Subcommittee on Long-Term Regional Planning Processes and Business Modeling

Climate Decision-Making Framework: Evaluative Criteria and Time-Bound Targets

Item 3c

January 18, 2024

Item 3b

Climate Decision-Making Framework: Evaluative Criteria and Time-Bound Targets

Subject

Review Draft Time-Bound Targets and Decision-Making Framework

Purpose

The CAMP4W process will establish a methodology for evaluating options through a Climate Decision-Making Framework and will provide a roadmap for identifying solutions to mitigating the identified risks. It will be a living document that will be updated to identify changing conditions and to report those changes to the Board.

This Committee Item focuses on the development and use of Time-Bound Targets and provides an overview of how they integrate into the CAMP4W process.

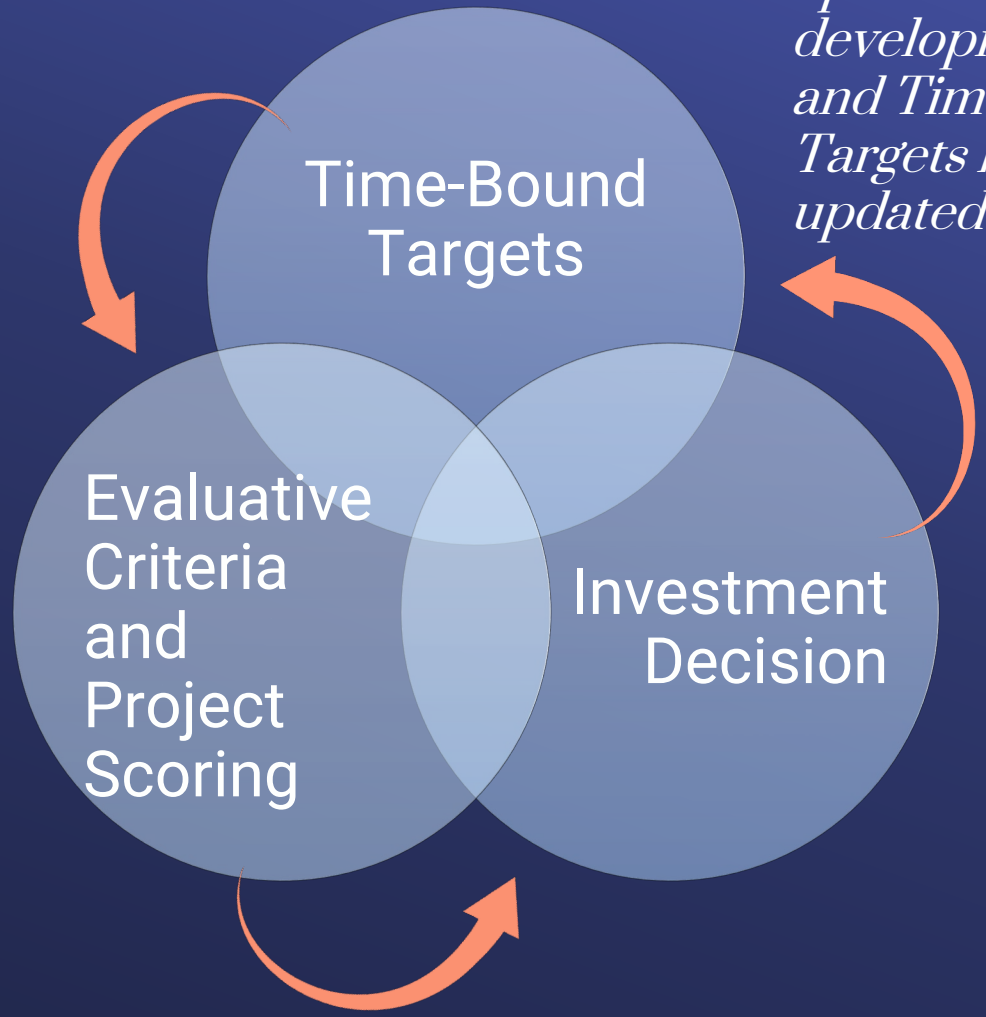
Climate Adaptation Master Plan for Water

Climate Decision Making Framework

Integrated Elements:

Time-Bound Targets, Evaluative Criteria and Investment Decisions function together

