

Smelt Working Group Monday, January 13, 2014

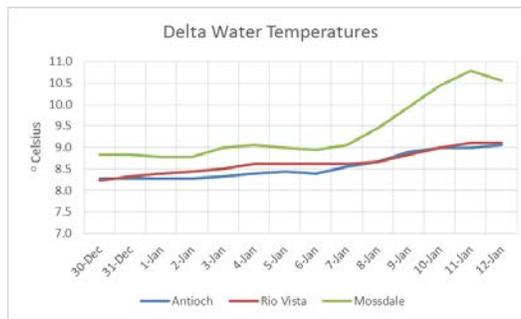
Meeting Summary:

The Working Group agreed that given their present distribution, current salvage, and Delta conditions, the risk of entrainment of delta smelt remains low and therefore, the Working Group recommends that no change in operations is necessary to adequately protect delta smelt from entrainment. The Working Group also agreed that given their present distribution, existing constraining conditions were sufficient to protect longfin smelt. The Working Group will continue to monitor salvage, turbidity, and other conditions and reconvene January 21.

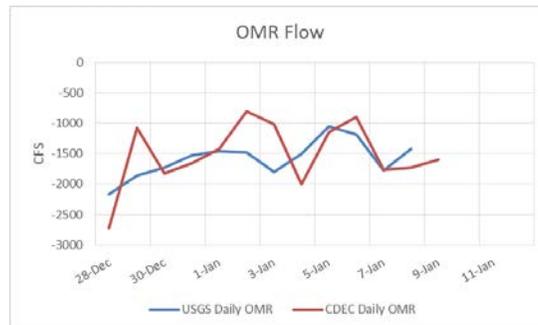
Reported Data:

1. Current environmental data:

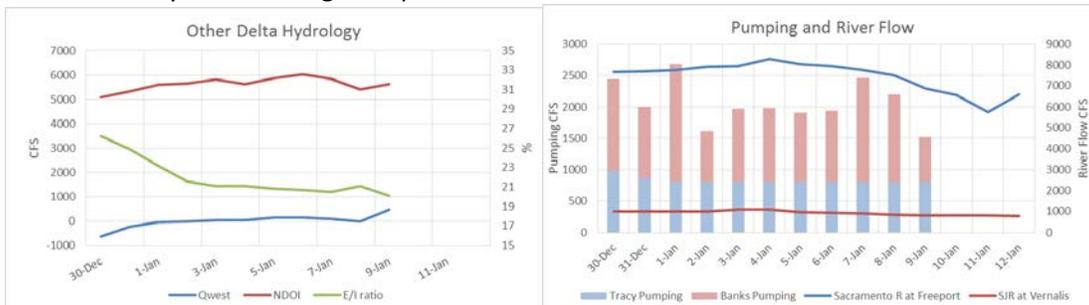
- Water temperatures:

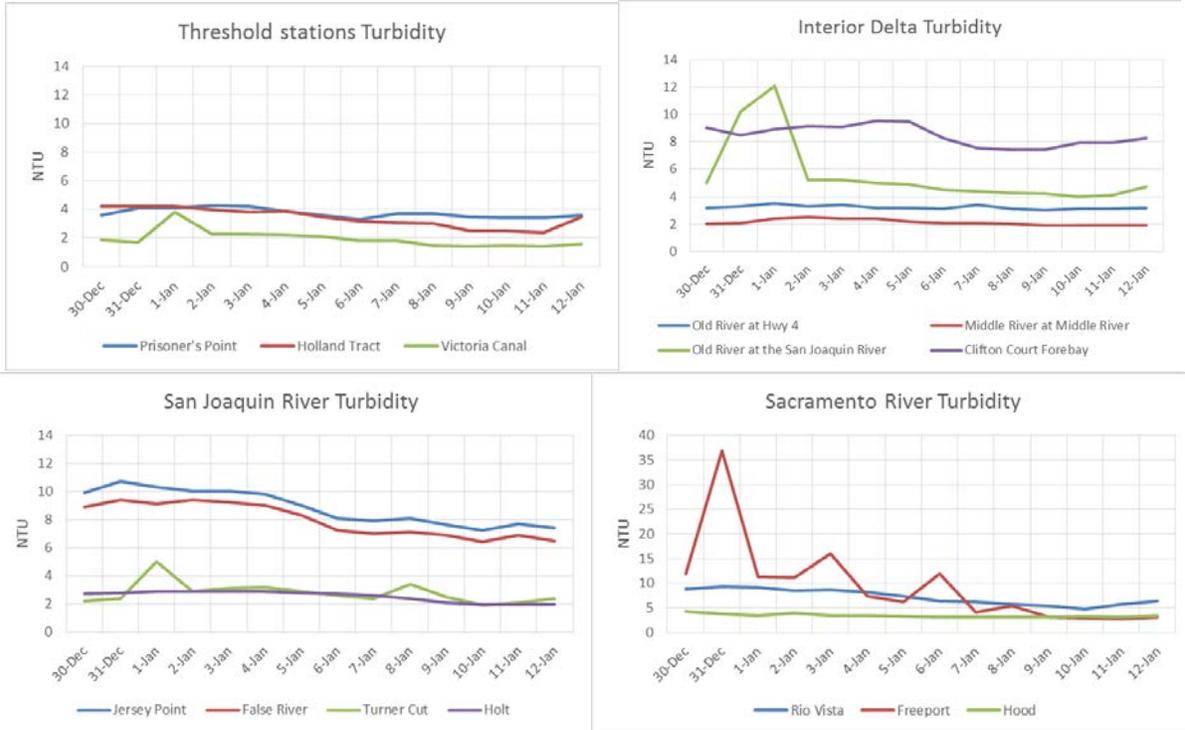


- **OMR flow:** USGS tidally averaged daily OMR flow on January 8 was -1415 cfs. CDEC daily OMR flow as of January 9 was -1593 cfs.



- **Flow:** Sacramento River average daily flow for January 12 was 6590 cfs and San Joaquin River average daily flow was 781 cfs. X2 calculation from CDEC is upstream of Colinsville (82 km). 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 Smelt Larval Survey #1 was January 8 through 10. CDFW has added nine stations on the Napa River to the SLS surveys this year, due to the CDFW/State Water Contractors settlement agreement for longfin smelt. No delta smelt larvae were detected. 261 longfin smelt larvae were detected, mostly downstream of the confluence. Small numbers were detected on the mainstem San Joaquin River and Sacramento Rivers. Although the data is preliminary, the additional stations on the Napa River did not detect longfin smelt Spring Kodiak Trawl #1 is in the field this week.

The 2013 Annual FMWT surveys have concluded. The Annual FMWT Index (based on all four months) for delta smelt is 18, the second lowest on record, and statistically indistinguishable from the lowest, 17 from 2009.

The 2013 Delta Smelt Recovery Index (based on September and October) is 4. More information on the Recovery Index can be found on the Bay-Delta Office's web site at http://www.fws.gov/sfbaydelta/species/delta_smelt.cfm. Results from CDFG surveys are available online at: <http://www.dfg.ca.gov/delta/>.

3. Salvage:

No delta smelt or longfin smelt have been salvaged in WY2014 thus far. As of last week, the CVP is experiencing technical difficulties with the Tracy Fish Collection Facility. Primary bypass gate #4 (at the end of the primary louver structure) is down with no estimated time for repair as yet. This is assumed to dramatically affect the ability to salvage fish, as a larger proportion of fish enter the facility through this gate than the remaining three bypasses.

