



IEP Science Highlights

Directors Update

September 2014

Monitoring Highlights

- Delta Smelt: The Summer Townet Survey **Delta Smelt** abundance index for 2014 is 0.5, making it the fifth lowest on record. This index is less than last year's index and is similar to the low indices from 2005-2010, reflecting long term issues with pelagic habitat and extended drought conditions.
- Striped Bass: The 2014 Summer Townet Survey index for age-0 **Striped Bass** is 0.3. This index is 50% of the 2013 index and ties 2007 for the lowest index on record.
- Microcystis: Monitoring by several IEP surveys indicate that *Microcystis* is widespread in the Delta this year, and that blooms occurred relatively early in the year (June).

Management Analysis and Synthesis Team (MAST)

- The IEP Management, Analysis, and Synthesis Team (MAST) is working to finalize a revised report summarizing the available information on Delta Smelt (2014 MAST report).
- The 2014 MAST report is already being used heavily by two major efforts, the "Collaborative AM Team" (CAMT), and the newly-formed IEP Tidal Wetlands Monitoring Team.
- The existing IEP MAST and additional DFW staff are currently using the conceptual model to develop predictions for the response of Delta Smelt and its habitat to current drought conditions. The goal of this effort is to identify additional data that should be measured during the drought, and to organize information from ongoing monitoring studies and research.
- Efforts continue to organize an IEP MAST for Chinook Salmon.

Workshops and Work Teams (see <http://www.water.ca.gov/iep/activities/calendar.cfm>)

Bay-Delta Science Conference: A number of sessions featuring IEP studies have been approved for the upcoming Bay-Delta Science Conference (10/28-10/30). Proposed sessions by IEP staff include Monitoring of Fish Abundance, Floodplain Ecology & Restoration, Ecohydraulics, and Chinook Salmon telemetry.

Fall Low Salinity Habitat (FLaSH)

- Report: The results of 2011 IEP Fall Low Salinity Habitat studies were published by USGS as a Scientific Investigations Report (<http://pubs.er.usgs.gov/publication/sir20145041>).
- Continuing Studies: The FLASH fish health, diet and fecundity study received partial funding for another field year. This allows continued comparisons of Delta Smelt health, otolith growth, diet and fecundity from fish collected in the **low salinity zone** with others from the **Cache Slough** and **Sacramento Deepwater Ship Channel** regions.
- New Studies: The 2011 FLASH investigations documented a rare fall plankton bloom, which appeared to be triggered by agricultural flows from Yolo Bypass. To better understand this effect, IEP is currently doing a more intensive investigation of the hydrodynamics, nutrients, phytoplankton, zooplankton, and benthos of the corridor from Yolo Bypass to Rio Vista.