

Refinements to Delta Plan Performance Measures

Summary: The 2013 Delta Plan contained performance measures, as required by the Delta Reform Act of 2009. The Delta Plan stated, however, that the Council would refine the initial performance measures through a multi-year, stakeholder-inclusive effort with special emphasis on “outcome” and “output” measures. The refinement effort—based on best available science and informed by input from stakeholders and the Delta Independent Science Board’s (Delta ISB’s) review of the performance measure refinement process—is now complete. The package of proposed refinements is recommended by staff for adoption by the Council as a formal amendment to the Delta Plan.

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 “measurable 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 (159 total) organized by Delta Plan goal and strategy. Measures are in three types: 1) administrative performance measures (118) used to track various actions recommended by the Delta Plan; 2) output performance measures (21) used to track results of administrative actions; and 3) outcome measures (20) included for tracking the impacts of those actions.

As stated in the Delta Plan, the initial set of performance measures were to be expanded and refined after adoption of the Delta Plan and considered for inclusion in subsequent updates of the Delta Plan.

Performance Measures Defined

To better facilitate understanding and discussion of the staff’s recommended refinements to the Delta Plan’s performance measures it is important to understand what is meant by a “performance measure”. The Delta Plan defines a “performance measure” as:

“A quantitative or qualitative tool to assess progress toward an outcome or goal. The Delta Plan must include performance measurements that will enable the Delta Stewardship Council to track progress in meeting the objectives of the Plan. Performance measures must include, but need not be limited to, quantitative or otherwise measurable assessments of the status and trends in all of the following:

- (1) *The health of the Delta estuary and wetland ecosystem for supporting viable populations of aquatic and terrestrial species, habitats, and processes, including viable populations of Delta fisheries and other aquatic organisms.*
- (2) *The reliability of California water supply imported from the Sacramento River or the San Joaquin River watershed.” (Delta Plan p. 314)*

The use of metrics in comparing trends against baseline and targets reveals progress or lack of progress, and is critical to the effectiveness of a performance measure. Developing metrics is dependent, in part, on available data and information as well as, current policy decisions or regulatory requirements. The proposed measures, including their metrics, baselines and targets, were also designed using the best available scientific information, where applicable.

Staff does not expect that these performance measures will require frequent change, because their value is in long-term evaluation of data. However, in response to the Council's input regarding the potential need for a metric to change in response to new data sources or technological advances,¹ staff proposes that the Council approve the proposed performance measures with the flexibility for staff to make non-substantive changes to the metric portions of the performance measures. Staff proposes that such alterations would result in metrics that are functionally equivalent or better than the existing metrics. Any substantive alterations to metrics would be brought to the Council for review and approval.

Council's Commitment to Performance Measures

This importance of tracking and reporting on performance was recognized by the Legislature with the Delta Reform Act requiring that *“the Delta Plan shall include performance measurements that will enable the council to track progress in meeting the objectives of the Delta Plan.”* (Water Code section 85211.) Performance measure tracking and analysis allow the Council to adaptively manage the Delta Plan, as called for in the Delta Reform Act.

Neither the Delta Reform Act nor the Delta Plan define or require any specific actions to be taken if performance objectives are not achieved. The Council may take any action it chooses in response to knowledge gained from performance reports. Changing the Delta Plan through modifying existing or adding new policies and recommendations would be the ultimate action the Council could take, making full use of its authority, as provided in Water Code section 85300(c), to address lack of progress in key areas highlighted by performance measures. However, there are many other possible actions that the Council could consider before doing something as significant as changing the Delta Plan. Below is

¹ For example, advances in remote sensing technology could allow performance measures to be tracked at finer spatial or temporal scales than the current methods of measurement would allow. This could apply to several performance measures such as tracking harmful algal blooms through satellite imagery or gravimetrically tracking changes in groundwater storage.

an example of a series of actions that could result from failure to achieve performance targets.

1. Information about insufficient progress is brought to light publicly through performance measure reporting, e.g., in the Council's annual report.
2. Agency to agency outreach, led by the chairperson or executive officer, is undertaken to encourage action.
3. Council staff works with implementing agency(ies) to address lack of progress through meetings, workshops, comment letters, etc.
4. Council staff requests assistance from the Delta Plan Interagency Implementation Committee to bring agencies together to overcome barriers to progress.
5. Council convenes a hearing on the inaction, using the authorities provided by Water Code section 85210(k).