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



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

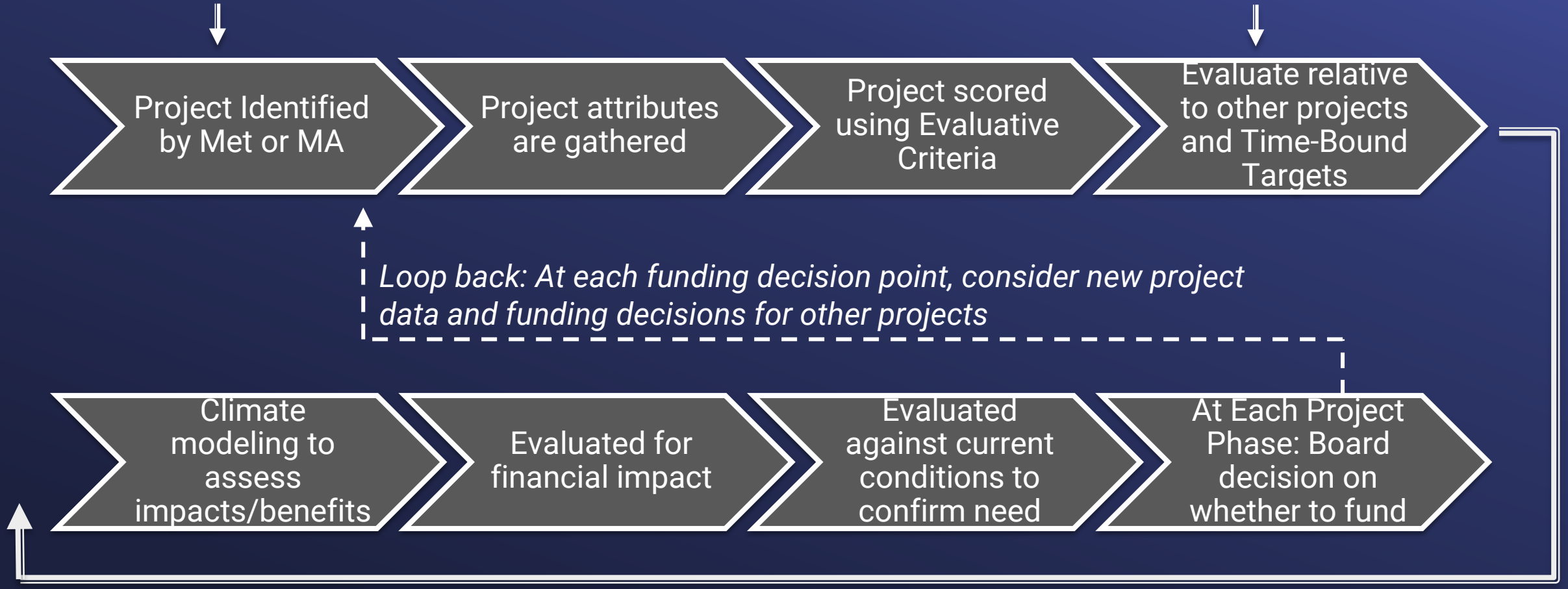
Scores and Time-Bound Targets inform decision-making

CAMP4W
Climate Adaptation Master Plan for Water

Role of Time-Bound Targets in the Climate Decision-Making Framework

Identify projects/ programs that address Time-Bound Targets

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



Time-Bound Targets
Examples from Other Agencies and Organizations

Governor Gavin Newsom's

California Water Supply Strategy

Adapting to a Hotter, Drier Future - August 2022

Statewide Targets	2030		2040	
Increase Recycled Water	.8 MAF	About 5 MAF	1.8 MAF	About 7 MAF
Increase Desal Production	28,000 AF		84,000 AF	
Increase Stormwater Capture	.25 MAF		.5 MAF	
Increase Conservation	.5 MAF		.5 MAF	
Subtotal of Recycled, Desal, Stormwater and Conservation	1.6 MAF		2.9 MAF	
Storage Above and Below Ground	3.7 MAF		4 MAF	
Total	4.8 MAF		6.9 MAF	

Los Angeles County Water Plan - 2023
2045 Targets

Regional Water Supply Reliability

- Achieve 100% compliance with State Urban Water Use Objectives
- Increase local supply sources by 580,000 AFY
- Meet 100% of water demands even in times of drought
- Maximize ability to meet health and safety needs following an emergency by maintaining access to six months of emergency supply

