



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

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

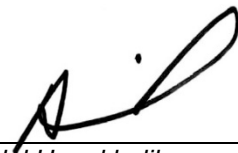
<ol style="list-style-type: none"> 1. EXECUTIVE SUMMARY 2. CAMP4W PURPOSE, NEED AND OUTCOME <ol style="list-style-type: none"> a. Summary of Metropolitan’s System, Assets and Member Agencies b. Purpose and Need of Climate Adaptation Planning c. Summary of Planning Efforts to Date d. CAMP4W Process Overview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

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

March 27, 9:30 am - 12:30 pm	CAMP4W Task Force (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	CAMP4W Task Force (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



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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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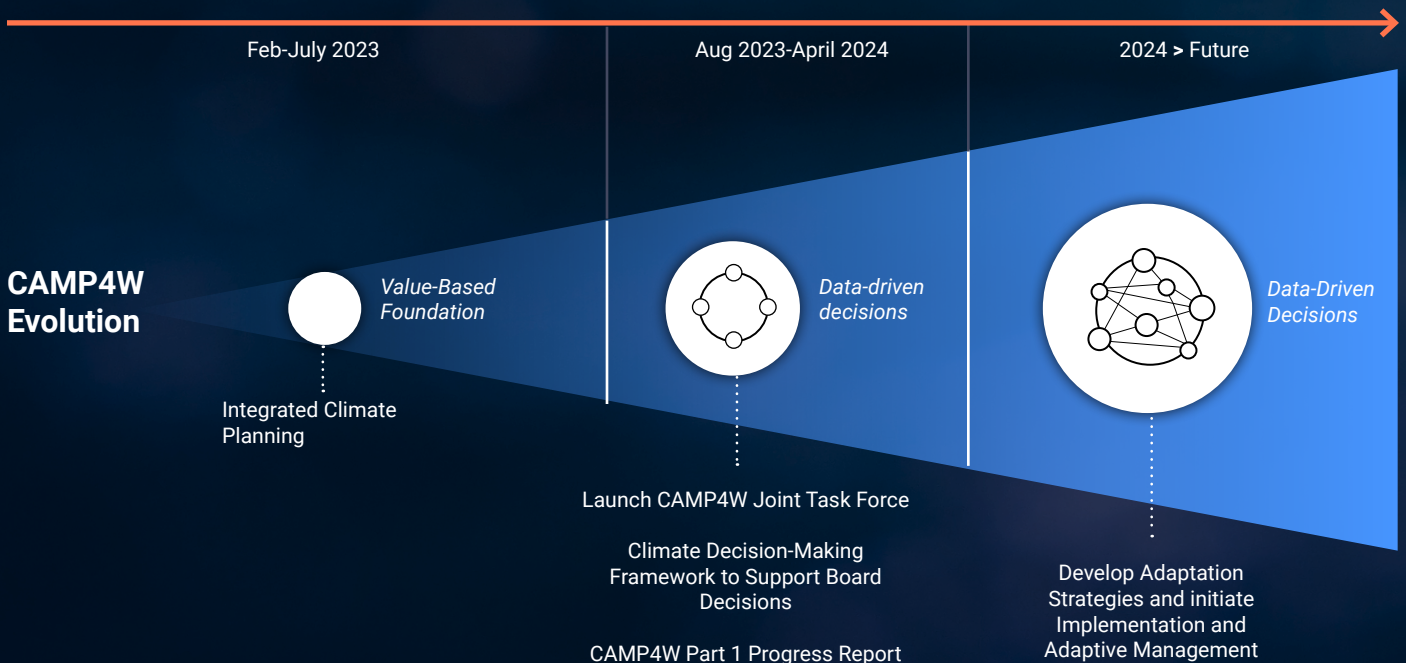
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Executive Summary

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:

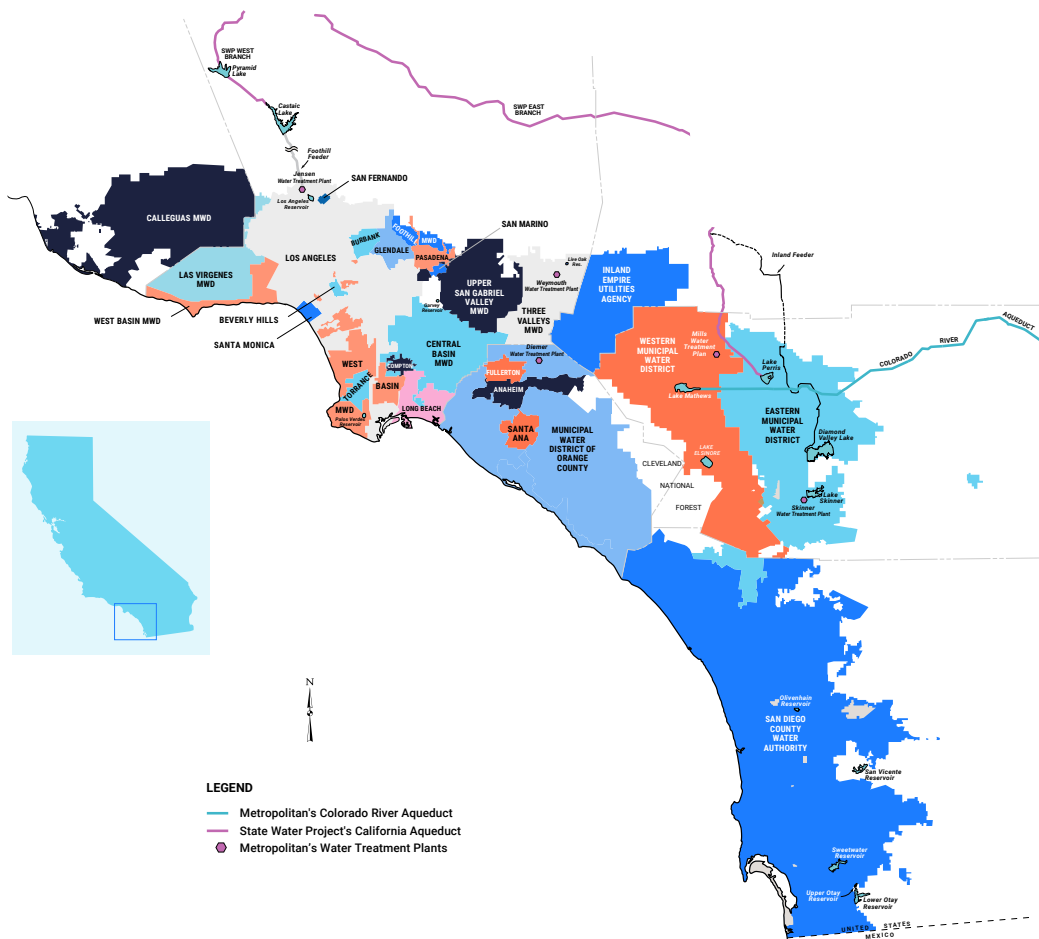
- **Climate and Growth Scenarios:** Utilize climate scenarios—based on RCP 8.5 as set by the board and regularly updated to reflect real-world conditions and climate risks—to assess and set ranges of variability of water supplies from the State Water Project, the Colorado River, and regional hydrology 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>Reliability</p> <p>Ability to consistently meet Member Agency water demands.</p>	<p>Resilience</p> <p>Ability to withstand and recover from disruptions.</p>	<p>Financial Sustainability</p> <p>Revenues sufficient to cover expenses over the short- and long-term.</p>	<p>Affordability</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>Equity</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>RELIABILITY 25 POINTS</p>	 <p>RESILIENCE 25 POINTS</p>	 <p>FINANCIAL SUSTAINABILITY & AFFORDABILITY 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>ADAPTABILITY & FLEXIBILITY 10 POINTS</p>	 <p>EQUITY 10 POINTS</p>	 <p>ENVIRONMENTAL CO-BENEFITS 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 ¹	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 ²	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 ³	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 ⁴		
	GPCD target for 2030 ⁵	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.

