



INFORMATION ITEM

Delta Plan Performance Measures: 2021 Year in Review

Summary: Council staff will present on the Delta Plan performance measures, including a staff-produced video, highlight key annual updates and progress, and report on the use of the online performance measures dashboard in 2021.

BACKGROUND

Water Code Section 85308(b) requires the Delta Plan to “include quantified or otherwise measurable targets associated with achieving the objectives of the Delta Plan.” To fulfill this requirement, the Delta Plan includes performance measures that detect environmental and administrative changes due to the implementation of policies and recommendations in the Delta Plan, in relation to time-specific, measurable performance targets. Delta Plan performance measures allow the Council to integrate science and monitoring results into decision-making about priorities and funding, inform adaptive management, and track progress toward achieving the coequal goals over time.

The Delta Plan contains 154 performance measures. These include 122 administrative measures that track the status of implementing its recommendations (e.g., implement water efficiency and water management planning laws, update Delta flow objectives, investigate opportunities for carbon markets) and 32 output and outcome performance measures that track environmental and social indicators over time, using defined baselines, metrics, and targets (e.g., acre-feet of Delta water exported, the abundance of native species, subsidence reversal, and total area of carbon sequestration projects).

An initial set of performance measures was included in the 2013 Delta Plan, and a revised set of performance measures was adopted by the Council in 2018 ([Appendix E of the Delta Plan](#)). The Council’s Performance Measures Unit tracks and evaluates performance measures on an annual basis. The schedule for performance data collection and evaluation is based on source data frequency and availability. While some performance data are updated annually, others are related to a specific water year type (e.g., critically dry years versus wet years), or triggered by specific events (e.g. emergency-related water delivery interruption). Baselines and target values were established in 2018 for most measures; therefore only some preliminary trends can be evaluated in 2021, having, at most, three years of data.

PERFORMANCE MEASURES – 2021 UPDATES

This report provides an overview of what we are learning from the implementation of the Delta Plan. Specifically, we'll discuss key performance measure data updates, progress made by implementing agencies in following through on Delta Plan recommendations, and steps the Council has taken to communicate and promote performance measures and what we're learning from them. The report concludes with a look ahead into the upcoming year, with the goal of continuing to promote and track performance measures for the future to provide the Council and other implementing agencies with information they can use to improve the effectiveness of their actions and programs.

Water Supply Reliability

Together, performance metrics based on five-year urban and agricultural water management plans are key measures of state-wide water conservation and water use efficiency, use of alternative water sources, and single and multiple dry year reliability. In 2020, the Department of Water Resources (DWR) included an example methodology for the preparation of reduced Delta reliance elements as part of the [Urban Water Management Plan Guidebook 2020](#) (PM [WR R05-01](#)). As a result, urban water suppliers¹ that receive water from the Delta now have a framework available to support how they report reduced Delta reliance as part of the 2020 Urban Water Management Plans submitted to DWR throughout 2021. This is important because water suppliers can document expected measurable reductions in reliance on the Delta and improvements in regional self-reliance, as is required for covered actions by Delta Plan Policy **WR P1**. Voluntary reporting of Delta reliance is tracked by PM [WR R04-01](#).

The 2020 UWMP submissions by water suppliers were due to DWR on July 1, 2021. As of November 1, 2021, 368 urban water suppliers, out of about 440, had submitted their UWMP to DWR. DWR is still reviewing the 2020 UWMPs. Council staff anticipate updating the Urban Water Use ([PM 3.1](#)), Alternative Water Supply ([PM 3.2](#)), and Water Supply Reliability ([PM 3.4](#)) performance measures in January 2022 using data from the submitted UWMPs.

Delta Ecosystem and Water Quality

Ecosystem and water quality performance measures reflect the impacts of consecutive drought year conditions on the Delta. Water Year 2021 (October 1,

¹ Section 10617 of the California Water Code defines an "Urban water supplier" as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.

2020, to September 30, 2021) was an extreme year in terms of high temperature and lack of precipitation and was recorded as the second driest water year in recent history.² The water year type is likely to be categorized as a critically dry year. Because of severe drought conditions in California, the State Water Resources Control Board (SWRCB) issued emergency regulations to curtail water diversions within the Delta watershed on August 19, 2021.

Drought affects the amount of freshwater flowing into the Delta and intrusion of salinity deeper into the Delta. Exceedances of salinity indicate how difficult it is to maintain salinity standards during severe drought conditions.

The Delta Salinity performance measure ([PM 6.2](#)) tracked water quality standard exceedances for agricultural objectives in the western Delta at two compliance stations during the 2021 summer months as well as exceedances for a south Delta station on multiple occurrences throughout the year. Starting in June 2021, a [Temporary Urgency Change Petition \(TUCP\) was in effect](#) allowing for relaxed water quality standards for the State Water Project and Central Valley Project in order to maintain critical water supply needs during extended drought conditions.

Harmful Algal Blooms (HABs) in the Delta impact water quality and the health of Delta residents and visitors. The Council's HABs performance measure ([PM 6.10](#)) tracks locations of cyanobacteria blooms (e.g., Microcystis) in Delta waterbodies. HABs [reported](#) in the Delta have almost doubled in 2021 compared to 2019 and 2020 conditions. 46 HABs incidents were reported, 38 of which were given Caution Advisories and four of which were given Danger Advisories representing the highest levels of public concern.

The Invasive Species performance measure ([PM 4.10](#)) tracks the establishment of new invasive species, non-native fish, and invasive aquatic vegetation in the Delta.

