

Smelt Working Group
December 7, 2015

Meeting Summary

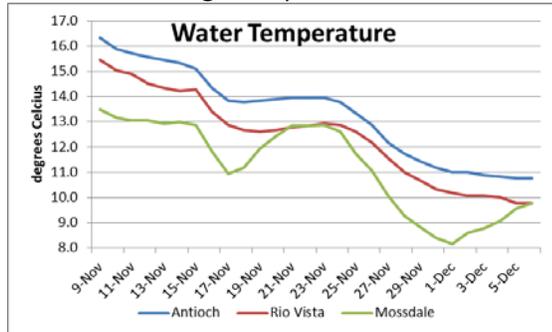
The Working Group reviewed current Delta Smelt distribution and salvage data, and current Delta conditions.

Reported Data

1. Current environmental data

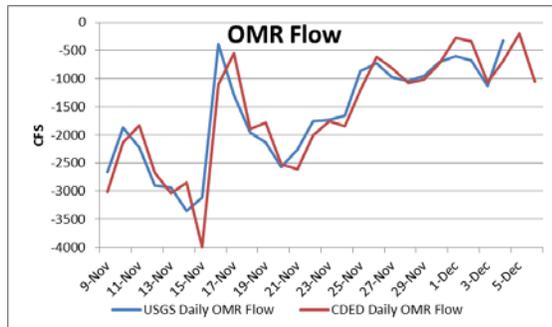
a. Temperature

Combined average temperatures for December 6 are 10.1°C



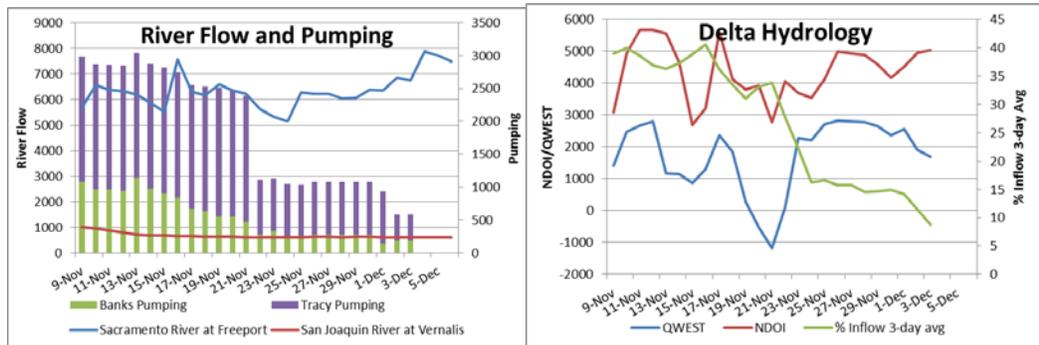
b. OMR flow

USGS OMR daily average flow for December 4 is -328 cfs. CDEC OMR daily average flow for December 6 is -1053 cfs.