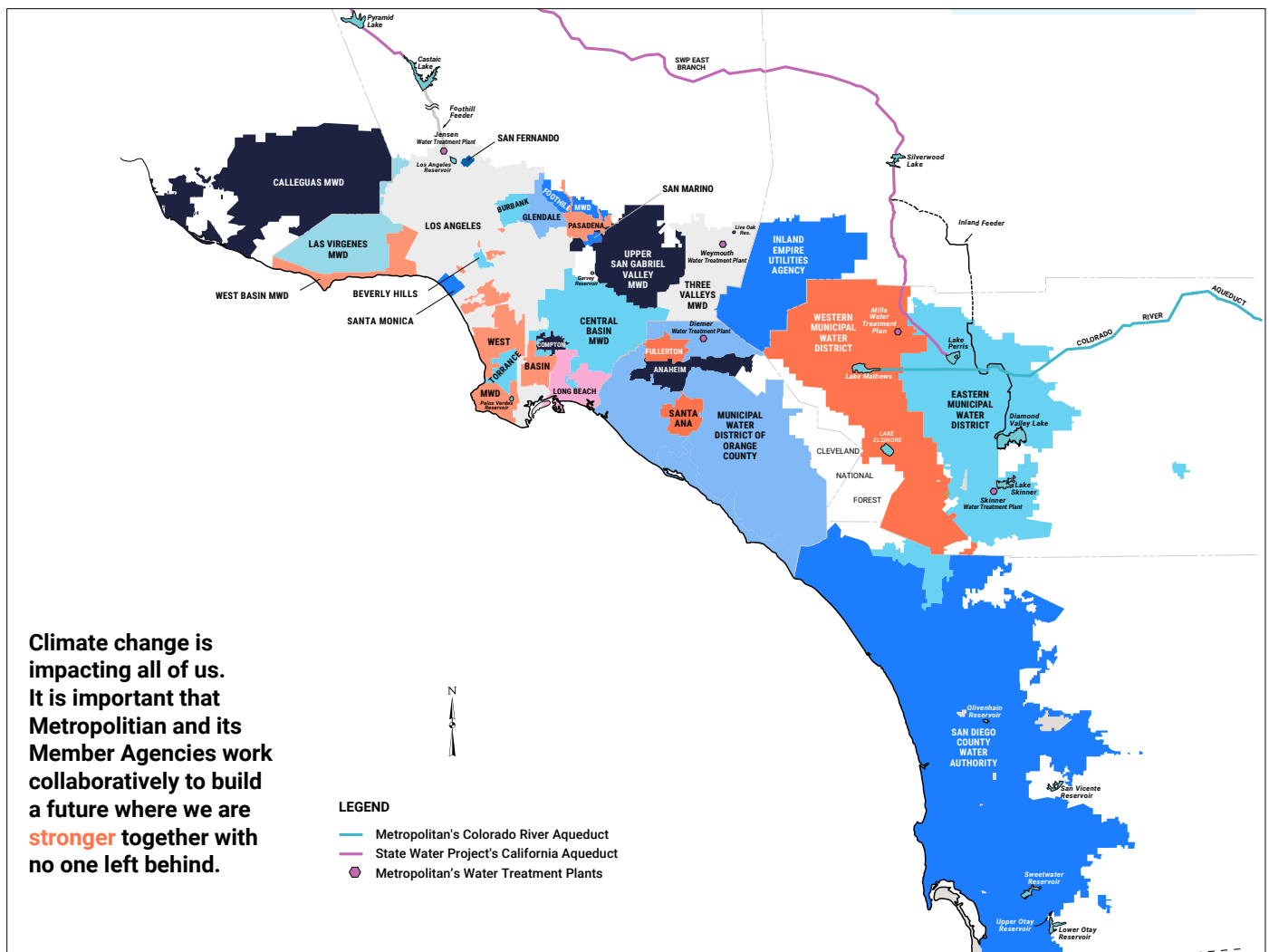
CAMP4W Background, Need, and Outcome

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.

