2014-2016 CCMP REVISION

CCMP Revision
WATER Subcommittee Meeting #2
December 12, 2014

MEETING PACKET

Water Subcommittee Members,

Enclosed are the following meeting materials for your review to prepare for the second meeting of the Water Subcommittee:

1. **Draft Water Objectives.** The draft objectives were prepared by SFEP staff for your use as a starting point for discussion. Please note that under each draft objective are examples of possible action topics that might fall under that objective. The examples are included for illustrative purposes only, in an effort to help explain the types of actions that may fall under a particular objective. Our discussion at the meeting will focus on the objective level.
2. **Appendix A.** A description of the process SFEP staff undertook to develop the draft objectives.
3. **Appendix B.** The objectives and actions prioritization process approved by the Steering Committee and the SFEP Implementation Committee.

To help structure our initial high level discussion on objectives, please focus on whether the draft objectives accomplish the following:

- Support the Water Topic Area working goal (Appendix A)
- Reflect/support the sources (Appendix A)
- Increase the resilience of the Estuary in the face of the anticipated impacts as the result of climate change and population growth
- Meet the prioritization criteria (Appendix B)
- Support potential actions that you consider are the “game changers”
- Support potential actions that you feel should be the priorities for the next five years

CCMP Revision
DRAFT WATER OBJECTIVES
DRAFT 12/12/14

The following are draft objectives, as a starting point for discussion by the Water Subcommittee. Under each draft objective are examples of possible action topics. The examples are included for illustrative purposes only, in an effort to help explain the types of actions that may fall under a particular objective.

DRAFT OBJECTIVES

1. **Improve estuarine functionality** to mitigate anticipated impacts to water quality as the result of climate change and population growth.

   HOW (EXAMPLES of possible action topics for illustrative purposes)

   - Protect and improve watershed health and function
   - Sufficient estuary inflow and outflow
   - Improve management of sediment regime

2. **Prevent, reduce, and control pollution** entering the Bay-Delta system to mitigate anticipated impacts to water quality as the result of climate change and population growth.

   HOW (EXAMPLES of possible action topics for illustrative purposes)

   - Address CECs through source control
   - Control agricultural runoff through tailwater treatment and return systems
   - Address stormwater pollution

3. **Improve management of water demand** to reduce reliance on the Delta as mandated by state policy, to mitigate anticipated reductions to freshwater availability as the result of climate change and population growth.

   HOW (EXAMPLES of possible action topics for illustrative purposes)

   - Adopt ordinances and code changes that encourage use of recycled water
   - Research new methods of agricultural water conservation
   - Maximize conjunctive use of water through groundwater recharge
   - Encourage the use of voluntary water transfers
   - Explore desalination to improve water supplies

4. **Implement and enforce existing laws** to ensure reliable water supply and sustainable freshwater flows for the estuarine ecosystem in the face of climate change and population growth.

   HOW (EXAMPLES of possible action topics for illustrative purposes)

   - Refine and resolve conflicts in measurements of flows into and out of the Delta
   - Clearly define and prohibit wasteful and unreasonable use of water
   - Implement new groundwater legislation

5. **Re-align our California water ethic** to assist in producing a more resilient estuary and water supply in the face of the stressors of climate change and population growth.

   HOW (EXAMPLES of possible action topics for illustrative purposes)

   - Adoption of conservation-based water and wastewater rates by water agencies
   - Clean up contaminated groundwater basins
   - Demonstration of BMPs for efficient use of water by all state agencies

APPENDIX A
2014-16 CCMP REVISION:
BACKGROUND ON PROCESS FOR DEVELOPING DRAFT WATER OBJECTIVES

Background

The Water Subcommittee met for the first time on September 19, 2014. At that meeting, the Subcommittee brainstormed on water in the San Francisco Bay-Delta Estuary, both in terms of current stressors and future desired conditions.

