

**DELTA STEWARDSHIP COUNCIL**  
**DELTA PLAN PERFORMANCE MEASURES**

Public Workshop: November 9, 2015

***Chapter 4 - Performance Measures***  
***Draft Refinement Recommendations***

# Delta Plan Performance Measures – Draft Staff Recommendations

## Chapter 4 - Goal: Protect, Restore, and Enhance the Delta Ecosystem

### Strategies:

1. Create More Natural Functional Flows
2. Restore Habitat
3. Improve Water Quality To Protect The Ecosystem
4. Prevent Introduction Of And Manage Nonnative Species Impacts
5. Improve Hatcheries & Harvest Management

Ref. #	Type	Policy or Rec.	Short Title	Current Delta Plan Wording	Recommended Revised Wording or Classification (in bold)
<b>Strategy 1: Create More Natural Functional Flows</b>					
4.28	Output	ER R1	Adopt Delta Flow Objectives	The SWRCB adopts Delta flow objectives by June 2, 2014.	<b>Administrative Performance Measure:</b> The SWRCB adopts Delta flow objectives by June 2, 2014.
4.31	Outcome	ER R1	Measured progress towards restoring in-Delta flows	Progress toward restoring in-Delta flows to more natural functional flow patterns to support a healthy estuary. Metrics: results from hydrological monitoring and hydrodynamic modeling.	Progress toward restoring in-Delta flows to more natural functional flow patterns to support a <b>healthier</b> estuary.  <b>Metric: As the SWRCB adopts flow objectives, staff will utilize the Ecological Limits of Hydrologic Alteration (ELOHA) framework and the Indicators of Hydrologic Alteration (IHA) tools, and identify aspects of flow regime that support key ecosystem functions and ecological processes.</b>
4.33	Output	ER R1	Adopt flow objectives for major tributaries by 2018	The SWRCB adopts flow objectives for the major tributaries by 2018 (or as soon as reasonably possible).	<b>Administrative Performance Measure:</b> The SWRCB adopts flow objectives for the major tributaries by 2018 (or as soon as reasonably possible).
<b>Strategy 2: Restore Habitat</b>					
4.27	Output	ER R2	Number of acres of habitat restored	Pilot scale Delta habitat restoration projects are developed and initiated in the priority areas described in ER R2 by 2015. These projects include tidal brackish and freshwater marsh as well as floodplain restoration, and have clear adaptive management plans aimed at improving outcomes and providing lessons for the development of large-scale restoration projects. Metrics: acres restored by habitat type, and lessons learned.	<b>Delta habitat projects are constructed including the following types: floodplain, tidal and subtidal, emergent wetland, shaded riverine aquatic and upland and riparian forest habitats. Tidal wetland and floodplain restoration projects should occur in the priority habitat restoration areas described in ER R2.</b>  <b>Metric: Number of acres of restoration projects constructed by habitat type, including progress toward the biological opinions' targets of restoring 8,000 acres of tidal wetland and 17,000-20,000 acres of floodplain habitat.</b>

