

SMELT WORKING GROUP
Tuesday, May 26, 2009

Preliminary Recommendation for the week of May 26, 2009:

The SWG recommends that the 14-day average OMR shall be maintained at no more negative than -2000 cfs. The 14-day average OMR shall be increased to no more negative than -1,250 cfs if salvage of delta smelt at the combined south Delta export facilities reaches 299 (Concern Level for delta smelt salvage for May as per 2008 Service Biological Opinion).

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

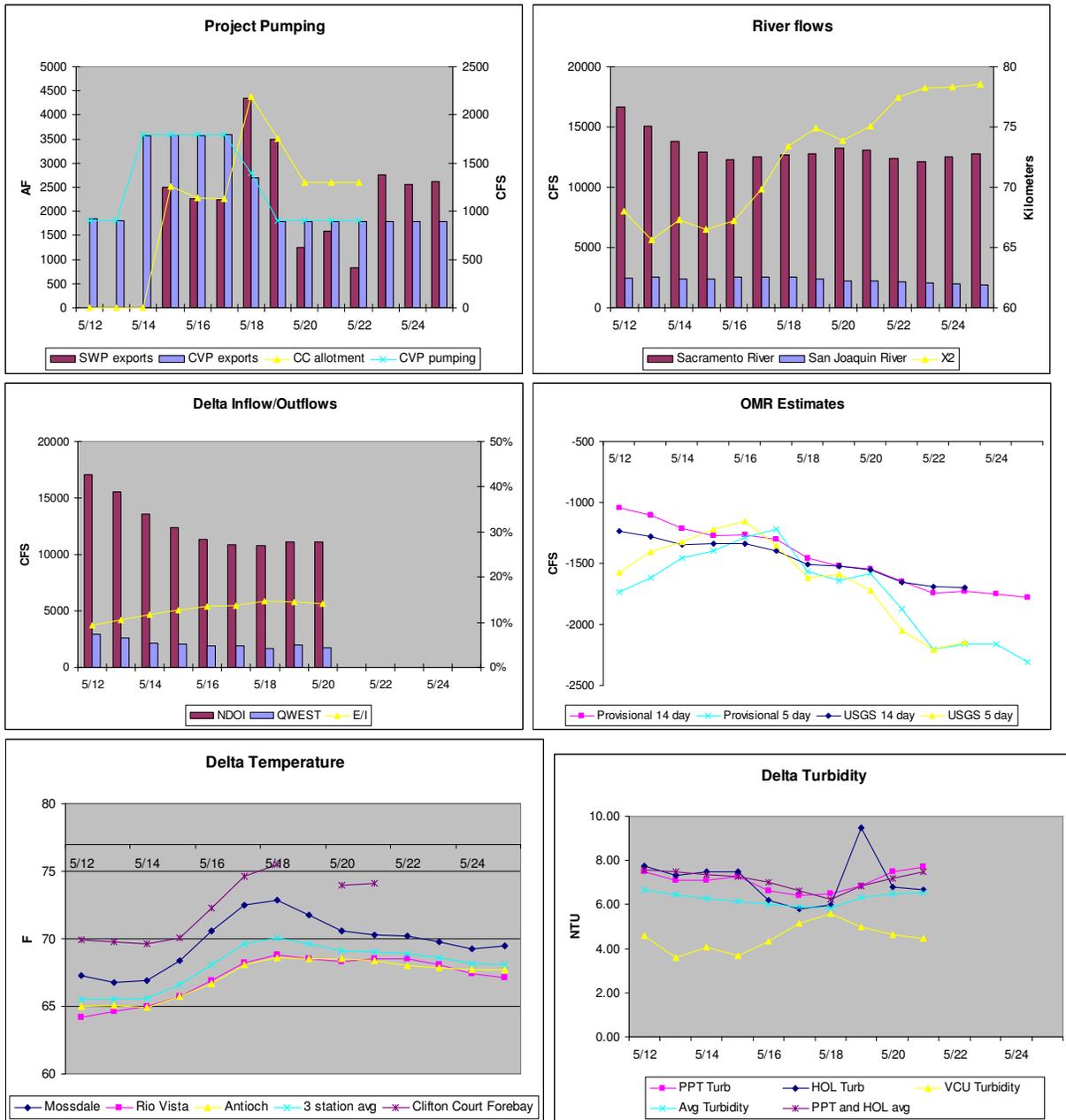
- 1. Size of the population.** Delta smelt densities are similar or less than what they were at this time last year. That cohort subsequently produced the lowest fall midwater trawl index ever recorded. The low abundance of delta smelt warrants conservative measures be taken to protect the population.
- 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.
- 3. Salvage.** Delta smelt have been consistently detected in salvage and larval sampling recently despite low export levels, with no detections at the CVP since May 22, but detections at SWP for two days running. With the low E/I ratio (14% as of May 20), the group believes the salvage is occurring mostly from Old and Middle rivers or reflects salvage of fish already entrained into CCF, rather than from the mainstem San Joaquin river. The group feels a spike in salvage at the SWP that could cause an exceedance of the 2008 BiOp's concern level is possible.
- 4. Life stage risk.** Most delta smelt observed to date are 20 mm or larger. This suggests that they 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.

Temperature for the 3 station average is 20.1 C. The provisional OMR estimate by the projects as of May 25 is -1770 cfs for 14 day average, -2300 cfs for 5 day average. USGS OMR as of May 23 is -1697 cfs 14 day average and -2147 cfs for 5 day average. As of May 25, Sacramento River inflow was 12779 cfs. QWEST as of May 20 is at 1777 cfs. X2 is at 78.59 km as of May 25. The E/I ratio was at 14% on May 20. The temperature at Clifton Court Forebay as of May 21 was 23.4 C.

Project pumping as of May 26 is at approximately 2200 cfs combined. The data are depicted in the graphs below.



2) Delta fish monitoring:

20mm Survey 6 ran from May 18 through 22. Data are available, with 23 of the 41 stations with all three tows processed. A total of 17 delta smelt larvae were collected at stations 504, 519, 804, 809, 919, and 719. 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 did not request PTM runs.

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 18 at the SWP and May 5, 6, 7, 8, 11, 13, 14, 17, 18, 19, and 21 at the CVP. For the month of May, delta smelt larvae or post-larvae were detected at the CVP on May 5, 6, 7, 8, 11, 14, 17, 18, and 19.

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 on May 7, 8, 10, 11, 14 through 22. At the SWP, young delta smelt were not salvaged again until May 24 and 25 for a total of 191 salvaged delta smelt (combined facilities) as of May 25.

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

Advice for week of May 26:

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 4-8 20mm Survey and hatching is assumed to be over for the year;
- (3) no longfin smelt larvae or juveniles have been salvaged by either facility since May 4, and prior to that salvage was sporadic and low;
- (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 confluence areas and not vulnerable to the central Delta 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 soon to happen in the Cache Slough area.

2. Recent salvage. Neither salvage facility has collected longfin smelt of any life stage since May 4, and prior salvage was sporadic and low.

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.