SMELT WORKING GROUP
Monday, June 17, 2013

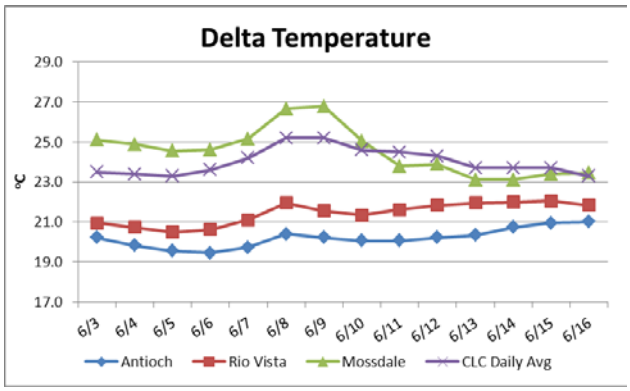
Meeting Summary:

The Working Group agreed that given their present distribution, current salvage, and Delta conditions, the risk of entrainment of delta smelt remains low and therefore, the Working Group recommends that no change in operations is necessary to adequately protect delta smelt from entrainment. The Working Group will continue to monitor smelt salvage, larval and juvenile smelt survey data, and Delta hydrological conditions and will reconvene June 24, 2013, at 10 am.

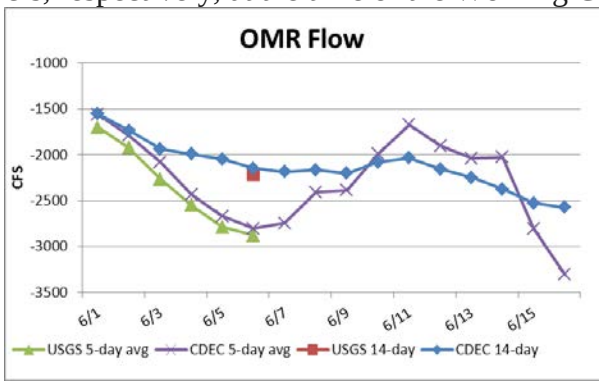
Reported Data:

1) Current environmental data:

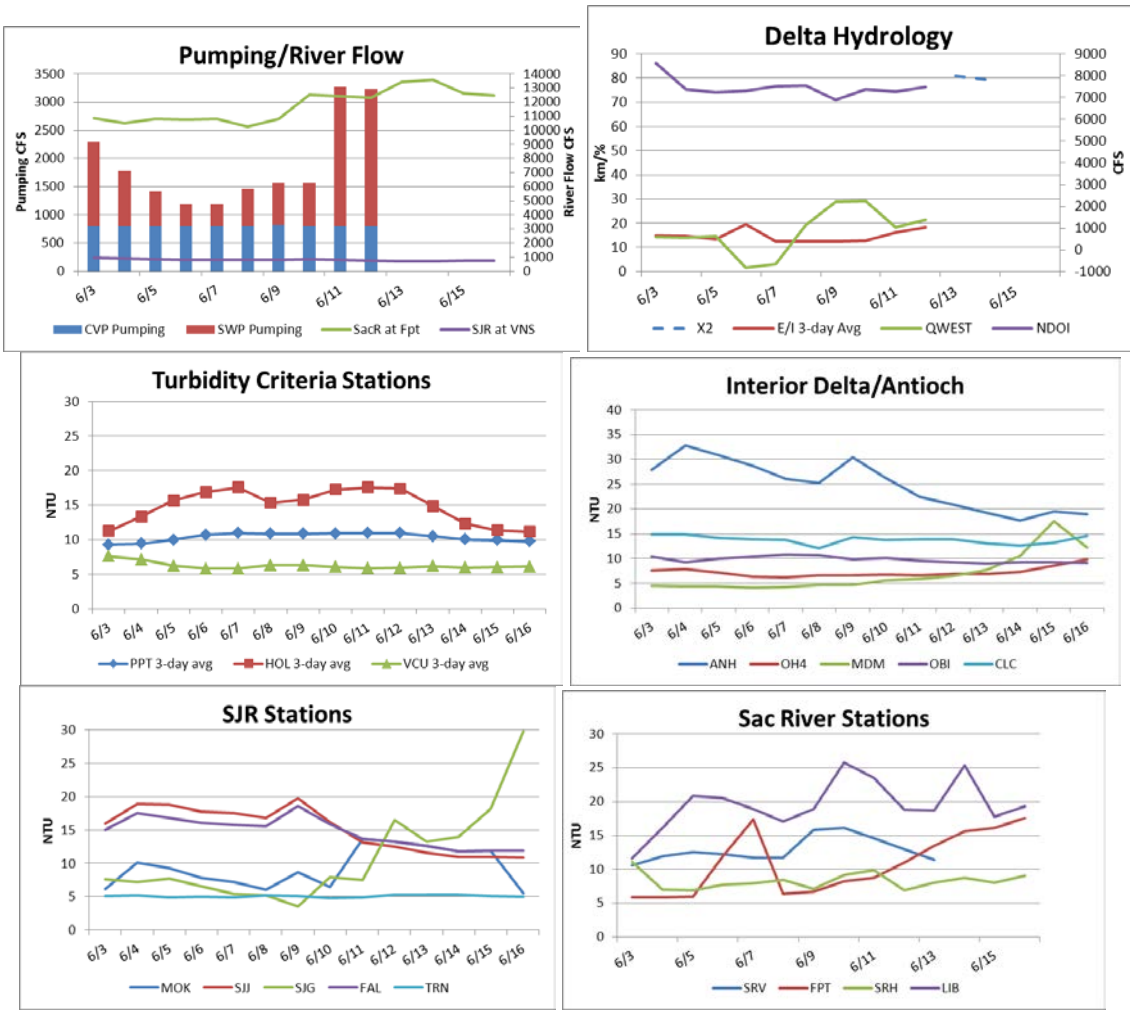
- **Water temperatures**:



- **OMR:** USGS tidally-averaged 5-day and 14-day average OMR flow on June 6 was -2,878 cfs and -2,215 cfs, respectively. The 5-day and 14-day average OMR flows were reported as -3,304 cfs and -2,573 cfs, respectively, at the time of the Working Group meeting.



- **Flow:** Sacramento River flows at Freeport are approximately 12,463 cfs and San Joaquin River at Vernalis is approximately 784 cfs, while X_2 was 81km.



Delta Fish Monitoring:

The 20-mm Survey #7 was in the field June 3 through 6. Processing of samples from Survey #7 is complete, but data are still preliminary. A total of 274 delta smelt has been collected ranging in length from 14 to 40 mm. Results indicate the majority of delta smelt are out of the central and southern Delta. Updated 20-mm Survey data have been uploaded to the 20-mm Survey webpage (http://www.dfg.ca.gov/delta/projects.asp?ProjectID=20mm).

Summer Tow-Net Survey #1 was in the field last week. Preliminary field results indicate 67 delta smelt were collected so far. Ten were from the lower Sacramento River, 51 in the Sacramento Deepwater Shipping Channel/Cache Slough area, four in the lower San Joaquin River (station #809), and the remaining were at or downstream of the confluence. Additional laboratory identification likely will yield higher densities of delta smelt catch.

The 2012 annual Fall Midwater Trawl Index (September through December) is 42. The combined SWP and CVP total allowable take for adult delta smelt for the WY 2013 as calculated from the FMWT Index using the formula prescribed in the BO is 362 (revised). The combined

SWP and CVP total allowable take for larval-juvenile delta smelt for the WY 2013 following the formula in Table C-4 of the BO is 2,350 (revised).

The 2012 Delta Smelt Recovery Index (based on September and October) is 13. More information on the Recovery Index can be found on the Bay-Delta Office's web site at http://www.fws.gov/sfbaydelta/species/delta_smelt.cfm. Results from CDFW surveys are available online at: http://www.dfg.ca.gov/delta/.

1) **Salvage:**

Delta Smelt:

A total of 213 young of the year delta smelt of salvageable size (≥20 mm) was observed at the SWP fish facilities for the reporting period of June 10 through June 16 (no salvage at the CVP). The season total for juvenile delta smelt ≥20 mm is 1,737; or 74% of the WY 2013 larval/juvenile incidental take limit of 2,350. Larval fish sampling was conducted at the SWP from June 10 through June 12 and the CVP from June 10 through June 16; no delta smelt (<20mm) was observed in the larval fish samples from either facility.

Longfin Smelt:

No young of the year (≥ 20 mm FL) longfin smelt (LFS) was salvaged at either fish facility for the reporting period of June 10 through June 16. No LFS post-larva < 20 mm have been observed in larval fish samples collected at either the SWP or CVP since May 7.