The straw goal statements were formed by distilling the existing 2007 CCMP goal statements on Pollution Prevention and Water Use. The Water Subcommittee and SFEP staff found these initial proposals to be uninspiring. After some discussion about adding ground water and the tributaries into the goal, and the recognition that recent actions will force changes in groundwater, water rights and instream flow management, the group decided to come back to the goals after gaining a better sense of what objectives the group wants to promote through the CCMP. The current placeholder goals are:

> ***Improve the water quality of the San Francisco Bay Delta Estuary***
>
> ***Increase freshwater availability to the San Francisco Bay Delta Estuary***

The next two meetings of the Water Subcommittee will be focused on drafting objectives for the revised CCMP.

Process for Developing Draft Objectives

To prepare for the second meeting of the Water Subcommittee, SFEP staff drew from a variety of sources to craft a set of draft objectives for discussion by the Subcommittee.

The *primary sources* were:

1. The 2007 CCMP objectives
2. The results of the brainstorm from the initial Water Subcommittee meeting
3. The benchmarks of health described in the 2011 State of the Bay Report

In addition, SFEP reviewed many additional key regional policy or management documents and pulled materials from those that were particularly relevant for the objectives discussion as *secondary sources.*

Finally, SFEP staff and the Subcommittee members recognize that climate change and population growth are key drivers of change for the San Francisco Bay Delta. With the 2016 CCMP, the agencies and organizations of the San Francisco Estuary Partnership are striving to prepare a guide for Estuary managers that will be of great practical benefit in responding to these unprecedented new challenges as we take a longer-term view of these changing environmental conditions which will become more severe as decades unfold.

Population growth in the Bay Area may result in increased competition for available water supply and impacts to water quality through increased stormwater runoff and higher loads of critical pollutants. Climate change may impact water quality and quantity through rising sea level, reduced sediment availability, more frequent and extreme storm events, and reduced snowpack coupled with longer drought conditions. These changing factors could result in reduced Delta freshwater outflows, greater salinity intrusion, threats to water supply and delivery, higher flood risks, increased delivery of pesticides, fertilizers, oils, and garbage from surrounding lands, and increased releases of raw sewage into the estuary from failing infrastructure.

Given the anticipated impacts to water quality and availability as the result of climate change and population growth, the following objectives are aimed at increasing the resiliency of the estuary in the face of these changes.

The following figure (Figure 1) shows the process for developing draft objectives to bring to the Subcommittee for consideration and discussion.

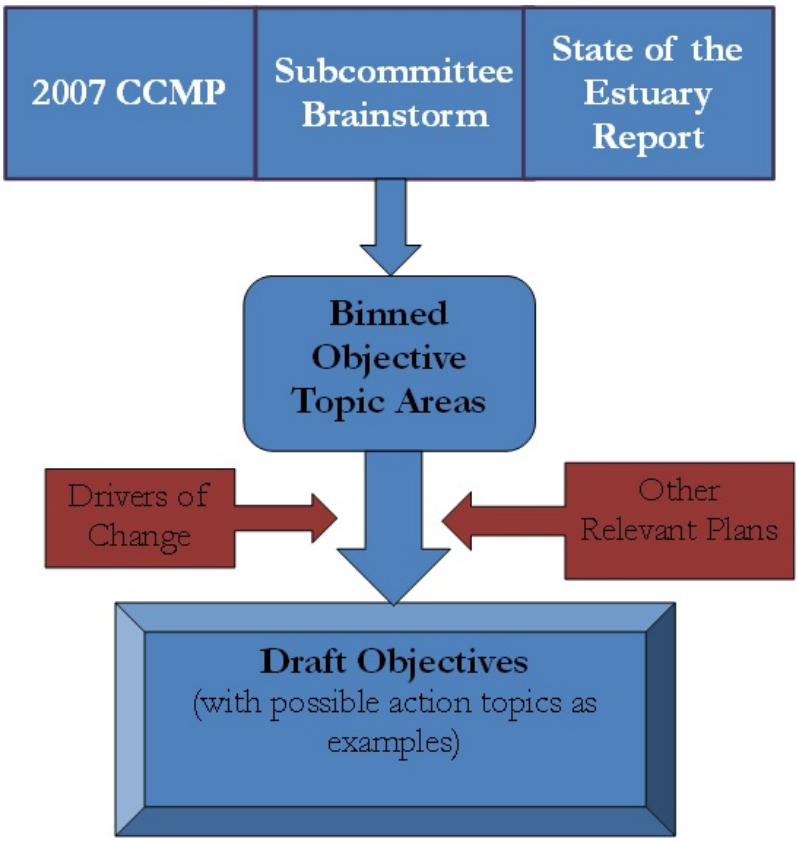

Figure1. Process for Developing Draft CCMP Objectives

Content from the various sources was collected and sorted by common topic area (Table A). Potential objectives were drafted based on the binned content, in direct response to the key drivers of change.

