

# Climate Adaptation Master Plan for Water (CAMP4W)

## WORKING MEMORANDUM #6

### TIME-BOUND TARGETS

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January 2024

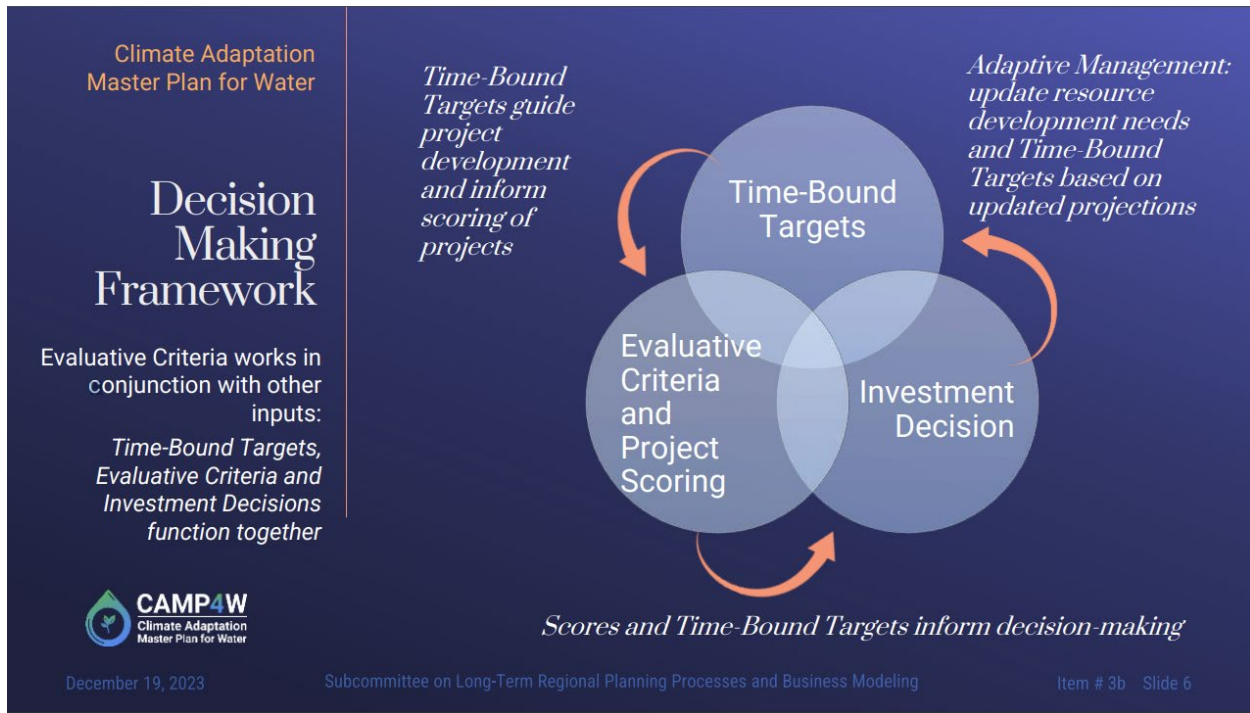
#### Section 1. Overview

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 or Master Plan). Specifically, the Master Plan will include (1) Climate and Growth Scenarios, (2) Time-Bound Targets, (3) 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.

To facilitate the development of the CAMP4W in a timely and transparent process, 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. The initial development tasks (discussed in this Working Memorandum and to be documented in the CAMP4W Year One Report) will continue through April 2024 and will include the Climate Decision-Making Framework. The development of the remaining Master Plan components will continue throughout 2024.

During the December 2023 and January 2024 Joint Task Force Meeting, 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 CAMP4W objectives. Targets are not intended to mandate action or evaluate compliance. Rather, Time-Bound Targets provide guidance and measurable goals that will be adaptable under changing needs and conditions. Task Force discussions related to targets focused on multiple categories of climate adaptation efforts, including core supply, conservation and efficiency, infrastructure, storage, flex supply, water quality, equity and affordability.

Time-Bound Targets, like the Evaluative Criteria, are important factors that inform Board decision-making, but do not replace the Board’s authority to direct Metropolitan’s investment decisions. **Figure 1** displays the interplay between the components of the Climate Decision-Making Framework.



**Figure 1. Climate Decision-Making Framework**

A complete Master Plan will be presented for Board consideration by the end of 2024. Using an adaptive management approach, it can be adjusted based on changing conditions and will further support Board decisions with information and reference points to evaluate the best 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 past 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. Additionally, the Board will establish the process for adapting and updating Time-Bound Targets as future conditions are evaluated over time.

## Section 2. 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.

## Section 3. Proposed Time-Bound Targets

CAMP4W will provide the Board with tools to assist it in making decisions that improve reliability and resilience under severe climate change. For consistency with the CAMP4W premise, 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.

Reliability under severe climate change impacts is highly sensitive to demands. Under IRP Needs Assessment Scenario C, the need for new Core Supply and Storage by 2045 would be an order of magnitude less than the needs of Scenario D. However, if demands turn out to be higher than Scenario C, then planning for a Scenario C low-demand future would result in more shortages. Overall demands by the end-users are impacted by several factors including the level of structural water use efficiency as well as weather, pricing, education and messaging, drought water use restrictions, population shifts, and economic factors. Moreover, wholesale demands on Metropolitan by its Member Agencies are also a function of local supply production which can vary significantly from year to year, and which are also sensitive to weather, operational and regulatory conditions.

