

SMELT WORKING GROUP
Monday, January 26, 2009

WEEKLY ADVICE FOR THE CALIFORNIA DEPARTMENT OF FISH AND GAME
FOR LONGFIN SMELT

Recommendation for week of January 26:

The Smelt Working Group's longfin smelt recommendation is to **maintain the 14-day average combined OMR flow no more negative than -3500 cfs.**

Basis for recommendation:

Our concern level for **longfin smelt** is based on:

- (1) longfin smelt juvenile and adult abundance remains low.
- (2) longfin smelt larvae were detected at 9 of 12 central and south Delta Longfin Smelt 2084 trigger stations surpassing the trigger threshold during the January 20-24, 2009 Smelt Larva Survey;
- (3) relatively low densities of larvae (0 to 7 larvae per tow at 10 of 12 trigger stations) occurred at central and south Delta longfin smelt 2084 trigger stations; and
- (4) particle tracking modeling predictions that current OMR levels will not strongly affect longfin smelt larvae at high density locations in the western Delta/confluence area.

The Smelt Working Group longfin smelt recommendation is based on discussion of the following information:

1. Size of spawning population. The spawning population remains low. The 2008 FMWT longfin smelt index of 139 was the fifth lowest on record.
2. Water temperatures. Water temperature (3 station average was 10.7 C on 25 January) is currently suitable for longfin smelt spawning and incubation.
3. Recent salvage. No longfin smelt have been salvaged since December 1. Longfin smelt larvae are not identified or counted in salvage.
4. Adult distribution. In January surveys, more adult longfin smelt were found in the Sacramento River than the San Joaquin River. The January Bay Study Survey detected 5 longfin smelt in the Delta east of Sherman Lake, but only one of the five was in the San Joaquin River. The January Spring Kodiak Trawl Survey collected only one longfin smelt east of Sherman Lake, in the lower Sacramento River.

5. Larva and juvenile distribution. The 2084 longfin smelt larva trigger (detection at 6 or more of 12 central and south Delta criteria stations) was tripped during the most recent Smelt Larva Survey, January 20-24, which detected longfin smelt larvae at 9 of 12 central and south Delta criteria stations. Longfin smelt larvae were collected throughout the Delta and high densities (>400 larvae per 1000 cubic meters filtered) were found in the confluence area (stations 508, 513) and the lower Sacramento River (705, 707) and the lower San Joaquin River (804) (http://www.delta.dfg.ca.gov/data/sls/CPUE_Map.asp). Particle Tracking Modeling (see below) suggests that these high density locations would not be strongly affected by recommended OMR, but the entrainment effect would increase with increasingly negative OMR.

6. Particle tracking results. Results from particle tracking modeling (PTM) runs based on hydrology during three low outflow years (1992, 2002, 2008) and using surface oriented particles indicate that substantial fractions of particles from San Joaquin River stations 812, 815, and 906 would be drawn into the export pumps (about 45 to almost 90%, with the highest percentage from particles injected at station 906, the most eastern station) at an OMR of -3500 cfs. Currently, larva densities are low at these San Joaquin River locations (approx. ≤ 30 larvae per 1000 cubic meters filtered) and most locations farther south within the Delta. However, these entrainment percentages would increase rapidly at more negative OMR flows, as would entrainment of particles from the Sacramento River. Densities in the Sacramento River near 3-Mile Slough are relatively high (>400 per 1000 cubic meters filtered).

WEEKLY ADVICE FOR THE FISH AND WILDLIFE SERVICE FOR DELTA SMELT

Monday, January 26, 2009

Recommendation for week of January 26:

The Smelt Working Group's does not have a delta smelt recommendation at this time.

Basis for recommendation:

In the 2008 OCAP biological opinion, there is a salvage trigger and a turbidity trigger that could warrant a needed action. Neither of these triggers has been met, therefore no action is recommended by the workgroup.