Smelt Working Group
December 14, 2015

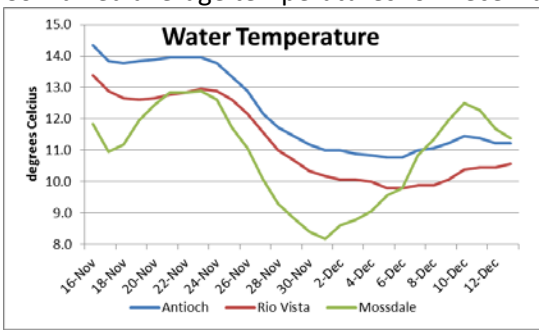
Meeting Summary

The Working Group reviewed current Delta Smelt distribution and salvage data, and current Delta conditions.

Reported Data

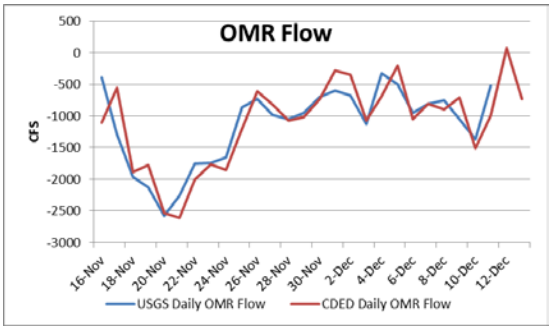
1. Current environmental data
    a. Temperature

    Combined average temperatures for December 13 are 11.1°C



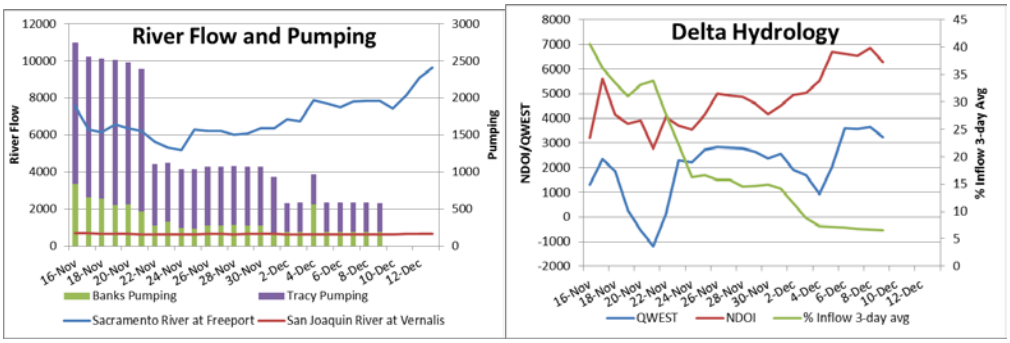
    b. OMR flow

    USGS OMR daily average flow for December 13 is -516 cfs. CDEC OMR daily average flow for December 11 is -727 cfs.

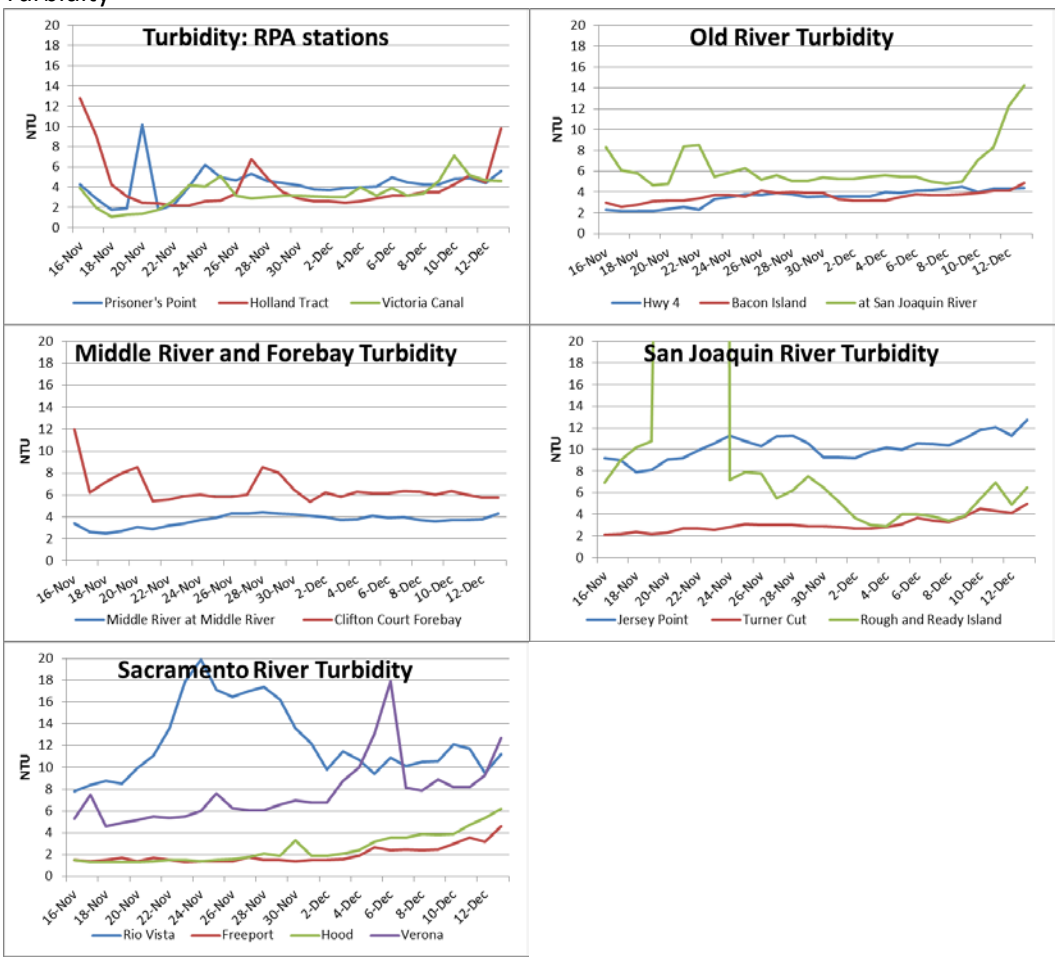


    c. River Flows and pumping

    Sacramento River at Freeport flow for December 13 was 9628 cfs. San Joaquin River at Vernalis river flow for December 13 was 651 cfs.



