, and the environment have enough water so life can flourish. For EVMWD, this is why your Climate Adaptation Management Plan for Water (CAMP4H2O) efforts are both necessary and timely.

**Revised Time Bound Targets**

In addition to our February 7<sup>th</sup> submittal, we respectfully submit the following comments for your consideration. First and foremost, the primary focus of this plan should be on water supply and water quality, including source water protection, water quality, treatment, and delivery in a dynamic and unpredictable climate. As noted previously, we are experiencing climate whiplash, and given these uncertainties, along with Metropolitan's mission, our



primary focus should be on delivering safe, reliable, resilient, adaptable, affordable, equitable water supplies, regardless of conditions.

**Time Bound Policy Targets Further Recommendations**

Based on the proposed ten revised Time Bound Targets, please find our following comments and recommendations (in bold).

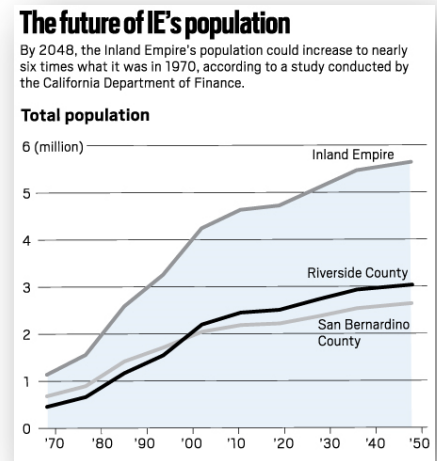
Reference No.	Type	Category	Near-term	Mid-term	Long-term
1	Resource	Core Supply		Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF.	Identify 650 TAF for potential implementation by 2045.  Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF.
2	Resource	Flex Supply	<b>We recommend adding the Board authorized water purchases opportunities included in near-term actions.</b>	Identify up to 500 TAF for potential implementation by 2035.	Identify up to 500 TAF for potential implementation by 2035.
3	Resource	Storage	<b>We recommend adding the Board Central Valley storage and other banking opportunities included in near-term actions.</b>	Acquire capability for up to 100 TAFY.  <b>We recommend increasing this amount to take advantage of significant rainfall years.</b>	Acquire capability for up to 100 TAFY.  <b>We recommend increasing this amount to take advantage of significant rainfall years.</b>
4	Policy	Local Agency Supply	Maintain 2.09 to 2.32 MAF (under average year conditions).	Maintain 2.12 to 2.37 MAF (under average year conditions).	Maintain 2.14 to 2.40 MAF (under average year conditions).

Reference No.	Type	Category	Near-term	Mid-term	Long-term
			<b>Does this align with Integrated Regional Water Plans?</b>	<b>Does this align with Integrated Regional Water Plans?</b>	<b>Does this align with Integrated Regional Water Plans?</b>
5	Policy	Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026.  <b>Should CRA-dependent areas also be addressed?</b>	Implement additional 130 CFS capacity to SWPDA by 2032.  <b>Should CRA-dependent areas also be addressed?</b>	Implement capacity, conveyance, supply, and programs for SWPDA by 2045.  <b>Should CRA-dependent areas also be addressed?</b>
6	Policy	Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards.	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards.	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards.
7	Policy	Water Use Efficiency	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045.  <b>Please see comments below.</b>	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045.  <b>Please see comments below.</b>	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045.  <b>Please see comments below.</b>
8		Average Regional Gallons Per Capita Per Day  <b>FOR AN EQUITABLE EFFICIENCY METRIC, WE RECOMMEND ADDING</b>	143 GPCD by 2026 (10% reduction from 2022 regional average GPCD).  <b>Please see comments below.</b>	127 GPCD by 2035 (20% reduction from 2022 regional average GPCD).  <b>Please see comments below.</b>	TBD (TBD% reduction from 2022 regional average GPCD).  <b>Please see comments below.</b>

Reference No.	Type	Category	Near-term	Mid-term	Long-term
		<b>SYSTEM EFFICIENCY – Gallons Per Connection per Day.</b>  <b>Please see comments below.</b>			
<b>9</b>		Greenhouse Gas Reduction  <b>Please see comments below.</b>	N/A	40% below 1990 emission levels by 2035.	Carbon Neutral by 2045.
<b>10</b>		Flexible Water Management	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan’s Regional Storage Portfolio and WSDM actions.	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan’s Regional Storage Portfolio and WSDM actions.	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan’s Regional Storage Portfolio and WSDM actions.

- 1. Core Supply:** No comments.
- 2. Flex Supply:** The Board authorized the General Manager to seek water purchases. Although the Board action was a monetary limit, this supply target should be quantified in the near-term.
- 3. Storage:** The Board has entered into agreements and has authorized the General Manager to continue exploring Central Valley storage options. These storage investments should be quantified and added as near-term targets.
- 4. Local Agency Supply:** Please clarify if these numbers are derived from Member Agency and Retail Agency Integrated Resources Management Plans.
- 5. Equitable Supply Reliability:** We appreciate the quantification for State Water Dependent areas, however, if equity is the goal, Colorado River dependent areas should not be overlooked.
- 6. Regional Water Use Efficiency:** Metropolitan plays a supportive role in education, outreach, and financial incentives related to water use efficiency and EVMWD is pleased to see that support would continue.

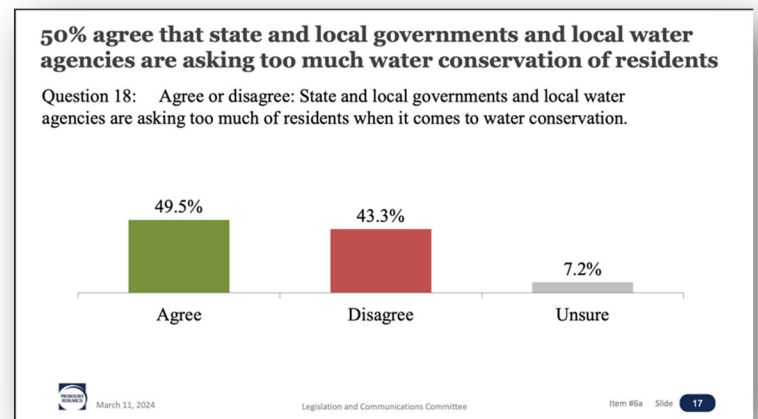
7. **Water Use Efficiency:** Please define “Structural Conservation.” Although the Los Angeles area is losing population, and that trend is expected to continue due to the high cost of living, the Inland Empire is expected to grow by 20% in the next twenty years. (ABUNASSAR, 2023). Currently, the majority of that growth comes from Los Angeles and Orange county residents however, that is expected to shift and an influx from India and China are expected to make up the majority of population growth. (YARBROUGH, 2023).



8. **Average Regional Gallons Per Capita per Day:** It is our understanding that the *intent* of using GPCD is to have a metric in which to measure efficiency. With the wide range of variables throughout Metropolitan’s service area including:

- a. Microclimates
- b. Temperature
- c. Average Precipitation
- d. Tree canopies
- e. Plant palettes
- f. Evo-transpiration

As well as the compounding effects of climate change, average GPCD numbers benefit privileged coastal areas, while penalizing hotter, more ethnic inland areas. It was also referenced in a recent Regional Water Conservation Poll that 50% of respondents felt that we are asking too much of our residents.



We respectively consider that we add an industry **Water System** efficiency standard to this metric. Since 2017 this efficiency standard is reported to the Department of Water Resources and includes all systems that serve more than 3,000 connections OR produce 3,000 AF per year which would include Metropolitan. System efficiency is measured in Gallons Per Connection per Day, however it can actually quantify larger water savings when these system leaks are addressed. It also takes the burden off our residents and customers. It does not penalize based on geography or climate, rather it is based on the **American Water Works Association’s Standard M36** and is equitable for agencies of all sizes and locations. It is the industry standard for efficiency.