If these actions were determined to be inadequate, the Council could amend the Delta Plan, including enacting new regulatory policies to address issues where the plan's recommendations have proven inadequate to spur action.

Refining the Plan's Performance Measures

Since adoption of the Delta Plan in May 2013, the Council has made significant progress in assessing and refining the full set of Delta performance measures (i.e., administrative, output and outcome performance measures) and initiating performance reporting, as described in the January 2016 staff report (<http://deltacouncil.ca.gov/docs/delta-stewardship-council-january-28-2016-meeting-agenda-item-10-delta-plan-performance>). Extensive engagement with subject matter experts and the public has been conducted as part of refining existing output and outcome measures and developing new measures. Examples of these activities include:

- Internal Subject Matter Expert Review – Following the staff assessment of the full suite of performance measure that was presented to the Council in August 2015, proposed refinements to the output and outcome performance measures underwent iterative reviews and refinement, through a series of internal meetings with planning and science staff. These meetings resulted in further refinements of the existing Delta Plan performance measures, including improved metrics for some measures and identification of baselines and targets for the majority of existing measures.
- External Subject Matter Expert Review and Online Survey – In October 2015, proposed refinements to the performance measures were provided to a select subset of 65 external subject matter experts representing state, local and federal agencies and stakeholders who were invited to review and comment on them. These interactions included meetings, conference calls, and the use of an online survey, which had a response rate of 52 percent, to solicit input on individual output and outcome measures.

- Public Comment Periods and Workshop – A revised draft of the proposed refinements to the performance measures was then made available online for public comment from November 5-19, 2015. During this time, a public workshop was held on November 9 to review the draft and to solicit input from stakeholders and the public. Public comment was provided in writing primarily through the use of the online survey. Immediately following the December 2015 Council meeting, a second public comment period ran from December 21 to January 22.
- Science Consultation – Refinements to the Delta Plan's performance measures were developed in coordination with or reviewed by the Delta Lead Scientist and Delta Science Program staff to ensure appropriate metrics and the incorporation of best available science and information.
- Delta Independent Science Board Review – Staff briefed the Delta ISB on the methodology and process used to refine existing performance measures and develop new ones and requested an independent review of this methodology. The Delta ISB agreed to conduct the review and following the December Council meeting, staff provided the Delta ISB with a full description of the methodology. Staff response to the Delta ISB's letter is discussed below.

Staff Response to Delta ISB Letter

In its review (Attachment 4), the Delta ISB was very supportive of Council staff's approach to refining the Delta Plan performance measures. The Delta ISB found:

- The process is thorough, i.e., the large and diverse set of performance measures can be expected to serve their intended purpose, as long as the data collection, analysis and reporting is suitably rigorous.
- The process builds on prior, well-documented efforts involving the use of similar performance measures.
- The process emphasizes learning, i.e., it has included using a pilot phase, vetting performance measures with regulatory agencies, and consulting with external experts, as well as Delta Science Program staff.
- The process lays the groundwork for future refinements that are expected to be needed as the Delta Plan is amended.

The Delta ISB had six minor suggested improvements to the performance measure refinement process, but said their concerns were less with the proposed process than its implementation. Staff's responses are provided in italics following each Delta ISB suggestion.

1. Explain more fully the criteria for selecting and assessing the metrics, and document how the criteria were applied in the selection of each metric. *Staff began with the performance measures provided in the Delta Plan, and evaluated the extent to which they aligned with the Delta Plan's goals and strategies. Staff went through a multi-step process to assess the following:*

*Step 1) **Is the performance measure useful in evaluating a Delta Plan strategy?** If so, the performance measure was retained, with minimal refinement. If not, the measure was significantly refined or removed.*

*Step 2) **Is every Delta Plan strategy evaluated by a performance measure?** If not, new measures were developed to provide adequate coverage for all of the strategies.*

In cases where new performance measures were needed, conceptual relevance of the performance measure was the primary criterion used to guide selection. In addition, staff conducted research to identify and confirm data sources and partners to assist in future data collection, analysis and interpretation. Current and expected future data availability, as well as scalability and responsiveness to management actions, were factors in the selection of metrics. Staff has documented all of the comments received and the reasoning supporting changes to performance measures for internal project management purposes.