d. Turbidity



2. Delta fish monitoring

Fall Midwater Trawl (FMWT): November catch for both Delta Smelt and Longfin Smelt was 0. The December FMWT was in the field the weeks of November 30 and December 7. Two Delta Smelt were detected; therefore, the annual Delta Smelt FMWT will be greater than 5 (Note; 5 is the Sept-Nov index). The Index for 2015 may be released as early as next week. The September through November Delta Smelt FMWT index is 5; the September through November Longfin Smelt index is 0.

The December Spring Kodiak trawl began today. The preliminary report of catch was that no Delta Smelt had been collected at any of the three lower Sacramento River stations that had been visited by the time of the call. Results are anticipated to be released on Friday. The SKT #1 will be in the field January 11.

Smelt Larva Survey begins January 4, 2016.

The Early Warning Survey began November 30. Sampling is alternating between Jersey and Prisoner's Point, with each being sampled once per week. One Delta Smelt was detected at Jersey Point on both Dec 7 and 10 (for a total of two fish).

3. **Salvage**
   There has been no salvage of Delta Smelt or Longfin Smelt at either the federal or state Delta pumping facilities during the current water year.

4. **Expected Project Operations**
   Jones pumping plant is pumping 400 cfs today and the Clifton Court (CC) allotment is at 200 cfs today for a total pumping of 600 cfs. Project operations currently are being controlled by water quality. Operators indicated the projected OMR Index for the week (based on decreased pumping at CC) is expected to be approximately -650 to 700 cfs.
   There was no turbidity transect survey last week.
   X2 is upstream of the Three Mile Slough on the Sacramento River and at approximately Jersey Point on the San Joaquin River.
   The Delta Cross Channel was opened December 4 and expected to be closed tomorrow.
   A storm is expected late in the month.

5. **Delta Conditions Team**
   DCT met on December 11.

6. **Assessment of Risk/Discussion**
   The SWG reviewed Delta Smelt distribution and salvage data, and current Delta conditions and provided no advice to the Service or CDFW for either Delta Smelt or Longfin Smelt.

   Water operations currently are constrained by water quality.

   Members indicated that weekly sampling at Jersey and Prisoner's Point for the EWS is sufficient until storm conditions indicate a change in flows and turbidity to the Delta.

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

Advice for week of December 14, 2015:
The Smelt Working Group does not have any advice for Longfin Smelt based on recent information. This is the first Longfin Smelt advice document for water year 2016.

Barker Slough operations advice was not provided by the Smelt Work Group, because the meeting occurred prior to concern period beginning January 15 (see #5 below).

Basis for advice:
The 2009 State Water Project 2081 for Longfin Smelt states that advice to WOMT and the DFW Director shall be based on:

1. Adult Salvage – total adult (>=80 mm) 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 20-mm 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; see Figure 1).

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

5. During the period January 15 through March 31 of a dry or critically dry water year only, advice for Barker Slough pumping plant operations may be warranted if larval Longfin Smelt are detected at station 716 and other information indicates risk of entrainment.

Discussion of Criteria

1. As of December 14, 2015, no Longfin Smelt has been salvaged for the water year. There will be a Longfin Smelt adult salvage threshold for advice (see criterion in #1 above), because some Longfin Smelt were collected by the Fall Midwater Trawl Survey in December. No Longfin Smelt was collected from within the Delta in December (see Current Conditions below). No advice is warranted based on this criterion.

2. December Bay Study sampling collected no Longfin Smelt in the San Joaquin River, suggesting no recent proximity to the export pumps. The December Fall Midwater Trawl sampled the region and did not detect Longfin Smelt in the San Joaquin River or the south Delta. Distribution information does not indicate advice is warranted based on this criterion.

3 & 4. The first Smelt Larva Survey (SLS) of 2015 will be conducted beginning January 4th.

5. Criteria does not begin until January 15th.

Current conditions: As of December 9th, the Sacramento River flow was low (9,628 cfs) as was the San Joaquin (651 cfs). X2 has been >81. Combined State and federal exports were 600 cfs for today and are being controlled by water quality. No changes in export operations are planned for the week. The projected OMR index for the week was estimated at about -700 cfs. Qwest was +5,047 on December 13. The storm last week produced only a small spike in outflow arriving this week.

In December, a few Longfin Smelt were collected by the Fall Midwater Trawl, one each in Carquinez Strait, Grizzly Bay and just upstream of Chipps Island. These were the first and only collections of Longfin Smelt by the Fall Midwater Trawl this year. A single Longfin Smelt was collected by the Bay Study in December in Carquinez Strait. No Longfin Smelt was collected in the San Joaquin River or south Delta by either survey.

No Longfin Smelt has been salvaged this water year.

Summary of Risk: Risk of entrainment is very low due to extremely low export rates and the apparent absence of Longfin Smelt in the lower San Joaquin River or south Delta.

The collection of no adult Longfin Smelt in the San Joaquin River or central Delta (Bay Study and FMWT sampling) to date suggests few fish have moved into the central or south Delta for spawning. Predicted conditions, particularly the weak negative OMR and positive Qwest values, indicate very little risk of entrainment for fish that do move into the central Delta.