

## Delta Plan Performance Measures

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**Summary:** In December 2014, Council staff presented its interim report on the assessment of the Delta Plan’s performance measures. That work is now complete. This report documents results and provides context to the Council of the status of the Delta Plan’s existing performance measures. Staff will now turn its attention to the next stage in its performance measures effort, namely working with data owners, stakeholders and interested parties to develop proposed Delta Plan amendments for the Council’s consideration in the coming months.

The inset shown here provides a snapshot of progress to date for each Delta Plan goal. As shown, there has been some progress toward achieving water supply reliability, ecosystem restoration and water quality goals. Progress is stronger in the areas of risk reduction and protecting/enhancing the Delta as an evolving place.

Further details are included in this report supporting each Delta Plan goal and supporting strategy, including key findings and specific recommendations for performance measure refinement.



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## Background

The Delta Reform Act of 2009 requires the Delta Plan to include performance measures that enable the Council to track progress in meeting its objectives. These performance measures are to include quantitative or other “measureable assessments of the status and trends” of the health of the Delta, as well as the reliability of the state’s water supply exported from the Sacramento and San Joaquin river watersheds (Water Code sections 85211 and 85308).

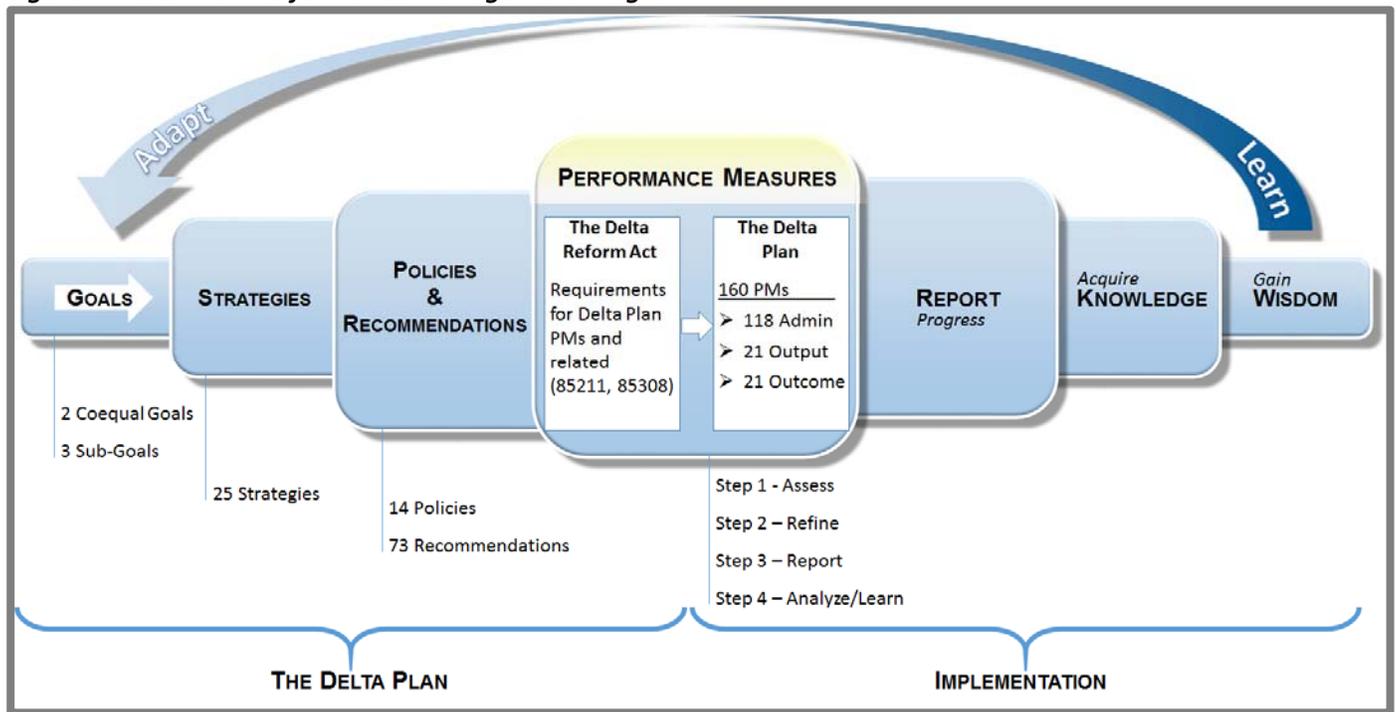
In compliance with the Act, the Council’s Delta Plan includes a suite of performance measures (160 total) organized by Delta Plan goal and strategy. Measures are in three types: *Administrative* performance measures (118) are used to track various actions recommended by the Delta Plan. *Output* performance measures (21) are used to track results of administrative actions. Finally, *outcome* measures (21) are included for tracking the impacts of those actions. Status and trends evaluated using existing performance measures will be presented in the Council’s annual report in early 2016.

Figure 1 below summarizes the linkage between the Delta Reform Act’s goals for performance with the strategies, policies, recommendations and performance measures incorporated into the Delta Plan. The figure also illustrates how measures will be used

in a continuous cycle of data collection, synthesis and decision support/learning. Performance measures must be allowed to adapt as the understanding of the system and/or condition changes over time. As stated in the Act, the Plan’s “initial set of performance measures will be expanded and refined after adoption of the Delta Plan and will be considered for inclusion in subsequent updates of the Delta Plan.

*Development of informative and meaningful performance measures is a challenging task that will continue after the adoption of the Delta Plan. Performance measures need to be designed to capture important trends and to address whether specific actions are producing expected results. Efforts to develop performance measures in complex and large-scale systems like the Delta are commonly multiyear endeavors. The Council will improve all performance measures, but will focus on outcome measures through a multiyear effort, using successful approaches for developing performance measures employed by similar efforts elsewhere... .”*

**Figure 1: Delta Plan Performance Management Program**



The need to adapt is especially critical in the current era of severe drought and other recent significant changes in hydrological conditions and water policy (summarized in Figure 2). These major developments since the Delta Plan’s implementation have implications to statewide water supply reliability, the health of the Delta environment, and to Delta Plan implementation and performance management.

**Figure 2: Major Developments Since Delta Plan Adoption**

**Severe drought continues** – Water year 2014-15 marks the fourth consecutive year of a historically severe drought of unknown duration. According to the Department of Water Resources (DWR)<sup>1</sup>, “The water years of 2012-14 stand as California’s driest three consecutive years in terms of statewide precipitation.” Data collected since the publication of this DWR report will undoubtedly classify 2015 as another critically dry year. With zero allocation in 2014 and 2015 to Central Valley Project Agricultural Water Service Contractors and Friant users, groundwater overdraft in the central valley increased exponentially. This led to groundwater levels dropping far below their previous historical lows and land subsidence occurring at a rapid pace.

- ✓ April 2014: The Governor proclaimed a drought emergency and issued an Executive Order directing the State Water Resources Control Board (SWRCB) to adopt emergency regulations to ensure that urban water suppliers implement conservation measures.
- ✓ June 2014: The SWRCB issued drought emergency curtailment of water diversion notices to junior appropriative water right holders in critical watersheds around the State.
- ✓ April 2015: The Governor issued the fourth executive order in the series of actions to address the severe drought conditions. The April 2015 Executive Order directed the State Water Resources Control Board (SWRCB) to implement mandatory water reductions in urban areas to reduce potable urban water use by 25% statewide.
- ✓ May 2015: The SWRCB adopted emergency conservation regulations, including the assessment of fines for non-compliance.
- ✓ June 2015: The SWRCB issued curtailment notices for junior and senior appropriative water right holders in the Sacramento-San Joaquin River and Delta watersheds and Scotts River. The SWRCB also placed the riparian right holders under review. This SWRCB action is unprecedented in the State’s administration of the water rights system.

