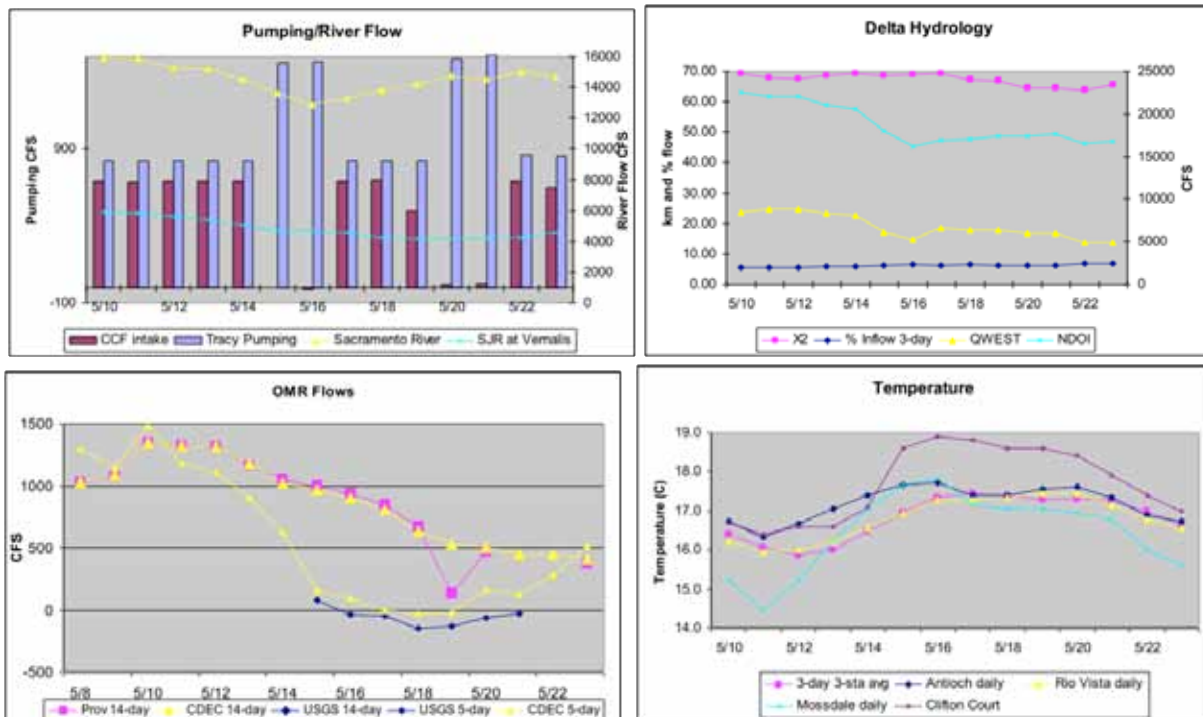


Recommendation for the week of May 24, 2010:

The SWG recommended OMR flows no more negative than -5,000 cfs, based on a low risk of entrainment. Cumulative expanded salvage of larvae is 23; the latest survey data indicate that the greatest densities of delta smelt are in the Sacramento River and downstream of the confluence, and, therefore, outside the influence of the export facilities. The Working Group will continue to monitor salvage, survey data, and hydrological conditions and will reconvene June 1.

1) Current environmental data.

- **Water temperature** for the 3 station average is 16.6°C.
- **OMR** USGS 5-day tidally-averaged OMR as of May 21 is -31 cfs. The 14-day USGS OMR is unavailable until May 26. The 14-day and 5-day OMR average estimate from CDEC as of May 23 is, respectively, 413 cfs and 518 cfs. The 14-day and 5-day provisional estimate of OMR flow as of May 23 is, respectively, 375 cfs and 313 cfs.
- **Flow** Sacramento River inflow is 114,668 cfs and San Joaquin 4,583 cfs. X₂ is 65.41km. As of May 23, E/I ratio is 6.8%, QWEST is 4,900 cfs and NDOI is 16,831 cfs. The graphs below show the most recent trends in Delta hydrology and water quality that were evaluated by the Working Group.



