

July 16th Meeting

California Water Commission

Issue Working Session – Measurable Improvement to the Delta ecosystem or to the tributaries to the Delta

Objective

Inform the Commission on how the Water Storage Investment Program (WSIP) will incorporate the Commission’s determination of measurable ecosystem improvements to Delta or Delta tributaries.

Introduction

Among the requirements for the WSIP, Chapter 8 of the Water Quality Supply, and Infrastructure Improvement Act of 2014 (Proposition 1), states that a project shall not be funded from the WSIP unless *“...it provides measurable improvements to the Delta ecosystem or to the tributaries to the Delta.”* (Water Code Section 79752)

WSIP applicants will be required to document methods for evaluation/verification of project claims and provide the means to assure identified benefits will be provided post-construction. Such information will be used by the Commission to make the required determination regarding whether individual projects provide measurable improvements to the Delta or the tributaries ecosystem.

Basic Provisions/Approach

Statutory Component Interpretation

In order to be **“measurable”** the claimed ecosystem improvement must have some physical, chemical, or biological parameter(s) that can be quantified at a specific location and time and used to verify the claim.

“Delta ecosystem or tributaries to the Delta” means ecosystems located in the Delta and tributaries to the Delta as defined in the WSIP (See prior issue paper on this topic).

“Improvements to ecosystems” are those improvements to protect, restore, or enhance the ecosystem. Ecosystem improvements to the Delta should be consistent with the core strategies of the Delta Plan for restoring the Delta ecosystem and reduce the impact of ecosystem stressors. For example, Chapter 4 of the Delta Plan identifies the following core strategies:

- Create more natural functional flows (for example, volume, timing, direction, duration, frequency, location)
- Restore habitats (for example, appropriate habitat required for any organism to survive and reproduce through quantity, quality, connectivity, and diversity of habitat)
- Improve water quality to protect the ecosystem (for example, dissolved oxygen levels, turbidity, salinity, temperature, contamination prevention)

- Prevent introduction of and manage nonnative species impacts (for example, reduction of predatory habitat or invasive aquatic weeds)
- Improve fish hatcheries and harvest management. (may not be applicable to storage projects applying for WSIP funding)

Measurable improvements to ecosystem include a suite of parameters from physical (e.g., flow regime and water temperature), chemical (e.g., water quality parameters including dissolved oxygen, conductivity, nutrients), and biological (e.g., algae, invertebrates, amphibians, and fish). Applicants should provide clear understanding (or justification) of the project benefits for the ecosystems.

Evaluation of Claimed Improvement

Ecosystem benefits, as described in Water Code Section 79753 and defined in the WSIP are not limited to those occurring in the Delta or its tributaries. Therefore, in the grant application, the applicant will need to clearly describe the project and identify those ecosystem benefits that satisfy the measurable ecosystem improvement in the Delta or its tributaries. The description will need to include the specific location, timing, and duration of the ecosystem improvements, especially for those that are spatially and temporally transient. In describing the ecosystem improvement, the applicant will need to relate any physical and/or chemical change(s) to an associated biological outcome.

This information will be used by the WSIP review team to evaluate the claimed measurable improvement(s) to the Delta or its tributaries. The evaluation is anticipated to use the project's proposed operation plan and model runs that were used to determine physical, chemical, and/or biological changes. Based on this evaluation, the review team will provide the Commission with an assessment of whether the proposed project will provide measureable improvements to the Delta or Delta tributaries.

Assurance of Improvement

Applicants will be required to submit a preliminary monitoring plan as part of the grant application. This plan will need to include, at a minimum, the following items:

- A description of the public benefits of the project,
- The metrics that will be used to monitor the ecosystem improvement benefits, including the measurable improvement to the Delta or its tributary,
- The location, timing, and frequency of the measurement, and
- A discussion of how the collected data will be used to evaluate the project outcomes and to apply adaptive management practices to ensure claimed benefits are realized post construction.

The preliminary monitoring plan will be assessed by the WSIP review team as part of the overall review effort. The preliminary monitoring plan will also serve as a starting point for content for the contracts for public benefits between the WSIP Grantees and the public agencies (Water Code Section 79755 (a)(3)).