

Agenda Item: 1
Meeting Date: February 1, 2008

Delta Regional Ecosystem Restoration Implementation Plan (DRERIP) Briefing

Summary: Denise Reed will present the status update on DRERIP, including the status of peer review of the ecosystem conceptual models. Jim Lichatowich will present the status of peer review of the species conceptual models. The following is presented as background material.

Action: Feedback on conceptual model peer review, DRERIP tools, and collaboration opportunities.

Background:

Peer Review of the Delta Conceptual Models

The Delta conceptual models compile the current scientific knowledge on Delta species, and on ecosystem processes, habitats, and stressors. The models are more than mere informational tools; they were designed to help evaluate proposed restoration actions in order to inform sound public policy decisions within the Delta. The Delta conceptual models are a critical component in the rapidly developing planning efforts for the Delta. Most of the ecosystem models were developed by teams of experts, and most species models by individual experts (Table 1).

Table 1. Delta Conceptual Models and Developers

Model	Primary Author¹	Status
ECOSYSTEM ELEMENT MODELS		
1) Processes		
Transport	Jon Bura	In revision
Sedimentation	Dave Schoellhamer	Complete
Organic Carbon	Jacob Fleck	Final revisions
Aquatic Foodweb	John Durand	Under re-review
Low Dissolved Oxygen	Will Stringfellow	Final revisions
Temperature	Mark Stacey	In preparation

¹ Most models were prepared by team of experts

Table 1. Delta Conceptual Models and Developers (cont.)

Model	Primary Author¹	Status
2) Stressors		
General Contaminants	Inge Werner	Complete
Pyrethroids	Inge Werner	Complete
Mercury	Charlie Alpers	Complete
Selenium	Theresa Presser	In editor review
3) Habitats		
Aquatic Vegetation	Lars Anderson	Final revisions
Tidal Marsh	Si Simenstad	Final revisions
Fish Habitat Linkages	Matt Nobriga	Complete
Floodplains	Jeff Opperman	Complete
Riparian	Eric Ginney	Final revisions
Managed Wetlands	To be determined	--
SPECIES MODELS		
Delta Smelt	Matt Nobriga	In preparation
Longfin Smelt	Jon Rosenfield	Editor review
Splittail	Daniel Kratville	Final revisions
Winter Run Chinook	Jon Rosenfield	Editor review
Spring Run Chinook	Jon Rosenfield	Editor review
Late-full Run Chinook	Jon Rosenfield	Editor review
Fall-run Chinook	Jon Rosenfield	Editor review
Steelhead	Jon Rosenfield	Editor review
White Sturgeon	Josh Israel/Mike Donnellan	Ready for peer review
Green Sturgeon	Peter Klimley/Josh Israel	Ready for peer review
Invasive clams	Daniel Kratville/Bruce Herbold	In preparation
Warm Water Centrarchids	Daniel Kratville/Christa Woodley	In preparation

The DRERIP Adaptive Management Planning Team (AMPT) held a model integration workshop in March 2007 to ensure that draft ecosystem and species models appropriately linked to one another. The workshop improved the individual models as well as their utility for scientific evaluation.

The AMPT also convened two peer review panel meetings for the ecosystem conceptual models in May and June 2007. Denise Reed served as panel chair for both meetings, and also serves as the editor for the ecosystem model peer reviews.

In May 2007 the AMPT also convened a species model colleague review of several species models. Based on feedback from the colleague reviews, the AMPT improved the species model guidelines and asked the model developers to update their models in accordance with the new guidelines. James Lichatowich and James Anderson are serving as editors for the species model peer reviews. Several species models were sent out for independent peer review starting in December 2007. Reviews and reports are expected throughout February, and all reviews should be completed by March 2008.

¹ Most models were prepared by team of experts

Attachment 1 provides more information on peer review.

Ecosystem Restoration Actions Formulation and Evaluation Tools

The DRERIP conceptual models are one of the tools that will be used to develop and evaluate ecosystem restoration actions. The AMPT designed a scientific evaluation process that provides a comprehensive method for carrying out a scientific review of restoration actions by addressing the magnitude and certainty of outcomes, assessing gaps in understanding or data, estimating the “worth” and “risk” of implementing the action, and assessing reversibility and opportunity for learning. This process ultimately “routes” actions into adaptive management categories of full implementation, pilot project, and targeted research.

Several meetings have taken place since DRERIP was last presented to the ISB with the purpose of refining the models and the scientific evaluation process as well as identifying needs for additional models. Outcomes of these efforts have included refinements to the scientific evaluation process, development of a standardized list of outcomes and stressors, guidelines for writing and parsing restoration actions, continuing efforts to bundle exiting ERP actions, and initiating an approach for creating new restoration actions.

Attachment 2 provides more information on the ecosystem restoration evaluation tools.

Collaboration with Other Delta Planning Initiatives

The ERP Implementing Agencies consider the DRERIP tools to be the best vehicle to provide robust, comprehensive, scientifically-defensible, transparent, and justifiable solutions to resource management in the Delta. The ERP agencies look to these tools as the scientific standard for ERP planning purposes, and the standard by which the agencies would appraise other proposed activities in the Delta. On January 17th representatives from the DRERIP team met with the BDCP Analytical Tools Technical Team to discuss the content and status of the Delta conceptual models and the scientific evaluation process. Based on the results of that discussion the DRERIP team provided several of the Delta conceptual models to the BDCP Steering Committee on January 25th. Members of the AMPT have offered to work collaboratively with the BDCP Steering Committee and its subcommittees to ensure that the Delta conceptual models and the scientific evaluation process can be used to help inform BDCP planning.

The AMPT is also exploring collaboration opportunities with Delta Vision as it embarks upon preparing its Strategic Plan, which is due for completion at the end of October 2008.

Questions to ISB:

1. Is the peer review process for the conceptual models appropriate?
2. What input does the ISB have with regard to using DRERIP tools in other planning initiatives?

Attachments:

Attachment 1: Delta Conceptual Models (DRERIP) Summary of Peer Review

Attachment 2: Ecosystem Restoration Evaluation Tools

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