9. **Greenhouse Gas Reduction:** This is a very ambitious goal. Is Metropolitan planning on building solar or green energy plants to reach this goal or support alternative clean energy sources such as nuclear energy, hydrogen, or even continuation of clean, gas-fired energy generation, as this is the most reliable energy? A diversified, reliable, and affordable energy portfolio will be required that can power Metropolitan needs now and well into the future. This may also be very expensive in the short term so finding funding offsets will be important.
10. **Flexible Water Management:** No comments.

Again, given Climate Adaptation Management planning complexity, we continue to observe a disconnect between sustainability efforts and water resources. We respectively recommend this effort be more collaborative at the staff level by **actively engaging** Metropolitan's recognized and industry-admired Water Resources and Planning Department, Water Quality, Operations, and Legal. All of Metropolitan's member agencies, and their sub-retail agencies, create and/or submit a multitude of plans (Urban Water Management Plan, Water and Wastewater Master Plans, Integrated Resources Plans, etc.) that provide very detailed analysis and projections of water demands and how the demands will be met. These projections get rolled up to Metropolitan, and thus regional demand forecasts are developed. Metropolitan has historically provided the gap between local supply and projected regional demand. From the outside looking in, there seems to be a disconnect between departments. As Metropolitan wrestles with the Time-Bound Target and Resource-Based Targets matrices, the various categories listed, and their associated short, mid, and long-term targets being developed, this water-related expertise is invaluable.

Thank you for allowing us to provide these comments and input to the planning effort. We have confidence that Metropolitan will consider these comments, adjust the plan accordingly noting the primary focus on water supply reliability, resilience, and affordability. We believe collectively these will enable the economy to thrive, ensure food security and availability as well as build resiliency for future generations just as those that came before us did for us today.

Sincerely,



Darcy M. Burke  
Board Director



Greg Thomas  
General Manager

DB/GT/se

**WORKS CITED**

- ABUNASSAR, L. (2023, February 17). Exodus from L.A. and Orange Counties Feeds Inland Empire Growth Spurt. *Los Angeles Magazine*.
- YARBROUGH, B. (2023, February 20). Inland Empire to grow twice as fast as rest of Southern California in next 25 years. *San Bernardino Sun*.

**Salgado, Stephanie Ann**

---

**From:** Michael Hurley <mhurley@ieua.org>  
**Sent:** Wednesday, March 13, 2024 6:21 PM  
**To:** Camp4Water  
**Cc:** Shivaji Deshmukh; Christiana Daisy; Eddie Lin; Cathy Pieroni  
**Subject:** Request for Comments on Time-Bound Targets

**Categories:** MA Feedback from Feb 29 2024

Dear Ms. Crosson,

I am writing on behalf of the Inland Empire Utility Agency (IEUA) to express our support for the development of Time-Bound Targets (TBTs) as part of The Metropolitan Water District of Southern California's (Metropolitan) Climate Action Management Plan for Water (CAMP4W). We commend the thoughtful progress made in expanding the categories of TBTs to include a range of important policy considerations not traditionally considered in regional water resource planning efforts.

We believe that TBTs are the cornerstones of any meaningful resource planning effort, and we appreciate the significant discussion that has taken place around the categories of TBTs. However, we suggest a continued discussion into the actual TBTs themselves, as their further detail will help determine impacts to member agencies like ours.

IEUA believes that before these TBTs are memorialized in the upcoming annual report, it is critical for all stakeholders, including member agencies, to fully understand the basis for these specific targets. This understanding should encompass the rationale behind the amounts and timing proposed. Our areas of interest for further clarification include:

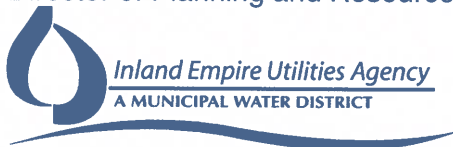
1. **Basis for the Targets:** The data, studies, or models underpinning the specific TBTs.
2. **Appropriateness of Amounts and Timing:** The process for determining the quantities and schedules for each target, assessing their alignment with realistic projections and capabilities.
3. **Relevance of 2015 IRP Resource Targets:** The continued applicability of the resource targets established in the 2015 Integrated Resources Plan (IRP).
4. **Historical Performance on Targets:** Metropolitan's track record in meeting prior TBTs and the insights gained from these endeavors.
5. **Strategic Adjustments:** Considering previous outcomes, the adjustments envisioned for these new TBTs.

We believe that a comprehensive understanding and discussion among all stakeholders will ensure that the TBTs are not only ambitious but also achievable, reflecting the collective input and expertise of the Metropolitan's member agencies. This collaborative approach will lead to the establishment of TBTs that are both strategic and reflective of our shared goals for sustainable water management in Southern California.

Thank you for considering our input and for your commitment to developing robust Time-Bound Targets for the CAMP4W process.

Sincerely,

**Michael Hurley**  
 Director of Planning and Resources



*"Water Smart - Thinking in Terms of Tomorrow"*  
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**Subject:** Revised CAMP4W Meeting Materials (Feb. 29) and Request for Comments on Time-Bound Targets



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

**Date:** March 11, 2024

**To:** Board of Directors  
Member Agency Managers

**From:** Liz Crosson, Chief Sustainability, Resilience and Innovation Officer

**Subject:** Revised CAMP4W Meeting Materials (Feb. 29) and Request for Comments on Time-Bound Targets

Attached are revised meeting materials for the CAMP4W Task Force meeting on February 29, 2024, consistent with the staff presentation. The changes are reflected under Equitable Supply Reliability in the following:

- Attachment 1 - Working Memo No. 6\_Revised3, (see Table 1. Proposed CAMP4W Time-Bound Targets for Inclusion in Year One Report )
- Attachment 2 - Appendix 1 - Examples of Existing Metropolitan Targets and Current Status\_Revised3
- 02292024 LTRPPBM 3b Presentation - Revised3 (see Slide 18)

The board website will be updated soon.

**Please submit any additional comments on the Time-Bound Targets by Wednesday, March 13, 2024, to [Camp4Water@mwdh2o.com](mailto:Camp4Water@mwdh2o.com).** We are preparing the Year One report for our next meeting on March 27 and would like to have your comments in advance. If you have questions, please contact us at [Camp4Water@mwdh2o.com](mailto:Camp4Water@mwdh2o.com).

Thank you.

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**Subject:** Subject: Comments on February 29 CAMP4W Subcommittee Report 3b  
**Date:** Wednesday, March 13, 2024 6:10:45 PM

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Dear Liz and CAMP4W Staff:

Los Angeles Department of Water and Power (LADWP) appreciates Metropolitan's efforts towards collaborating with its member agencies while developing the Climate Adaptation Master Plan for Water (CAMP4W). In response to your request below for additional comments to the proposed time bound targets, the following is a list of our high-level feedback of the discussions to date, but is not an exhaustive list of all our concerns and comments:

### **Equitable Reliability**

Ensuring continued water supply reliability is the primary driver of the development of CAMP4W. Reliability encompasses the goals of water supply portfolio diversity, system interconnectivity, water use efficiency, storage development, and equitable access to clean, safe water. Metropolitan's Board has already committed to ensuring regional reliability for all member agencies, and eliminating isolated shortages, such as was experienced in 2022 in the SWP-dependent areas. This commitment must be addressed as a priority in the CAMP4W process.

### **Resiliency**

The ability to withstand supply disruptions within Metropolitan's service area is an important factor to Metropolitan's overall water supply reliability, the primary driver of the CAMP4W process. LADWP has several water connections with neighboring water agencies and Metropolitan member agencies. These water connections allow LADWP

to supply water to neighboring areas during major disruptions and help improve water supply reliability throughout the region. Improving reliability in the westside of Metropolitan's service territory also improves the reliability to all Metropolitan member agencies that have water connections with LADWP. However, when LADWP is without access to supplemental water from MWD in sufficient quantities to meet its own M&I demands, LADWP will not have water available to meet the needs of neighboring water agencies.

