IEP Science Highlights

Director's Meeting Update

June 2015

Monitoring Highlights

- Delta Smelt: The 2015 Spring Kodiak Trawl (SKT) survey ***Delta Smelt*** abundance index was 13, making it the lowest on record. Preliminary 20 mm Survey data suggest very low production of young in 2015.
- Invasive Species: In contrast to Delta Smelt, recent surveys show sharp increases in predators such as ***Mississippi Silverside*** and ***Black Bass***.
- Chinook Salmon: Recent monitoring indicates generally poor conditions for young salmon.
    - Birth Year 2014 **winter-run** Chinook Salmon egg-to-fry survival rates and juvenile production were lowest on record.
    - Preliminary outmigration survival estimates from acoustically tagged hatchery winter-run indicate **higher survival** to Benicia this year than for the last two drought years.
    - Mossdale trawl catches suggest record low numbers of **San Joaquin fall-run** Chinook Salmon.
    - Warm SJ River temperatures shortened the outmigration season.

Drought Activities

- Drought Response: The IEP staff and resources continue to be heavily utilized in WY 2015 to provide early warning data on fish abundance, distribution, and habitat. Examples included:
    - Spring Kodiak Trawl in December.
    - High frequency Kodiak trawling at Jersey and Prisoner Points.
    - South Delta turbidity transects.
    - Salmon genetics and telemetry.
- Drought MAST: The Drought Management Analyses and Synthesis Team continue to work on a report examining how recent drought conditions have influenced Delta fishes and their habitat.
- New Sampling: To deal with declining fishes during the drought, IEP is tentatively planning to implement several advanced monitoring technologies including:
    - *SmeltCAM*: To monitor ESA-listed species along the lower San Joaquin River corridor including the channels around the new False River Barrier.
    - *Genetic Estimation of Smelt Populations*: Genetic tools will be used to estimate the effective population size ("N_e") of Delta Smelt as compared to previous years.

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

- The IEP Annual Meeting was held March 18, 19, and 20 at Lake Natoma Inn in Folsom.
    - Highlights of the meeting included talks on Delta Smelt, new technologies, Suisun Marsh, predation, entrainment, life cycle modeling, and drought effects.