

Results from Complementary Approaches to Modeling the Pelagic Organism Decline

8–9 September 2009

University of California, Davis

8 September: Wellman Hall

9 September: Memorial Union, Mee Room

Workshop Purpose

We aim to present and discuss results from complementary modeling efforts focused on the decline of pelagic fishes in the upper San Francisco Estuary. These efforts are examining trends in abundance of delta smelt, longfin smelt, threadfin shad, and striped bass and potential drivers of the trends.

*** Please contact Erica Fleishman (fleishman@nceas.ucsb.edu) and Larry Brown (lrbrown@usgs.gov) by **14 August** if you are interested in attending or nominating someone to attend the technical session on 9 September, described below. Attendance will be limited to technical experts. We will contact the participants to develop an agenda for the day that best fits their interests and needs.

Workshop Approach

The first day of the workshop will be directed toward a non-technical audience. We will use an integrated approach to share results and inferences. We will provide context for the modeling efforts by specifying key hypotheses, assumptions, and uncertainties about trends and drivers of abundances of pelagic fishes. We then will explain how researchers selected data sets and analytic approaches. We will summarize two types of model outputs: responses of each species of fish to major environmental gradients and human activities, and interactions among multiple species of fishes and their food webs. Speakers will address uncertainties in existing sets of data, uncertainties that might be introduced during the analytical process, and potential mechanisms for increasing confidence in the results and inferences. Further, we will interpret uncertainties in the context of the work's ability to inform management and policy.

The second day of the workshop primarily will be dedicated to technical discussions among practicing modelers regarding data, results, inferences, and core uncertainties. Depending on the desires of the participants, these discussions may occur in plenary or in small groups. To facilitate communication among analysts in an informal setting, attendance on day 2 will be limited to 30. Participants are expected to be actively engaged in modeling of declines of pelagic fishes in the San Francisco Estuary or of similar systems, to have advanced understanding of mathematical and statistical concepts and approaches to population modeling, and to have a working knowledge of past and present work in the San Francisco Estuary.

Tentative Agenda

Coffee will be provided on the morning of both days. Lunch will not be provided on either day.

Tuesday, 8 September

Discussions will be led by Larry Brown, Fred Feyrer, Erica Fleishman, Wim Kimmerer, Erik Loboschefskey, Ken Newman, and Howard Townsend

9:00 – 9:30	Introductions Review goals and format of the workshop Key hypotheses and questions addressed by research teams
9:30 – 10:30	Selection of response variables and predictor variables Selection of analytic approaches
10:30 – 11:00	Break
11:00 – 12:00	Results from complementary models for individual species
12:00 – 1:30	Lunch
1:30 – 2:15	Results from all complementary models for multiple species or food webs
2:15 – 3:00	Reducing uncertainties in data sets and modeling approaches
3:00 – 3:30	Break
3:30 – 4:30	Interpretation of results and uncertainties in the context of information needs for management and policy

Wednesday, 9 September

9:00 – 4:30

Agenda will be developed in advance by the participants. Ken Newman will chair the session.