Table A. Sources for Draft Water Objectives

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
PRIMARY SOURCES					
2007 CCMP OBJECTIVES	• Improve water quality through restoration and enhancement of tidal wetland functions in the Estuary and riparian and floodplain wetland functions in the watersheds.[PO4] • Determine the behavior and fate of sediments in the Estuary and adopt policies to manage their modifications. [DW1] • Identify threats to and benefits for Estuary resources from future modifications to waterways. [DW5]	• Reduce pollutants entering into the estuary by establishing a pollution prevention program. [PO1] • Improve regulatory systems for point and nonpoint source pollution control.[PO2] • Remediate pollution threats to public health and wildlife in the Estuary [PO3]	• Develop recycled water and the needed facilities to reuse water. [WU1] • Develop water conservation methods and facilities to increase the availability of freshwater for instream uses and water supply. [WU2] • Promote integrated regional water management and development of diversified portfolios of water management strategies to ensure better water quality, and to foster environmental restoration and stewardship, efficient urban development, protection of agriculture, sustainable water uses, reliable water supplies, and a strong economy. [WU4] • Coordinate and improve integrated and regional management for land use,		• Improve the legal and regulatory mechanisms to facilitate the voluntary transfer of water in order to increase the availability of freshwater for instream uses and water supply. [WU3]

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
PRIMARY SOURCES					
			water supply and recycled water, stormwater management and flood protection, habitat and watershed protection, transportation, housing, and physical infrastructure, to both protect the Estuary and its watersheds and provide for a sustainable economy. [LU2]		
WATER SUBCOMMITTEE BRAINSTORM – IDEAL VISION	• Actions that appropriately support human and environmental needs • Support human uses in the bay, delta, tribs, support fish/aq life (beneficial) uses in all three, support wildlife uses in all three. Defining tribs as those that drain directly to the SF Bay or Delta, not those to the Sac/SJ rivers. • Fishable/swimmable ["but CWA needs to be revised"]	• Actions that appropriately support human and environmental needs • Support human uses in the bay, delta, tribs, support fish/aq life (beneficial) uses in all three, support wildlife uses in all three. Defining tribs as those that drain directly to the SF Bay or Delta, not those to the Sac/SJ rivers. • Fishable/swimmable ["but CWA needs to be revised"]	• Actions that appropriately support human and environmental needs • Support human uses in the bay, delta, tribs, support fish/aq life (beneficial) uses in all three, support wildlife uses in all three. Defining tribs as those that drain directly to the SF Bay or Delta, not those to the Sac/SJ rivers. • Fishable/swimmable ["but CWA needs to be revised"] • Improved outflow regime	• Actions that appropriately support human and environmental needs • Support human uses in the bay, delta, tribs, support fish/aq life (beneficial) uses in all three, support wildlife uses in all three. Defining tribs as those that drain directly to the SF Bay or Delta, not those to the Sac/SJ rivers. • Fishable/swimmable ["but CWA needs to be revised"]	• Actions that appropriately support human and environmental needs • Support human uses in the bay, delta, tribs, support fish/aq life (beneficial) uses in all three, support wildlife uses in all three. Defining tribs as those that drain directly to the SF Bay or Delta, not those to the Sac/SJ rivers. • Fishable/swimmable ["but CWA needs to be revised"]