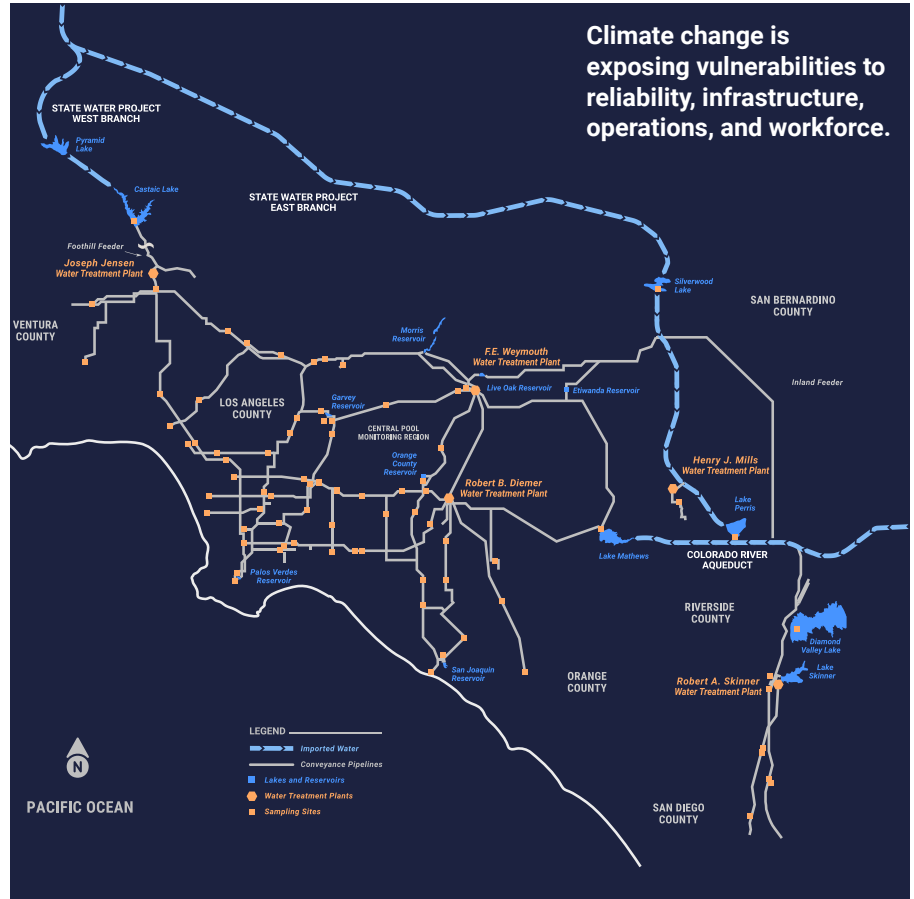
Southern California’s water supplies are facing major long-term threats, brought on by climate change, emerging contaminants and evolving ecological needs. Three consecutive years of recent drought left State Water Project dependent areas with shortages, threatening the health and wellbeing of our residents. 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

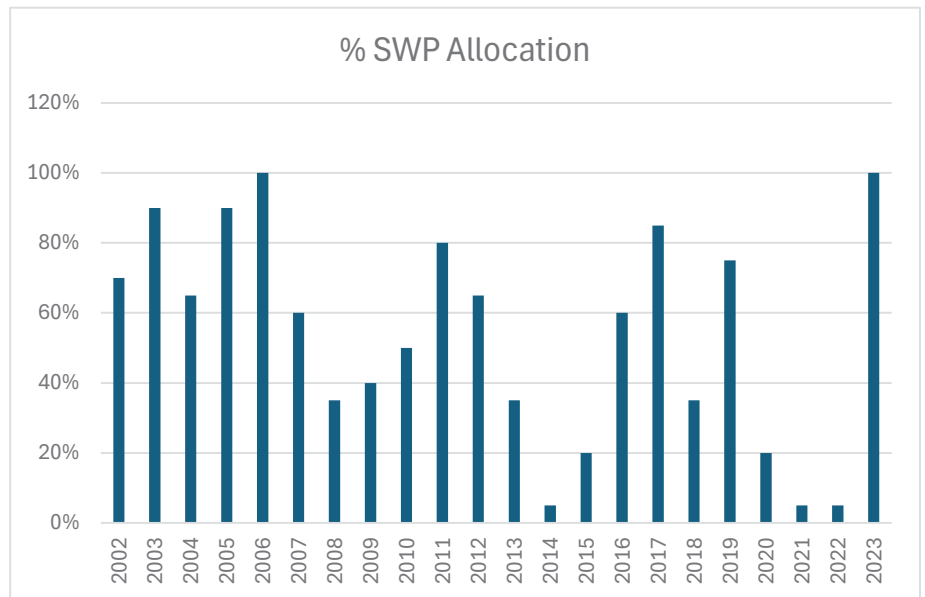
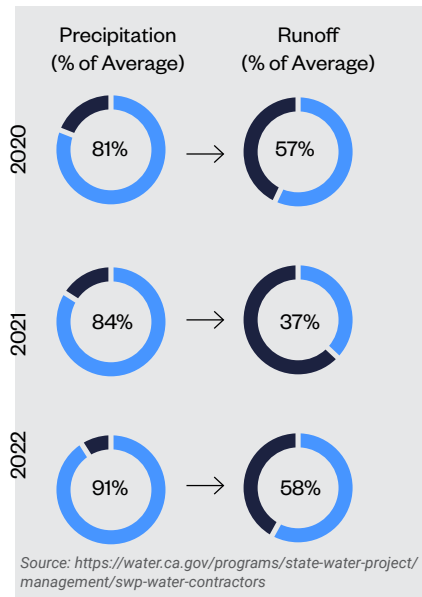
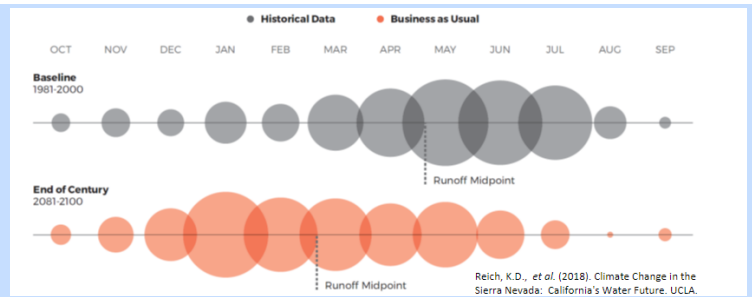
Worldwide, agencies are grappling with the reality that climate change is impacting our lives in a multitude of ways. Extreme weather events such as drought, flooding, wildfires, heat waves, and windstorms, as well as sea level rise and the compounded impacts of climate change on other hazards such as 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