### **Baseline Forecast**

A baseline forecast using current data is needed to better understand where the region may be trending. Metropolitan's recent sales and recent sales forecasts are even lower than the low demand assumptions used in IRP Scenarios A and C. Scenario C, which also uses RCP 8.5, is more reflective of actual conditions, but it hasn't been in discussion. MWD's IRP Needs Assessment also noted that under Scenario C, supply shortages could be eliminated, provided that distribution system constraints are removed. Scenario D which seems to be the focus of the CAMP4W process projects future demands far beyond what current trends project.

### **Adaptive Management**

All storage, supply, conveyance, and infrastructure programs should be evaluated in the CAMP4W process. There are immense financial implications and policy decisions that should be evaluated holistically. Each of these programs and projects (ex: SWM, PWSC, Regional Conveyance, Sites, etc.) should be thoroughly evaluated to ensure fairness, equity, financial sustainability, reliability, resiliency, etc. and compared to other programs and/or projects. Large projects require years of planning, design, and construction. How will Metropolitan have enough time to "adapt", especially for those large projects?

Additionally, in the past decade, we've experience some of the wettest years, along with the driest years on record. In 2022, Metropolitan implemented an Emergency Water Conservation Program and declared a water shortage emergency within its SWP-dependent areas. We have already seen signposts indicating an issue that needs to be addressed.

### **Time-bound Targets**

Time-bound target categories should emphasize Metropolitan priorities and should include groundwater remediation as a time-bound target. There are numerous groundwater remediation opportunities within Metropolitan's service area that would allow for greater utilization of groundwater basins as a core supply.

### **Time Bound Target #4 – Assist in Maintaining Existing and Under Construction Local Agency Supply**

Metropolitan should not undervalue the effectiveness of the Local Resources Program (LRP), where all the risk is borne by the member agency and Metropolitan only pays approximately \$350/AF for local water produced. As stated in Metropolitan's Annual Progress Report to the California State Legislature (SB60) report dated December 27, 2023 – *“Conservation and local resource development occur at the local and regional levels; regional approaches have proven to be cost-effective and beneficial for all Metropolitan member agencies. These programs increase water supply reliability and reduce the region's reliance on imported water supplies to meet future demands.”* The LRP Program is cost-effective and has been a successful tool for Demand Management. Metropolitan should not penalize those who have invested in local resources during time of shortage and should not develop programs that disincentivize agencies who have invested, and continue to invest, in local supply and water use efficiency programs. This time-bound target must include “new local projects” and not limit to those existing

and under construction. Additionally, even though the LRP Program has not reach maximum contract yield, in terms of actual yields/expenditures being below maximized contractual agreements, since Metropolitan only pays on local water actually produced, this program is very cost-effective, provides regional benefits, and there is no risk to Metropolitan.

### **Time Bound Target #10 - Flexible Water Supply Management**

Metropolitan is here to provide collective regional benefit, and it is Metropolitan's role to manage wet year supplies that are currently unmanaged. Metropolitan should, and must, do everything that it can to manage their available surplus supplies for the entire region.

Metropolitan's goal should be to manage its surplus supplies to benefit the whole and seek regional storage opportunities that can directly benefit all agencies, not just the few who have managed groundwater basins. There is more than 1.6 MAF storage capacity still available in MWD's regional storage portfolio and therefore there is no need for a discounted groundwater replenishment program to increase member agency local storage. Furthermore, there are already other groundwater replenishment programs in place to manage surplus supplies. For example, the Cyclic Cost Offset Program (CCOP) was just modified to increase participation.

LADWP appreciates Metropolitan's efforts to define and refine the CAMP4W process and looks forward to our continued collaboration.

### **Delon Kwan**

**Assistant Director of Water Resources**

**Los Angeles Department of Water and Power**

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**Subject:** [EXTERNAL] Revised CAMP4W Meeting Materials (Feb. 29) and Request for Comments on Time-Bound Targets

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THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

**Date:** March 11, 2024

**To:** Board of Directors  
Member Agency Managers

**From:** Liz Crosson, Chief Sustainability, Resilience and Innovation Officer

**Subject:** Revised CAMP4W Meeting Materials (Feb. 29) and Request for Comments on Time-Bound Targets

Attached are revised meeting materials for the CAMP4W Task Force meeting on February 29, 2024, consistent with the staff presentation. The changes are reflected under Equitable Supply Reliability in the following:

- Attachment 1 - Working Memo No. 6\_Revised3, (see Table 1. Proposed CAMP4W Time-Bound Targets for Inclusion in Year One Report )
- Attachment 2 - Appendix 1 - Examples of Existing Metropolitan Targets and Current Status\_Revised3
- 02292024 LTRPPBM 3b Presentation - Revised3 (see Slide 18)

The board website will be updated soon.

**Please submit any additional comments on the Time-Bound Targets by Wednesday, March 13, 2024,** to [Camp4Water@mwdh2o.com](mailto:Camp4Water@mwdh2o.com). We are preparing the Year One report for our next meeting on March 27 and would like to have your comments in advance. If you have questions, please contact us at [Camp4Water@mwdh2o.com](mailto:Camp4Water@mwdh2o.com).

Thank you.

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March 13, 2024

Las Virgenes Municipal Water District

Request for Comments on CAMP4W Working Memorandum #6: Time-Bound Targets

- Revised Attachment 1, Page 3 of 6, Last Bullet. The category name is not consistent with other time-bound target category names. Consider changing the name to Local Agency Supply.
- Revised Attachment 1, Page 5 of 6, Assist in Maintaining Existing and Under Construction Local Agency Supply. Change the category name to Local Agency Supply. Specific information about “existing” and “under construction” local agency supply can be included for each term (near, mid, and long).



March 13, 2024

CAMP4W Task Force  
Subcommittee on Long-Term Regional Planning Processes and Business Modeling  
700 North Alameda Street  
Los Angeles, CA 90012-2944

**Subject: Input on Proposed CAMP4W Time Bound Targets**

Dear CAMP4W Task Force Members,

As member agencies participating in the Climate Adaptation Master Plan for Water (CAMP4W) process, we appreciate the multiple opportunities to weigh in on topics that are critically important for Metropolitan’s continued success.

As discussed at the Joint Task-Force meeting on February 29, 2024, Time-Bound Targets are critical for guiding project development, and we value the opportunity to work together on refinements to these targets. The following comments are offered in the spirit of working towards consensus on the development of the proposed Time-Bound Targets.

We appreciate Metropolitan’s continued collaboration with its member agencies and look forward to seeing refinements incorporated into the Draft Year One Report.