Small, At-Risk System Resilience & Drinking Water Equity

- Reduce at-risk systems by 100%
- Reduce color, taste, and odor drinking water quality issues by 50%
- 100% of agencies, including in severely disadvantaged communities, have affordable water to meet health and safety needs
- 100% of small community water systems have access to alternative sources of supply

Watershed Sediment Management

- Reduce fire-contributing species in riparian areas by 2,900 acres
- Reduce human-caused ignitions by 50%
- Maintain a minimum of 75% average available capacity in debris basins and 80% average capacity in reservoirs
- Confirm 100% of water management agencies within the wildland-urban interface are implementing a wildfire resilience or mitigation plan

Groundwater Management & Quality

- Optimize production of GW by maintaining at least 700K AFY baseline production
- Optimize production of GW by increasing in areas overlying impaired GW by 18K AFY
- Increase GW recharge and storage by enhancing regional facility recharge by 250K AFY
- Increase GW recharge and storage by increasing decentralized infiltration by 80K AFY

SFPUC / City of San Francisco	2045 Target	Additional Metrics
Local Groundwater	4 MGD	
Local Recycled Water	2.5 MGD	
Onsite non-potable water reuse	1.5 MGD	
Conservation	4.2 MGD	
Affordability		Typical Household (40th Percentile Income) Less than 3% of income Low Income Household (20th Percentile) Less than 7% of income at approved rates Less than 5% of income if in bill discount program
Equity / Conservation		% of low-income/EJ demographics reached through targeted conservation messaging and enrolled in programs
Equity / Water Supply Innovation		# of innovative projects conducted in communities with environmental justice burden
Greenhouse Gas Emissions Reduction	Net zero emissions by reducing emissions at least 90% compared to 1990 levels/sequester residuals by nature-based solutions (2040)	** Climate Targets from 2020, Water Supply and Affordability from 2023*

Key Findings for South Coast Region

Untapped Potential of California's Urban Water Supply Report

Pacific Institute
April 2022

- Southern California has made laudable progress in recent years to reduce water use and augment local supplies, but more is needed in the face of climate change.
- Proven water efficiency technologies and practices could reduce urban water use in the South Coast by **1.1 million to 1.7 million AFY**.
- Reuse of municipal wastewater could boost local water supplies in the South Coast by up to **1.1 million AFY**, tripling current reuse levels.
- Urban stormwater capture in areas overlying public supply aquifers could boost local water supplies in the South Coast by **260,000 AF in a dry year to 1.4 million AF in a wet year**.
- These strategies are proven – and can **improve water reliability and provide other co-benefits**, including meeting energy and GHG reduction goals.

Time-Bound Targets
Draft Metropolitan CAMP4W Targets

Time-Bound Targets: Resource-Based Targets

DRAFT

#	Category	Near-Term	Mid-Term	Long-Term
1	Core Supply	N/A	Identify 15-300 TAF for potential implementation by 2035. Upper range can be reduced as follows: - 250 TAF of new storage will reduce core supply need to 200 TAF	Identify 50-650 TAF for potential implementation by 2045. Upper range can be reduced as follows: - 250 TAF of new storage will reduce core supply need to 550 TAF - 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	Maintain Existing and Under Construction Local Agency Supply	2.09 to 2.32 MAF by 2030 (under average year conditions)	2.12 to 2.37 MAF by 2035 (under average year conditions)	2.14 to 2.40 MAF by 2045 (under average year conditions)

Time-Bound Targets: Resource-Based Targets, Cont.

DRAFT

#	Category	Near-Term	Mid-Term	Long-Term
4	Flex Supply (Dry Year Equivalent)	Acquire capability for up to 100 TAFY	Acquire capability for up to 100 TAFY by 2035	Acquire capability for up to 100 TAFY by 2045
5	Water Quality	Prepare for future regulations to meet or surpass all drinking water standards	Identify projects and programs to ensure continued compliance to meet or surpass all drinking water standards	Update compliance program as required to meet or surpass all drinking water standards
6	Water Quality	Update Nitrification Control Plan and identify system nitrification solutions	Implement initial system nitrification solutions	Prepare Nitrification Control Plan for submission to regulators and implement additional system nitrification solutions as needed
7	Water Quality	Study solutions for treatment plants to improve performance under low flows and with varying source water quality	Identify projects to improve treatment plant performance	Implement projects to improve treatment plant performance