2. Aim for metrics that are stable and consistent. *Staff agrees with the suggestion to aim for metrics that are stable and consistent, but, as mentioned above, has asked the Council for flexibility to make non-substantive changes to the metric portions of the performance measures in response to new data sources or technological advances. Staff proposes that such alterations would result in metrics that are functionally equivalent or better than the existing metrics.*

3. Say more about the reviews from subject experts. *The 65 subject experts surveyed from October 28 to November 19, 2015 were selected based on staff research and recommendations from other experts. The survey had a 52% response rate. The survey was then opened to the general public for additional input. In addition, staff held a public workshop on November 9, 2015 that was attended by 34 people, including 17 in person and 17 remotely via internet. The input from the survey and workshop was used to refine the performance measures in order to prepare the draft that was presented to the Council and the public at the December 2015 Council meeting. Staff received significant additional public comment on the December 2015 draft, during the public comment period which ran from December 17, 2015 to January 22, 2016. All comment letters were posted to the Council's website, providing documentation of the wide range of opinion regarding the performance measures. Highlights of public comments and staff responses are summarized below. In addition, Delta ISB review of the process for developing performance measures took place from December 2015 to February 2016.*

4. Clarify the status of the metrics. *The performance measures, along with their metrics, baselines, and targets, are included in Attachment 1. They have been refined in response to input from the Council's Lead Scientist and other Science Program staff, Council input, and public comments. They are now ready for adoption by the Council.*

5. Obtain independent review of draft updates and refinements before implementation. *In light of the significant stakeholder, expert, and extensive public comment process (including a public workshop and two public Council meetings), staff*

recommends the attached new and refined performances measures as ready for adoption and implementation. Staff further recommends that additional independent review be conducted during the implementation phase, as described below.

6. Similarly, obtain independent review of the performance appraisal results and reporting. *Staff welcomes independent review of the performance appraisal results and reporting.*

The Delta ISB also provided thoughts regarding the next steps leading to reporting on the performance measures, including data collection, analysis and interpretation. The Delta ISB advised:

- Use caution in attributing outcomes, such as the recovery of species, to outputs, such as acres restored. Be aware of external factors, such as drought and invasive species that may overshadow the proposed causal relationship.
- Be aware that ecological response may not occur until a crucial threshold is reached, e.g., species may not respond until a significant amount of habitat is restored.
- When determining the appropriate spatial scale for measurement, consider the scales on which different components of the system are operating, as well as the scales of management and decision-making.
- Carefully design statistical analyses so that performances measures can be used to determine whether a change in a metric really indicates significant progress toward the goal or strategy being evaluated.
- Use the insights gained from performance reporting to inform policy and management.

Staff intends to follow these suggestions by working closely with the Lead Scientist and Delta Science Program staff to ensure that appropriate methods of data analysis and interpretation are used. Insights gained from performance reporting will be used to inform Delta Plan amendments, as well as future updates to the Delta Plan required by the Delta Reform Act (Water Code section 85300(c)). As mentioned above, we welcome independent review of the performance measures during the appraisal results and reporting phase.

Summary of Proposed Performance Measures

Starting with the 41 output and outcome performance measures in the current Delta Plan, staff used the process described above to arrive at the 37 performance measures, including metrics, baselines and targets, now proposed for adoption. Twenty-five of the performance measures underwent significant refinement, while four remained unchanged, except for the addition of metrics, baselines and targets. Eight new performance measures were developed to address gaps in tracking progress toward achieving the Delta Plan's goals and strategies. Four measures were reclassified as administrative performance measures and another eight were removed or combined with other measures. (Please see below for a complete list of changes made; explanations of why certain performance measures were removed can be found in Attachment 2).

