

Peer Review Summary Document

(05/29/2013)

Peer Review Plan

<https://www.usgs.gov/about/organization/science-support/office-science-quality-and-integrity/information-quality-6> [31 KB PDF].

Title and Authorship of Information Product Disseminated

Synthesis of Studies in the Fall Low Salinity Zone of the San Francisco Estuary, September-December 2011, by Larry R. Brown, Randy Baxter, Gonzalo Castillo, Louise Conrad, Steven Culberson, Greg Erickson, Frederick Feyrer, Stephanie Fong, Karen Gehrts, Lenny Grimaldo, Bruce Herbold, Joseph Kirsch, Anke Mueller-Solger, Steve Slater, Ted Sommer, Kelly Souza, and Erwin Van Nieuwenhuysse.

Peer Reviewers Expertise and Credentials

Review was by a 6-member Panel (Reviewers 1-6 below) and one additional reviewer (Reviewer #7 below).

- Peer Reviewer #1 – Professor in Department of Earth and Environmental Sciences University of New Orleans.
- Peer Reviewer #2 – Associate Professor, College of Marine Science, University of South Florida.
- Peer Reviewer #3 – Kenan Professor of Marine and Environmental Sciences, UNC-Chapel Hill, Institute of Marine Sciences.
- Peer Reviewer #4 – Professor, Department of Zoology and Beaty Biodiversity Centre and Museum, University of British Columbia.
- Peer Reviewer #5 – Associate Professor of Biology and Director of Environmental Studies, College of the Holy Cross.
- Peer Reviewer #6 – Assistant Professor School of Civil and Construction Engineering Oregon State University.
- Peer Reviewer #6 – Assistant Professor School of Civil and Construction Engineering Oregon State University.
- Reviewer #7 – General Engineer, U.S. Geological Survey.

Charge Submitted to Peer Reviewers

The charge to the 6-member review panel is available at http://deltacouncil.ca.gov/sites/default/files/documents/files/Flash_Scope_FinalClean_V2_to_post_0.pdf.

Summary of Peer Reviewers Comments and Summary of USGS Response to Comments

Reviewers #1 through #6 Comments: The 6-member panel offered only one comment for the report as follows: Develop a schematic version of the CM [conceptual model] that matches the revised, written version of the CM in the draft 2012 FLaSH study report.

USGS Response to Reviewers #1 through #6 Comments: The authors do not disagree that a schematic version of the conceptual model (CM) would be useful; however, a revised conceptual model was not included in the revision of this report. This decision was made on the basis of several factors:

- From a purely process point of view the purpose of the report was to determine if the data collected in Fall 2011 supported the predictions made in the Adaptive Management Plan (AMP). When writing the report we felt it essential to provide the review of conceptual models in the report and the review of the new CM provided in the AMP. As the adaptive management cycle does require improvements of conceptual models after assessment of outcomes, we expect the next iteration of the AMP to include a revised CM based on information in our report and the recommendations of the Panel.
- Many of the authors are working on a CM for a new report on delta smelt as an assignment to the Monitoring, Assessment and Synthesis Team (MAST) of the Interagency Ecological Program (IEP). This CM will have a schematic format similar to the recommendation by the Panel and will also include all seasons and life stages of delta smelt. A full life cycle context for the assessment of the Fall Action was one of the major points made at the end of the FLaSH study report.

Reviewers #7 Comments:

1. The beginning of the report was not very clear about why the fall was the focus of the report.
2. There were several different types of information referenced as "data" in the report and that it was a source of confusion.
3. At several places in the report, the reviewer questioned the relevance of a prediction about wind speeds associated with the low-salinity zone and noted that it is the effect of wind speed on resuspension of sediment creating turbidity that is of interest.
4. The reviewer pointed out several problems with the text regarding predictions about phytoplankton primary production, concentrations of chlorophyll-a, and the effects of grazers, mainly clams, on these quantities.
5. The reviewer also pointed out several other instances where interpretations of data were not fully explained in the assessment of predictions and that decisions about the validity of some predictions were not fully supported.

USGS Response to Reviewer 7 Comments:

1. Text was added to clarify that the report was intended to assess the results of studies specifically focused on the fall portion of the delta smelt life cycle but that understanding all portions of the life cycle of delta smelt is important.
2. A column was added to an existing table that indicated the type of data used from various sources. The types ranged from actual field measurements to model output from numerical models. References to the applicable portions of the appendix were also added. The appendix includes details on data sources and methods.

3. The purpose of the report was to assess the validity of predictions resulting from the conceptual model presented in the Adaptive Management Plan. Because there was a specific prediction about wind speed, it had to be addressed. The report questions the need for this prediction and suggests that developing a sediment model that includes wind speed might be a more appropriate approach for refinements of the conceptual model and adaptive management plan.

4. These sections of the report were rewritten to incorporate the points made by the reviewer.

5. In all cases the data were re-assessed. In some cases, interpretations were changed. In all cases the reasoning for decisions about predictions was clarified.

The Dissemination

The published information product will be released in a USGS Scientific Investigations Report publication series and will be available at <http://pubs.er.usgs.gov/>.