Thank you,

Richard Wilson, P. E.  
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Burbank Water & Power

Joe Mouawad, P.E.  
General Manager  
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**Table 1. Proposed CAMP4W Time-Bound Targets for Inclusion in Year One Report**

	No.	Category	Near Term	Mid Term	Long Term
<b>Resource-Based Targets*</b> (numbers reflect additional supplies unless indicated otherwise) *based on Scenario D (can be adapted over time)	1	Core Supply	N/A	Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 650 TAF for potential implementation by 2045.  Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF
	2	Storage	N/A	Identify up to 500 TAF for potential implementation by 2035	
	3	Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY		
<b>Policy-Based Targets</b>	4	Imported Water Source Resilience	Invest in protecting source watersheds and existing infrastructure to reduce risks presented by accelerated climate change <sup>1</sup> (TBT in development)		
	5	Assist in Maintaining Existing and Under Construction Local Agency Supply	Maintain 2.09 to 2.32 MAF (under average year conditions)	2.12 to 2.37 MAF (under average year conditions)	2.14 to 2.40 MAF (under average year conditions)
	6	Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026	Implement additional 130 CFS capacity to match needs of SWPDA by 2032	Identify capacity, conveyance, supply, and programs for SWPDA by 2045
	7	Imported Demand Management (used to offset need for additional Core Supply)	Implement structural conservation programs and assist in additional local supply development to achieve 300 TAF from 20XX (TBD) baseline by 2045		
	8	Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards		
			GPCD aligned with 2030 State Standards	GPCD aligned with 2035 State Standards	GPCD aligned with 2045 State Standards
	9	Greenhouse Gas Reduction		40% below 1990 emission levels by 2030	Carbon Neutral by 2045
	10	Flexible Water Management (Under Surplus Conditions)	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan’s Regional Storage Portfolio and WSDM actions		

<sup>1</sup> Taken from slide 24, Item 3b, Subcommittee on Long-Term Regional Planning Processes and Business Modeling February 29, 2024

March 12, 2024

Matt Petersen

Chair of Subcommittee on Long-Term Regional Planning Processes and Business Modeling

Metropolitan Water District of Southern California

700 N. Alameda Street

Los Angeles, CA 90012

Electronic copy via email [Camp4Water@mwdh2o.com](mailto:Camp4Water@mwdh2o.com)

RE: Comments on February 29 CAMP4W Subcommittee Report 3b

Dear Chair Petersen:

The Water Authority appreciates MWD's efforts toward collaborating with its member agencies while developing the Climate Adaptation Master Action Plan for Water (CAMP4W) under the leadership of Chair Ortega, Vice Chair Goldberg, and yourself. We have valued the discussions that the Task Force has been having, as well as the detailed staff report provided by the above memo and its attachments ("Board Memo"), including Working Memo #6 on the "Time Bound Targets" ("Targets Memo #6). We also appreciate the comments provided by several member agencies, included as Attachments to the Board Memo, and are pleased to find that we are in agreement in many areas, including the need for additional work and board deliberation in the key areas noted below.

The purpose of this letter is to provide feedback at a high-level and not respond to every issue mentioned in the Board Memo. At this high-level, we believe it is imperative that the board identify and acknowledge, right now, what scenario we are in and begin to deal with it accordingly—not wait for adaptive management to be applied later. *If we "own" the scenario we are already in, we will necessarily have to address the high-level concerns presented in this letter around reliability, affordability, and equity in order to move forward in CAMP4W.*

1. *Affordability.* The Board Memo states that the fiscal impact of establishing Time-Bound Targets is "not applicable," and the subject is not discussed in the outline of the draft Year One Report (presented at Board Memo pgs. 3-4). But MWD has received many comments<sup>1</sup> and board perspectives to the contrary. For this reason, and to support and advance this critical board objective, we request the subject be placed on a Subcommittee Task Force agenda for discussion and board direction in time for inclusion in the Year One Report. This issue is of the utmost importance to the Water Authority Board of Directors and region, and we can see that many other board members and the ratepayers they represent share our concerns.

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<sup>1</sup> For one example of many, see Board Memo Attachment 3, p. 8 of 21; "MWD must consider affordability issues for all MWD ratepayers" (Attachment 4, pg. 5 of 22).



Chair Petersen

March 12, 2024

Page 2

2. *Adaptive Management*. The initial proposed Time-Bound Targets as presented in the Board Memo are based in part on 2015 or even older data.<sup>2</sup> The 2022 IRP scenario planning process which is the basis of the near-, mid- and long-term resource based targets (AF of supply to be developed) did not analyze the trendline supply gap as past IRP's had done, and instead focused on potential "scenarios."<sup>3</sup> Staff says that these initial resource targets "could be adjusted through CAMP4W's adaptive management approach as conditions change" (Targets Memo #6 at pg. 3 of 6, para. 3), going forward, without addressing the current conditions that already have materially changed and exist now, including severely reduced demand for MWD water. *Now is the time to apply adaptive management, at the outset of CAMP4W's historic mission, to narrow the scenario planning range on which the resource targets are based.*<sup>4</sup> After months of board engagement and the CAMP4W process, it would be a setback for the CAMP4W Year One Report to use outdated analyses and data as the basis for beginning to review projects for MWD's next 100 years.

Indeed, staff acknowledges at many points in its presentation materials the need to adjust Time-Bound Targets to meet real-world conditions and changed circumstances.<sup>5</sup> But this is exactly what many board members and member agencies have requested from the outset of this process in asking staff to provide *data to establish and apply a*

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<sup>2</sup> Targets Memo #6, Attachment 1, pg.2, states the following: "Existing Targets: Time-Bound Targets have been used in the past to drive programs and planning efforts. A sample of past targets are listed in the table in Appendix 1. Many of Metropolitan's resource-based targets are from the 2015 IRP and will be superseded or incorporated into the Master Plan." While it is correct that MWD has established "targets" as part of past IRP processes, the targets were not developed as "Time-Bound Targets" in the context now being discussed. It is not clear from the Board Memo and Targets Memo #6 how the "existing targets"—which include MWD's core sources of supply—will be analyzed to determine whether they will be superseded or incorporated into the Master Plan. A current assessment of these core supplies would appear to be foundational to consideration of any new projects or programs that may be brought forward to the Decision Making Process.

<sup>3</sup> We agree with the use of planning scenarios as a tool, but are making the point that an overly broad scenario range does not go far enough for planning purposes at a time like this, when we need to respond to real threats to reliability and affordability. We must meaningfully grapple with real world options in the context of *the scenario in which we currently find ourselves as the starting point*. Failure to do so could leave us in the same position we are in now, without benefit of the board's CAMP4W deliberations which are the only pathway to the equity all member agencies and ratepayers are seeking.

<sup>4</sup> Beyond board comments over the last several months, many comments were received suggesting the IRP planning range be narrowed. See, for example, Board Memo Attachment 3, pg. 8 of 21 ("A range of 50-650 TAF is a very large range and may be too broad to accurately evaluate potential projects" (City of Anaheim); Board Memo Attachment 3, pg. 12 of 21 ("The amount of core supply needed for each term (near, mid, and long) should be identified. The range of 50-650 TAF is too broad. Narrow the range to something more meaningful" (Las Virgenes MWD).

<sup>5</sup> "The Task Force will have the opportunity to add additional targets in the Draft Master Plan by the end of 2024, and targets can be adjusted through adaptive management" (Board Memo at pg. 1); "...it is anticipated that any initial targets established would be regularly revisited and could be adjusted or augmented in the future, consistent with the adaptive management approach" (Board Memo at pg. 2); "the Adaptive Management process includes reassessment of future projections, including demands, *as real-world conditions* are used to update modeling and assess the supply gap in the future" (emphasis added) (Attachment 4, pg. 8 of 22).

Chair Petersen

March 12, 2024

Page 3

baseline trend to guide climate adaptation investments at the beginning of the process.<sup>6</sup>