Changes to Performance Measures (PMs) by Reference Number

25 PMs were significantly refined

Chapter 3. A More Reliable Water Supply:

- 3.1, 3.2, 3.4, 3.9

Chapter 4. Protect, Restore and Enhance the Delta Ecosystem:

- 4.2, 4.4, 4.6, 4.7, 4.10

Chapter 5. Protect and Enhance the Delta's Unique Values:

- 5.3, 5.4, 5.5, 5.6, 5.9

Chapter 6. Improve Water Quality:

- 6.1, 6.5, 6.7, 6.8, 6.9, 6.10, 6.11

Chapter 7. Reduce Risks to People, Property, and State Interests:

- 7.1, 7.3, 7.5, 7.7

4 PMs stayed the same as the current Delta Plan version, except for the addition of metrics, baselines and targets

Chapter 5. Protect and Enhance the Delta's Unique Values:

- 5.2

Chapter 6. Improve Water Quality:

- 6.3

Chapter 7. Reduce Risks to People, Property, and State Interests:

- 7.2, 7.6

8 PMs are new

Chapter 3. A More Reliable Water Supply:

- 3.6, 3.8

Chapter 4. Protect, Restore and Enhance the Delta Ecosystem:

- 4.8, 4.11

Chapter 5. Protect and Enhance the Delta's Unique Values:

- 5.7, 5.8

Chapter 6. Improve Water Quality:

- 6.2, 6.4

4 PMs were reclassified from output or outcome to administrative

Chapter 3. A More Reliable Water Supply:

- 3.7

Chapter 4. Protect, Restore and Enhance the Delta Ecosystem:

- 4.9

Chapter 5. Protect and Enhance the Delta's Unique Values:

- 5.1

Chapter 6. Improve Water Quality:

- 6.6

8 PMs were removed or combined with other measures

Chapter 3. A More Reliable Water Supply:

- 3.3, 3.5, 3.10

Chapter 4. Protect, Restore and Enhance the Delta Ecosystem:

- 4.1, 4.3, 4.5

Chapter 7. Reduce Risks to People, Property, and State Interests:

- 7.4, 7.8

Attachment 2 of the staff report is a redline version of the proposed performance measures comparing staff's proposed performance measures against the version presented at the Council's Jan. 28, 2016 meeting. Changes made reflect comments received from Councilmembers, the Delta ISB, administrative agencies, stakeholders, and the public at large.

Public Comment Highlights

From December 21 through January 22, the Council held a second public comment period on proposed performance measures. Comments received as part of this second public comment period were provided at the Council's January 28 meeting and have been incorporated, as appropriate, and will be presented at this February Council meeting.

Chapter 3 – Water Reliability

The majority of comments in Chapter 3 were focused around the following two performance measures.

- 3.4 – Reduction in reliance on the Delta: Some commenters disagreed with the basic definition of achieving reduced reliance set forth in the Delta Plan as a significant reduction in the amount of water used or in the percentage of water used from the Delta watershed. Staff sees this as a policy disagreement and believes this performance measure is a valid way of tracking the outcomes intended by the Delta Plan.
- 3.9 – Export reliability: Commenters suggested different performance measures using exceedance curves from the Department of Water Resources Delivery Reliability Report. This idea may be revisited as the new conveyance and storage principles move forward and the Delta Plan is amended. The current measure reflects the Council's current recommendations.

Chapter 4 – Ecosystem Restoration

Two performance measures were picked to highlight some of the comments Chapter 4 received.

- 4.2 Flows: Because of Council, stakeholder and public comment feedback regarding the geography and further analysis of flows, the flows performance measures have been consolidated from three separate performance measures into one comprehensive measure. Namely, the spring pulse flow and recession flows measures have been incorporated as a component of the measure regarding restoring in-Delta flows.
- 4.6 Progress toward “doubling goal” for wild salmon: Commenters suggest that the baseline is unclear and an average of years might be considered. Staff responded by clarifying the baseline language to include “average levels during the period of 1967-1991.”

Chapter 5 – Delta as a Place

Chapter 5 received many comments. Two highlights include:

- 5.3 No further farmland loss: Commenters pointed out that subsidence reversal and carbon sequestration projects are not included in measuring areas of farmland loss. In response, staff notes that subsidence reversal and carbon sequestration projects were, and continue to be, proposed to be tracked under a different performance measure (reference number 5.2) in Chapter 5.
- 5.6 Include recreation facilities in ecosystem restoration projects: Commenters suggested a more realistic target for the percentage of new ecosystem restoration projects that include recreation facilities, rather than the proposed target of 100%. Since Delta Plan Recommendation DP R11 acknowledges that including recreation facilities is not always feasible, staff now proposes to track the trend in the percentage of new ecosystem restoration projects that include recreation facilities. Tracking the trend over time will establish a basis for setting a reasonable target in future Delta Plan updates.

Chapter 6 – Water Quality

Chapter 6 performance measures received comments on a select few measures.