**Groundwater management begins** – The Sustainable Groundwater Management Act (SGMA) was signed into law in 2014, ushering in a new era of statewide, comprehensive program to manage the State’s groundwater resources. DWR completed the prioritization of groundwater basins, and is developing regulations and other resource management aspects required by the legislation. A few local agencies began discussions on the formation of Groundwater Sustainability Agencies, in order to meet the June 2017 deadline and avoid SWRCB intervention. Groundwater Sustainability Agencies in critical overdraft basins are required to adopt and implement Groundwater Sustainability Plans by 2020.

Though historic, the pace of implementation of the SGMA may need to be accelerated in light of the alarming “race to the bottom” in groundwater overdraft. According to DWR<sup>2</sup>, “Since spring 2008, groundwater levels have experienced all-time historical lows in most areas of the state.” DWR’s November 2014 report<sup>3</sup> states that subsidence is occurring as a result, with additional subsidence continuing in specific areas.

**Delta conveyance proposals changed** – As reported to the Council in June 2015, recent changes to the Bay Delta Conservation Plan (BDCP) altered the relationship between BDCP and the Delta Plan. The Council is currently assessing whether these changes to BDCP may result in revisions to the Delta Plan. Furthermore, details on water conveyance, system operations, ecosystem restoration, adaptive management, Delta governance and finance will need to be updated to reflect the absence of the BDCP as a combined Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP).

**Water rights administration**– The SWRCB has been taking actions to enforce mandatory cutbacks in water use during the current severe drought, including curtailment notices reviewing the diversions of riparian right holders. The SWRCB is also empowered by the SGMA to intervene with regulatory action in groundwater management, if needed, in certain basins.

## **Performance Measures Tracking Project**

<sup>1</sup> California’s Most Significant Droughts: Comparing Historical and Recent Conditions, Department of Water Resources, February 2015.

<sup>2</sup> Public Update for Drought Response, Groundwater Basins with Potential Water Shortages and Gaps in Groundwater Monitoring, Department of Water Resources, April 2014.

<sup>3</sup> Public Update for Drought Response Prepared pursuant to April 2014 Proclamation of a Continued State of Emergency, California Department of Water Resources, November 2014.

The Council's performance measures tracking project has accomplished the following critical milestones since adoption of the Delta Plan:

- December of 2013 – Staff reported to the Council that a full assessment of Delta Plan performance measures for implementation readiness was underway. A description of the assessment framework and approach was provided.
- July 2014 – Staff reported interim project status to the Council, including highlights of implementation challenges, improvements applied to online tracking tools, and opportunities/next steps.
- December 2014 – Staff provided an end-of-year report including detailed reporting status spanning all 118 administrative measures and reporting highlights of a select two output measures.

This report provides the results of the complete assessment of all 160 performance measures with expanded performance reporting by Delta Plan goal and strategy as well as proposed refinements to various existing measures, and suggestions for possible additional output and outcome measures. Figure 3 below summarizes implementation status for all 160 performance measures, by Delta Plan goal. The remainder of this report provides additional information on specific measures with supporting details attached.

**Figure 3: Delta Plan Performance Measures – Tracking Status Dashboard**



## Delta Plan Progress Overview

- **Goal: A more reliable water supply for California** – Urban water conservation efforts during the drought have exceeded long-term goals and demonstrate what is possible when rapid demand reduction is necessary. The State Water Resources Control Board has been exercising its authority to conserve the limited resources for all beneficial uses. 2014 saw the passage of Proposition 1: the Water Quality, Supply, and Infrastructure Improvement Act and the Sustainable Groundwater Management Act which is driving progress in expanding storage and improving groundwater management. The Bay Delta Conservation Plan (BDCP) proposed improvements to water conveyance through the Delta, but has recently undergone major changes and is now proposed to be split into two separate initiatives: California WaterFix and California EcoRestore. Each of these developments may generate significant changes and uncertainties for Delta water and ecosystem management programs, and related performance measurement of these areas. This report considers options for refining Delta Plan performance measures in light of these new revised proposals. Feasibility studies of the CALFED storage projects are largely complete and funds for storage improvement are available from Proposition 1.



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- **Goal: To protect, restore and enhance the Delta ecosystem** – Although progress toward habitat restoration in the Delta has been slow overall, and the drought has added additional challenges for native species, important groundwork has been set for future restoration. For example, two Delta restoration projects (Sherman Island, Dutch Slough) have been certified as consistent with the Delta Plan and one pilot project (Calhoun Cut) has been constructed. Also, due to recent changes in the BDCP, the proposed California EcoRestore alternative may be a pathway for high-priority restoration projects to be completed. Recommendations to refine Delta Plan ecosystem performance measures are included in this report, focusing on areas such as: developing standards to ensure more natural Delta flows; identifying a more robust set of metrics and goals to target ecological functions; assessing migratory bird habitat needs; and expanding targeted habitat type categories.



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- **Goal: To protect/enhance the Delta as an evolving place** – Efforts to protect and enhance the Delta as an evolving place are moving forward. For example, the Delta Protection Commission (DPC) and their Delta Narratives Initiative is working toward designation of the Delta and Suisun Marsh as a National Heritage Area. Other efforts such as DWR's subsidence reversal and carbon sequestration projects, totaling 2,325 acres, are creating managed wetlands while addressing subsidence issues. Also, the Council is working with



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the Department of Conservation's Farmland Mapping and Monitoring Program to track Delta farmland loss, and the Delta Conservancy/DPC's Delta Branding and Marketing Project continues to promote agritourism. Other topics involving inter-agency collaboration include non-native invasive aquatic plants. Council staff will continue to participate with the Delta Conservancy, the Department of Parks and Recreation/Division of Boating and Waterways and others in better understanding the impact of invasive aquatic plants on the Delta economy and recreational uses.

- **Goal: To improve water quality for the protection of human health and the environment** – Water quality in the Delta is a “balancing act” between the needs of humans

and those of fish and wildlife species. Managing this balance is challenging especially given the impacts from urban, industrial, and agricultural runoff. The statewide focus to minimize these impacts is currently limited by insufficient objectives, data, and measurement standards. However, progress has been made in some key areas, such as improved monitoring for specific constituents of concern (e.g. mercury, selenium, diazinon, and chlorpyrifos). Additionally, progress has also been made towards completing an environmental impact report for the North Bay Aqueduct Alternative Intake Project, which is anticipated to reduce organic carbon loads for water treatment facilities supporting areas such as Solano and Napa Counties once constructed. Also, while dissolved oxygen (DO) targets have yet to be adopted Delta-wide, recent regulatory directives and actions focused on the Stockton Deep Water Ship Channel have served as a valuable pilot study in DO research and management.



- **Goal: To reduce risks to people, property, and state interests in the Delta** – Emergency preparedness has been improved through implementation of the Delta Multi-Hazard

Coordination Task Force recommendations. Of the eleven Task Force recommendations, two have been completed, three are expected to be completed in 2016, and the rest are in progress. Prioritization of state investment in flood management is well underway with the Council leading the Delta Levees Investment Strategy project. With the approval of the Central Valley Flood Protection Board, DWR continues to provide funding for levee improvements through existing programs. The Delta Protection Commission has begun the feasibility study for a Delta Flood Risk Management Assessment District, hopefully leading to an improved means of financing local flood management activities in the future. Progress is being made towards integrating Delta levees and ecosystem function through the draft Central Valley Flood Protection System Conservation Strategy, which proposes an adaptive management strategy for vegetation on levees and identifies potential setback levee areas. Further highlights and potential performance measure refinements are identified in the report body.



## A More Reliable Water Supply for California

The Delta watershed and California's water infrastructure are in crisis. In addition to the longstanding problems of California's variable precipitation, growing population, and declining native fish species, recent developments have major implications for the reliability of California's water supply including the ongoing drought, recent changes to the BDCP and the 2014 Sustainable Groundwater Management Act (SGMA).

Progress toward implementing the Delta Plan's four core strategies to provide a more reliable water supply for California is summarized below. Select performance measures (PMs) are highlighted here. Details for all measures are included in the attachments.

