SMELT WORKING GROUP
Tuesday, January 3, 2012

Meeting Summary:

The Working Group will continue to monitor salvage, survey data, and hydrological conditions and will reconvene January 9, if conditions warrant. No recommendation was made based on no changes observed in delta hydrology, absence of salvage, and the current distribution of delta smelt as indicated in the December FMWT.

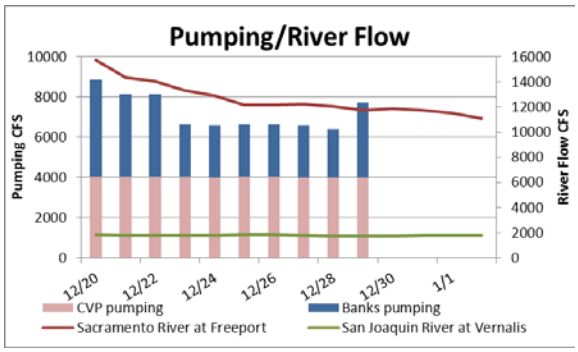
Reported Data:

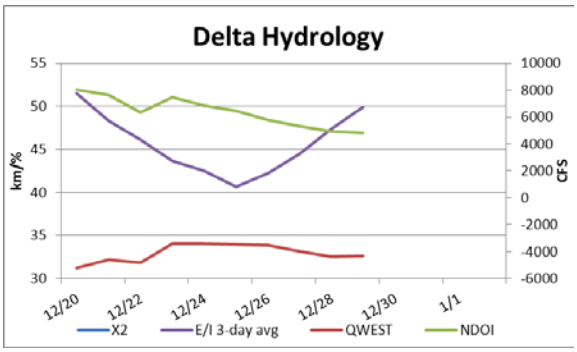
1) Current environmental data:

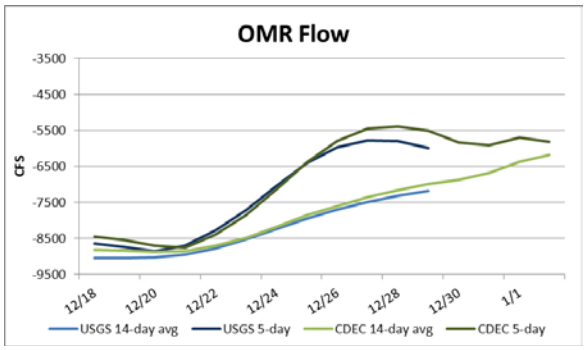
- **Water temperature** for the 3 station average is 8.6°C.

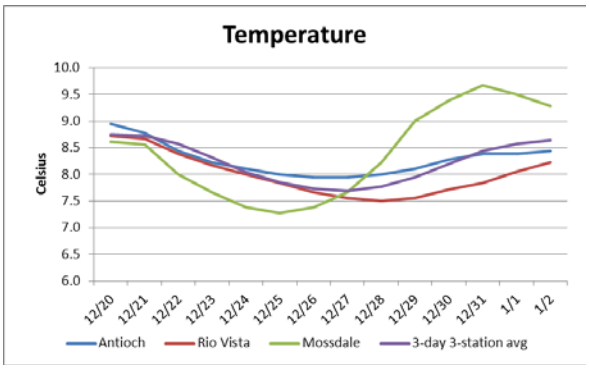
- **OMR:** USGS tidally-averaged OMR 5-day average for December 29 was -5,992cfs and the 14-day average was -7,183cfs. CDEC 5-day average on January 1 was -5,708cfs and the 14-day average was -6,369cfs. Project operators have begun implementing the -5,000 cfs OMR mandated by the NMFS biological opinion.

- **Flow:** Sacramento River inflow is 11,106cfs and San Joaquin River is 1,778cfs. X_2 calculation from CDEC is upstream of 81km since December 8. The E/I ratio, NDOI, and QWEST for December 29 were 49.9%, 4,805cfs, and -4,332cfs, respectively. The graphs below show the most recent trends in Delta hydrology and water quality that were evaluated by the Working Group.

