

SMELT WORKING GROUP  
June 1, 2009

**Recommendation for the week of June 1, 2009:**

The SWG recommends that the 14-day average OMR shall be maintained at no more negative than -1500 cfs. If combined salvage at the South Delta export facilities reaches the June concern level of 759, the 14-day average OMR shall no more negative than -1,250 cfs.

The recommendation is based on a review of active risk factors:

1. **Size of the population.** Delta smelt densities are similar or less than what they were at this time last year. That cohort subsequently produced the lowest fall midwater trawl index ever recorded. The low abundance of delta smelt warrants conservative measures be taken to protect the population.

2. **Distribution.** Delta smelt seem to be broadly distributed in the delta with detections at some central Delta stations in the most recent 20mm Surveys. Larvae and young juvenile delta smelt distributed in the south Delta have high risk of exposure to the export facilities. The group remains concerned that there are delta smelt that may not make it out of the South Delta if OMR flows are strongly negative. Although 20mm Survey 6 did not detect fish at its south delta stations, delta smelt are clearly present in the south delta as evidenced by high salvage at both facilities.

3. **Salvage.** Delta smelt detections in salvage increased over the past week, culminating with 95 delta smelt caught on May 29, the last day that both facilities exported water before incidental take concerns triggered the projects to voluntarily stop pumping at the SWP on May 30 and at the CVP on May 31. With the projects not exporting water for the past few days, it is not clear if the salvage event that is occurring is peaking. The group remains concerned that continued high salvage at the facilities that could, in a matter of days, reach the take concern level (759) or the incidental take level (1139) for June in the biological opinion.

4. **Life stage risk.** Most delta smelt observed to date are 20 mm or larger. This suggests that they are have attained sizes that enable them to be efficiently detected in sampling programs, and that post-larvae and young juveniles are still at risk of entrainment. These fish greater than 20 mm can contribute to the salvage take at the export facilities.

**Environmental, Survey, Modeling, and Facilities Data Considered:**

1) Current environmental data.

The provisional OMR estimate by the projects as of May 31 is -1873 cfs for 14 day average, -1356 cfs for 5 day average. As of May 25, Sacramento River inflow was 12376 cfs. X2 is at 73.6 km as of May 31. The E/I ratio was at 7% on May 31. The temperature at Clifton Court Forebay as of May 31 was 23.4°C.

There was not any Project pumping on May 31 and only 842 cfs was pumped on May 30, due to concerns with hitting the incidental take limit. On Friday, May 29, the last day that both projects were pumping, combined exports was 1,461 cfs.

## 2) Delta fish monitoring:

20mm Survey 6 ran from May 18 through 22. Data are complete and available for all stations sampled, except 2 in the Napa River, where delta smelt catch is likely. A total of 48 delta smelt larvae were collected at eight stations. The final Spring Kodiak Trawl (survey #5) was completed May 14. 10 delta smelt were collected from stations 719 and 606. Results from previous larval surveys, 20mm surveys and the SKT are available online at:

<http://www.delta.dfg.ca.gov/data/projects/?ProjectID=SLS>

<http://www.delta.dfg.ca.gov/data/projects/?ProjectID=20mm>

<http://www.delta.dfg.ca.gov/data/projects/?ProjectID=SKT>.

## 3) Particle Tracking Modeling

The group received PTM runs that showed three different scenarios, OMR flows of -1,250 cfs (Scenario A), -1,500 cfs (Scenario B), -2,100 cfs, (Scenario C), -2,600 cfs (Scenario D). and -3,100 cfs (Scenario E).

## 4) Salvage

Adult delta smelt have not been salvaged at either facility since March 11. Delta smelt larvae or post-larvae were first observed at the CVP on April 10 and April 20 at the SWP. Collection of larval delta smelt (< 20 mm FL) occurred on May 4, 6, 15, 16, and 21, 23, and 28 at the SWP and May 5, 6, 7, 8, 11, 13, 14, 17, 18, 19, 21, 22, 26, and 30 at the CVP.

The salvage of post-larvae and young juvenile delta smelt (= or > 20 mm FL) first occurred on May 4 at the SWP and May 5 at the CVP. The CVP salvaged young delta smelt on May 7, 8, 10, 11, 14 through 22, 26, 28, 29, 30. At the SWP, young delta smelt were not salvaged again until May 24, 25, 26, 27, 28, and 29 for a total of 423 juvenile delta smelt salvaged (combined facilities) as of May 31. Combined salvage has increased over the past week, with 68 on May 26, 32 on May 27, 24 on May 28, and 95 on May 29. This caused the SWP to stop exports on May 30 and 31 and the CVP to stop exports on May 31.

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

### Advice for week of June 2:

The Smelt Working Group provides no new advice.

### Basis for advice:

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

- (1) longfin smelt juvenile and adult abundance remained low last fall;
- (2) no longfin smelt larvae or juveniles were collected in the central or south Delta during the May 18-22 20mm Survey and hatching is assumed to be over for the year;
- (3) no longfin smelt larvae or juveniles were salvaged by either facility May 5-13, and only two juveniles have been salvaged since;
- (4) Delta water temperatures have surpassed 18°C, which is believed to be approaching the threshold to stimulate emigration;
- (5) longfin smelt juveniles remaining in the Delta are located in the Sherman Lake/confluence area with a single fish in Cache Slough, and not vulnerable to the central Delta entrainment until OMR levels surpass -3500 cfs.

The Smelt Working Group longfin smelt advice is based on the following information:

1. Water temperatures. Water temperatures are currently above the range believed suitable for longfin smelt spawning and incubation at about 16°C. Emigration is believed to trigger when Delta water temperatures increase above 18°C, which is happening in the central and south Delta, and in the Cache Slough area.
2. Recent salvage. Only 2 fish, on May 14 and May 27. High Clifton Court water temperatures (23.4°C) make it unlikely that any longfin smelt remain in the forebay for future salvage.
3. Adult distribution. No new adult information
4. Larva and juvenile distribution. The May 18-22 20mm Survey did not detect longfin smelt larvae or juveniles in the central or south Delta. Larvae were located in the confluence area from station 703 and 801 and locations farther west.
5. Particle tracking results. PTM runs were not evaluated.