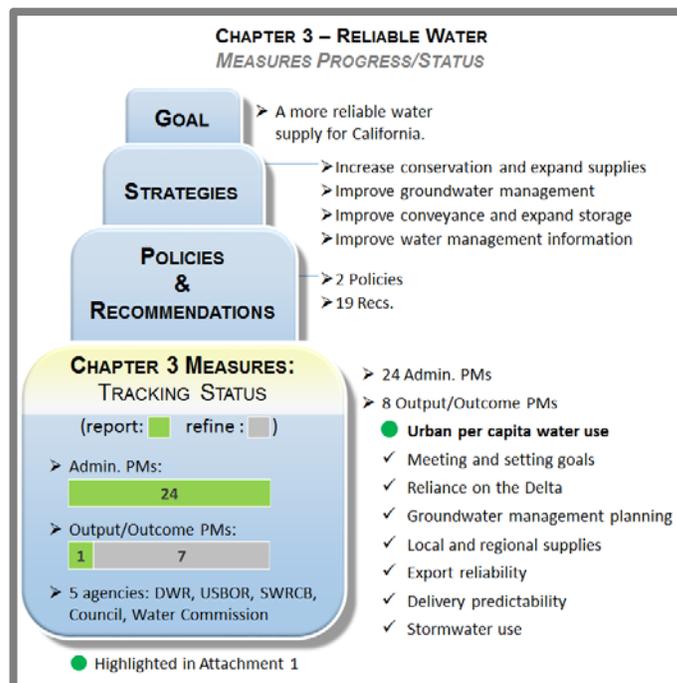
- **Increase water conservation and expand local and regional supplies –** Managing water demand and expanding supply is critical to achieving the coequal goal of providing a more reliable water supply for California.

✓ PM: Urban per capita water use

reduction. This measure targets a 10% reduction in urban per capita water usage by 2015 and 20% reduction by 2020. Achievement of these targets is measured as a single year snapshot of water use. Interim data from multiple sources from 2010 to May 2015 shows an overall decrease in per capita use statewide. For the 12-month period of June 2014 to May 2015, reduction in water production for urban use in each hydrologic region and statewide has exceeded the Urban Water Management Plan-adopted 2020 targets, this is five years ahead of schedule. However, water use patterns are heavily influenced by supply availability. Once drought restrictions are lifted, water use may again increase. Reporting on interim targets with more complete information will be critical to tracking trends and this type of information will be included in the 2015 updates of the Urban Water Management Plans. (See Attachment 1 for full reporting details.)

While progress has been observed in urban water use efficiency, the remaining performance measures under this strategy depend on data to be included in Urban and Agricultural Water Management Plans due in 2016.

- **Improve groundwater management –** The Delta Plan recognizes the importance of groundwater management through updated information on groundwater resources and local implementation of groundwater management plans. It also highlights the need to recover and manage critically overdrafted groundwater basins.



- ✓ PM: Include updated Bulletin 118 information in California Water Plan Update and Urban and Agricultural Water Management Plans. Bulletin 118 has not been updated since 2003. The SGMA calls for an interim update in 2017 with a comprehensive update to follow in 2020.

The SGMA is the driving force in this strategy. DWR has been assigned the lead and is currently developing regulations and other resource management aspects required by the Act. The Council could consider new policies, recommendations and measures for tracking the implementation of the SGMA, and, separately, for groundwater overdraft reversal and groundwater recharge augmentation.

- **Improve conveyance and expand storage** – The state’s interconnected network of surface and groundwater storage is insufficient in volume, conveyance capacity, and flexibility to achieve the coequal goals. The Delta Plan calls for improved conveyance and expanded storage both north and south of the Delta so that larger amounts of water may be exported and stored during wet years for use during dry years.
  - ✓ PM: Complete surface water storage studies and survey of past grant applicants. DWR and the Bureau of Reclamation completed surface water storage feasibility studies including recommendations for Shasta, Sites, and Temperance Flat.
  - ✓ PM: Complete survey of past grant applicants for future storage projects. DWR in collaboration with the Association of California Water Agencies, the California Water Commission, the Delta Stewardship Council, and other state agencies completed a survey of past grant applicants in 2014 to identify potential near-term future storage and water delivery projects.
  - ✓ PM: Hold hearings on priority projects and provide recommendations. Proposition 1: the Water Quality, Supply, and Infrastructure Improvement Act was passed in November 2014 and dedicated \$2.7 billion for investments in water storage projects. The California Water Commission is currently developing measures of public benefits to prioritize and fund these projects through the Water Storage Investment Program. Program regulations are expected to be adopted by December 2016.

Near-term progress in improving conveyance and expanding storage is being driven by Proposition 1. Over the longer-term, progress depends upon the reconstituted BDCP. As already noted, the Council is currently assessing whether changes to BDCP may result in revisions to the Delta Plan and this assessment includes a preliminary set of draft conveyance, storage, and water operations principles (see Agenda Item 18). These principles are intended to promote options for new and improved infrastructure relating to water conveyance in the Delta, storage systems, and the operation of both, in the Delta Plan.

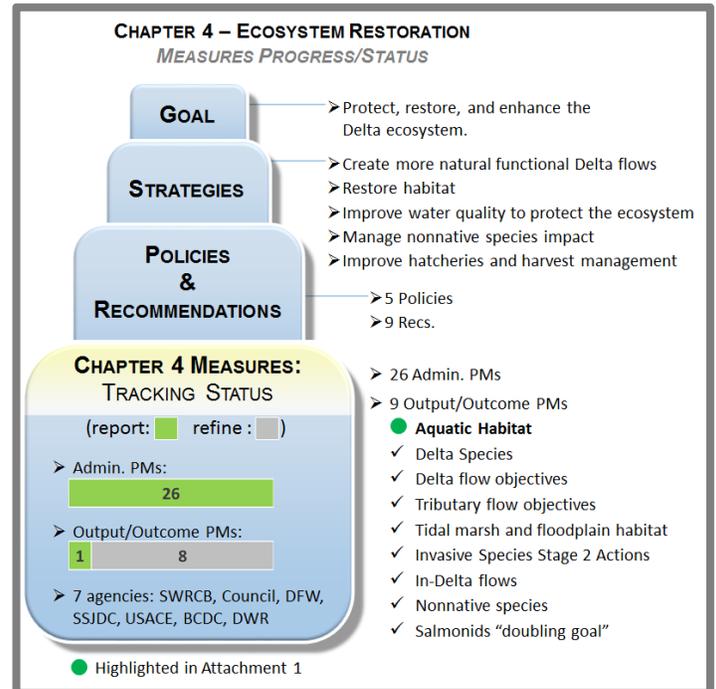
- **Improve water management information** – Progress in reliability improvements depends on the availability of water management information from both the urban and agricultural sectors, and for surface water and groundwater use.

- ✓ PM: Implementation of statewide system for water use reporting. Interagency meetings on this topic were held following the passage of water legislation in 2009, however development of a statewide database was paused due to lack of funding. While no single database has been implemented to collect all water usage data as recommended in the Delta Plan (Recommendation WR R17: Integrated Statewide System for Water Use Reporting), there has been recent interagency cooperation to collect information for DWR's water budgeting through the State Water Resources Control Board's (SWRCB's) Drinking Water Program. Due to the drought, SWRCB has also been collecting monthly water usage data since June of 2014. Continued collection of this data while also expanding collection to include additional types of information (e.g., stormwater, desalination capacity, import source) would provide further flexibility in the types of analysis and performance reporting available in support of this strategy.
- **Proposed Refinements and Additional Performance Measures to be Considered** – Achieving the coequal goal of providing a more reliable water supply for California means better matching the state's demands for reasonable and beneficial uses of water to the available water supply. With this in mind, and also considering the significant developments and lessons learned since the Delta Plan was adopted in 2013, staff have identified opportunities for refining Chapter 3 performance measures around the following main themes (see Attachment 2 for detailed descriptions):
  - ✓ Supply-side Management Actions: A broader suite of supply-related measures should be considered to monitor the progress and effectiveness of the latest developments in water supply management policies, programs, and projects, as well as real-time and long-term trends in hydrologic variations.
  - ✓ Demand: A broader suite of demand-side measures should also be considered to monitor the progress and effectiveness of demand management policies and programs. For example, current Chapter 3 water conservation measures focus on urban use; tracking of agricultural demand and local land and water use policies would provide a fuller picture.
  - ✓ Reliability: The aspect of "reliability" is important to the goal statement, although the term can be subject to interpretation. Refined strategies and performance measures can help more clearly define and track reliability. One approach may be refined measures which delineate supply versus infrastructure-related reliability.