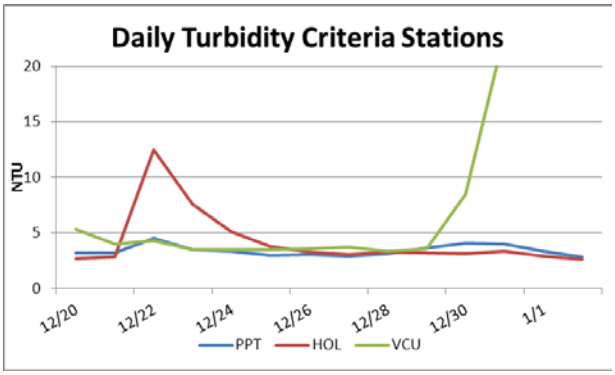


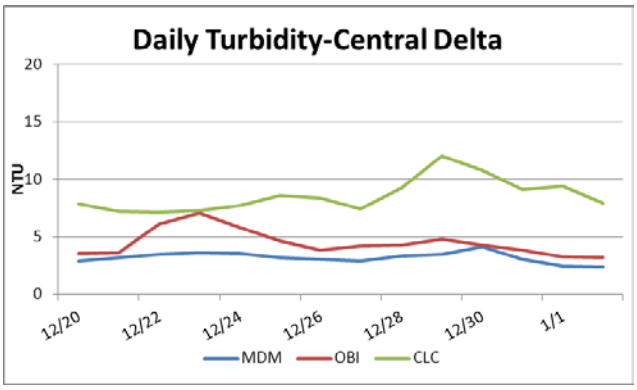


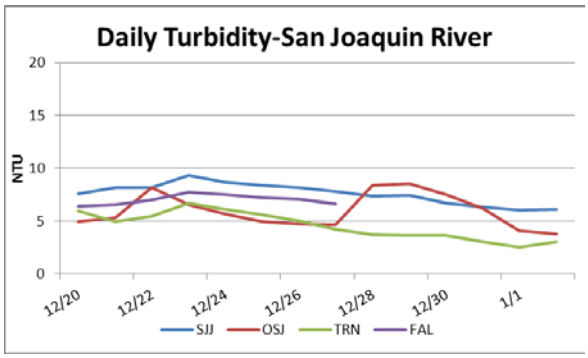


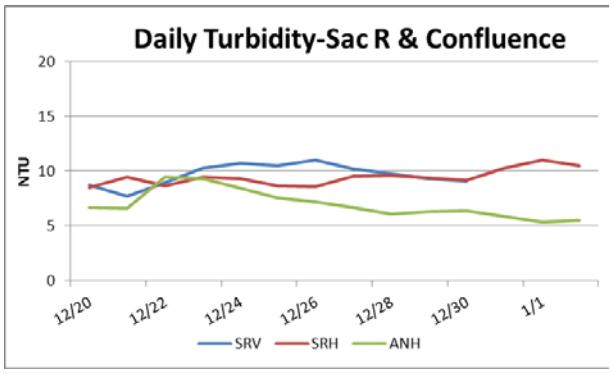


- **Turbidity**: Most stations indicating relatively low, baseline-level turbidity.









2) Delta Fish Monitoring:

Final results from the December Fall Midwater Trawl indicate that delta smelt were mainly distributed around the confluence area, as were longfin smelt. The annual FMWT Index for delta smelt for 2011 is calculated as 343 (sum of all four months). The 2011 Delta Smelt Recovery Index (based on September and October) is 55. The first Smelt Larval Survey will begin January 9 and the first Spring Kodiak Trawl will begin January 17. CDFG requested feedback on proposed changes to the SKT protocol to accommodate the "X2" studies, which could result in a delay in the distribution of information on delta smelt reproductive stage to the Working Group. (Subsequent discussion later in the week determined that no delays would occur.) Comments are

due this week to CDFG. More information on the Recovery Index can be found on the Bay-Delta Office's web site at http://www.fws.gov/sfbaydelta/ under "hot topics." Results from CDFG surveys are available online at: http://www.dfg.ca.gov/delta/

3) Salvage:

No longfin smelt or delta smelt have as yet been salvaged in water year 2012.

4) Expected Project Operations:

Combined CVP/SWP exports are approximately 6,000 cfs as of January 3. CVP reduced pumping to 2,000cfs on December 31, due to attaining full storage in San Luis Reservoir. SWP will adjust their delta pumping to meet the following standards: NMFS RPA restrictions, state board d-1641 average monthly outflow 4,500cfs, and Contra Costa water quality standards.

Operators reported that the 2-week weather forecast is dry, with no precipitation anticipated.

5) Particle Tracking Modeling:

The Working Group did not request PTM runs for this week.