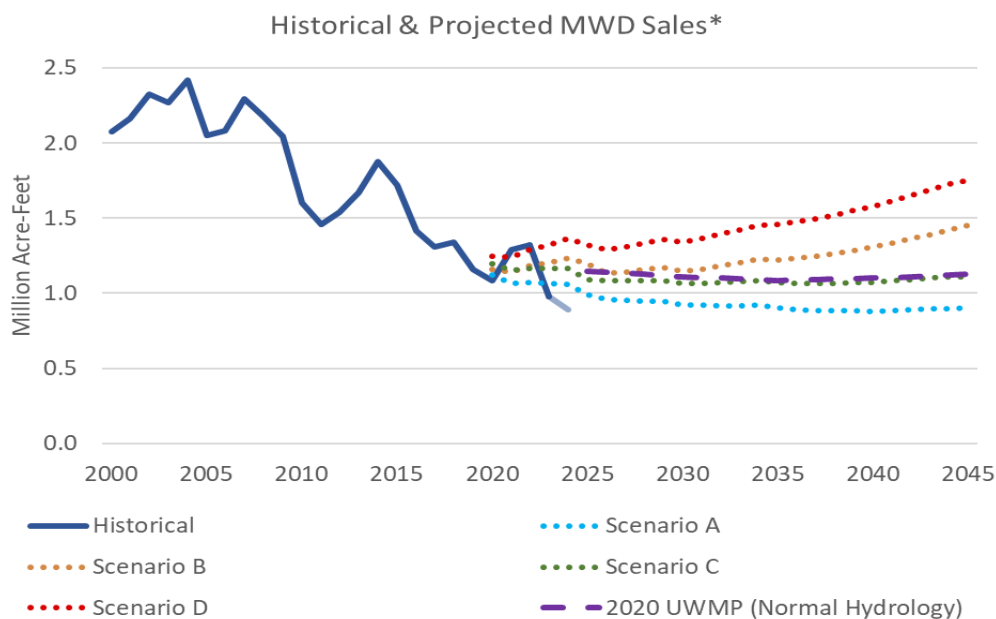
In spite of these many requests, the “data gap analysis” is now identified as part of “next steps” in the process, with the various metrics being established now still based on a two-year old IRP needs assessment that has already been proven to diverge materially from real-world conditions.<sup>7</sup>

Below is a graph of MWD’s actual water sales, and projected sales under the four IRP scenarios and MWD’s 2020 Urban Water Management Plan (UWMP). The Water Authority’s exchange water, which is not subject to hydrologic variations and is reliably ordered and paid for by the Water Authority, is excluded from this graph. This chart clearly shows the current MWD water sales trend is far from Scenario D.

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<sup>6</sup> From the outset, a fundamental tenet of CAMP4W has also been the need for meaningful integration with the existing and planned projects of MWD member agencies in order to establish a baseline against which adaptive management may be applied. See, for example, Attachment 3, pg. 14 of 21 recommendation that MWD determine forecasted local supplies, along with retail demand in order to “define demands for Metropolitan resources” (Long Beach). This data gap analysis has now been relegated to the next phase of the process (Board Memo at pg. 4, “Next Steps.” Targets Memo #6 at pg. 6 of 6 relegates New Local Supply to “Additional Time-Bound Targets for Future Consideration.” Many respondents commented on the need for a baseline which has not yet been established due to the absence of requested data. See for example, Attachment 4, pg. 3 of 22, bullet 22; “We believe it is essential to identify the targeted supply gap baseline, and that the ability to phase development of projects and timing are essential considerations for the board to address as part of the CAMP4W process” (Attachment 4, pg. 4-5 of 22). Others commented that MWD should “spend more time understanding what Met and the member agencies are considering as projects first. There may be situations where a member agency is planning something that may lessen Met’s need for projects. We also need to consider how LRP projects will be incorporated into CAMP” (Attachment 4, pg. 10 of 22). Similarly, others noted that the CAMP4W process should “allow for the inclusion of smaller projects or programs. While these may individually provide limited core supply or storage, their collective implementation can contribute cumulatively in comparison to the benefits of a large project” (Attachment 4, pg. 7 of 22).

<sup>7</sup> Attachment 1, pg. 2 of 6: “Scenarios C and D of the 2020 IRP Needs Assessment were used as the initial basis for quantifying the region’s potential magnitude of resource needs over time and under highly adverse conditions. Scenario C envisions a combination of severe climate change impacts on water supplies with low demands. Scenario D envisions a combination of adverse conditions, including severe climate change impacts on water supplies and persistently high demands on Metropolitan’s wholesale water supplies. Both scenarios include assumptions consistent with Representative Concentration Pathway (RCP) 8.5 greenhouse gas emissions. The main difference between the two severe change scenarios is whether demands are lower or higher over time.” (Emphasis added).



\*Sales projected for 2024 and all sales exclude the Water Authority’s exchange water.

3. **Equity.** MWD has also received many comments on this core value from various perspectives,<sup>8</sup> related to access to water delivery facilities (SWPDA), treatment costs and historic and ongoing financial contributions in conservation and water supply reliability. Calleguas MWD stated it well by posing the question, “How does Metropolitan see decision making about reliability investments advancing in conjunction with a business model that will equitably align who decides, who benefits, and who pays for those investments?” (Attachment 3, pg. 11 of 21).<sup>9</sup> It will be extremely difficult to make decisions about the potential investment of billions of dollars without this critical issue being discussed and hopefully some consensus reached by the board of directors. We also believe and request this subject be placed on a Subcommittee Task Force agenda for discussion and board direction in time for inclusion in the Year One Report on CAMP4W. We doubt many board members will be comfortable approving expensive water supply projects without having the answer to Calleguas’ question.

<sup>8</sup> There are too many to reference (e.g., Attachment 4, pg. 11 of 22, points 12, 19, 21, 22 and 25) and offered in many different contexts throughout board and member agency responses. City of LA was comprehensive in stating that equity is “a necessary part of all Metropolitan projects...and Metropolitan has committed to promoting equity among and within its member agencies.” Board Memo Attachment 3, pg. 18 of 21. Other comments include: “Resource decisions and investments based on “equity” must also be fully integrated with financial impacts and comply with legal requirements” (Attachment 4, pg. 4 of 22). Where available, the source of individual/agency comments is noted in this letter.

<sup>9</sup> Calleguas also suggested—and we agree—using a less-complicated decision-making framework, and that it must provide “clarity on how the new business model will balance decision-making, reliability/resilience benefits, and appropriate distribution of costs...” (Attachment 3, pg. 11 of 21).

4. Reliability. Except for early board meeting discussions that have not carried forward, the board has yet to discuss the level of reliability that CAMP4W aims to address. The proposed targets assume MWD will continue to seek to provide 100% reliability, 100% of the time under Scenario D, which is far from current real-world conditions or trend or even the board's own core values focusing on affordability. We believe achieving this level of reliability is not only cost-prohibitive but would result in stranded investments. It is important for the board to have a discussion of this foundational goal supported by the trade-offs of establishing a lower level of reliability be considered and evaluated. From the Water Authority's perspective, we speak from experience on this as we have customers who, when faced with a choice between reliability and rate impacts, choose a less reliable water supply.

There is also solid support, and it is worth noting, for the premise that water supply reliability must be the "primary driver of the development of CAMP4W."<sup>10</sup> In other words, spending decisions must be grounded primarily on the need for water supply reliability.

5. Existing MWD "targets." It is not clear from the Board Memo or Targets Memo #6 how the existing core water supplies, and board policies shown on Revised Attachment 2 will be reviewed in CAMP4W. The cited source for most of the board actions on these core projects are almost 25 years old (2015 IRP), with one 25 years old (salinity management policy). This schedule concludes that all of these "targets"<sup>11</sup> have been "achieved" or are "on track," without any reference to the historic and changed objectives of the CAMP4W process. We request staff clarify this in its next meeting discussion.

We understand that some of the questions posed here may be planned to be addressed later in the CAMP4W process; however, our concern based on the presentation—including Figure 1 at pg. 1 of Attachment 1, is that staff may see the "Decision Making Framework" as being ready to be applied to proposed projects following the board's action at its May 2024 board meeting to approve the Year One Report. Therefore, we request that staff include in the Year One Report the key issues and questions that remain to be addressed and identify when they will be

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<sup>10</sup> LADWP letter, Attachment 3, pg. 18 of 21; "As an initial screening criterion, all projects and programs for consideration must contribute to meeting a Primary Resource Time-based Target" (Attachment 3, pg. 4 of 21) (from eight General Manager Task Force members).