## Protect, Restore, and Enhance the Delta Ecosystem

Altered flows, habitat loss, and stressors such as invasive species and poor water quality have degraded the health of the Delta ecosystem, resulting in the decline of native species that depend on the Delta for their survival. Progress toward implementing the Delta Plan’s five core strategies to protect, restore and enhance the Delta ecosystem is summarized below. Select performance measures (PMs) are highlighted here. Details for all measures are included in the attachments.

- Create More Natural Functional Flows –**  
 The best available science suggests current flow regimes harm native aquatic species and encourage nonnative species, and that currently required flow objectives are insufficient to protect the Delta ecosystem (SWRCB 2010). The Delta Plan recommends that the SWRCB update its Bay-Delta Water Quality Control Plan to include new and updated flow objectives for the Delta and its major tributaries.



- ✓ PM: The SWRCB adopts Delta flow objectives by June 2, 2014. Although the Delta Science Program has supported SWRCB’s process by holding public workshops and preparing summary reports, new Delta flow objectives have not yet been adopted due to drought priorities.
- ✓ PM: Progress toward restoring more natural functional flows. This performance measure will be evaluated once the new objectives are adopted, based on the metrics in the updated Bay-Delta Water Quality Control Plan.

Based on the existing Delta Plan performance measures, there has been limited progress to date in restoring more natural functional flows, but work is ongoing to implement this Delta Plan recommendation.

- Restore Habitat –** Habitat loss has led to declines in Delta fish and wildlife, including both resident and migratory species. The Delta Plan calls for restoring habitat in priority areas, with a focus on tidal wetland and floodplain habitats, and expanding floodplains and riparian habitats in conjunction with levee projects.
  - ✓ PM: Acres of Habitat Restored. Two restoration projects totaling approximately 1,500 acres of land have been certified as consistent with the Delta Plan and both include adaptive management plans. Attachment 1 illustrates what has been constructed and which projects are planned.
  - ✓ PM: Trends in the occurrence of native Delta species in restored habitats. Due to the limited amount of restoration completed to date, it is not yet possible to track

trends in the occurrence of native Delta species in restored habitats. However, the Interagency Ecological Program (IEP) has been developing a framework to guide restoration proponents in developing monitoring programs, which will provide this type of data in a standardized format.

- ✓ PM: Progress toward the “doubling goal” for wild Central Valley salmonids relative to 1995 levels. Achieving the “doubling goal” for wild Central Valley salmonids is currently not feasible given the drought-driven decline in endangered native fish species.

Progress toward habitat restoration has been slow, and the drought has adversely affected native species as shown by general trends, but a wide range of efforts are laying the groundwork for implementing restoration projects and assessing their effectiveness (see Habit Restoration Pilot Projects in Attachment 1).

- **Improve Water Quality to Protect the Ecosystem** – Recommendations and performance measures for water quality are included in the section below regarding water quality progress.
- **Prevent Introduction of and Manage Nonnative Invasive Species** – The resilience of native species is reduced by the growing presence of nonnative invasive species in the Delta. The Delta Plan calls for managing existing nonnative invasive species and avoiding introductions of new nonnative species.
  - ✓ PM: The California Department of Fish and Wildlife and other appropriate agencies prioritize the list of actions to manage nonnative invasive species. In the 2014 Ecosystem Restoration Program (ERP) Conservation Strategy, the state and federal fish and wildlife agencies identified the nonnative invasive species of highest concern, including invasive weeds and quagga and zebra mussels. The California Department of Parks and Recreation, Division of Boating and Waterways continues to treat areas of the Delta infested with aquatic weeds, such as Brazilian waterweed, spongeplant, and water hyacinth. A boat inspection program has been implemented to prevent introduction of quagga and zebra mussels to currently uninfested areas of the state.
  - ✓ PM: Regulate angling for nonnative sport fish to protect native fish. The ERP Conservation Strategy concluded that much more information regarding the impact of largemouth and smallmouth bass predation on salmonids in the Central Valley is needed to help determine whether new angling regulations should be pursued. CDFW is currently providing grants of up to \$1 million for scientific research projects intended to inform this decision.

The state has prioritized a small number of nonnative invasive species as its highest concern, and is actively managing four highly invasive aquatic weeds (e.g. water hyacinth, Brazilian waterweed, curly-leaf pondweed, and spongeplant). Additional data will be needed to track trends for a larger number of nonnative species.

- **Improve Hatcheries and Harvest Management** – Fish hatcheries and harvest regulation are important tools in fisheries management, but they also pose

ecological risks to native fish populations. The Delta Plan recommends improvements in hatchery and harvest management.

- ✓ PM: Hatcheries develop scientifically sound hatchery and genetic management plans. NOAA has approved hatchery and genetic management plans for two facilities and is currently reviewing plans for six facilities within CDFW's jurisdiction that produce listed fish, as well as fall-run Chinook salmon.
- ✓ PM: CDFW revises and begins implementing its program for marking and tagging hatchery salmon and steelhead. The program has been suspended due to the lack of funding.

The state has made progress in developing plans for improving hatchery management, but additional funding is needed for implementation.

- **Proposed Refinements and Additional Performance Measures to be Considered** – Much has changed since the Plan was implemented. For example, the recent changes to the Bay Delta Conservation Plan (BDCP) leave a notable gap in the types of measures that were anticipated to be provided through that program and which would have been added to the Delta Plan. Considering these changes, staff have identified opportunities for refining Chapter 4 performance measures around four themes (see Attachment 2 for detailed descriptions):
  - ✓ Real-time water management to achieve 'more natural flows'.
  - ✓ Habitat needs of migratory birds, including water supply, to better understand whether or not habitat needs are being met and what actions will result in better meeting those needs.
  - ✓ Focus on ecological function and overall health, leveraging the work of the Wetlands and Estuary Monitoring Workgroups of the California Water Quality Monitoring Council and others for the State of the Estuary Report. Examples include fish diversity and abundance, population trends for selected bird species, and zooplankton that provide food for fish.
  - ✓ Expand habitat types to allow tracking of habitat restoration beyond the BiOps' targets, i.e., tidal marsh and floodplain habitats. The Delta Reform Act calls for restoring a healthy ecosystem in the Delta by establishing functional corridors for migratory species, restoring diverse and biologically appropriate habitats, restoring large areas of interconnected habitat, and restoring habitat necessary to avoid a net loss of migratory bird habitat (Water Code sections 85302(c) and 85302(e)). To assess progress toward these goals, it will be important to track a wider range of habitat types, including managed wetlands, seasonal wetlands, riparian habitat, channel margin habitat, grasslands, and wildlife friendly cultivated land.