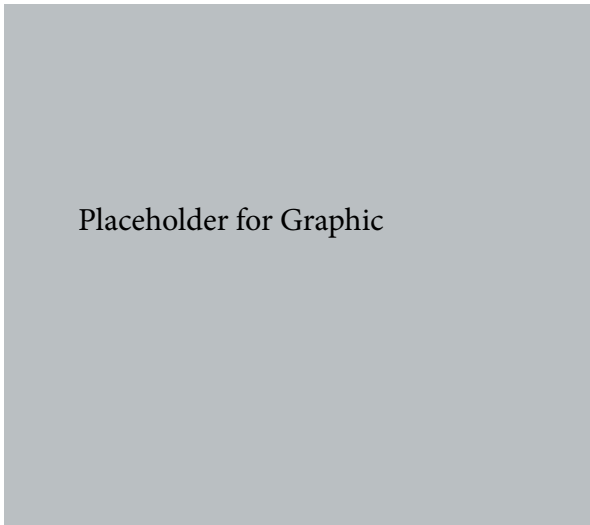
- Less snow/more rain
- More frequent and hotter fires
- More frequent and severe flooding
- Longer and drier dry periods



Reliability of runoff efficiency and supplies are decreasing

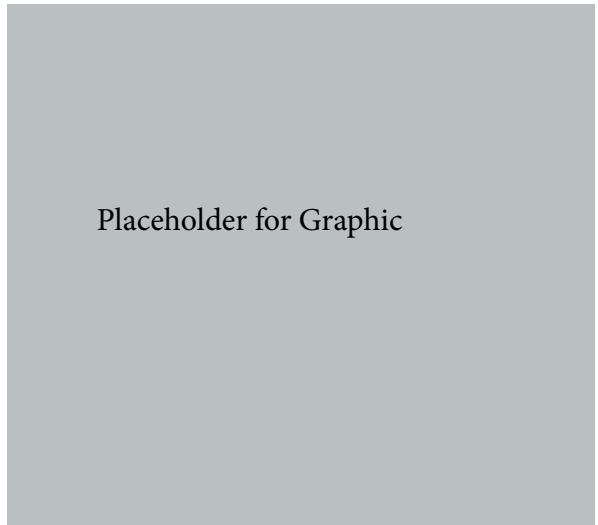
Impacts Beyond Drought

Metropolitan faces many challenges while operating in a changing climate.



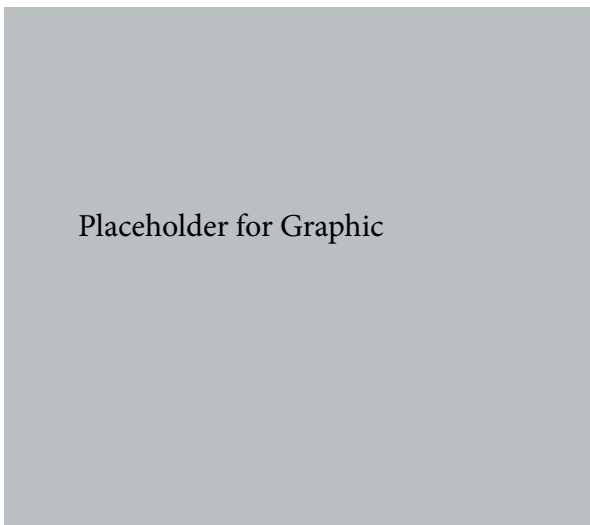
Placeholder for Graphic

Wildfire



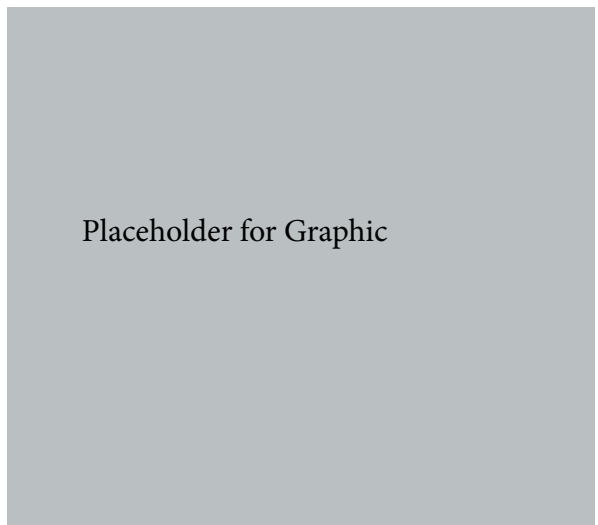
Placeholder for Graphic

Extream Heat



Placeholder for Graphic

Flooding



Placeholder for Graphic

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.

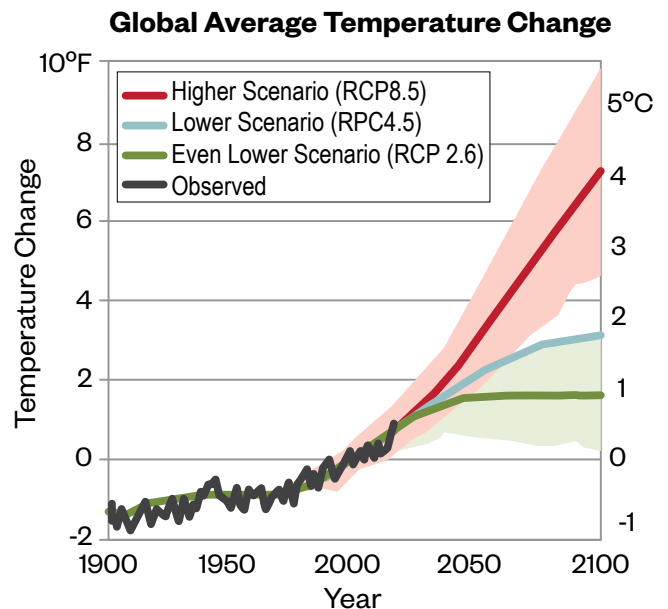


Figure 1-1 Global Average Temperature Change

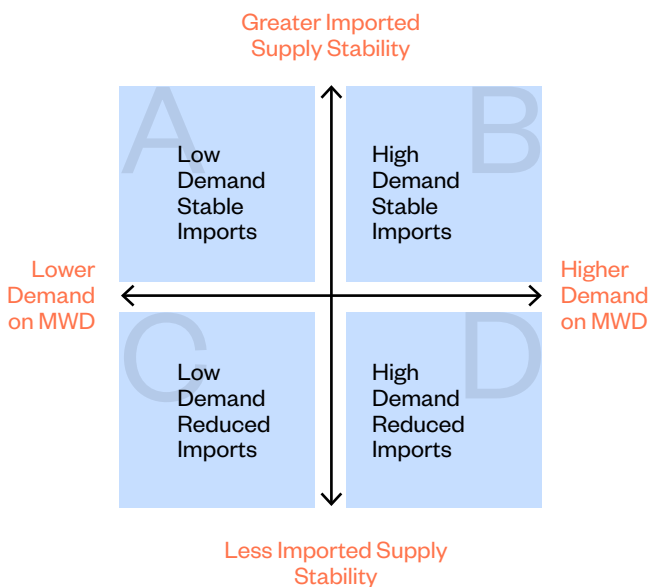
IRP NEEDS ASSESSMENT IDENTIFIED THREE CATEGORIES OF SUPPLY

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.