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
PRIMARY SOURCES					
	• Tribs to bay : protect and improve watershed health and function (IRWMP lang) • Diversity of fish and wildlife found in the bay	• CECs are addressed through source control • Ag controls runoff through recycling • Diversity of fish and wildlife found in the bay • Take down the fish advisory signs	• Ag controls runoff through recycling • More natural hydrological budget improvements • Diversity of fish and wildlife found in the bay • Sufficient estuary inflow and outflow, appropriate timing to support resilient natural communities, let watershed be clean, secure water supply for beneficial uses	• MC: water rights allocations reflect triple bottom line • Diversity of fish and wildlife found in the bay	• If the bay shows signs of drought, it would be because of climate change variability, not because of water deliveries. • Effective adaptation to sea level rise • Diversity of fish and wildlife found in the bay
2011 STATE OF THE ESTUARY REPORT BENCHMARKS	• State Water Board's determination of the need for 75% unimpaired runoff • 124 gallons per day per person by 2020 [stewardship]	• Standards set of CA for concentrations of chemical pollutants in water, methylmercury concentrations in the food web, and the toxicity of Bay waters and sediments in lab tests. (Safe for aquatic life) • Guidelines set by OEHHA to protect public health (fish contamination – safe to eat)	• State Water Board's determination of the need for 75% unimpaired runoff • 124 gallons per day per person by 2020 [stewardship]		

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
SECONDARY SOURCES					
CALIFORNIA WATER ACTION PLAN 2014	• Action 3: Achieve the Co-Equal Goals for the Delta • Action 4: Protect and Restore Important Ecosystems		• Action 1: Make Conservation a California Way of Life • Action 2: Increase Regional Self-Reliance and Integrated Water Management across All Levels of Government • Action 3: Achieve the Co-Equal Goals for the Delta • Action 6: Expand Water Storage Capacity and Improve Groundwater Management	• Action 9: Increase Operational and Regulatory Efficiency	• Action 5: Manage and Prepare for Dry Periods
WATER QUALITY CHALLENGES IN THE SAN FRANCISCO BAY/ SACRAMENTO-SAN JOAQUIN DELTA ESTUARY: EPA'S ACTION PLAN	• Restore Aquatic Habitats While Managing Methylmercury: EPA will advance both the restoration of aquatic habitats and the implementation of the Delta methylmercury (MeHg) TMDL. EPA will fund research by USGS to study whether treatment technology used for carbon capture in the	• Regional Water Quality Monitoring and Assessment Programs: EPA supports the establishment of Regional Water Quality Monitoring and Assessment Programs in the Central Valley. • Total Maximum Daily Load Implementation: EPA will work with the Water Boards to accelerate Bay	• Bay Delta Conservation Plan: EPA is supporting development of the Bay Delta Conservation Plan (BDCP) as one of the means of meeting the co-equal goals established by the California legislature – a more reliable water supply and a restored Delta ecosystem.	• Estuarine Habitat Water Quality Standards: The State Water Board should expeditiously review, modify, and implement estuarine habitat standards in the Bay Delta Water Quality Control Plan to more fully protect aquatic species.	• Bay Delta Conservation Plan: EPA is supporting development of the Bay Delta Conservation Plan (BDCP) as one of the means of meeting the co-equal goals established by the California legislature – a more reliable water supply and a restored Delta ecosystem.

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
SECONDARY SOURCES					
	Delta can also be used to sequester MeHg in accreting wetlands. EPA will also collaborate on proposed restoration projects to ensure MeHg is effectively managed. • Bay Delta Conservation Plan: EPA is supporting development of the Bay Delta Conservation Plan (BDCP) as one of the means of meeting the co-equal goals established by the California legislature – a more reliable water supply and a restored Delta ecosystem.	Delta Estuary water quality restoration through strengthening the implementation of Total Maximum Daily Loads (TMDLs). • Selenium Water Quality Standards: By December 2012, EPA will draft new site-specific numeric selenium criteria to protect aquatic and terrestrial species dependent on the aquatic habitats of the Bay Delta Estuary. • Pesticide Pollution Prevention: EPA will help ensure that federal regulation of pesticides under FIFRA more fully considers effects on aquatic life. EPA will also work with our partners to minimize pesticide pollution in urban runoff.			
CONSERVATION STRATEGY FOR RESTORATION OF THE SACRAMENTO-			• Goal 6, Conservation Priority 1: Reduce the loadings and concentrations of toxic contaminants in the	• Goal 6, Conservation Priority 3: Improve coordination with the Water Boards, IEP and other entities on	

