

# IEP Science Highlights

## IEP Quarterly Directors Update

March 24, 2011

### 2011 Fish Surveys

- Only the first two surveys of the Spring Kodiak Trawl have been completed. Maturation data indicates that delta smelt have not yet spawned.
- The first four surveys of the Smelt Larva Survey are completed. Distribution or abundance criteria that would trigger OMR flow restrictions were not met.

### IEP Science Events

- The **2011 IEP Annual Workshop** will be held on Wednesday, March 30, 2011, in conjunction with the Annual Conference of the California-Nevada Chapter of the American Fisheries Society (AFS Cal-Neva) at the Lake Natoma Inn in Folsom, CA. The IEP sessions will focus on past, present, and future Delta conditions, novel scientific tools, and an in-depth look at the ecology of near-shore fishes in the Delta. They will include the following results:
  - Results of the delta smelt migration study conducted 12/21/10 – 1/2/11 show that delta smelt move offshore on flood tides and onshore during ebb tides to migrate upriver or maintain position. They were primarily caught in the more turbid Sacramento River. In spite of high flows, this winter's "first flush" did not substantially increase turbidity and increases occurred mostly in the north Delta.
  - The historical Delta landscape included flood basins (north Delta), tidal islands (central Delta), and distributary rivers (south Delta) which supported different ecological functions and species.
  - Modeled future Delta conditions (turbidity, water temperature, and X2) make the persistence of delta smelt into the next century uncertain. These results are based on four 100-year scenarios of climate change.
  - Remote sensing and new genetic techniques show great promise for more efficient and effective monitoring and studies of Delta water quality conditions, food web interactions, and sublethal effects of contaminants on Delta fishes.
  - The distribution of young-of-the-year striped bass has shifted away from channels towards near-shore habitats, perhaps due to reduced food availability in channels.
  - The population size of largemouth bass, warmouth sunfish, and other non-native fishes in the Delta has increased concurrent with substantial changes in near-shore habitat, primarily an increase in rip-rapped banks and notable proliferation of non-native submerged aquatic vegetation.
- Results from the IEP-POD investigation will be the focus of a day-long **symposium at the national Annual Meeting of the American Fisheries Society in Seattle, WA**, in September. The symposium title is "San Francisco Estuary: a dynamic confluence of fisheries, policy, and resource management."

### Draft IEP Directed/Coordinated Studies Workplan for 2011

- Includes ongoing POD studies, ongoing studies funded as part of the Near-Term Science Strategy and Integrated BDCP Biological Opinion Strategy developed by the joint DOI/DOC Federal Biological Opinion Task Force, and new studies funded by the Delta Science Program.

### Other IEP Science Activities:

- Ongoing participation in meetings on IEP-BDCP coordination, in Delta Plan Science and Adaptive Management planning, and in CA WQMC "Estuaries Workgroup" meetings.