## Protect and Enhance the Unique Cultural, Recreational, Natural Resource, and Agricultural Values of the California Delta as an Evolving Place

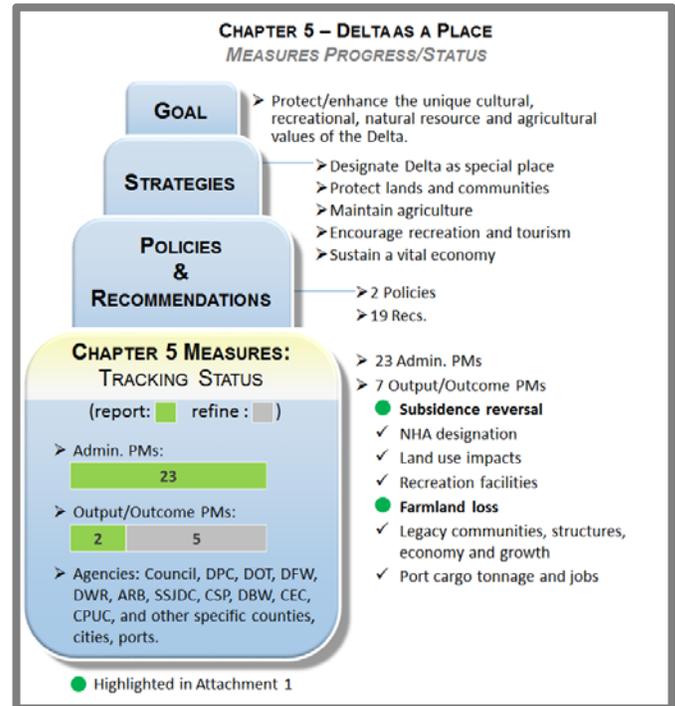
The Delta Reform Act provides that the coequal goals shall be achieved in a manner that protects the unique values of the Delta as an evolving place. Changes required to provide a more reliable water supply and restore the Delta's ecosystem will influence the kind of place the Delta becomes. At the same time, the need to protect the Delta's land uses and people will shape decisions about water supply and ecosystem restoration. Progress toward implementing the Delta Plan's five core strategies to protect and enhance the Delta as a place is summarized below. Select performance measures (PMs) are highlighted here. Details for all measures are included in the attachments.

- **Designate the Delta as a Special Place** – Gaining national recognition for the Delta's unique cultural, recreational, natural resource, and agricultural values can increase the likelihood of its protection and enhancement. Therefore, the Delta Plan recommends designation of the Delta as a National Heritage Area.

- ✓ PM: Congress designates the Delta and Suisun Marsh as a National Heritage Area (NHA) by January 1, 2014. The Delta Protection Commission (DPC) completed an NHA feasibility study that was endorsed by numerous partners. Legislation has been introduced to both houses of Congress during the last two sessions, but the designation has not yet been achieved.

Despite the delay in the NHA's designation, the DPC is pursuing actions to raise the profile of the Delta's heritage resources by working with the University of the Pacific on a Delta Narratives initiative to plan museum exhibits highlighting the Delta's history and culture.

- **Plan to Protect the Delta's Lands and Communities** – Poorly sited or designed projects can detract from the Delta's distinctive character, including its primarily rural, agricultural landscape. By limiting significant new development to areas currently designated for development, the Delta Plan fosters a land use pattern that protects agriculture and open space while reducing flood risks to people and property. The Delta Plan also calls for planning to enhance Delta communities and provide adequate infrastructure, as well as minimizing the impacts of major new water and ecosystem projects on Delta communities.



- ✓ PM: Prepare plans for each Delta community. The grassroots nonprofit RioVision formed in 2012, developed a plan in 2013 to revitalize Rio Vista and completed a downtown makeover in 2015. Yolo County is leading community planning in Clarksburg, and the DPC will initiate planning in Courtland and Walnut Grove in late 2015. No plans have been developed yet for the communities of Bethel Island, Freeport, Hood, Isleton, Knightsen, Locke, or Ryde.
- ✓ PM: Develop plans for infrastructure to meet development needs. Regional planning agencies are planning infrastructure investments to meet local needs. For example, the Sacramento Area Council of Governments has completed a Rural-Urban Connections Strategy (RUCS), covering Sacramento and Yolo Counties. This helps to determine rural transportation and other infrastructure needs, such as investment in farm-to-market roads. RUCS planning may be expanded to the other three Delta counties in the future.
- ✓ PM: Minimize water and habitat project impacts on local land uses. The Council's regulations require project proponents to minimize water and habitat project impacts on local land uses. The two projects that have certified consistency with the Delta Plan to date have complied with this policy. Additionally, agency staff and stakeholders in the Yolo Bypass are jointly investigating restoration alternatives in terms of their impacts on agriculture, waterfowl and water quality, as well as their benefits to fisheries and flood protection. This effort presents an opportunity for demonstrating effective use of stakeholder input in developing a restoration program that achieves its ecological goals and minimizes adverse economic impacts while maintaining flood protection benefits.
- ✓ PM: DWR and others increase the extent of their subsidence reversal and carbon sequestration projects to 5000 acres by January 1, 2017. DWR's subsidence reversal projects now total 2,325 acres, as of June 2015. Additional projects scheduled for completion by 2017 total 7,925 acres, which exceeds the Delta Plan target. (See Attachment 1 for full reporting details.)
- ✓ PM: No further rural farmland in the Delta is lost to urban development. The Council will be working with the Department of Conservation's Farmland Mapping and Monitoring Program to track this PM. (See Attachment 1 for full reporting details). No significant conversions of rural farmland to urban uses have occurred since the Delta Plan's adoption.

As described above, several planning efforts are supporting community revitalization and infrastructure investment in the Delta. The Council has been successful in ensuring that new development is sited within areas already designated for development in the Delta Plan, and that water and habitat projects minimize their impacts on local communities. DWR's subsidence reversal efforts are on track to meet the Delta Plan's acreage target. Any farmland loss acreage will be reported in the future as data becomes available.

- **Maintain Delta Agriculture** – Agriculture in some parts of the Delta is threatened by urbanization, subsidence, market competition and shifting consumer preferences.

The Delta Plan calls for supporting Delta agriculture by promoting value-added crop processing, agritourism, and wildlife-friendly farming.

- ✓ PM: Local governments take steps to support growth in agritourism. Agritourism is being promoted through the DPC and Delta Conservancy's joint Delta Branding and Marketing Project.

A variety of other efforts are underway to promote agricultural sustainability in the Delta. For example, Solano, Yolo, and Sacramento Counties are updating their general plans to meet local agricultural needs.

- **Encourage Recreation and Tourism** – Recreation opportunities in the Delta are plentiful, but many have not been fully developed. The Delta Plan calls for enhancing recreation and tourism through direct state actions and partnerships with local agencies and the private sector.

- ✓ PM: Recreation facilities are included in new ecosystem restoration projects. Recreation is planned as part of several restoration projects. For example, McCormack-Williamson Tract and Overlook Club in Suisun Marsh will be open to boaters, and Dutch Slough will have a community park operated by the City of Oakley.

A variety of other efforts are underway to encourage recreation and tourism in the Delta. An example of a project that is already completed, is East Bay parks. This included development of the Big Break Visitor Center as a model 'gateway' facility.

- **Sustain a Vital Delta Economy** – Economic opportunities in the Delta, such as port and energy uses, could suffer if unplanned development, flooding, or other land uses interfere with them. The Delta Plan calls for supporting the ports and planning for Delta energy facilities.

- ✓ PM: The California Energy Commission and California Public Utilities Commission (CPUC) cooperate with the Council to identify actions that should be part of Delta Plan. Staff has developed a work plan for this effort.

Flood risks to energy infrastructure are being addressed through the Council's Delta Levee Investment Strategy.