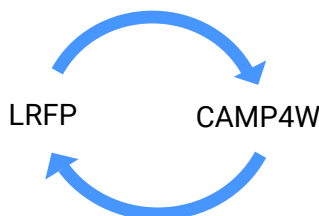
Storage: The capability to save water supply to meet demands at a later time. Converts core supply into flexible supply and evens out variability in supply and demand.

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.

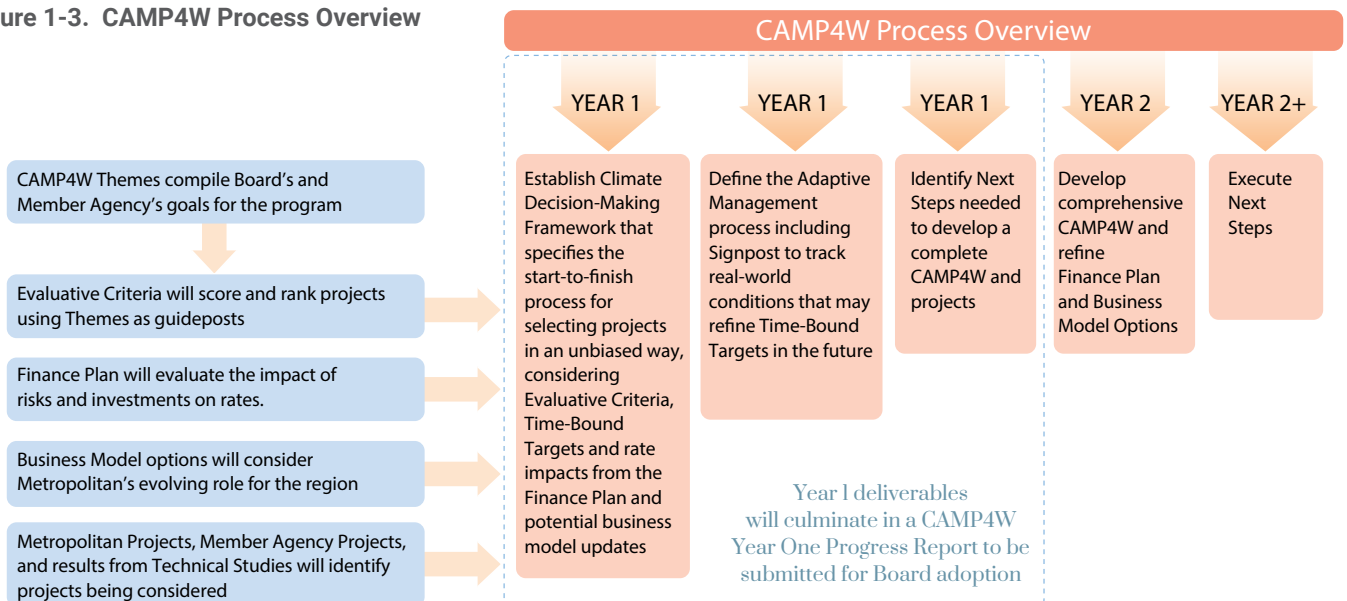
Preliminary objectives (that will be refined through the process) include:

- 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



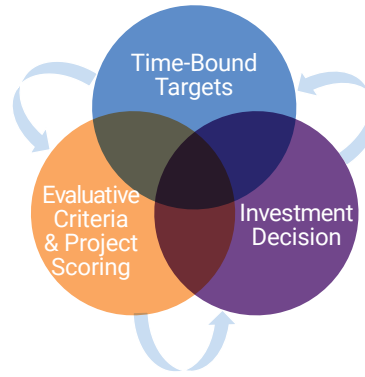
Climate Decision-Making Framework

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

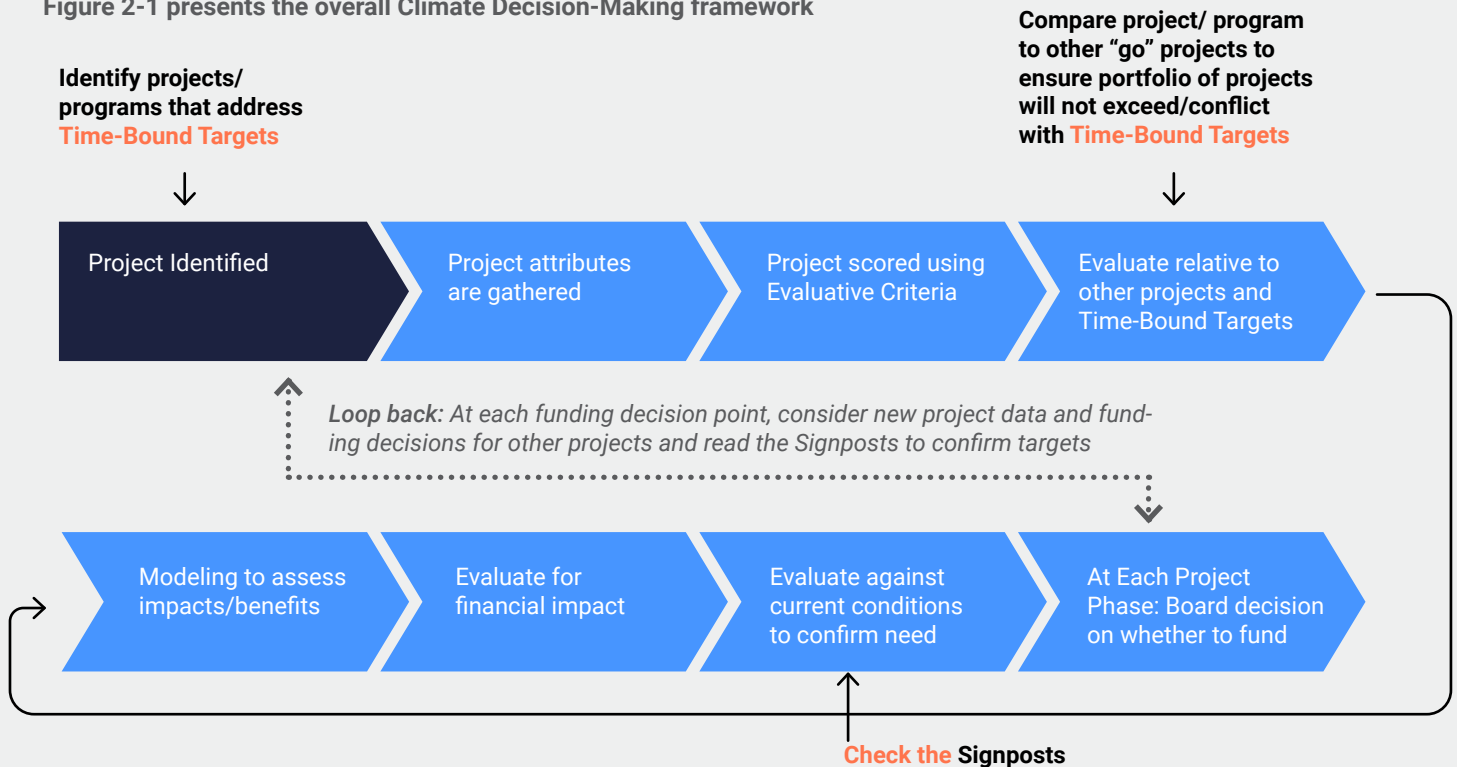
Time-Bound Targets guide project development and inform scoring of projects