Time-Bound Targets: Policy-Based Targets

DRAFT

#	Category	Near-Term	Mid-Term	Long-Term
8	Local Agency New Supply	TBD	TBD	TBD
9	Equitable Supply Reliability	Add 160 CFS capacity to the SWPDA by 2026	Identify additional 130 CFS capacity to SWPDA by 2032	Identify capacity, conveyance, supply and programs for SWPDA by 2045
10	Water Use Efficiency Regionwide	100% compliance with State Water Board Water Use Efficiency Standards	100% compliance with State Water Board Water Use Efficiency Standards	100% compliance with State Water Board Water Use Efficiency Standards
11	Landscape specific efficiency		Meet MWELO standards region-wide by 2035 (.55 ETAF)	
12	Average Regional Potable Gallons Per Capita Per Day (GPCD)	115 GPCD by 2026	101 GPCD by 2035	TBD

Time-Bound Targets: Policy-Based Targets, Cont. DRAFT

#	Category	Near-Term	Mid-Term	Long-Term
13	Non-Functional Turf (NFT) Replacement		30% reduction in NFT by 2035	
14	Annual Investment in Conservation and Water Use Efficiency Rebates, Incentive and Innovation Programs	$50 M	TBD	TBD
15	Greenhouse Gas Reduction		40% below 1990 emissions by 2030	Carbon neutral by 2045
16	Imported Water Resilience	Annually invest in levee protection, water quality improvements, and other risk reduction measures in the Delta to protect through-Delta water supply		

Time-Bound Targets: Policy-Based Targets, Cont. DRAFT

#	Category	Near-Term	Mid-Term	Long-Term
17	Community Equity	Mitigate project impacts in underserved communities through community investment programs based on initial target % of total project cost to support workforce and business development; educational and conservation programs; and/or environmental health investments.	Mitigate project impacts in underserved communities through community investment programs based on adjusted target % of total project cost. Target percentage to be determined through evaluation of impact from community investment programs conducted to date	Mitigate project impacts in underserved communities through community investment programs based on adjusted target % of total project cost. Target percentage to be determined through evaluation of impact from community investment programs conducted to date
18	Water Conveyance and Distribution System Resilience Investment	Prioritize resilience investments and resources to rehabilitate and replace aging infrastructure		
19	Water Conveyance and Distribution System Resilience Investments	Prioritize resilience investments for reliability during and after major disruptions		

For Discussion Today

What additional targets should staff develop and propose?

Potential Additional Time-Bound Targets

- Core Supply/Storage Categories
  - Stormwater Capture
  - Water Reuse
  - Groundwater Recharge and Storage
  - Brackish/Ocean Desalination
- Affordability
- Others?

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Initial Set of Time-Bound Targets

- Suggested Targets for April 2024 Year One Report
  - Core Supply
  - Storage
  - Flex
  - Equitable Supply Reliability
  - Conservation and Efficiency
  - Community Equity

- Other Targets require further development for inclusion in Draft Master Plan in Nov/Dec 2024

For Discussion Today

Which targets should be further developed for inclusion in the CAMP4W Year One Report?

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Evaluative Criteria Scoring Options

DRAFT

Evaluative Criteria	Scoring Metric 1	Scoring Metric 2	Scoring Metric 3	Scoring Metric 4
Reliability (20 points)	Advances Equitable Supply Reliability	Consistency of Water Source in various hydrological conditions		
EXAMPLE:	12	8		
Resilience (20 points)	Increases Existing Infrastructure / Water Source Resilience	Project's Ability to Withstand Climate Impacts	Addresses an Identified Climate Vulnerability	
Financial Sustainability and Affordability (15 points)	Financial Leverage	Unit Cost	Average Annual Rate Impact	
Adaptability and Flexibility (15 points)	Increases flexibility of existing assets	Operational ease and complexity of implementation	Scalability	
Equity (15 points)	Benefit Programs for Underserved Communities	Scale of Community Engagement	Public Health Benefits	Workforce Development
Environmental Co-Benefits (15 points)	Greenhouse Gas Emissions Benefits	Ecosystem Services	Habitat/Wildlife Benefits	


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928