Current longfin smelt and delta smelt salvage information can be downloaded from DFG's salvage FTP site at <ftp://ftp.dfg.ca.gov/salvage/Daily%20Smelt%20Summary/> or queried from DFG's salvage web page at

<http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx>

4. Expected Project Operations:

Combined SWP/CVP exports are expected to be approximately 1500 cfs this week. Currently, exports are controlled by salinity intrusion into the central and south Delta and the monthly outflow standard as set by the State Water Resources Control Board. The Tracy Pumping Facility will be shut down entirely starting January 15 for six to ten days for maintenance activities.

Although not presently controlling operations, NMFS RPA IV.2.3 is in affect as of January 1, 2014, which restricts OMR flow to no more negative than -5,000 cfs.

5. Particle Tracking Modeling:

No PTM runs were requested for this week.

6. Turbidity Modeling:

No modeling runs were discussed this week.

7. Assessment of Risk:

Background:

RPA Component 1, Action 2: "An action implemented using an adaptive process to tailor protection to changing environmental conditions after action 1. As in Action 1, the intent is to protect pre-spawning adults from entrainment and, to the extent possible, from adverse hydrodynamic conditions."

"The range of net daily OMR flows will be no more negative than -1,250 to -5,000 cfs. Depending on extant conditions (and the general guidelines below) specific OMR flows within this range are recommended by the SWG from the onset of Action 2 through its termination..." (page 35).

Discussion:

The Working Group reviewed and discussed all relevant data from Delta monitoring, salvage, field surveys, and planned Project operations. Adult take limit is 155 with a concern level of 116 fish. Juvenile take limit is 1007 with a concern level of 671 fish. These numbers reflect the revised take estimate produced last February.

The Working Group agreed there was no need to modify exports at this time to benefit delta or longfin smelt.

8. Framework for providing advice to the Service:

Service management presented a draft framework to the group which contains a new way for the members to provide advice to the Service. Members are to review and provide comments and suggestions by January 17 to the Service. See attached document, entitled "Smelt Working Group Framework for providing advice to the Service," which is the current draft in circulation. Members provided some initial thoughts and some members were requested to provide specific information to the Service.

The SWG will have the next meeting on January 21.

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

Advice for week of January 13, 2014:

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 2014.

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 January 13, 2014, no Longfin Smelt have been salvaged for the water year. The Fall Midwater Trawl Longfin Smelt annual abundance index was 164. The total salvage level threshold for advice is > 820 (see criterion in #1). No advice is warranted based on this criterion.

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

3 & 4. The first Smelt Larva Survey (SLS) of 2014 was conducted January 6-7. Few Longfin Smelt larvae were collected in the central or south Delta, and neither larva criterion was met (cf., Table 1 and Basis for Advice #s 3 & 4 above). During SLS survey 1, Longfin Smelt larvae were collected at only 5 criteria stations and in very low numbers at all but one station.

5. Water year 2014 has been classified as critically dry and a Longfin Smelt larva was collected at 716 (Table 1) and a couple more larvae were collected at 723, but this meeting occurred prior to the January 15 start date, so no advice is given.

Current conditions: Net Delta outflow has been low (about 6,000 cfs or less) since mid-December. X2 has been >81 in January. Combined State and federal export are at 1,500 cfs and will remain there for the foreseeable future. Qwest has been weakly positive since January 3rd, but will trend negative in several days. OMR has been weakly negative in January (ca. -800 to -2000).

Summary of Risk:

Risk of entrainment is very low.

The collection of no adult Longfin Smelt in salvage or in the San Joaquin River or south Delta to date suggests limited spawning in the central or south Delta. The small numbers of larvae collected in the central and south Delta supports this conclusion, though it is too early in the hatching season to predict this will be the case throughout. The current and predicted exports will result in a modest -2500 OMR or less negative OMR flows. Currently, X2 located in the lower Sacramento and San Joaquin rivers, which suggest that some adult Longfin Smelt might move into the central and south Delta to spawn. There has not been any adult fish detected by monitoring, but a few larvae were detected. Qwest has been of insufficient magnitude to move larvae one way or the other. These circumstances all support the conclusion of very low risk of entrainment.