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

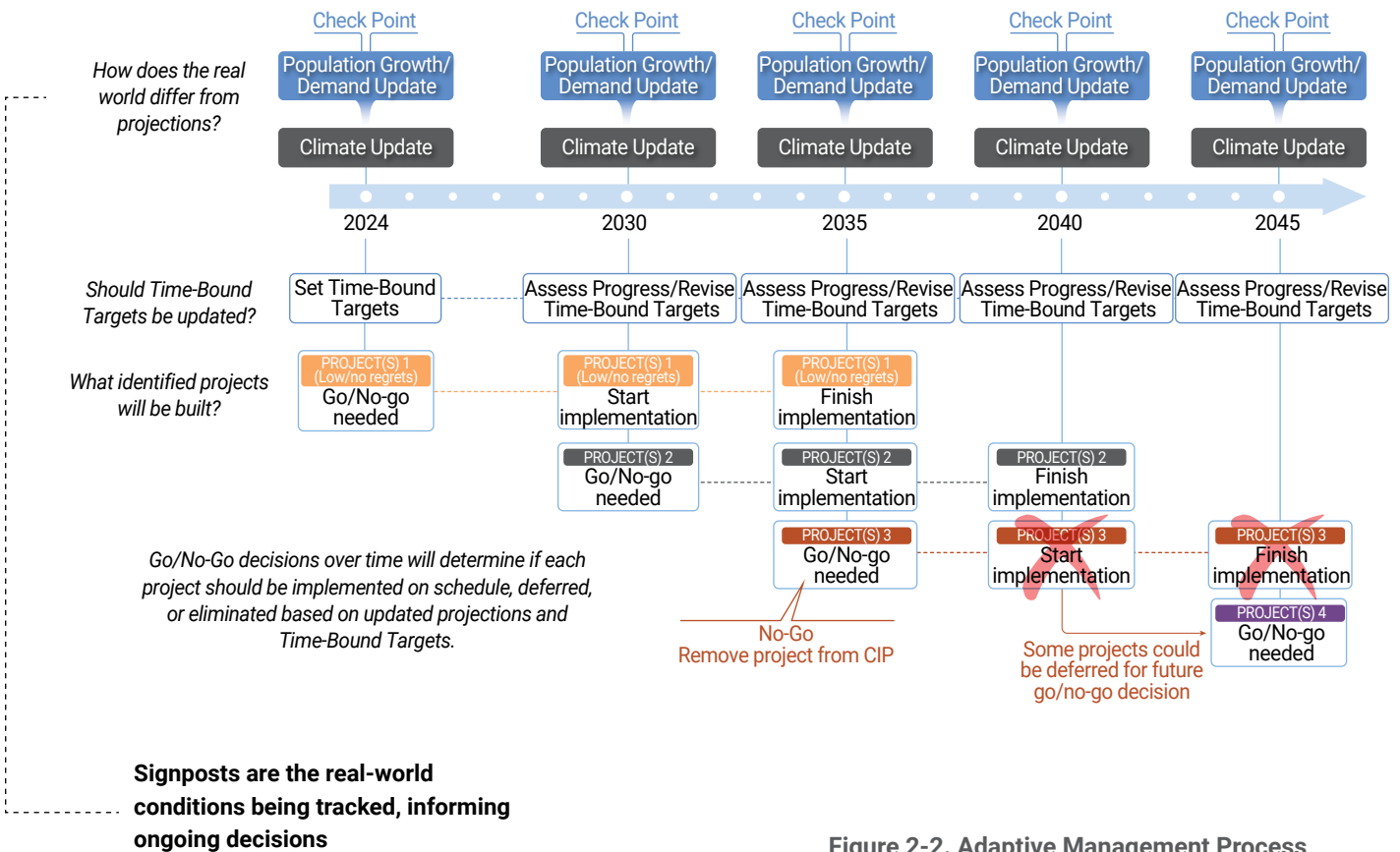


Figure 2-2. Adaptive Management Process

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 ¹	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 ²	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 ³	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 ⁴		
	GPCD target for 2030 ⁵	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