6) Assessment of Risk:

Background: The period covered by RPA Component 1, protection for pre-spawning adult delta smelt, Action 1(a) (pp 280-282 in the B.O. and Attachment B, pp 329-351), is December 1 through 20. Historic salvage patterns indicate that an entrainment event is unlikely during this period. The Working Group may recommend an action during this period based upon examination of turbidity and salvage data, as well as parameters such as the location of X2, apparent abundance, and river flows. The historic likelihood of an entrainment event increases after December 20, the period covered by Component 1, Action 1(b). If turbidity criteria are met or exceeded after December 20, Action 1(b), setting average daily OMR flow no more negative than -2000 cfs for a 14-day period, will begin. The salvage criteria for initiating an action are three consecutive days of salvage or a one-time salvage of 343 delta smelt (estimated). Component 1, Action 2 (pp 280-281 and Attachment B, pp 352-356) is implemented following the conclusion of Action 1.

Discussion: The Working Group reviewed and discussed all relevant data from fish surveys, Delta monitoring, salvage, and planned Project operations. The Working Group assessed the risk of entrainment for delta smelt and longfin smelt to be low based upon apparent distribution as indicated by the December FMWT, lack of change in Delta hydrology since the last Working Group meeting, and lack of salvage. No recommendation was made.

DWR requested a clarification of the authorized incidental take for adult delta smelt in WY 2012. Service staff agreed to report the authorized take at the WOMT meeting at 1pm. It was subsequently reported at WOMT that, based upon the 2011 FMWT index for delta smelt (343),. the authorized incidental take of adults is 2,487 (estimated) and the concern level is 1,862

(estimated), cumulative for the December through March period. Irrespective of Delta conditions, Action 1 would be initiated if salvage at the export facilities occurs on three consecutive days, or exceeds 343 on any given day (B.O. p 329).

The Working Group will hold the next call on January 9 at 10am, if conditions warrant.

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

Advice for week of January 9, 2012:
The Smelt Working Group does not have any longfin smelt advice at this time**.**

Basis for advice:
The 2009 State Water Project 2081 for longfin smelt states that advice to the DFG Director shall be based on:

1. Adult Salvage – total adult (>=80mm) longfin smelt salvage (SWP+CVP) for December through February > 5 times the Fall Midwater Trawl longfin smelt annual abundance index.

2. Adult abundance, distribution or other information indicates that OMR flow advice is warranted.

3. Larva distribution in the Smelt Larva Survey or the 20mm Survey finds longfin smelt larvae present at 8 of 12 Central and South Delta sampling stations in 1 survey (809, 812, 815, 901, 902, 906, 910, 912, 914, 915, 918, 919).

4. Larva catch per tow exceeds 15 longfin smelt larvae or juveniles in 4 or more of the 12 survey stations listed.

Discussion of Criteria

1. As of midnight January 9, 2012, no longfin smelt have been salvaged for the water year. The Fall Midwater Trawl longfin smelt annual abundance index for 2011 is 477. The total salvage level threshold for advice is 2385 (see criterion in #1). No advice is warranted based on this criterion.

2. December fish surveys (Fall Midwater Trawl and Bay Study) collected longfin smelt in the San Joaquin River just downstream and just upstream of the Antioch Bridge. In early January, Bay Study collected longfin smelt as far upstream as San Andreas Shoals on the San Joaquin River, but catches have yet to be summarized. Not enough distribution information to indicate advice is warranted based on this criterion.

3 & 4. No information is available yet. The first Smelt Larva Survey of 2012 begins in the field today (9 January 2012). Information should be available for discussion 17 January.

Current conditions: Combined State and federal exports declined beginning 20 December and were about 6,000 cfs and Qwest was about -2700 cfs as of 5 January (DWR Daily Hydrologic Conditions). San Joaquin River flow was at 1640 cfs and Sacramento River flow at 11,235 cfs, also measured 5 January. OMR, estimated for 8 January, was -4492 cfs and trending slightly less negative.

The collection of adult longfin smelt farther into the San Joaquin River (San Andreas Shoals) last week suggests a slightly elevated risk, but information is needed on relative numbers to evaluate concern. The current OMR level (ca -5000 cfs) and trend (less negative) would be the target level IF there was concern for longfin smelt adult entrainment; current conditions should not increase adult entrainment risk. Cold water temperatures during December will slow longfin smelt egg incubation and few longfin smelt larvae are anticipated to hatch until late January, with more in February.