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
SECONDARY SOURCES					
SAN JOAQUIN DELTA, SACRAMENTO VALLEY AND SAN JOAQUIN VALLEY REGIONS			environment to levels that do not adversely affect organisms, wildlife, and human health. • Goal 6, Conservation Priority 2: Reduce loadings of oxygen-depleting substances from human activities into aquatic ecosystems to levels that do not cause adverse ecological effects.	evaluating ecological effects from water and sediment quality stressors and methods to reduce these stressors. • Goal 6, Conservation Priority 4: Work with the Water Boards and other entities to participate in a long-term integrated monitoring program that evaluates water and sediment quality stressors and ecological impacts to wildlife	
THE DELTA PLAN	• WQ R2 – Identify Covered Action Impacts • WQ R8 – Completion of Regulatory Processes, Research, and Monitoring for Water Quality Improvement • RR P4 – Floodplain Protection • RR R7 – Designate Additional Floodways	• WQ R2 – Identify Covered Action Impacts • WQ R8 – Completion of Regulatory Processes, Research, and Monitoring for Water Quality Improvement	• WR P1 – Reduce Reliance on the Delta through Improved Regional Water Self-Reliance • WR R6 – Update Water Efficiency Goals • WR R11 – Recover and Manage Critically Overdrafted Groundwater Basins • WR R15 – Improve Water Transfer Procedures	• WR R1 – Implement Water Efficiency and Water Management Planning Laws • WR R2 – Require SWP Contractors to Implement Water Efficiency and Water Management Laws • WR R3 – Compliance with Reasonable and Beneficial Use • WR R16 – Supplemental Water Use Reporting	• FF R3 – Identify Funding Gaps – *this really doesn't belong here but where should it go?*

SOURCE	OBJECTIVES				
	Improve Estuarine Functionality	**Prevent, Reduce, and Control Pollution**	**Improve Management of Water Demand**	**Implement and Enforce Existing Laws**	**Realign Water Ethic**
SECONDARY SOURCES					
			• WQ R10 – Evaluate Wastewater Recycling, Reuse, or Treatment	• ER P1 – Delta Flow Objectives • ER R1 – Update Delta Flow Objectives • WQ R1 – Protect Beneficial Uses	
BAYLANDS ECOSYSTEM HABITAT GOALS SCIENCE UPDATE 2014	1. Restore estuary-watershed connections that nourish the Baylands with sediment and freshwater: 1.D. Consider opportunities for taking advantage of treated wastewater and stormwater to create salinity gradients and maximize peat accumulation in the Baylands, while protecting water quality and minimizing nutrient loading.				

APPENDIX B

CCMP 2016 Revision

CRITERIA FOR SETTING OBJECTIVES/ACTIONS

Background

A primary goal for the revised CCMP is to be strategic and focused. While the goals will be centered on where the Estuary should be in 2050, the actions should be measurable against objectives and achievable within five years. To assist with the process of considering possible objectives and actions, the IC CCMP Revision Steering Committee agreed to use a prioritization process with specific criteria and a framework for how to use the criteria.

Criteria

The following are the agreed upon criteria for prioritizing objectives and actions:

- **Makes progress towards goal(s)**
- **Measurable results within a 5 year timeframe**
- High probability of success/high level of feasibility
- High level of expected benefit
- High level of importance/urgency
- Strengthens Partnerships/Promotes Leveraging
- Related to other actions/interdependency
- Linked to federal/state/local funding priorities
- Considers climate change

Framework for Applying Criteria

A potential objective or action does not need to meet *all* the criteria above to be considered for inclusion in the CCMP, but must meet the *majority*.

However, the following criteria are considered *mandatory* and must be met by all objectives and actions*:*

- Makes progress towards goal(s)
- Measurable results within a 5 year time frame

Every potential objective or action should be assessed by evaluating each of the criteria as they apply to that objective or action as High (3), Medium (2), Low (1), or none (0). Relative scoring of the objectives and actions will be used to prioritize inclusion in the 2016 CCMP.