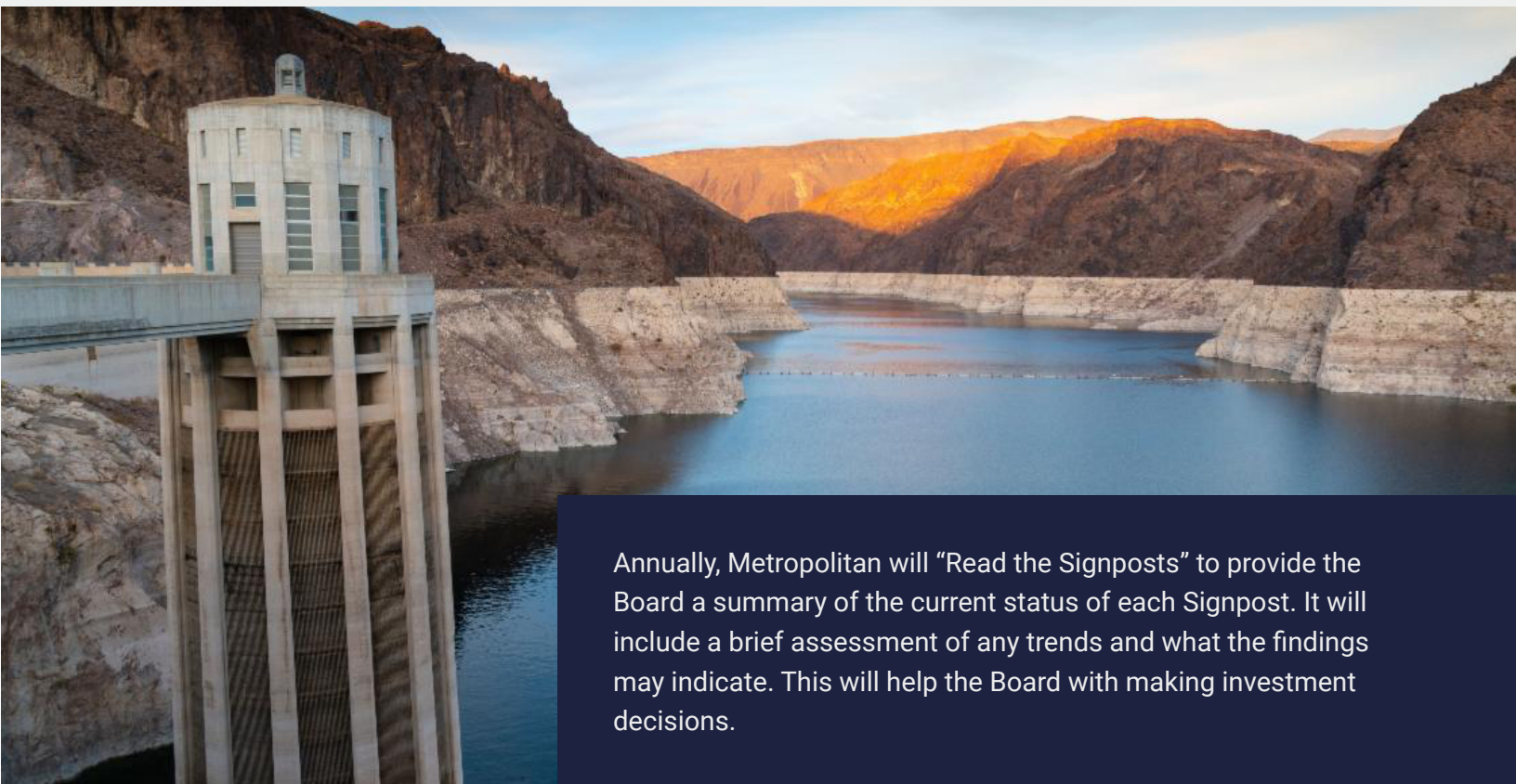
SUPPLY

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

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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

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

Philip Bogdanoff, PE
Water Planning and Resources Manager
714.765.4420
pbogdanoff@anaheim.net

**ELSINORE
VALLEY**

MUNICIPAL WATER DISTRICT

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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 7th 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).

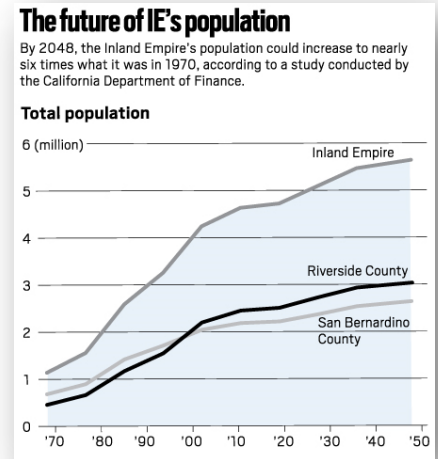
Reference No.	Type	Category	Near-term	Mid-term	Long-term
1	Resource	Core Supply		Identify 300 TAF for potential implementation by 2035. Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF.	Identify 650 TAF for potential implementation by 2045. Alternatively, 250 TAF of new storage 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	We recommend adding the Board authorized water purchases opportunities included in near-term actions.	Identify up to 500 TAF for potential implementation by 2035.	Identify up to 500 TAF for potential implementation by 2035.
3	Resource	Storage	We recommend adding the Board Central Valley storage and other banking opportunities included in near-term actions.	Acquire capability for up to 100 TAFY. We recommend increasing this amount to take advantage of significant rainfall years.	Acquire capability for up to 100 TAFY. We recommend increasing this amount to take advantage of significant rainfall years.
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
			Does this align with Integrated Regional Water Plans?	Does this align with Integrated Regional Water Plans?	Does this align with Integrated Regional Water Plans?
5	Policy	Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026. Should CRA-dependent areas also be addressed?	Implement additional 130 CFS capacity to SWPDA by 2032. Should CRA-dependent areas also be addressed?	Implement capacity, conveyance, supply, and programs for SWPDA by 2045. Should CRA-dependent areas also be addressed?
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. Please see comments below.	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045. Please see comments below.	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045. Please see comments below.
8		Average Regional Gallons Per Capita Per Day FOR AN EQUITABLE EFFICIENCY METRIC, WE RECOMMEND ADDING	143 GPCD by 2026 (10% reduction from 2022 regional average GPCD). Please see comments below.	127 GPCD by 2035 (20% reduction from 2022 regional average GPCD). Please see comments below.	TBD (TBD% reduction from 2022 regional average GPCD). Please see comments below.

Reference No.	Type	Category	Near-term	Mid-term	Long-term
		SYSTEM EFFICIENCY – Gallons Per Connection per Day. Please see comments below.			
9		Greenhouse Gas Reduction Please see comments below.	N/A	40% below 1990 emission levels by 2035.	Carbon Neutral by 2045.
10		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.