Because of the uncertainty in actual resource needs by 2045 in the face of climate change and other factors, and because many potentially promising projects have yet to be identified, scoped, and/or evaluated, the CAMP4W framework takes a proactive approach to identify and evaluate options and project opportunities. Uncertainty also merits using an adaptive management approach to inform the Board in its decisions to implement and/or adjust as conditions and supply-demand projections continue to evolve. Time-Bound Targets set now, for example, could be adjusted through CAMP4W's adaptive management approach as conditions change.

Targets listed in Table 1 incorporate comments received during and following the Task Force meetings. These represent an initial list of proposed categories, metrics, and dates for inclusion in the Year One Report. These initial targets focus on resource-based categories from the 2020 IRP Needs Assessments as well as policy-based targets that help fulfill resource needs and that reflect priorities identified in the CAMP4W process. As further discussed below, it is anticipated that any initial targets established would be regularly revisited and could be adjusted or augmented with additional targets in the future.

The following summarizes the ten categories of Time-Bound Targets identified in Table 1:

- **Core Supply:** Resource management actions that augment supply or reduce Metropolitan demand and remain available each year. Structural conservation efforts that reduce Metropolitan's demands are therefore considered a Core Supply.
- **Storage:** Volume of water that is retained during periods of excess supply for later use when demands exceed supply availability.
- **Flex Supply (dry year equivalent):** Resource management actions implemented as needed (not annually, which would be a Core Supply), including savings from deliberate efforts to change water use behavior (e.g. water transfers, fallowing programs).
- **Assist in Maintaining Existing and Under Construction Local Agency Supply:** Support for Member Agencies in maintaining the amount of local supply that was assumed during the development of the IRP Needs Assessment, which if lost would increase the demand on Metropolitan supply.

- Equitable Supply Reliability: Refers to the need for measures to address an inequity in supply reliability to one or more Member Agencies.
- Regional Water Use Efficiency: Refers to regional measures and actions Metropolitan can take to assist Member Agencies in achieving water use efficiency standards set by the state.
- Water Use Efficiency: Support for structural conservation measures that reduce demand and therefore offset additional Core Supply development needs.
- Average Regional Gallons Per Capita Per Day (GPCD): Reduction in water use per capita per day by a given percentage from a baseline year, 2022 (159 GPCD).
- Greenhouse Gas Reduction: Reduction in emissions of greenhouse gas by Metropolitan.
- Flexible Water Supply Management: Refers to programs and measures Metropolitan can implement to manage additional wet year surplus supply beyond Metropolitan's Regional Storage Portfolio and WSDM actions.

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

	No.	Category	Near Term	Mid Term	Long Term
<b>Resource-Based Targets*</b> (numbers reflect additional supplies unless indicated otherwise)  *based on Scenario D (can be adapted over time)	1	Core Supply	N/A	Identify 300 TAF for potential implementation by 2035.  Alternatively, 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 650 TAF for potential implementation by 2045.  Alternatively, 250 TAF of new storage will reduce core supply need to 550 TAF or, 500 TAF of new storage will reduce core supply need to 500 TAF
	2	Storage	N/A	Identify up to 500 TAF for potential implementation by 2035	
	3	Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY		
<b>Policy-Based Targets</b>	4	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)
	5	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
	6	Regional Water Use Efficiency	Assist Retail Agencies to achieve, or exceed, compliance with SWRCB Water Use Efficiency Standards		
	7	Water Use Efficiency (used to offset need for additional Core Supply)	Implement structural conservation program to achieve 300 TAFY of reduced water use from 2024 baseline by 2045		
	8	Average Regional Gallons Per Capita Per Day (GPCD)	143 GPCD by 2026 (10% reduction from 2022 regional average GPCD)	127 GPCD by 2035 (20% reduction from 2022 regional average GPCD)	TBD (TBD% reduction from 2022 regional average potable GPCD)
	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		

## **Section 4. Additional Time-Bound Targets for Future Consideration**

Table 1 includes an initial list of Time-Bound Targets for inclusion in the Year One Report. The Task Force will have the opportunity to consider additional targets for inclusion in the Master Plan. Specifically, staff will continue to develop Time-Bound Targets for Task Force consideration including, but not limited to, the following categories:

- **Community Equity:** focus on investing in underserved communities, affordability measures and providing meaningful community engagement.
- **New Local Supply:** focus on targets around local and member agency supply and/or program development.
- **Water Quality:** focus on ensuring research, innovation, and progress in addressing emerging contaminants of concern and new regulatory requirements.
- **Infrastructure Resilience:** focus on investments necessary to meet growing climate -driven vulnerabilities during and after disruptions.
- **Imported Water Source Resilience:** focus on investment in protecting source watersheds and existing infrastructure to reduce risks presented by accelerated climate change.
- **Ecosystem Health:** focus on measurable improvements to natural systems that provide value, resilience and regulatory benefits to water supplies.

The above categories of Time-Bound Targets, and others identified through the process, can be included in the final Master Plan.