- **Proposed Refinements and Additional Performance Measures to be Considered** – Staff have evaluated the suite of performance measures supporting this chapter and the linkages with other current efforts underway in other partner agencies. From this evaluation, staff have recommended future performance measure refinements to be considered (see Attachment 2 for detailed descriptions):

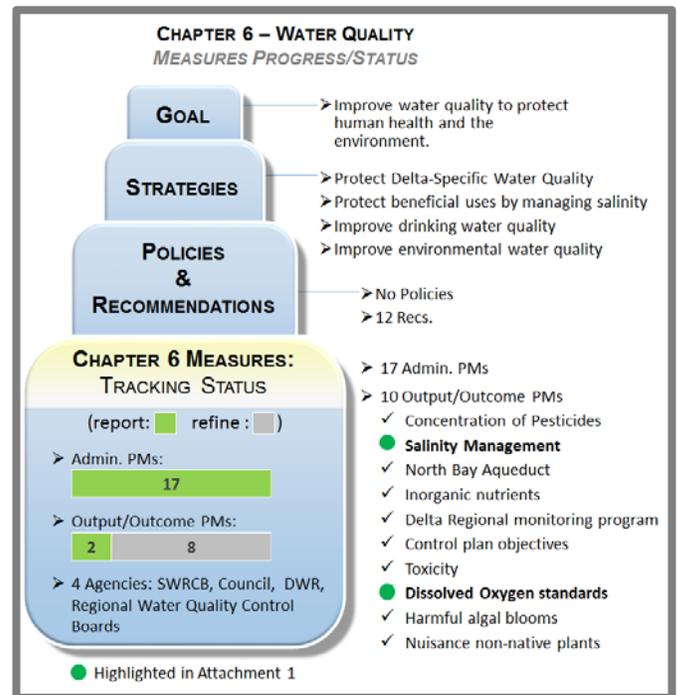
- ✓ Invasive aquatic plants: Measures here can help track the economic impact to Delta communities.
- ✓ Delta-wide agriculture: New measures should be considered to track broader trends in agriculture throughout the Delta, including value-added crops, agritourism, and wildlife friendly farming.

- ✓ Delta-wide economic vitality: Additional measures should be considered to more fully track broader trends in economic vitality. For example, coordinating with the DPC as they update their Economic Sustainability Plan.

## Improve Water Quality to Protect Human Health and the Environment

Water quality is fundamental to achieving the coequal goals of providing a reliable water supply as well as enhancing and restoring the Delta ecosystem. Water quality in the Delta has been negatively impacted over a long time period by an array of factors. This includes, but is not limited to: urban runoff, excessive amounts of nutrients and/or pesticides, seawater intrusion from the Bay, or salts from in-Delta agriculture drainage through the use of chemicals. Progress towards implementing the Delta Plan’s four core strategies to improve water quality to protect human health and the environment are summarized below. Selected performance measure (PMs) are highlighted here. Details for all measure are included in the attachments.

- **Require Delta-Specific Water Quality Protection** – As both a source of drinking water for communities, as well as critical habitat for many special-status species, water quality management actions in the Delta require proactive and anticipatory measures beyond the standards developed for general statewide application. Best available science indicates that urban stormwater, treated wastewater, agricultural drainage, and drainage from managed wetlands are impacting water quality in the Delta, and should be a focus for Delta-specific strategies and actions.



- ✓ PM: Harmful algal blooms (HABs) will lessen in the Delta over the next decade. The Delta Regional Monitoring Program and Bay Regional Monitoring Program have begun researching indicators. Additionally, HABs have been included in the Delta Nutrient Research Plan and monitoring and control of HABs has become a statewide effort.

Based on the existing Delta Plan performance measures, there has been some progress in acquiring stronger data sets for specific constituents of concern, but overall progress is limited by the lack of objectives, data, and measurement standards. Several programs and plans are currently developing and reviewing key indicators (e.g. Delta Strategic Plan) that could aid in moving these efforts forward.

- **Protect Beneficial Uses by Managing Salinity** – Salinity is a natural, essential characteristic of the Delta estuary, providing the basis for its unique habitat. Historical changes in natural flows due to diversions and dam construction have severely altered the natural flows that influence salinity, impacting native fish, associated wetland habitats and human uses for drinking and agriculture. To maintain stable freshwater conditions year-round, a consequent suppression of natural salinity levels is required. The Delta Plan recognizes that achieving the coequal goals will require balancing ecosystem and water supply needs with respect to salinity management, as well as updating comprehensive flow objectives and water quality control programs. The recent drought, as well as climatic changes, has added urgency and difficulty to this balancing act, with focus on management actions and their impacts.

- ✓ *PM: Salinity Trends.* Tracking of salinity data in the Delta has been effective (e.g., current, reliable, and frequent data at multiple sites), and reporting on salinity (e.g. data visualizations, public access to data, etc.) is improving at a rapid pace. (See Attachment 1 for full reporting details.)

It is becoming increasingly difficult during the drought to meet salinity standards in the Delta, without relaxing regulatory thresholds and/or implementing “emergency” measures. As a result, this measure may become a benchmark for tracking challenges in regulatory decisions and actions related to salinity management.

- **Improve Drinking Water Quality** – Many Californians rely on the Delta for drinking water, however in light of the current drought, that water quality supply may be uncertain in the near term. In locations where Delta water is diverted for municipal use, the water may at times contain relatively high levels of bromide, organic carbon, nutrients, and salinity. Additionally, pathogens, bacteria, and viruses may also be present in Delta waters and can be a disease risk for drinking water.

- ✓ *PM: DWR begins constructing the North Bay Aqueduct Alternate Intake Project (NBAAIP) as soon as possible after the environmental impact report is completed.* The project is intended to produce several important results, including reducing organic carbon loads, improving fisheries habitat, and decreasing the number of days that the aqueduct at this site needs to be shut down. Progress has been made towards construction of the NBAAIP, including initial field studies and modeling of hydrological and water quality impacts. However, the initial timeframe for planning was delayed by drought-related priority shifts. The draft Environmental Impact Report (EIR) is anticipated to be released soon.
- ✓ *PM: Adopt policies/regulations to require Delta water users to participate in CV-SALTS (Central Valley Salinity Alternatives for Long-term Sustainability).* The Central Valley Regional Water Quality Control Board (CVRWQCB) and Central Valley Salinity Coalition (CVSC), responsible for CV-SALTS are developing technical information regarding conceptual model development, data development, water quality objectives and more. They have completed their Strategic Salt Accumulation Land and Transportation Study (SSALTS) for their Phase 2 report, September 2014. According to staff, Phase 3 is near complete

and a decision to finalize is on hold until a companion document evaluating nitrate implementation options is complete, which is expected fall of 2015.

There has been much progress towards completing the NBAAIP, which is intended to improve water quality and to provide reliable deliveries of State Water Project (SWP) supplies to its contractors. Beyond the progress of SSALTS, CVSC and CVWRQCB have also made headway developing their Phase 2 Conceptual Model. This will support the preparation of the Salt/Nitrate Management Plan (SNMP) by including targeted refinements to the project database and salt and nitrate data analysis methods to support regulatory decisions. Additionally, the Phase 3 Conceptual Model is planned for initiation sometime this year and will focus on regulatory-related analyses and preparation of documentation to support adoption of the SNMP into the Basin Plan.

- **Improve Environmental Water Quality** – A variety of pollutants are discharged into the Delta from industrial and agriculture runoff and can create adverse conditions for native species and ecosystem processes. Pollutants of concern include nutrients, pesticides, mercury, selenium, and other toxic substances. Newly identified pollutants of potential concern (emerging contaminants) are also of concern and need to be investigated.
  - ✓ *PM: Progress toward meeting applicable DO standards in the Delta by 2020.* The Stockton Deep Water Ship Channel (SDWSC) TMDL standards, along with associated regulatory directives and actions, have produced significant progress in elevating DO levels in this area. Recent data indicates that management actions have succeeded in significantly improving DO levels at this site, complying with TMDL standards. (See Attachment 1 for full reporting details.)
  - ✓ *PM: Implement a Delta regional water quality monitoring program.* The initial draft design of the Delta Regional Monitoring Program was approved by the Delta Regional Monitoring Program Steering Committee, June 2015. A final monitoring design is planned to be released at the end of 2015. Due to budget constraints, initial monitoring will focus on three priority constituents: pathogens, nutrients, and pesticides. In addition, the Delta Independent Science Board (DISB) will review water monitoring programs throughout the Delta and discuss how water quality information is being used to inform management programs. The DISB has just released, for public review, a draft prospectus for this review.