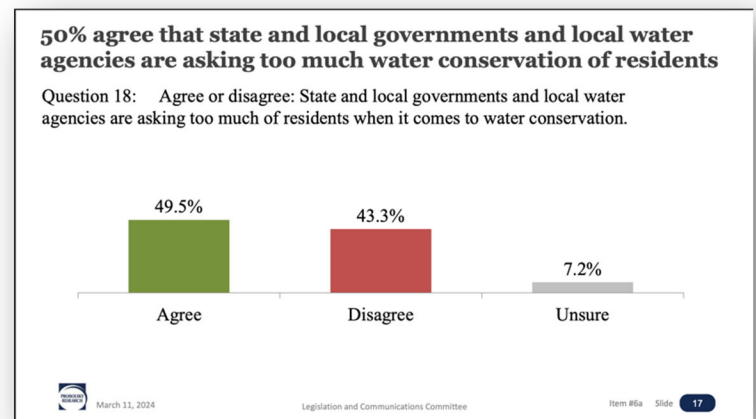
7. **Water Use Efficiency:** Please define “Structural Conservation.” Although the Los Angeles area is losing population, and that trend is expected to continue due to the high cost of living, the Inland Empire is expected to grow by 20% in the next twenty years. (ABUNASSAR, 2023). Currently, the majority 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.

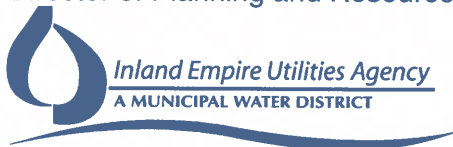
We believe that a comprehensive understanding and discussion among all stakeholders will ensure that the TBTs are not only ambitious but also achievable, reflecting the collective input and expertise of the Metropolitan's member agencies. This collaborative approach will lead to the establishment of 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"

6075 Kimball Ave / Chino, California 91708

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Michael Hurley

Director of Planning & Resources



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**From:** Office of the General Manager <OfficeoftheGeneralManager@mwdh2o.com>**Sent:** Monday, March 11, 2024 7:34 PM

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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. 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.

Thank you.

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From: [Kwan, Delon](#)
To: [Camp4Water](#); [Crosson, Elizabeth K](#)
Cc: [Ortega Jr., Adan](#); [Petersen, Matt](#); [Goldberg, S. Gail](#); [Hagekhalil, Adel](#); [Collins, Anselmo](#); [Pettijohn, David](#); [Tsui, Sabrina](#); tquinn.mwd@gmail.com; [Carl Douglas](#); [Matt Petersen](#); [Miguel Luna](#); [Virginia Wei](#); [Tracy Quinn](#); luis.i.gutierrez@lacity.org; rdouglas125@gmail.com
Subject: Subject: Comments on February 29 CAMP4W Subcommittee Report 3b
Date: Wednesday, March 13, 2024 6:10:45 PM

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

(213) 367-2166



 Please consider the environment before printing this email.

From: Office of the General Manager <OfficeoftheGeneralManager@mwdh2o.com>

Sent: Monday, March 11, 2024 7:34 PM

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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. 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.

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.
Assistant General Manager
Burbank Water & Power

Joe Mouwad, P.E.
General Manager
Eastern Municipal Water
District

Nina Jazmadarian
General Manager
Foothill Municipal Water District

Chisom Obegolu
Assistant General Manager of
Water Services
City of Glendale



Chris Garner
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Long Beach Utilities



Harvey De La Torre
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Stacie N. Takeguchi, P.E.
Assistant General Manager -
Water
City of Pasadena



Sunny Wang, P.E.
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Matthew H. Litchfield, P.E.
General Manager
Three Valleys Municipal Water
District



Tom A. Love
General Manager
Upper San Gabriel Valley
Municipal Water District



Craig Miller, P.E.
General Manager
Western Municipal Water
District

Table 1. Proposed CAMP4W Time-Bound Targets for Inclusion in Year One Report

	No.	Category	Near Term	Mid Term	Long Term
Resource-Based Targets* (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		
Policy-Based Targets	4	Imported Water Source Resilience	Invest in protecting source watersheds and existing infrastructure to reduce risks presented by accelerated climate change ¹ (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		

¹ 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

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 comments¹ 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.

¹ 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).

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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.² 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."³ 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.*⁴ 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.⁵ 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*

² 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.

³ 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.

⁴ 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).

⁵ "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).

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baseline trend to guide climate adaptation investments at the beginning of the process.⁶

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.⁷

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.

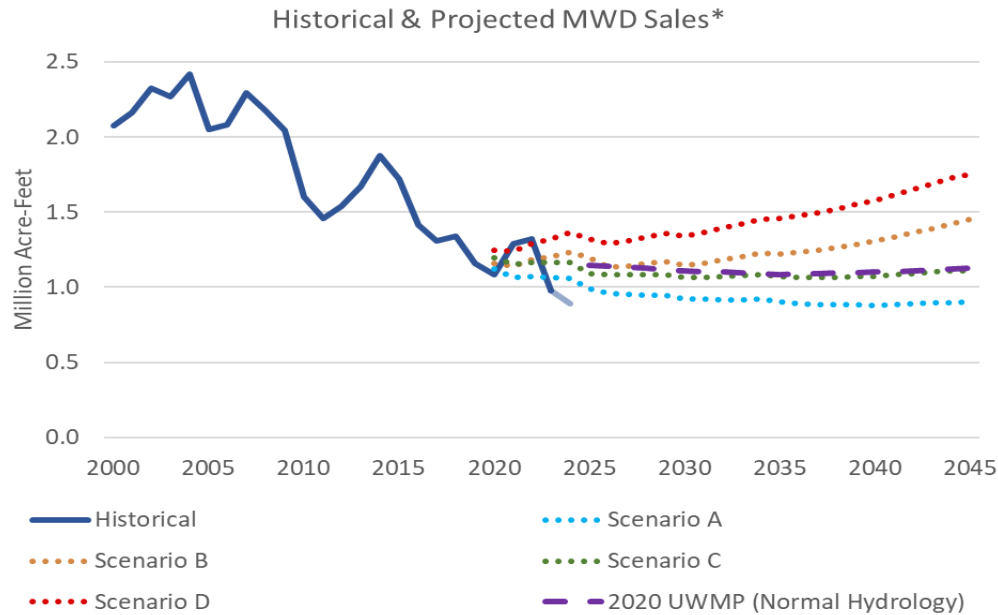
⁶ From the outset, a fundamental tenet of CAMP4W has also been the need for meaningful integration with the existing and planned projects of MWD member agencies in order to establish a baseline against which adaptive management may be applied. See, for example, Attachment 3, pg. 14 of 21 recommendation 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).

⁷ 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).

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*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,⁸ 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).⁹ 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.

⁸ 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.

⁹ 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).

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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."¹⁰ 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"¹¹ 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

¹⁰ 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).

¹¹ 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.

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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