[Ribbon weed](#), a new aquatic invasive plant species was recently identified in the Delta. Native to Australia, ribbon weed grows below the water surface in stagnant or flowing fresh- to brackish water up to 23 feet deep, often forming tall underground meadows. It has been found mainly in the northwest central Delta arc near Rio Vista, Liberty Island, and Sherman Lake. A new establishment of an invasive submersed aquatic weed in the already heavily invaded Delta may further exacerbate the already stressed Delta ecosystem by disrupting flows and native ecosystem processes and interfering with water deliveries.

² [Water Year 2021: An Extreme Year](#). 2021. California Department of Water Resources.

Although declining in 2021, recent invasions of nutria continue to be a threat that is actively managed by the California Department of Fish and Wildlife with the goal of eradicating it from California. As of November 10, 2021, 640 nutria were taken from the Central Valley watershed, including 3 from within the Delta. In comparison, 1,237 nutria were taken in 2020, including 13 from within the Delta. In total, over 2,745 nutria have been taken from the watershed since 2017. Nutria is a non-native, highly invasive wildlife species with devastating impacts on wetland habitats, agriculture, and flood protection infrastructure.

Native fish population and biomass relative to non-native fish species decreased during the 2020 dry year after high values were achieved for both metrics during the 2019 wet year. This is important because non-native fish prey on juvenile native fish and compete for habitat space and food.

The Central Valley Regional Water Quality Control Board's Delta Mercury Control Program completed an [Independent Scientific Review](#) of methylmercury control studies in wetlands and open water areas (PM: [WQ R08-07](#)). This scientific evaluation of site-specific study plans informs the development of methylmercury control measures that can be applied throughout the Delta. This is important because fish from Delta waterways consumed by people and wildlife may contain harmful levels of mercury.

Delta Tourism

The Delta is a world-class tourism destination that offers diverse opportunities for boating, fishing, recreation, cultural and agricultural tourism, and, consistent with a recommendation in the Delta Plan, it was designated as a National Heritage Area in 2019 by the United States Congress. The Delta Tourism performance measure ([PM 5.8](#)) consists of seven recreation-related metrics, including the seasonality of visitations. A recent assessment of tourists visiting the Delta during different seasons of the year was provided by the 2019 [Delta tourism survey](#), funded by the Delta Protection Commission (DPC). In the survey, 857 respondents addressed a question related to seasonality. The number of Delta visits differs across the seasons, with higher numbers in the summer and lower numbers in the winter. DPC staff discussed additional findings from the tourism survey as part of presentations related to the Delta Recreation and Tourism Update of the Economic Sustainability Plan at Council meetings in [March 2021](#) and [August 2021](#).

Reducing Delta Flood Risk

The Council's risk reduction performance measure ([PM 7.2](#)) includes metrics describing flood risk to people and property in the Delta. A recent update to the

Council's Delta Levees Investment Strategy (DLIS) used updated hydrology and levee evaluation data to re-evaluate both the probability and the consequences of flooding on Delta islands and tracts. Council staff presented DLIS updates to the Council in [May 2021](#), and [August 2021](#), including the updated risk calculations. Performance measures tracking flood-related expected annual fatalities and property damage decreased significantly between 2007 and 2017 due to improvements to Delta urban and rural levees, newer elevation data, and updated probability of flooding calculations.

COMMUNICATING PERFORMANCE MEASURES

The Council deployed a web-based dashboard in 2019 to visually track the performance measures and provide open access for the public and interested parties to the associated data, methods, and information. The performance measures can be viewed on the dashboard at viewperformance.deltacouncil.ca.gov.

In 2021, the dashboard had more than 14,000 pageviews, averaging 1,300 page views each month. This is slightly lower than 2,000 average monthly views in 2020 but two-times higher than monthly views in 2019. Dashboard access peaked in September with over 4,000 monthly views. These pages were accessed by an average of 255 users per month, with a peak of 407 users in September.

Video

To support and promote the dashboard, Staff recently prepared a five-minute informational video available on the Council's YouTube channel (youtube.com/watch?v=oSrFNV1cGHQ&list=PLqTHClW1Hhq4lMQsm2DsMZKjFAI4xaYs). The video is intended to provide a broad audience with information about how the performance measures were established, what are they used for, and how to access and view the performance measures dashboard. The video will be shown at today's Council meeting.

Guidebook

In 2019, staff prepared a [Performance Measures Guidebook](#) to provide an additional resource that promotes understanding of the performance measures (Attachment 1). The guidebook provides a lay person's guide through the performance metrics and explains why each performance measure is important within the context of managing the Delta.

NEXT STEPS FOR 2022

Many of the 2021 goals for performance measure outreach and communications were postponed due to other emerging Council priorities. In the upcoming year, a

renewed focus will be given to novel outreach techniques to continue building an understanding of performance tracking. These may include continuing production of informational videos, presenting at specialty conferences, and preparing subject-focused digital posters, story maps, and potentially, informational podcasts.

In 2022, the effort to propose revisions to the administrative performance measures as part of the Council's commitment to adaptively managing implementation of the Delta Plan and to better align with emerging policies (such as SGMA) and climate and water infrastructure resilience actions (California Water Resilience Portfolio) will continue. Staff will provide updates to the Council regarding the revised administrative performance measures in 2022. The proposed revisions would require Council approval at a future date.

FISCAL INFORMATION

Not applicable.

LIST OF ATTACHMENTS

Attachment 1: Performance Measures Guidebook, 2019

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