Highlights include:

- 6.5 Meeting dissolved oxygen (DO) standards: The Central Valley Regional Water Quality Control Board commented that the target value that Council staff initially proposed was misleading. Board staff explained that the DO standard of 6 mg/L from September 1 – November 30 applies only to the San Joaquin River; the DO standard of 5 mg/L applies everywhere else in the Delta. Staff responded by applying the appropriate language change to the target.
- 6.7 Concentration of pesticides: Commenters recommended that pyrethroids not include numeric targets because the Central Valley Regional Water Quality Control Board is in the processes of determining the appropriate regulatory approach for establishing numeric targets. In response staff removed any numeric targets under pyrethroids component of this performance measure and replaced the language with broader wording until pyrethroid TMDLs are more fully assessed and targets can be established.

Chapter 7 – Risk Reduction

The following two performance measures highlight some of the comments received for Chapter 7.

- 7.2 – Casualties and economic damages: Commenters pointed out that few if any lives have been lost in the history of Delta flooding and suggested that performance measures should focus on economic damages and improved emergency response. Staff recognizes that no lives have been lost in the Delta due to flooding, but still believes: (1) this is an important metric to track, and (2) tracking this metric does not detract from measuring economic damages and improved emergency response which are addressed by this and other measures.
- 7.3 – Levee improvements: Commenters pointed out that not all assets in the Delta require the same level of protection. Staff agreed, as this is a central idea behind

the Delta Levees Investment Strategy (DLIS). This led staff to remove the proposed target from this measure and highlighted the importance of the work being done through the DLIS. Additional refinements to the risk reduction performance measures are likely to be proposed as part of the Delta Plan amendment for the DLIS.

Requested Action

Staff recommends that the Council adopt the proposed Appendix E (Attachment 1) as an amendment to the Delta Plan to consolidate and refine its administrative, output and outcome performance measures. Specifically, proposed Appendix E (Attachment 1) contains the following:

- Existing administrative performance measures currently located in Appendix E.
- Existing measures that are currently located at the end of Delta Plan chapters and did not need refinement, aside from the addition of metrics, baselines and targets;
- Refined versions of existing output and outcome performance measures that are currently located at the end of Delta Plan chapters; and
- New output and outcome performance measures.

In other words, staff proposes that the Council consolidate all of the Delta Plan performance measures in the same location in the Delta Plan, Appendix E.

The proposed Appendix E is organized by Delta Plan chapter and the administrative performance measures are listed by strategy within each chapter. Key information related to each performance measure includes:

- Type of performance measure (i.e., administrative, output or outcome); and
- Amended output and outcome performance measures, including metrics, baselines, and targets.

Staff also recommends that the Council adopt conforming edits to the Delta Plan that reflect the placement of all performance measures in Appendix E (Attachment 3).

This Delta Plan amendment does not implicate the California Environmental Quality Act or the California Administrative Procedures Act because it does not include any changes to Delta Plan policies or recommendations.

Proposed Motion

The Council adopts, as a formal amendment to the Delta Plan, the staff recommended package of performance measure refinements, and directs staff to take the following actions as soon as practicable: (1) Consolidate all performance measures (including those existing performance measures that were not refined) into an amended Delta Plan Appendix E (Attachment 1); and (2) make conforming changes in the Delta Plan text that

reflects or is otherwise implicated by the performance measure consolidation (Attachment 3). The Council delegates to staff the authority to adjust performance measure metrics as described in this staff report, without the need for formal adoption by the Council.

Next Steps

Next steps for this effort include:

1. Staff will request Delta ISB review of the performance measures during the appraisal results and reporting phase (Summer-Fall 2016).
2. Staff will release public reporting tools such as online dashboard, scorecards, etc. (Fall-Winter 2016).
3. Staff will provide performance reporting to the Council and stakeholders as part of the Council's annual report (Winter 2017).

List of Attachments

Attachment 1: Proposed Amendment: Delta Plan Performance Measures Appendix E (Adoption Version)

Attachment 2: Redline Version of Proposed Performance Measures Compared against Jan. 28, 2016 Version

Attachment 3: Conforming Changes to the Delta Plan related to the Proposed Amendment

Attachment 4: Delta ISB's Review of the Council's Process for Refining the Delta Plan Performance Measures

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