The Central Valley Regional Water Quality Control Board has made some progress toward developing water quality standards, implementing monitoring programs, and meeting water quality control plan objectives. There are obstacles however that could affect future progress. For example, the aeration facility at the SDWSC is operated voluntarily and scheduled to close down in 2016. Despite progress made to collect water quality data (e.g. dissolved oxygen), some data will not be available for several years.

- **Proposed Refinements and Additional Performance Measures to be Considered** – Staff have evaluated the suite of performance measures supporting this chapter and the linkages with other current efforts underway in other partner

agencies. From this, refinement opportunities have been identified around overarching themes, including (see Attachment 2 for detailed descriptions):

- ✓ Adapting to changing constituents: Many of the constituents being assessed in the Delta are changing far more rapidly than regulatory cycles do. Measures need to take this into account and provide ways to accommodate changes. (e.g., updating pesticides lists, tracking “Contaminants of Emerging Concern”).
- ✓ Testing methodologies: In reducing measurable toxicity, a focus should be placed upon assessing and potentially refining current testing methods. Ideal water quality monitoring is accomplished through field testing and the performance measures should likewise align to these refined testing methods.

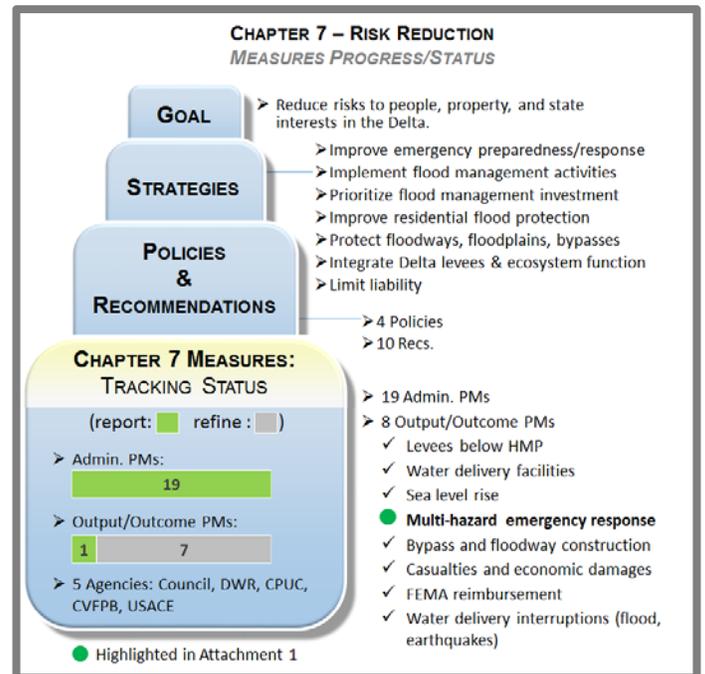
### Reduce Risk to People, Property, and State Interests in the Delta

The Delta is, by its nature, inherently floodprone. Floods in the Delta have wide impacts including harm to Delta residents, the statewide water supply system, the environment and other qualities that make the Delta unique and valuable. Fragile levees, subsiding farmland, and rising sea levels are also increasing the risk. There has been much attention paid to these issues, as evidenced by various interagency efforts such as the Council’s Delta Levees Investment Strategy and the Delta Working Group, an ad-hoc continuation of the Delta Multi-Hazard Coordination Task Force. These and other efforts summarized below are in direct support of specific Delta Plan strategies for reducing risks. Select performance measures (PMs) are highlighted here. Details for all measures are included in the attachments.

- **Improve emergency preparedness and response** – Levee failures and subsequent flooding place human life, property, and State interests in danger. Appropriate emergency preparedness and response planning is critical to mitigate these risks.

- ✓ PM: Implementation of Delta Multi-Hazard Task Force Recommendations. Implementation of the Task Force recommendations is well underway. All the responsible agencies at the State, local, and federal levels have made significant accomplishments towards the goals of improving the quality and effectiveness of emergency response and maintaining a level of readiness for identified threats within their current capabilities. (See Attachment 1 for full reporting details.)

While progress has been made, the Council may need to work with the California Governor’s Office of Emergency Services (Cal OES) and other agencies to highlight



funding issues and elevate the visibility of emergency planning and preparedness efforts.

- **Finance and implement flood management activities** – No mechanism exists for ensuring that costs of levee maintenance are borne by all beneficiaries. The Delta Plan calls for creation of a Delta Flood Risk Management Assessment District to centralize and coordinate financing of levee operations and maintenance and have authority to collect fees from all levee beneficiaries including infrastructure owners and water users who rely on the levees to protect water quality.
  - ✓ PM: Legislature creates a Delta Flood Risk Management District. The Delta Protection Commission awarded a contract in July 2015 to begin development of a feasibility study to assess district formation and implementation and identify Delta levee beneficiaries.

While progress has been made towards assessing the flood district's feasibility as described above, no progress has been made on other recommendations under this strategy such as calling for action by the California Public Utility Commission (CPUC) to hold hearings on imposing flood and disaster prevention fees or to direct regulated public utilities to protect public facilities.

- **Prioritize flood management investment** – A comprehensive method does not currently exist for prioritizing State investments in Delta levees. The Delta Plan calls for the development of a prioritization methodology which reflects a broad, long-term approach to public funding of levees.
  - ✓ PM: Delta Levees Investment Strategy (DLIS). The Council is leading a multi-agency effort to update priorities for State investments in the Delta levee system to reduce the risk of levee failures while advancing the coequal goals. The DLIS project combines economics, engineering, and decision-making techniques to identify state funding priorities and assemble a comprehensive investment strategy for the Delta levees. This project is expected to be completed in June 2016.
- **Improve residential flood protection** – Continued residential development without adequate flood protection increases risk to lives, property, and State interests in the Delta. The Delta Plan calls for increased levels of flood protection for any new residential development in rural areas of the Delta.
  - ✓ PM: Plan for sea level rise in new residential developments. New residential developments in rural areas not exempted by the Delta Plan will be tracked as covered actions. No covered actions to date have involved this recommendation.
- **Protect and expand floodways, floodplains, and bypasses** – The carrying capacity of the existing flood control system can be diminished by encroachments into floodways, floodplains, and bypasses. The Delta plan calls for protecting and expanding these flood control systems.
  - ✓ PM: Construct San Joaquin River bypass and floodway. This project is currently being considered as part of the Basin-Wide Feasibility Study of the 2017 Central Valley Flood Protection Plan and is far from approval and construction. Staff

suggests expanding the scope of this performance measure to multiple projects addressing the strategy to integrate flood management and ecosystem restoration purposes.

- ✓ PM: Covered actions that encroach upon a floodways or floodplains. No covered actions to date have been applicable to the encroachment policies of this core strategy.
- **Integrate Delta levees and ecosystem function** – Currently, agencies have no consistent method for determining the appropriateness of setback levee incorporation as they relate to habitat enhancement and flood control benefit. The Delta Plan calls for DWR to work with the Central Valley Flood Protection Board, the California Department of Fish and Wildlife, and the Delta Conservancy to develop setback levee criteria.
  - ✓ PM: Develop Setback Levee Criteria. The draft Conservation Strategy component of the 2017 update of the Central Valley Flood Protection Plan has identified and prioritized potential locations for setback levees and established a procedure to evaluate if setback levees are appropriate. Adoption of this plan by the Central Valley Flood Protection Board will complete this performance measure.
- **Limit liability** – The State has previously been exposed to significant financial liability for flood damages. The Delta Plan calls for limiting this liability by requiring flood insurance in floodprone areas.
  - ✓ PM: Emergency response and recovery costs are eligible for FEMA reimbursement. The Federal Emergency Management Agency's (FEMA's) public assistance memorandum of understanding (MOU) with Cal OES has been terminated and negotiations have not resulted in a new MOU. However, other federal reimbursement programs such as the United States Army Corps of Engineers (USACE's) Rehabilitation and Inspection Program may still be applicable in the Delta. Performance measures should be refined to track eligibility for all federal reimbursement programs rather than only for FEMA.