<sup>11</sup> The projects and policies listed on Revised Attachment 2 (which include MWD core supplies including Colorado River, State Water Project, local supply production and more) had not earlier been identified by staff as "targets." However, given the manner in which staff is describing how the CAMP4W Decision Making Framework will work (see Figure 1, Target Memo #6 at pg. 2), it is imperative that these projects and policies be reviewed at the outset and updated as part of the CAMP4W decision-making process. City of Long Beach emphasized this need for "more specific quantification of these water supply sources/"targets," such as specific SWP yields, or Colorado River Basin data (such as Lake Powell inflows) could provide a useful target from which to guide adaptive actions by MWD" (see Board Memo, Attachment 3 at pg. 16 of 21, "Targets." The Board Memo says that these existing targets from the 2015 IRP "will be superseded or incorporated into the Master Plan" (Targets Memo #6 at Attachment, pg. 2 of 6) without comment how or when this will happen.

Chair Petersen

March 12, 2024

Page 6

addressed later in the process, and also confirm there is no intention to apply the Decision Making Framework until these high-level issues are addressed.

We very much appreciate the progress being made in the CAMP4W process and look forward to continuing to develop a long-term plan that integrates MWD's water resources, services, financial, and climate adaption planning, in mutually beneficial alignment with the needs and plans of our 26 member agencies.

Sincerely,



Lois Fong-Sakai, CAMP4W Task Force Member  
On behalf of Water Authority MWD Delegates

cc: Adán Ortega, MWD Board Chair  
Adel Hagekhalil, MWD General Manager  
Liz Crossen, MWD Sustainability, Resiliency, and Innovation Officer  
Dan Denham, Water Authority General Manager and CAMP4W Task Force Member  
CAMP4W Task Force Members  
Gail Goldberg, Water Authority MWD Delegate  
Marty Miller, Water Authority MWD Delegate  
Tim Smith, Water Authority MWD Delegate  
Water Authority Board of Directors  
MWD Board of Directors



Subcommittee on Long-Term Regional Planning  
Processes and Business Modeling

# Climate Adaptation Master Plan for Water – Draft Year One Report

Item 3b  
March 27, 2024

## Item 3b

### Climate Adaptation Master Plan for Water - Draft Year One Report

#### Subject

Climate Adaptation Master Plan for Water – Draft Year One Report

#### Purpose

The CAMP4W Draft Year One Report documents progress since February 2023 and sets up the next steps for 2024. Progress to date includes work to establish the values and priorities of the Board and Member Agencies, components of a Climate Decision-Making Framework, Time-Bound Targets, and the process for identifying projects and programs for evaluation.

Climate Adaptation  
Master Plan for Water

# Year One Progress Report Sections

*The DRAFT Executive Summary, Section 1 and Section 2 provided. Sections 3-6 will be provided in April.*



CAMP4W Year One  
Progress Report  
April 2024 DRAFT

Executive Summary

Section 1: Background, Need  
and Outcome

Section 2: Climate Decision-  
Making Framework

Section 3: Development of  
Adaptation Strategies

Section 4: Business Model  
and Affordability

Section 5: Policies, Initiatives  
and Partnerships

Section 6: Adaptive  
Management



Climate Adaptation  
Master Plan for Water

# Year One Progress Report Sections

*The DRAFT Executive Summary, Section 1 and Section 2 provided. Sections 3-6 will be provided in April.*



CAMP4W Year One  
Progress Report  
April 2024 DRAFT

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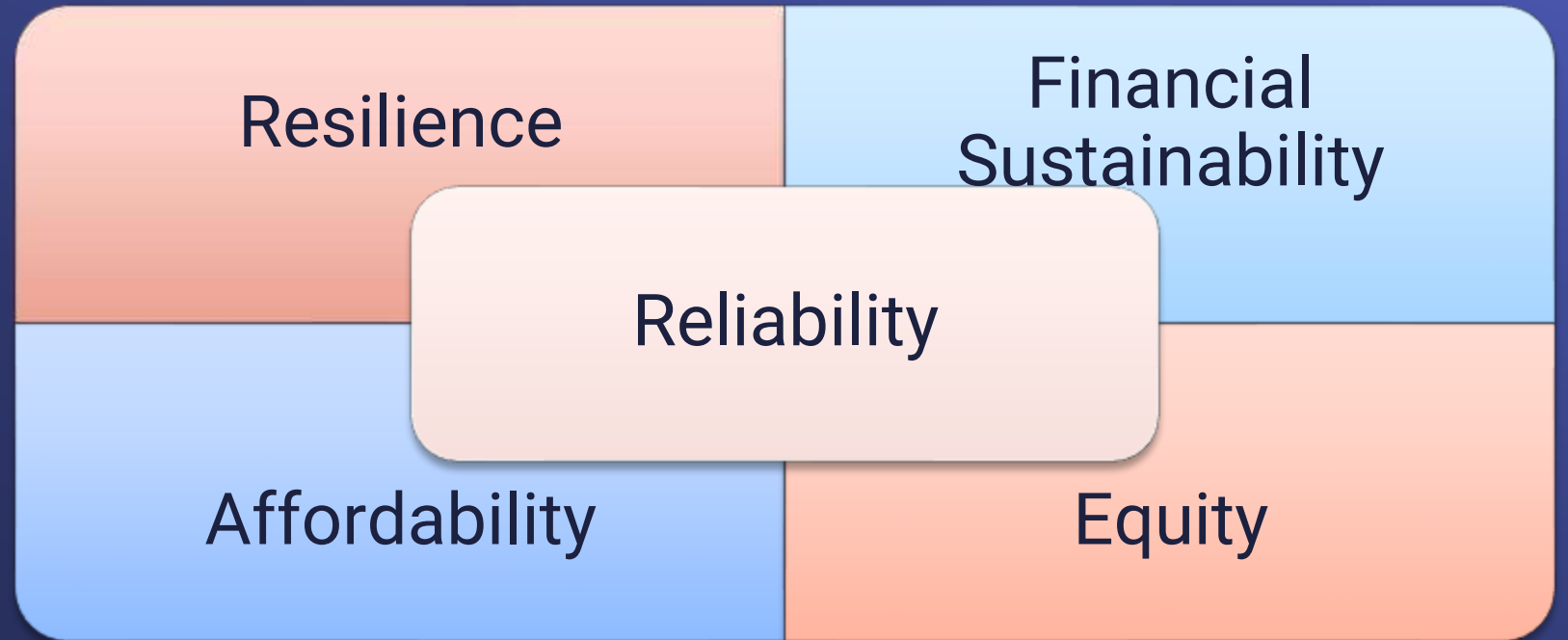
Section 6: Adaptive  
Management

