

DRAFT

Monitoring Metrics Development Work Plan

Note to Reviewers: This work-plan remains a draft that articulates the current intentions of the workgroup to formulate metrics for the BDCP in an orderly, step-wise approach. It remains subject to adjustments based upon comments and refinements as the work progresses.

Purpose: Develop and recommend to the Steering Committee a suite of monitoring metrics to be incorporated into Chapter 3, Section 3.5, Monitoring and Research Plan that will be initially used by the Implementing Entity to measure progress towards achieving biological objectives and informing adaptive management decision making concerning conservation measure implementation.

Focus: Develop framework and planning tools for determining metrics to measure progress towards achieving biological objectives.

Task 1. Review the BDCP DRERIP database summary of conservation measure evaluations with predicted outcomes and the certainty and magnitude scores for each predicted outcome. This database includes 31 conservation measures and 575 outcomes. Completing this task will provide the Small Group with important results from the DRERIP evaluations to assist with:

- *Identifying magnitude and certainty of outcomes for conservation measures*
- *Identifying metrics for outcomes*
- *Evaluate linkages between conservation measures and objectives.*
- *Prioritizing key outcomes*

Schedule:

- By September 29, 2009: Complete Review of BDCP DRERIP database.

Task 2: Develop a template of metrics and linkages to biological objectives for selected high priority conservation measures¹. Matrix #1 is an example of a planning tool that summarizes information for the Cache Slough complex ROA conservation measure. Matrix #1 includes a row for each predicted outcome and columns about the predicted outcome, the hypothesis supporting the outcome, the linkages to uncertainties associated with the predicted outcome, and potential monitoring metric[s]. Outcomes with lower certainty are less likely to have clearly, predictive relationships with the anticipated response, and may require articulation of multiple metrics. Matrix #1 contains a complete narrative that demonstrates how specific metrics will measure the response of a conservation measure to achieving one or more conservation objectives.

Schedule:

- September 22, 2009: Small Group review of Matrix #1 for HRCM4 (Restore between 5,000 and 11,000 acres to tidal action and vegetated tidal marsh and shallow subtidal habitat in the Yolo Bypass/Cache Slough Complex ROA) (in addition to Liberty Island and Little Holland Tract). (Task Complete).
- September 24, 2009: Present to Steering Committee, use feedback to evaluate approach of Matrix #1.

¹ The phrase “high priority conservation measures” as used here is intended to refer to those measures projected to have the potential for a high magnitude of beneficial effects but for which the level of certainty is low.

- October 6, 2009: Present drafts of detailed Matrices for all Habitat Restoration Conservation Measures identified in Chapter 3 to Metrics Small Group, based on this example as modified by above feedback.
- October 20, 2009: Present drafts of detailed matrices for all remaining conservation measures identified in Chapter 3 to the Metrics Small Group.

Task 3: Identify the common outcomes and potentially common metrics between Conservation Measures. It is necessary to evaluate how common metrics and outcomes are similar and different and provide potential monitoring tools for measuring progress toward biological objectives at the ecosystem, natural community, and species levels. This task will be accomplished with analysis of Matrices from Task 2 combined with a matrix (Matrix #2) of columns filled with Goals and Objectives vs. rows of Conservation Measures (a draft is already prepared by SAIC), and a third matrix (Matrix #3) that will incorporate visual interpretations of uncertainty and magnitude of outcomes vs. each conservation measure to display the synergies and conflicts between outcomes. These matrices will be used to develop common metrics among outcomes, and evaluate linkages between conservation measures and objectives. Also, these tables will be useful for evaluating synergies and conflicts among potential metrics, that will demonstrate priority and high uncertainty metrics.

Schedule:

- September 22, 2009: Draft Matrix #2 and #3 shared with Metrics Small Group (Task Complete).
- October 6, 2009: Use Matrices #1, #2, and #3 to evaluate utility of planning tools for assessing common metrics and outcomes and evaluating if objectives are measured by metrics. Take feedback and reassess.
- October 8, 2009: Present planning tools and Small Workgroup critique to Steering Committee. Take feedback and reassess.
- October 20, 2009: Small Group evaluates the Matrices as a basis for identifying high priority conservation measures (i.e. those with a potential for a high magnitude of beneficial effects but for which certainty is low) for which monitoring metrics and linkages to biological objectives should first be developed.

Focus: Expand metric evaluation using planning tools to inform adaptive management decision making concerning conservation measure implementation.

Task 4: Use refined Matrices #1-3 to identify common metrics, evaluate linkages between conservation measures and objectives and prioritize key metrics for broader monitoring needs (i.e. system monitoring).

Schedule:

TBD

Future steps:

- Summarize common metrics for objectives and assess the metric data in the knowledge base from current monitoring program to inform draft adaptive management targets.
- Draft potential metric values to serve as targets for measuring progress towards achieving biological objectives.