In addition to FEMA terminating its MOU, no progress has been made towards this strategy's other recommendations of state legislation requiring flood insurance of all floodprone Delta development and addressing the State's liability.

- **Proposed Refinements and Additional Performance Measures to be Considered** – Potential performance measures refinements are summarized as follows (see Attachment 2 for detailed descriptions):
  - ✓ Multi-Benefit Risk Reduction Efforts: Measures should be considered which track projects that benefit multiple goals.
  - ✓ Delta Levee Investment Strategy (DLIS): Completion of the DLIS project will result in changes to current Delta Plan provisions, including performance measures, related to risk reduction. Measures should be considered which track risk to state interests as determined through the DLIS.

- ✓ Climate Change: Staff recommend broadening the performance measure from “plan for sea level rise” to encompass the full range of potential impacts of climate change.
- ✓ Federal Participation: Refinements should be considered for tracking federal (not just FEMA) participation and addressing lack of participation in the Delta.

## Next Steps

Having identified performance measures (PM) requiring revisions, the next steps are to implement revision recommendations. Staff will largely focus on revisions to output/outcome measures in the near-term. As shown in this report, the extent of revision varies (from slight to significant) and implementation activities will need to address those variations. Types of revisions are generally around these main groups:

- **Group 1 – Some data is available and reporting is possible with slight PM revision:** The seven output/outcome PMs reported in this document belong to this group (Attachment 1). This reporting will be expanded to additional measures also having available data. A few examples of PMs in this group are as follows. More specific refinement recommendations are included in Attachment 3 – Delta Plan Performance Measures Catalog:
  - ✓ Progress towards Biological Opinions’ restoration targets: Staff recommends including estimated ‘FAST credits’ for projects, with tracking of and transfers to confirmed credits after project completion.
  - ✓ Levees below HMP: Because FEMA has terminated its MOU with CalOES and this standard is no longer appropriate, the Council is evaluating levels of risk through the Delta Levee Investment Strategy project and exploring appropriate options to reduce risks. Staff recommends revising this measure to reflect findings of the DLIS project.
- **Group 2 – Data is not yet available, however initial ‘baseline’ reporting is possible with some PM revision:** Council staff have collaborated with various other agencies/programs involved in Delta issues and performance tracking and this collaboration has proven extremely valuable in the development of this report. Staff recommend continuing and expanding this collaboration and data exchange as vital trend data is discussed in these forums and data becomes available. (Examples of collaboration opportunities are listed in the inset on the following page) Several PMs await key source data before reporting is possible. A few examples are:
  - ✓ Increase stormwater use: Trend data is expected with Urban Water Management Plan updates due July, 2016. This data will provide a baseline and staff recommend encouraging the SWRCB to collect data more frequently so that trends may be tracked.
  - ✓ Progress toward achieving "doubling goal" for wild CV salmonids: Staff recommends convening an expert group to select the appropriate metric(s) for this performance measure from the various means of measuring salmon populations currently utilized.

- ✓ Farmland loss: This performance measure is summarized in the Delta Plan as “No further rural farmland in the Delta is lost to urban development.” For purposes of consistency with the Delta Plan Policy DP P1, Council staff proposes a change to the original PM language to "No further Delta rural farmland loss to urban development in areas designated for agricultural use in Delta Plan regulations." DP P1 allows for additional farmland loss in areas designated for development according to city or county general plans. Data will be available in 2016.
- **Group 3 – Significant revision is needed:** A few examples of PMs in this group are:
  - ✓ Measurable reduction in reliance on the Delta: Staff recommends consulting with stakeholders and experts to identify specific metrics and available data to track reduced reliance on the Delta. Evaluation methods should be identified for reducing reliance on the Delta without relying on compliance with WR P1 (only required for suppliers undertaking covered actions). Staff also recommends continued collaboration with DWR in Delta reliance reporting and, specifically, including reliance reduction in future water management plans.
  - ✓ Progress toward occurrence and use of protected and restored habitat by native species: Staff recommend identifying and selecting indicator species, targets, and baseline for each restoration project. Monitoring needs to be done prior to restoration at each site to determine the baseline.
  - ✓ Include recreation facilities in ecosystem projects: Staff recommends linking this performance measure to Delta Plan recommendation DP R11 for a more appropriate alignment to both the Delta Plan recommendations and core strategy.
  - ✓ Protect/ enhance legacy community structures, economy and growth: Staff recommends revising metrics to match the elements of community plans. The Council should coordinate with the Delta Conservancy and DPC, as the DPC updates the Economic Sustainability Plan. Staff also recommends refining PM language so it is clearly linked to ongoing efforts assessing Delta vitality through Delta branding and marketing.

#### DELTA INTERAGENCY COLLABORATIVE EFFORTS

(representative sample)

##### ➤ **Collaborative Working Groups:**

- CA Water Quality Monitoring Council (CWQMC)
- CA Estuary Monitoring Workgroup (CEMW)
- CA Wetlands Monitoring Workgroup (CWMW)
- Data Management Group
- Healthy Streams Partnership
- San Francisco Estuary Partnership (SFEP)

##### ➤ **Planning and Data Resources:**

- CA EcoRestore
- CA WaterFix
- State of the Estuary Report (SotER)
- Bay Delta Water Quality Control Plan
- Delta Plan
- EcoAtlas
- Bay Delta Live
- Delta Landscapes Project
- Sac.-SJ Delta Historical Ecological Study
- CA Wetlands Portal (Wetland Tracker)
- Delta Regional Monitoring Program (Delta RMP)
- Comprehensive Conservation Mgt. Plan (CCMP)

##### ➤ **Other Multi-Agency Plans and Programs:**

- Fish Restoration Program Agreement (FRPA)
- Ecosystem Restoration Program (ERP)
- Central Valley Flood Protection Plan (CVFPP)
- Delta Land Use and Resource Management Plan
- CVRWQCB Water Quality Control Plan
- Delta Science Plan
- Interagency Ecological Program (IEP)
- Environmental Monitoring Program (EMP)
- Delta Vision

- **Group 4 – Additional PMs are recommended:** Initial considerations for additional PMs are described in Attachment 2 – Proposed Refinements and Additional Performance Measures to be Considered. The topic areas requiring additional PMs are as follows:
  - ✓ Water supply reliability – groundwater, recycled water, desalination, transfers, agricultural demand, refined ‘reliability’ measures.
  - ✓ Ecosystem restoration – more natural functional flows, habitat needs/types, ecological function and processes.
  - ✓ Delta as an evolving place – invasive aquatic plants, expanded agriculture/agritourism, expanded economic vitality.
  - ✓ Water quality – measures aligned to testing methods.
  - ✓ Risk reduction – measures aligned with Delta Levee Investment Strategy, disaster recovery programs fully evaluated.

With these revisions and additional measures in mind, staff will undertake the following steps for implementing recommendations over the coming months:

- Step 1. Meet with data owners (partner agencies/programs) and stakeholders to leverage other efforts and obtain additional available data for existing measures.
- Step 2. Clearly identify and fully specify each additional performance measure and begin collecting data.
- Step 3. Continue to provide regular reporting to the Council and stakeholders through a variety of means including developing public reporting tools such as an online ‘dashboard’. Messaging will be design to answer, for each goal and strategy, ‘Are we on track?’ Related questions include: Why is this performance measure important? How is progress tracked? What do the results tell us?
- Step 4. Return to the Council over the coming months with proposed Delta Plan amendments that both refine existing performance measures and recommend new performance measures.

### **List of Attachments**

Attachment 1: Output/Outcome Performance Measures Reporting Highlights  
Attachment 2: Proposed Refinements and Additional Performance Measures to be Considered  
Attachment 3: Delta Plan Performance Measures Catalog

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