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DELTA STEWARDSHIP COUNCIL

A California State Agency

MEMORANDUM

Date: July 7, 2020

To: Delta Plan Interagency Implementation Committee Members

From: Martina Koller, Program Manager, Performance Management Unit

Subject: Delta Plan Performance Measures Related to the July 13, 2020 DPIIC Agenda Item 2

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The Delta Plan, a comprehensive, long-term management plan for the Sacramento-San Joaquin Delta, defines time-specific performance measures to track status and trends towards achieving the coequal goals of a reliable statewide water supply and resilient ecosystem in a manner that protects and enhances the Delta as an evolving place.

Relying on science and monitoring data, these measurable indicators are based on numeric targets and include dates to achieve the targets as well as baseline conditions against which to evaluate the progress. They were developed over multiple years with the help of state, federal, and local agencies, scientists, and stakeholders.

This memo describes a set of flow-based performance measures related to the Central Valley Project Improvement Act and the Incidental Take Permit, both of which will be discussed during the July 13 Delta Plan Interagency Implementation Committee meeting. This discussion will be held in the context of pursuing an ecosystem-based management approach to Delta ecosystem health efforts.

Delta Ecosystem Performance Measures

Performance measures for restoring the Delta ecosystem include quantitative metrics with measurable objectives and target dates, and are an important component of the ecosystem-based management¹. The performance targets define a suite of measurable endpoints for the desired ecosystem conditions for the Delta and human uses of the ecosystem.



¹ **Ecosystem-based management** is a comprehensive and adaptive approach that includes the simultaneous management of water, land, and organisms to achieve a desired ecosystem condition that benefits both native biodiversity and human well-being (PPIC, 2019, [A Path Forward for California's Freshwater Ecosystems](#)).

"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."

Measurable, quantitative metrics set by the performance measures provide a method to evaluate progress in achieving desired outputs and outcomes of management actions. The performance targets and the baselines against which the progress is evaluated are based on best available scientific information and monitoring data, and were developed over multiple years with input from the Delta Lead Scientist, Delta Science Program, agency and stakeholder scientists, and the Delta Independent Science Board.

The performance measures were selected based on scientific understanding of the Delta, relevance to Delta management, and the core strategies and recommendations in the Delta Plan. The performance measures contribute to the adaptive management framework for managing the Delta ecosystem, and support government transparency and collaboration across Delta managing entities.

Ecosystem Performance Measures – Functional Flows

With a strong emphasis on a natural functional flows approach, a set of four performance measures track the status of Delta ecosystem-based management. A functional flows approach focuses on providing enough water at key times of the year to support ecological processes that improve native species populations. This approach, rather than replicating historical natural flows which may be impossible under modern infrastructure and environmental conditions, implements only critical flow components that are crucial in improving habitat and native species.

The following four performance measures track the status of restoring the ecosystem functional flows components:

- Yolo Bypass Inundation: More natural functional flow patterns in the Yolo Bypass floodplain support native fish spawning and rearing along with food web production.
- Peak Flow: Large magnitude peak (pulse) flows in the Sacramento River provide an important function in erosion and deposition processes that create healthy Delta habitats.
- Recession Flow: Gradual spring recession flows on the Sacramento River support riparian tree establishment and avoidance of aquatic species stranding.
- In-Delta Flow: An increase in the Delta outflows in relation to Delta inflows contributes to restoring Bay-Delta habitat and improving native fish populations.



Additional performance measures in the Delta Plan define a broad portfolio of measurable endpoints with target dates for the desired conditions in the Delta. These metrics include topics on water quality, invasive species, reduced risk, and Delta as an evolving place, as well as statewide water supply reliability.



The Delta Plan Ecosystem Amendment is proposing additional new and revised performance measures based on updated scientific synthesis, ecosystem-based principles, and improved understanding of structural habitat and connection to flows. To maximize application of functional flows, water must connect landscapes to improve native species habitat and ecosystem processes. The ecosystem amendment also added emphasis on agency alignment, governance and coordination of ecosystem investments.

Performance Measures Dashboard

A web-based dashboard provides access to all Delta Plan performance measures and features interactive visualizations of performance baselines, targets, current status, layers of technical details, and enhanced display and filter options for administrative performance measures. The dashboard can be found on the Council's website: viewperformance.deltacouncil.ca.gov.