

Recommendation for the remainder of the week of May 24, 2010:

The SWG could not reach full consensus. The majority supported a recommendation of OMR flows no more negative than -2,000 cfs; the minority proposed a range of OMR flows from -2,500 cfs to -3,500 cfs. Given the change in conditions since the Monday call, the Working Group agreed that the likelihood of a relatively large entrainment event is high, but the timing and magnitude cannot be predicted. Protection should be viewed in both the long and short terms; this recommendation is for a short-term action. The Working Group will reconvene June 1.

1) Current environmental data was sparse, due to call scheduling. According to DWR's *Executive Operations Summary* for May 28, 2010, Delta inflow is 22,963 cfs (15,919 from the Sacramento River and 4,723 from the San Joaquin). The outflow index is 16,400 cfs; the 14-day E/I ratio is 20.3; X_2 is 70.1 km; 14-day OMR is -10 cfs and 5-day OMR is -224. On the yesterday's DAT call, it was reported that OMR was -2200 on Wednesday. Given weather conditions, water temperatures were presumed not to have risen since Monday, when the 3-station average was 16.6⁰C.

2) Delta fish monitoring:

Very preliminary results for 20-mm Survey 6 were available. Most delta smelt were collected in the north Delta. With all the south Delta stations processed, only two delta smelt were collected: in the lower San Joaquin River (station 804, one fish) and the central Delta (station 815, one fish), on Monday and Tuesday. Sample processing is ongoing.

3) Salvage

No additional salvage was believed to have occurred since Monday. As of May 23, juvenile delta smelt salvage was 23. The total authorized take for juveniles (> 20 mm) in May under the Biological Opinion is 333, cumulative. The Concern Level for May is 222. 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 ramping exports to achieve a 14-day OMR of -5,000 cfs by the weekend. San Joaquin flows at Vernalis are expected to begin dropping post-VAMP. Releases from Shasta are expected to increase.

5) Particle Tracking Modeling

The PTM requested following Monday's call will not be available until Tuesday, June 1.

6) Discussion for Recommendation

The Working Group reviewed and discussed all relevant data from fish surveys, Delta monitoring, salvage, and planned Project operations that was available for this off-schedule call.

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.

The Working Group was cautiously optimistic that as a result of the highly favorable conditions in the Delta – a long, cool spring with good inflow – smelt production is likely to be relatively strong this year. However, the Working Group also expressed concern for an entrainment event which it believes very likely to follow the ramping-up of exports and decreased San Joaquin River inflow. The timing and extent of this event cannot be predicted, but due to anticipated production, could be substantial. Delta temperatures are not presently likely to cue delta smelt to begin moving downstream toward the low-salinity zone. This suggests that juveniles presently in the south and central Delta will be at increased risk of entrainment as export pumping increases. As the Delta is presently in a neap tidal cycle following the full moon, proactively extending protection to juveniles now may minimize entrainment. It may then be appropriate to relax flow restrictions somewhat as the Delta begins to fill, in about a week, depending upon overall conditions.

The RPA provides an adaptive process for developing recommendations for the Service (pp 358-359). The RPA directs that “once larvae are likely to become vulnerable to entrainment, set OMR flows to no more negative than -2,000 cfs based on a 14-day running average...” This rate of flow is characteristic of VAMP conditions in most years. A majority of the Working Group, therefore, recommended setting OMR at -2,000 cfs. However, a minority of the Working Group proposed that a range of OMR from -2,500 to -3,500 cfs would be adequately protective, based upon an overall assessment of the risk of entrainment.

It was also noted that Survey 5 of the 20-mm Survey collected a number of small (5-15 mm) delta smelt, indicating that larvae may be expected to occur in the Delta for some time.

Next Meeting: Tuesday, June 1, 2010 at 9 am.