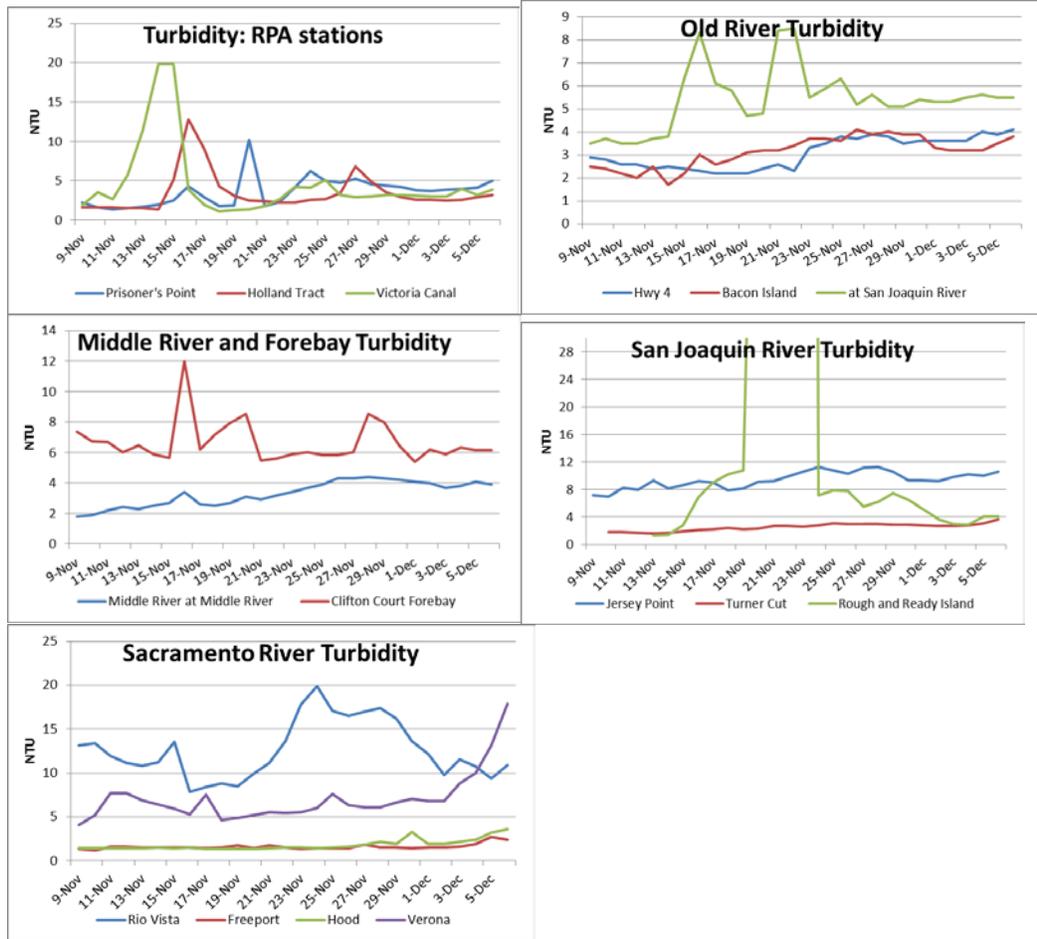


c. River Flows and pumping

Sacramento River at Freeport flow for December 6 was 7484 cfs. San Joaquin River at Vernalis river flow for December 6 was 606 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 last week and this week. Last week, the survey caught one Delta Smelt at an index station in Montezuma Slough (73mm). Three Longfin Smelt were collected at index stations in the December FMWT. The September through November Delta Smelt FMWT index is 5; the September through November Longfin Smelt index is 0.

Bay Study collected two Delta Smelt, both at the Sacramento River station adjacent to Sherman Island and one Longfin Smelt during the December survey.

The December spring Kodiak trawl begins December 14.
Smelt Larva Survey begins January 4, 2016

The Early Warning Survey began November 30. Sampling is alternating between Jersey and Prisoner's Point daily. No species of concern have been collected as yet. Sacramento River sampling could begin as soon as next week.

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 -700 cfs.

DWR's turbidity transect survey was in the field November 23. The results are attached to last week's notes.

X2 is upstream of the Three Mile Slough on the Sacramento River and downstream of Jersey Point on the San Joaquin River.

The Delta Cross Channel was opened December 4.

A storm is expected this Wednesday or Thursday.

5. Delta Conditions Team

DCT met on December 4. There was no recommendation to forward.

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 are currently constrained by water quality. While there is a precipitation event expected sometime mid-week, salinity has intruded into the Delta to a point that the event is unlikely to affect water operations at least for the week. The initial water operations response due to this week's precipitation would likely be a reduction in releases to the Feather River, rather than an increase in Delta exports.

The SWG briefly discussed BOR's request for flexibility with regard to Delta Cross Channel gate operations in order to improve water quality. The request for flexibility was granted by NMFS with the following criteria .

DCC gates will be closed within 24 hours if either:

- The salinity level at any of the four water quality stations (Jersey Point, Bethel Island, Holland Cut or Bacon Island) drops below the concern levels; or
- Fish monitoring data are greater than three fish per day for the Knights Landing Catch Index (KLCI) or Sacramento Catch Index (SCI) surveys, as outlined in RPA IV.I.2.;

and

- U.S. Fish and Wildlife Service will intensify the Sacramento Catch Index surveys to a daily effort during the period of time that the gates are open.
- While the DCC gates are open, combined exports will be limited to 1,100 cfs to support Human Health and Safety.

The SWG did not anticipate that the DCC gates being in the open position at this time of the season would have a negative effect on Delta Smelt or Longfin Smelt.

The SWG's Preliminary comments on the Service's Early Warning Survey were provided to the Service last Friday. Final comments will be provided soon.

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

Advice for week of December 7, 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 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; 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 7, 2015, no Longfin Smelt have been salvaged for the water year. There is no interim Longfin Smelt adult salvage threshold for advice (see criterion in #1 above), because no Longfin Smelt were collected by the Fall Midwater Trawl Survey from September through November. Fortunately, several Longfin Smelt were collected in December (see Current Conditions below), but none from within the Delta. 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 November 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 5th.

5. Criteria does not begin until January 15th.

Current conditions: As of December 6th, the Sacramento River flow was low (7484 cfs) as was the San Joaquin (606 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 operations are planned for the week. The projected OMR index for the week was estimated at about -700 cfs. A storm expected later in the week may lead to a small spike in outflow over the weekend or early next 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 were collected in the San Joaquin River or south Delta by either survey.

No Longfin Smelt have 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 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.