Summary of Content in  
Submitted Draft:  
Executive Summary and  
Sections 1-2



# Values and Priorities

Task Force Charter defined components of the Master Plan

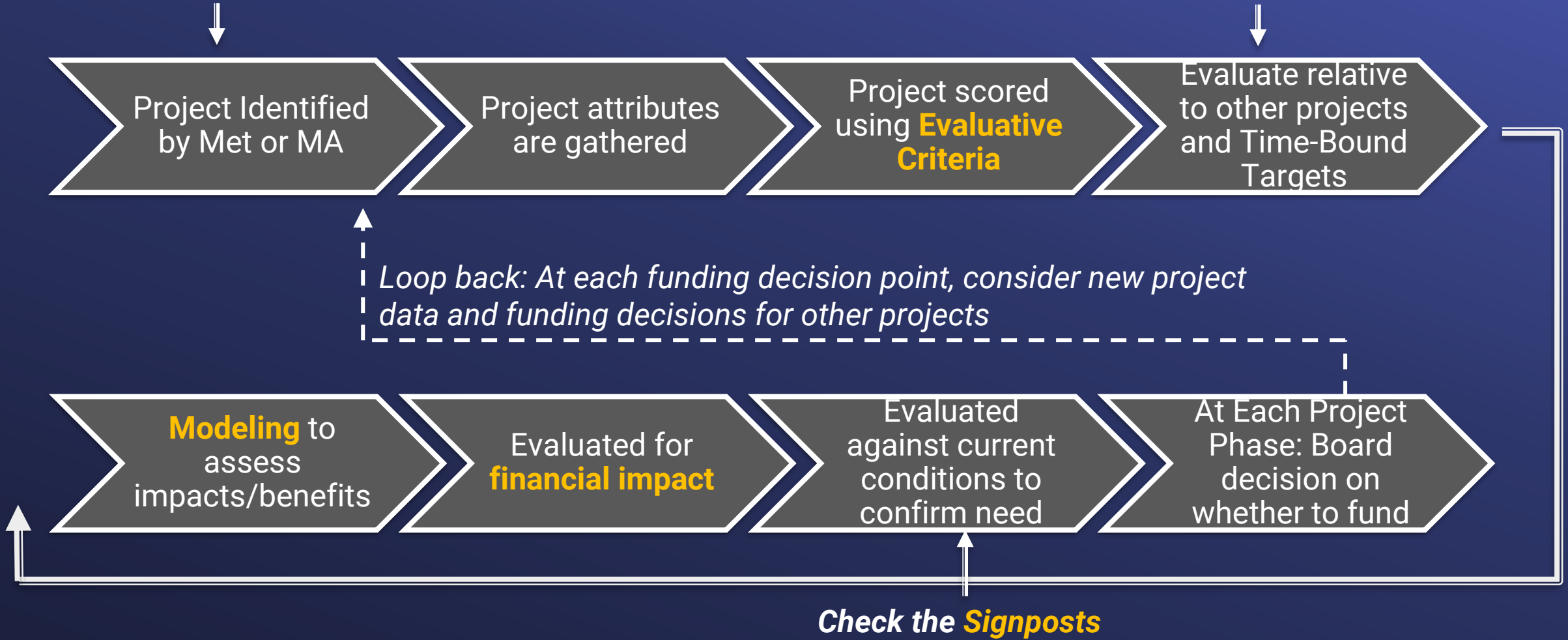


- 1) Climate and Growth Scenarios
- 2) Time-Bound Targets
- 3) Framework for Climate Decision-Making and Reporting
- 4) Policies, Initiatives, and Partnerships
- 5) Business Models and Funding Strategies

# Climate Decision-Making Framework

Identify projects/ programs that address Time-Bound Targets

Compare project/program to other "go" projects to ensure portfolio of projects will not exceed/conflict with Time-Bound Targets



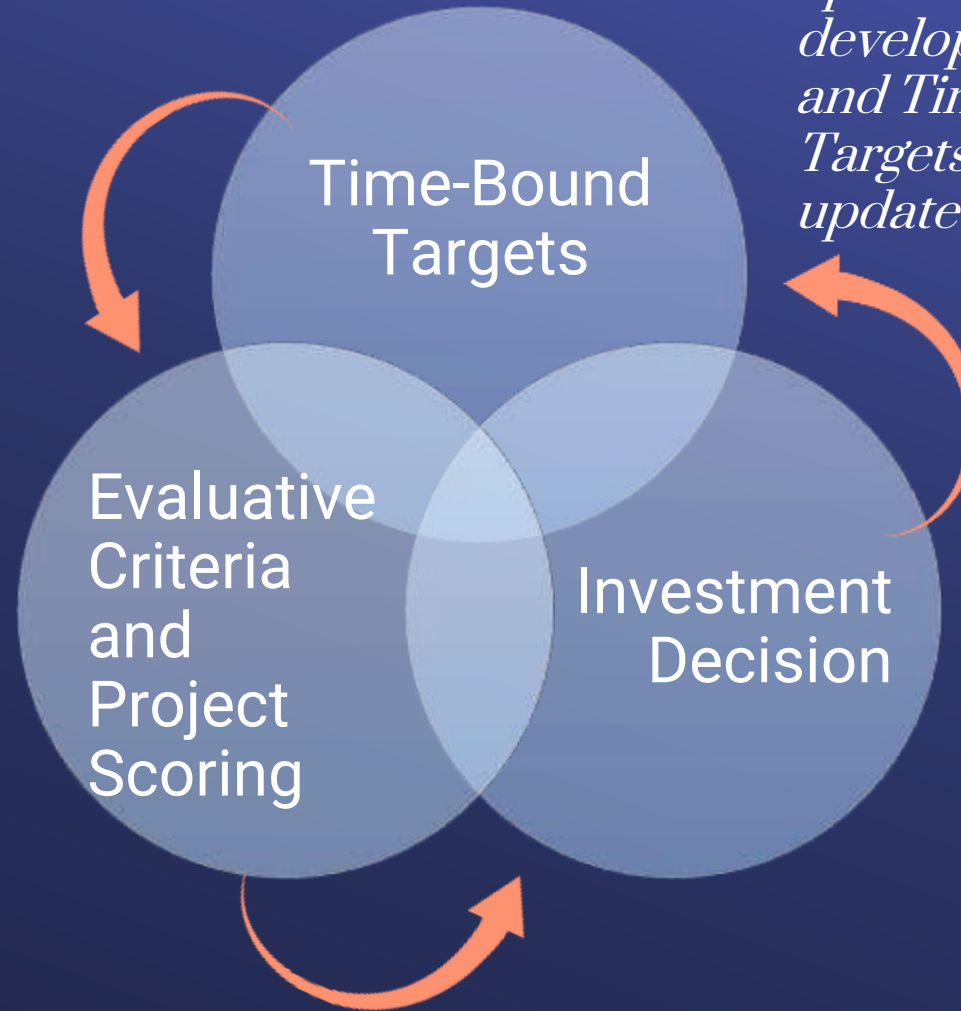
Climate Adaptation  
Master Plan for Water

# Climate Decision Making Framework

Integrated Elements:  
*Time-Bound Targets,  
Evaluative Criteria and  
Investment Decisions  
function together*






*Time-Bound  
Targets guide  
project  
development  
and inform  
scoring of  
projects*






*Adaptive Management:  
update resource  
development needs  
and Time-Bound  
Targets based on  
updated projections*

*Scores and Time-Bound Targets inform decision-making*

# Climate Decision-Making Framework – Evaluative Criteria

 <b>RELIABILITY</b> 25 POINTS	 <b>RESILIENCE</b> 25 POINTS	 <b>FINANCIAL SUSTAINABILITY &amp; AFFORDABILITY</b> 20 POINTS
Supply Performance Equitable Reliability	Addresses known vulnerabilities Project's ability to perform under climate impacts	Bond capacity Unit cost
Assess how a project or program performs under various hydrologic conditions, the extent to which it helps close gaps identified in the IRP Needs Assessment, and how it can address an inequity in supply reliability.	Evaluates how the project or program addresses known vulnerabilities and how it performs under climate impacts.	Considers the ability of a program to be funded through bonds and the overall cost of the program.

# Climate Decision-Making Framework – Evaluative Criteria

 <b>ADAPTABILITY &amp; FLEXIBILITY</b> 10 POINTS	 <b>EQUITY</b> 10 POINTS	 <b>ENVIRONMENTAL CO-BENEFITS</b> 10 POINTS
Flexibility of existing assets Ease / Complexity Scalability	Programs for underserved communities Scale of community engagement Public health benefits Workforce development	Greenhouse gas emissions Benefits Ecosystem services Habitat / wildlife benefits
<p>Considers how a project or program improves operational flexibility, the difficulty of implementation, and if a program is able to be phased. Flexibility addresses the capability of Metropolitan’s system to respond to changes in water supply, water quality, treatment requirements, or demands during planned and unplanned facility outages.</p>	<p>Consideration of underserved communities, scale of community engagement, public health, and workforce development.</p>	<p>Measures greenhouse gas emissions, ecosystem services, and benefits to habitat and wildlife.</p>

# Climate Decision-Making Framework – Time-Bound Targets



## Resource-Based Targets

Numbers reflect additional supplies unless indicated otherwise

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Core Supply <sup>1</sup>	N/A	Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 650 TAF for potential implementation by 2045. Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF
Storage	Identify up to 500 TAF for potential implementation by 2035		
Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY		

- Core Supply sub-targets will be considered later this year and may include targets for **groundwater remediation and stormwater capture**.