2) Delta fish monitoring:

The final Spring Kodiak Trawl survey for the season (#5) was in the field May 3 through 5. Two adults were collected at station 704, 2 at station 719, and 1 each at stations 715 and 716. Five delta smelt were females, one was of undetermined sex. Three individuals were spent, two were pre-spawn. 20mm Survey 5 was in the field May 10 through 13. All tows from all stations have been processed. A total of 218 larvae were collected. Delta smelt larvae were collected from station 809 on the lower San Joaquin River, with the remaining larvae collected from the Sacramento River system, confluence area, and stations downstream. The highest densities of longfin smelt larvae were downstream of the confluence area. Results from larval surveys, SKT, and 20mm Surveys are available online at: <http://www.delta.dfg.ca.gov/delta>.

3) Salvage

As of May 23, juvenile delta smelt salvage was 23. The total authorized take for juveniles (> 20 mm) for May under the biological opinion is 333, expanded. The Concern Level for May is 222. Larval sampling will be discontinued at the CVP and SWP fish facilities. Delta smelt larvae were detected at the CVP on May 12. Longfin smelt larvae were detected at the CVP on April 18.

4) Expected Project Operations

The Projects are presently managing to the NMFS RPA action IV.2.1. Vernalis flow of 4,600 cfs is anticipated to continue through May 25. From May 26 through 31, Vernalis flow is anticipated to be 3,300 cfs. Combined exports are anticipated to remain at 1,500 cfs until June 1.

5) Particle Tracking Modeling

No PTM run was requested for this week.

6) Discussion for Recommendation

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

The juvenile protective phase of the biological opinion (RPA Component 2; Action 3 in Attachment B) is in effect. This action will continue until June 30 or when the 3-day mean water temperature at Clifton Court Forebay reaches 25⁰C, whichever occurs earlier.

Component 2, Action 3 of the biological opinion, which is intended to protect larvae and juvenile delta smelt, includes a range of OMR flow from -1,250 cfs to -5,000 cfs. The BO provides guidance for the assessment of the risk of entrainment of larvae and juveniles and for determining the appropriately-protective OMR flows within that range for any given week. The BO (pp 353-354) specifies that if entrainment risk is low, OMR flows could be expected to remain as negative as -5000 cfs, but if entrainment risk is higher, OMR flows would be set so as to reduce that risk. The risk factors are (1) evidence (i.e., from survey data) that delta smelt are present in the South or Central Delta, and (2) evidence of ongoing entrainment.

As required in NMFS biological opinion, RPA action IV.2.1, minimum Vernalis flows from April 1 through May 31 are at 4,600 cfs based on the New Melones Reservoir Index (page 642 of the June 2009, NMFS Biological Opinion). Combined pumping for the CVP and SWP is at 1,500 cfs during the 60-day implementation of the RPA action. The action is designed to protect emigrating steelhead smolts from the San Joaquin River Basin during the 60-day period of implementation.

The Working Group noted that juvenile delta smelt salvage so far this year is low (23 expanded salvage), one detected occurrence of larval delta smelt at the facilities on May 12, and the results from the 20mm survey #5, and the Spring Kodiak Trawl #5 indicate that the risk of entrainment of larval and adult delta smelt is likely low. The Working Group noted the positive hydrological conditions in the interior Delta and positive 5-day and 14-day values of OMR also would suggest a low risk of entrainment to larval delta smelt. The Working Group agreed that -5,000 cfs OMR flow would be adequately protective for larval delta smelt for the next week.

The Working Group will request PTM runs from DWR to examine entrainment risk with expected changes to Project operations in June.

Next Meeting: Tuesday, June 1, 2010 at 9 a.m.