Ref. #	Type	Policy or Rec.	Short Title	Current Delta Plan Wording	Recommended Revised Wording or Classification (in bold)
4.30	Outcome	ER R2	Progress toward achieving "doubling goal" for wild CV salmon	Progress toward achieving the State and federal "doubling goal" for wild Central Valley salmonids relative to 1995 levels. Trends will be derived from long-term salmonids monitoring surveys conducted by the National Marine Fisheries Service, US Fish and Wildlife Service, and others.	Progress toward achieving the State and federal "doubling goal" for wild Central Valley <b>salmon</b> relative to 1995 levels. Trends will be derived from long-term <b>salmon</b> monitoring surveys conducted by the National Marine Fisheries Service, US Fish and Wildlife Service, and others.  <b>Metric: Number of naturally spawned wild adult salmon by run type, annually censused at American River, Feather River, Mokelumne River, and Sacramento River mainstem.</b>
4.32	Outcome	ER R2	Progress toward occurrence & use of protected & restored habitat by native spp.	Progress toward the documented occurrence and use of protected and restored habitats and migratory corridors by native resident and migratory Delta species. Trends in occurrence, use, and performance of native species in protected and restored habitats and corridors will be upward over the next decade. These trends will be derived from animal and plant monitoring surveys that are conducted as part of adaptive management strategies for the protection and restoration of these areas.	Progress toward the documented occurrence <b>in</b> and use of protected and restored habitats and migratory corridors by native resident and migratory Delta <b>fish and bird</b> species. Trends in <b>the number</b> of native species in protected and restored habitats and corridors will be upward over the next decade. These trends will be derived <b>from monitoring</b> surveys that are conducted as part of adaptive management strategies for the protection and restoration of these areas.  <b>Metrics:</b> <ul style="list-style-type: none"> <li>• <b>Native Fish:</b> <ul style="list-style-type: none"> <li>○ <b>Presence and abundance of native fish in restoration project sites.</b></li> </ul> </li> <li>• <b>Native Birds:</b> <ul style="list-style-type: none"> <li>○ <b>Counts of waterfowl in the Delta.</b></li> </ul> </li> </ul>

### Strategy 3: Improve Water Quality To Protect The Ecosystem

Delta Plan Performance Measures are addressed in Chapter 6 – Water Quality.

### Strategy 4: Prevent Introduction Of And Manage Nonnative Species Impacts

4.34	Output	ER R7	Implement DFW (2011) list of "Stage 2 Actions for Non-native Invasive Species"	The DFW and other appropriate agencies fully implement the list of "Stage 2 Actions for Nonnative Invasive Species."	<b>Administrative Performance Measure:</b>  The DFW and other appropriate agencies fully implement <b>the 2014 ERP "Conservation Strategy" list for Strategic Goal 5.</b>
4.35	Outcome	ER P5	Progress towards decreasing trends in new/existing nonnative invasive spp., and abundance/ distribution of existing nonnative invasive spp.	Progress toward decreasing annual trends in both the number of new and existing aquatic and terrestrial nonnative species, and the abundance and distribution of existing aquatic and terrestrial nonnative species in the Delta over the next decade. These trends will be derived from long-term animal and plant monitoring surveys conducted by the Interagency Ecological Program agencies, the California Department of Boating and Waterways, the U.S. Department of Agriculture, the San Francisco Estuary Institute, and others.	Progress toward decreasing annual trends, the number of new aquatic and terrestrial <b>invasive nonnative</b> species, and the abundance and distribution of existing aquatic and terrestrial <b>invasive nonnative</b> species in the Delta over the next decade. These trends will be derived from long-term animal and plant monitoring surveys conducted by the Interagency Ecological Program agencies, the California Department of Boating and Waterways, the U.S. Department of Agriculture, the San Francisco Estuary Institute, and others.  <b>Metrics:</b> <ul style="list-style-type: none"> <li>• <b>Fish:</b> <ul style="list-style-type: none"> <li>○ <b>Percentage of individual native fish vs. percentage of</b></li> </ul> </li> </ul>

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					<p>individual nonnative fish.</p> <ul style="list-style-type: none"> <li>• <b>Vegetation:</b> <ul style="list-style-type: none"> <li>○ Number of newly identified invasive nonnative plant species reported.</li> <li>○ Coverage in acres of invasive nonnative plant species (e.g. Arundo donax and Phragmites australis).</li> </ul> </li> </ul> <p>* Established invasive nonnative aquatic plants will be reported on in Chapter 6.</p>
<b>Strategy 5: Improve Hatcheries &amp; Harvest Management</b>					
4.36	Output	ER R9	Percent of hatchery fish that are marked and tagged	N/A: New measure	<p><b>Percentage of hatchery fish that are marked and tagged.</b></p> <p><b>Metric: Reaching a 100% marked and tagged as reported by NMFS and CDFW.</b></p>