

**Recommendation for the period of June 22 though 30, 2009 :**

**This is the last scheduled meeting of the SWG until next fall when pre-adult delta smelt migrate into the Delta. This week's recommendation is intended to cover the period of June 22 through June 30.**

**The SWG recommends the 14-day average OMR be no more negative than -5000 cfs. Current conditions, described below, prompted the SWG to relax OMR relative to the previous recommendation of -3,500. The SWG recommends that OMR change gradually, with export increases limited to no more than a combined total 400 cfs per day. This is to avoid a sudden change in hydrodynamics that could potentially draw fish rapidly into the south Delta.**

**In the event that total combined salvage reaches 759 delta smelt (June concern level), which would indicate continued vulnerability of delta smelt to export operations, the SWG will reconvene to consider further actions to protect delta smelt at risk of entrainment to the Delta pumps.**

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

- 1. Size of the population. Delta smelt densities are low comparable to historic numbers. The low abundance of delta smelt warrants conservative measures be taken to protect the population.**
- 2. Distribution. The delta smelt appear to be distributed around the confluence and Cache Slough/Sacramento Deepwater Ship Channel areas based on 20mm Surveys 7 and 8 and results from Summer Tow Net Survey (STNS) 1 . Recent salvage at both the CVP and SWP suggests that some unknown percentage of fish remain distributed in the south delta. Thus, the cumulative data from the past few weeks, along with recent real-time data suggest that overall distribution is generally favorable, which was a major reason for relaxing OMR.**
- 3. Salvage. From June 8 through 18, salvage was low and inconsistent. From June 19 through 21, the SWP experienced an increase in salvage. As of June 21, total salvage for the season is 648 delta smelt, still well below the June concern level of 759. The combination of increased pumping and low salvage at the CVP suggested to the SWG that delta smelt densities in the south Delta were not high and was another reason for relaxing OMR. Salvage has not completely stopped, suggesting that some fish remain in the south Delta. The lack of detections in the south Delta by the 20mm Survey 7 and 8 and STNS 1 make that proportion uncertain. Thus the relaxation of OMR is contingent upon salvage not exceeding the 759 fish concern level for June.**

Delta smelt detections in salvage have continued in low numbers over the past week at the CVP, with 8 delta smelt caught on June 16 and 4 on June 17. The SWP went from June 13 through 18 with no salvage, and then on June 19 salvaged 32 delta smelt, 28 on June 20, and 28 on June 21. The group remains concerned that additional salvage could occur at the facilities, and the take concern level (759) or the incidental take level (1139) for June in the biological opinion could be reached.

**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.

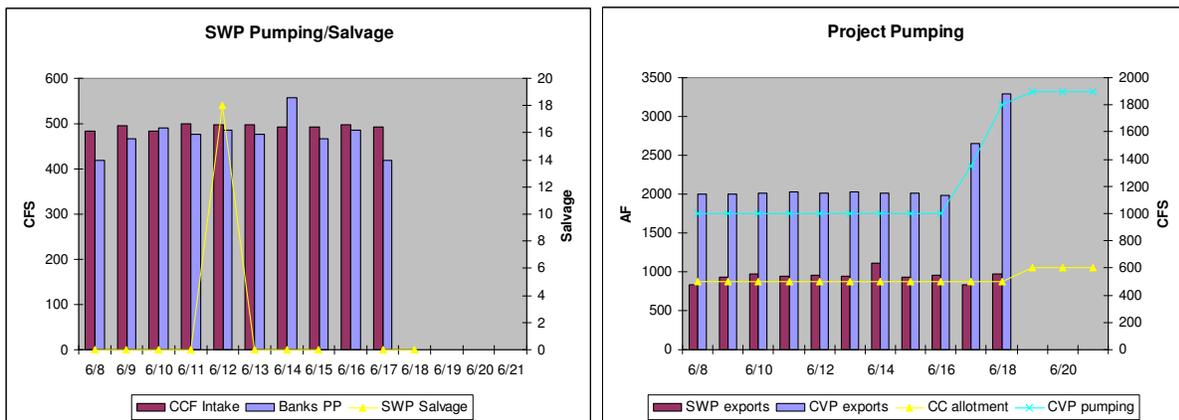
**Environmental, Survey, Modeling, and Facilities Data Considered:**