Salvage Operations

Current longfin smelt and delta smelt salvage information can be downloaded from DFG's salvage FTP site at ftp://ftp.dfg.ca.gov/salvage/Daily%20Smelt%20Summary/ or queried from DFG's salvage web page at http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx

2) **Expected Project Operations:**

Projected exports at the CVP are targeting 800 cfs. Projected exports at the SWP are targeting 1500 cfs and may increase later in the week due to increased upstream releases. D-1641 water quality standards for June require meeting 7,100 cfs outflow at Collinsville for the month (3-day average), which is presently controlling operations.

3) **Particle Tracking Modeling:**

No PTM runs were requested for this week.

4) **Assessment of Risk:**

Background:

RPA Component 2, Action 3: "The objective of this RPA component (which corresponds to Action 3 in Attachment B), is to improve flow conditions in the Central and South Delta so that larval and juvenile delta smelt can successfully rear in the Central Delta and move downstream when appropriate" (page 282).

Upon completion of RPA Component 1 or when Delta water temperatures reach 12°C (based on a 3-station average of daily average water temperature at Mossdale, Antioch, and Rio Vista) or when a spent female delta smelt is detected in the trawls or at the salvage facilities, the projects shall operate to maintain OMR flows no more negative than -1,250 to -5,000 cfs based on a 14-day running average with a simultaneous 5-day running average within 25 percent of the applicable 14-day OMR flow requirement. Depending on the extant conditions, the SWG shall make recommendations for the specific OMR flows within this range from the onset of implementing RPA Component 2 through its termination. The Service shall make the final determination regarding specific OMR flows. This action shall end June 30 or when the daily water temperature at Clifton Court Forebay reaches 25°C for three consecutive days (pages 282 and 358).

Discussion: The Working Group reviewed and discussed all relevant data from Delta monitoring, salvage, field surveys, and planned Project operations.

The Working Group is following the guidance provided in Action 3 of the RPA for assessing the risk of entrainment to juveniles. The Working Group discussed its June 3 recommendation, the March 12 Service determination, the WY 2013 juvenile delta smelt Incidental Take Limit (ITL), the recent delta smelt distribution data from field surveys, and the low level of salvage of juvenile and larval delta smelt.

Daily OMR flows since June 9 have ranged between approximately -167 and -4,056 cfs. Exports are presently constrained by D-1641 to support the 7,100 cfs outflow water quality standard at Collinsville.

Delta smelt distribution data from field surveys conducted every other week since the beginning of May (20-mm Surveys #5 through #7) indicate that the center of delta smelt distribution has been out of the south Delta. The majority of delta smelt collected from 20-mm Survey #7 (in the field the week of June 3), were observed in the lower Sacramento River and confluence area.

A total of 213 larval/juvenile delta smelt (>=20mm) was salvaged over the reporting period of June 10 through June 16, all at the SWP facility. This is a reduction from the previous week's salvage (week of June 3) and further reduced from the week of May 27, which was the highest weekly salvage of juvenile delta smelt in WY 2013. The cumulative seasonal total of salvaged larval/juvenile delta smelt is 1,737, or 74% of the WY 2013 total ITL of 2,350.

The weekly total salvage decreased last week as compared to the previous two weeks, which may be indicative of a pattern historically observed where salvage spikes as temperatures increase and approach approximately 25^{o}C. As water temperatures approach 25^{o}C, it is less likely that an additional spike in delta smelt salvage will be observed. This pattern of salvage may be a result of delta smelt moving downstream and away from the influence of project

exports, and is similar to what has been observed over the last several weeks with longfin smelt. Water temperatures at Clifton Court Forebay (gauge CLC) increased from May 31 until June 8 and 9, when temperatures surpassed 25^{o}C. Since June 9, temperatures have decreased slightly.

Based on the review of current delta smelt distribution and salvage data, current Delta conditions and projected operations, the Working Group agrees that projected operations are sufficiently protective of delta smelt. The Working Group will continue to monitor Delta conditions and survey and salvage data.

The need for longfin smelt advice is over for 2013. No additional longfin smelt salvage is expected. Clifton Court water temperatures surpassed 25^{o}C and salvage has been zero since June 4. Although a few additional longfin smelt likely remain in the central Delta, south Delta temperatures currently are unsuitable for the species, and as temperatures warm, remaining longfin smelt will attempt to emigrate.