# Climate Decision-Making Framework – Time-Bound Targets



## Policy-Based Targets

CATEGORY	NEAR TERM	MID TERM	LONG TERM
Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026	Implement additional 130 CFS capacity to SWPDA by 2032	Implement capacity, conveyance, supply, and programs for SWPDA by 2045
Local Agency Supply <sup>2</sup>	Maintain 2.09 to 2.32 MAF (under average year conditions)	2.12 to 2.37 MAF (under average year conditions)	2.14 to 2.40 MAF (under average year conditions)
Demand Management <sup>3</sup>	Implement structural conservation programs to achieve 300 TAF by 2045		
Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards <sup>4</sup>		
	GPCD target for 2030 <sup>5</sup>	GPCD target for 2035	GPCD target for 2045
Greenhouse Gas Reduction	N/A	40% below 1990 emission levels by 2030	Carbon Neutral by 2045
Surplus Water Management	Develop capability to manage up to 500 TAFY of additional wet year surplus above Metropolitan's Storage Portfolio and WSDM action		

# Climate Decision- Making Framework

## *Time-Bound Targets*

- Local Agency Supply includes existing (and under construction) local agency supplies **and can be augmented later this year** to include new local agency supply.
- Demand Management target is used **to offset the need for additional core supply** and uses 2024 as a baseline.
- Regional Water Use Efficiency: each retail water supplier will report progress to the State Water Board annually through a **Water Use Objective (WUO)** equaling the sum of efficiency budgets for a subset of urban water uses: residential indoor water use, residential outdoor water use, real water loss and commercial, industrial and institutional landscapes with dedicated irrigation meters. Each efficiency budget is calculated using **a statewide efficiency standard and local service area characteristics** (population, climate, etc.)
- Specific GPCD Time-Bound Targets **will be identified later this year** based on final SWRCB standards as well as Metropolitan's overall demand management target. The target will be designed **to track water use efficiency trends by sector over time** and will take local conditions, including climate, into consideration.

# Climate Decision-Making Framework

## Signposts

Metrics must be:  
Measurable  
Updatable  
Readily accessible  
Reporting frequency: Annual

### DEMAND

Population

Demand Management

Economy

Regulations

Local Agency Supply

*Throughout 2024, Signposts will be further developed, and additional Signposts may be included.*

### SUPPLY

Climate Change Indicators

Regulations

Storage

Imported Supply  
Performance

Climate Adaptation  
Master Plan for Water

# Year One Progress Report Sections

*The DRAFT Executive Summary, Section 1 and Section 2 provided. Sections 3-6 will be provided in April.*



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April 2024 DRAFT

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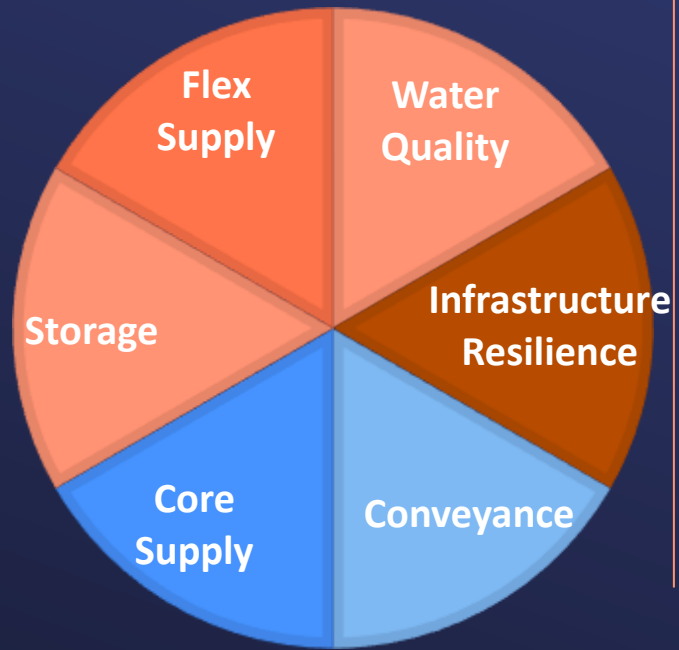
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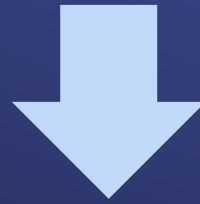
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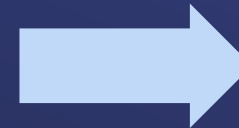
# What projects are assessed in CAMP4W?



R+R Projects  
(Scored through CIP Criteria)



Board  
Consideration



Capital  
Investment Plan  
or Program  
Implementation

CAMP4W Go Projects and  
Programs  
(Scored through CAMP4W Criteria)



## What projects are assessed in CAMP4W?

Potential questions where a “yes” answer would mean a project or program will be considered through CAMP4W:

- Is the project or program providing a new core supply, flex supply, or storage, or is the project or program enabling a new core supply, flex supply, or storage?
- Is the project or program addressing a known vulnerability to an asset(s) and does it involve improvements beyond what would be required to perform traditional R&R for that asset?



# Development of Adaptation Strategies

*Projects and Programs designed to achieve the Time-Bound Targets*

Resilience Planning,  
Hazard and Vulnerability  
Assessments

Drought Mitigation Action  
Planning

Resource  
Studies/Program  
Development

System  
Capacity  
Planning

Flexibility and  
Supply Planning

Multiple processes will identify projects and programs for CAMP4W evaluation



What  
projects are  
assessed in  
CAMP4W?

Should there be a size, cost or other threshold for CAMP4W evaluation?

- Cubic feet per second (CFS) / Acre-feet per year (AFY)
- Total or max annual cost of project / program





# Year One Progress Report Sections

*Sections 4-6 will lay out  
next steps for 2024*

CAMP4W Year One  
Progress Report  
*April 2024 DRAFT*

Executive Summary

Section 1: Background, Need  
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# Discussion Topics for April Task Force

Year One Progress Report Sections 4, 5, 6



## Business Model and Affordability

Identify categories of business model options, new models for financing, propose affordability support measures

## Policies, Initiatives and Partnerships

Identify policy areas for focus as well as potential partnership opportunities with and among member agencies and other interested parties

## Adaptive Management

Propose process to check the signposts, review assumptions with real-world conditions, refine/augment Time-Bound Targets

# Additional 2024 CAMP4W Activities

For December 2024 Climate  
Adaptation Master Plan

## Refine Framework

- Finalize and augment Targets and Adaptive Management

## CAMP4W Evaluation

- Identify and evaluate projects and programs through the CAMP4W

## Business Model Action

- Determine next steps on business and revenue models

## Community Engagement

- Work with Member Agencies on community engagement and partnerships

# Task Force Meeting Schedule and Discussion Topics

March 27 9:30-12:30	CAMP4W Task Force (LTRPPBM Subcommittee)	Draft Year One Progress Report (Exec Summary, Purpose and Need, Climate Decision-Making Framework, Developing Adaptation Strategies)
April 9 10:30 am	Finance and Asset Management Committee	Draft Year One Progress Report (Info Item)
April 23 11:30 am	Equity, Inclusion and Affordability Committee	Report on Water Affordability Panels and Recommended Actions
April 24 9:30-12:30	CAMP4W Task Force (LTRPPBM Subcommittee)	Draft Year One Progress Report (Business Model and Affordability, Policies, Partnerships, Adaptive Management)
May 13/14	Finance and Asset Management Committee	Draft Year One Progress Report (Action Item)



CAMP4W Task Force Meetings (LTRPPBM Subcommittee) are currently scheduled for the fourth Wednesday, 9:30 am - 12:30 pm throughout 2024.