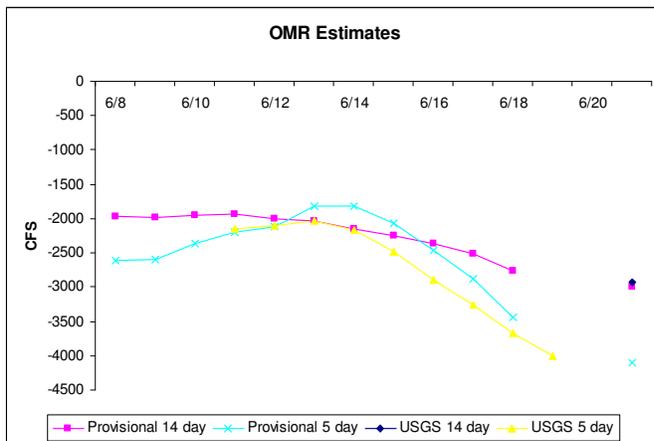
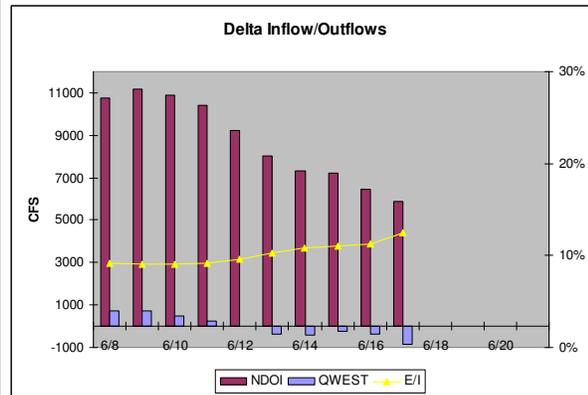
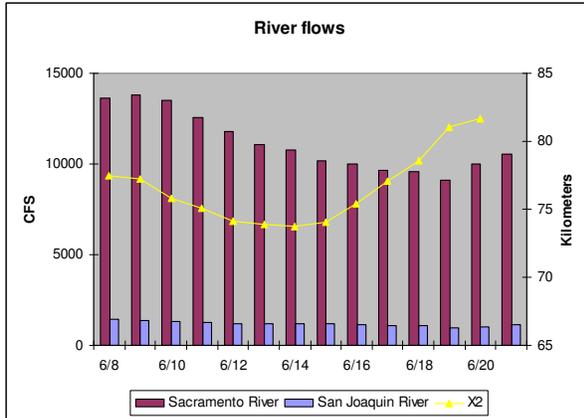
1) Current environmental data.

The provisional OMR estimate by the projects as of June 21 is -2988 cfs for 14 day average, -4095 cfs for 5 day average. As of June 21, Sacramento River inflow was 10546 cfs. X2 is at 81.64 km as of June 20. The E/I ratio was at 12.5% on June 17. The temperature at Clifton Court Forebay as of June 21 was 22.3°C.

The Project pumping increased on June 17 and 18 to a combined 2500 cfs and has remained steady at that number since June 18.

Data is depicted in the graphs below:





2) Delta fish monitoring:

20mm Survey 8 ran from June 15 through 18. Data are incomplete. A total of 56 delta smelt larvae have been identified so far, 19 of which are from two supplemental stations in the SDWSC. Summer Tow Net Survey 2 ran from June 16 through 20. Data are incomplete. Delta smelt were collected from stations 508 and 704. STNS 1 was completed the week of June 2. Data is complete for all stations. A total of 11 delta smelt were collected from 6 stations centered around the confluence area. STNS 1 results are comparable to results seen in 2005 and 2006. The final Spring Kodiak Trawl (survey #5) was completed May 14. 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 discuss PTM.

4) Salvage

Adult delta smelt have not been salvaged at either facility since March 11. Delta smelt larvae or post-larvae have not been observed since June 6 at either facility. Juvenile (> 20 mm FL) delta smelt have been salvaged consistently from June 1 through 7 and 19 through 21 at the SWP and June 11 through 14 as well as on June 16 and 17 at the CVP. A total of 648 juvenile delta smelt were salvaged (combined facilities) as of June 21.

The group discussed the increase in pumping and the continued low salvage at the CVP. Pumping increased to 1900 cfs at the CVP with no evident increase in delta smelt salvage. SWP pumping remained constant and did experience an increase in salvage. The group discussed these events and how they could relate to the distribution of the populations, especially that in the south delta. Strong winds and increased turbidity in the forebay over the weekend was mentioned. Last week, the SWG suggested the CVP increase pumping first. The group felt that if the CVP increased pumping with no subsequent increase in salvage, it could support the concept that few delta smelt remain in the south delta. The group discussed the possibility that the increase in salvage at the SWP with no increase in pumping could be a result of fish that were previously entraining into the forebay. The water level in the forebay was at a low level last week and continued to be gradually drawn down since, with a level of -2.98 as of June 21. The group did not come to consensus on this issue.

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

### **Advice for week of June 22:**

The Smelt Working Group provides no new advice. This will be the last advice from the SWG until late-fall 2009.

### **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 June 8-12 Towner Survey or the June 16-18 20mm Survey, and hatching is probably over for the year;
- (3) no longfin smelt larvae or juveniles have been salvaged by either facility since June 3;
- (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, 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 recently happened in the central and south Delta, and in the Cache Slough area.

2. Recent salvage. Only three juvenile longfin smelt on June 3 and none since. High Clifton Court water temperatures (23.4°C) in late May made it unlikely that any longfin smelt remained in the forebay. South Delta temperatures have been in the low 20°C range.

3. Adult distribution. No new adult information

4. Larva and juvenile distribution. The June 8-12 Townet Survey and the June 16-18 20mm Survey did not detect longfin smelt larvae or juveniles in the central or south Delta. During the June surveys, larvae/juveniles were located in the confluence area from station 706 and 804 and locations farther west (except for a small number in the Cache Slough area), so none are expected from the central or south Delta.

5. Particle tracking results. No PTM results discussed.