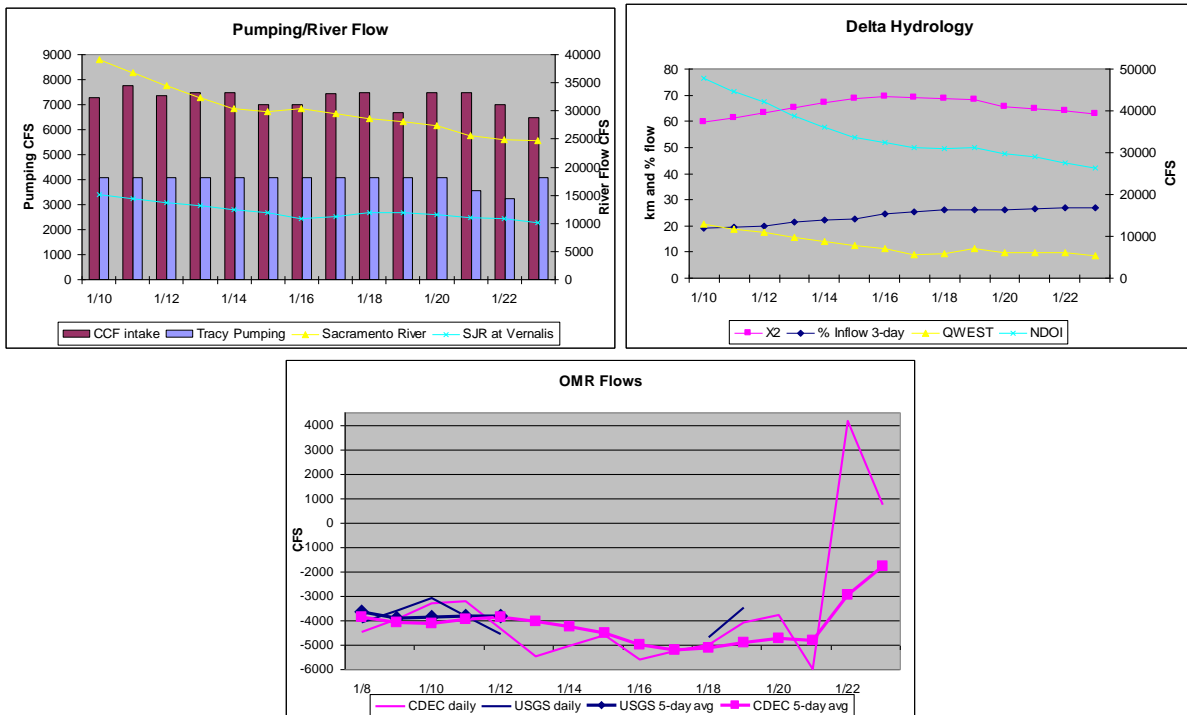


SMELT WORKING GROUP
Monday, January 24, 2011

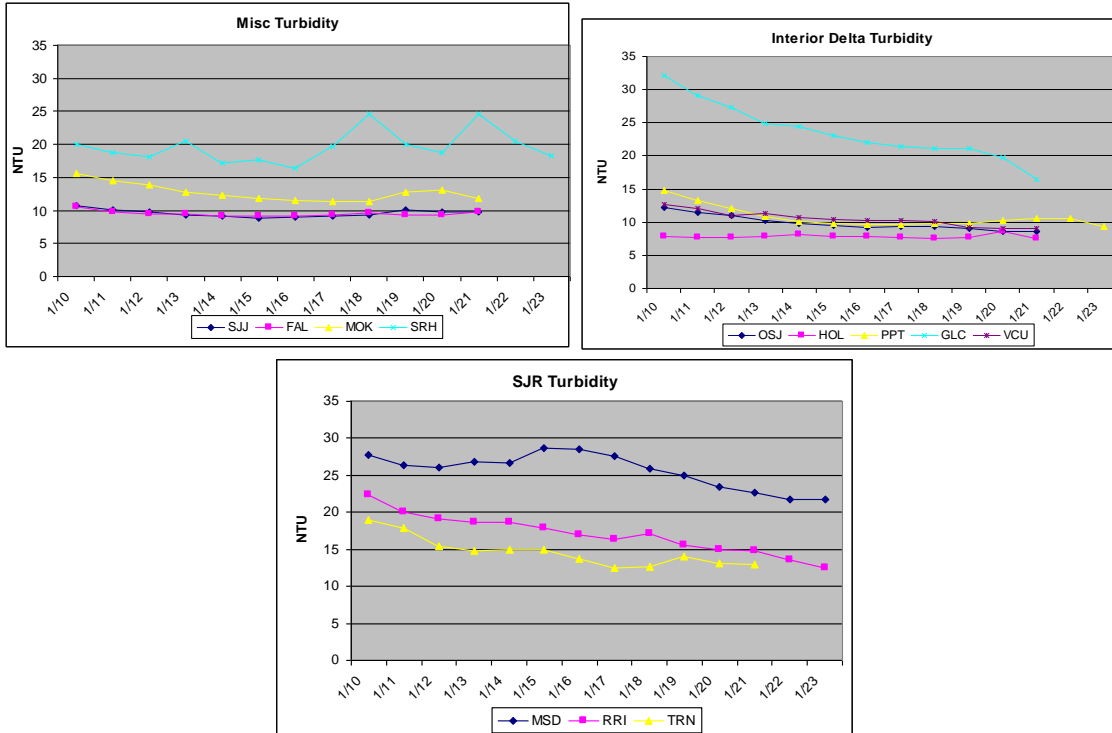
The Working Group will continue to monitor salvage, survey data, and hydrological conditions and will reconvene January 31. No recommendation was made.

1) Current environmental data.

- **Water temperature** for the 3 station average is 9.8°C.
- **OMR** USGS tidally-averaged OMR was -3491 cfs on Jan. 19, 2011. The OMR average estimate from CDEC on Jan. 23, 2011 is 742 cfs. The 5-day CDEC OMR is -1794 cfs.
- **Flow** Sacramento River inflow is 24,699 cfs and San Joaquin 10,166 cfs. X₂ is 62.96km. As of January 23 E/I ratio is 27%, QWEST is 5,447 cfs and NDOI is 26,249 cfs. The graphs below show the most recent trends in Delta hydrology and water quality that were evaluated by the Working Group.



- **Turbidity** Three-day criterion station averages were 10.15NTU at Prisoner’s Point while both Holland Cut and Victoria Canal data was unavailable for January 22 and 23. Three-day criterion for these two stations as of January 21 was 7.93NTU and 9.08NTU, respectively. Additionally, the Working Group reviewed turbidity data for several stations in and around the Delta.



2) Delta fish monitoring:

Smelt Larva Survey was in the field last week. No delta smelt larvae were collected. SLS #2 will be in the field the week of January 31. Spring Kodiak Trawl #1 was in the field Jan. 10 and collected a total of 177 delta smelt throughout the Delta. 155 fish were collected from the Sacramento River area (including 128 fish from station 719 during a 5 min tow, half the normal trawl time), 17 from Suisun Bay and Montezuma Slough, and 5 from the central and south Delta. 160 delta smelt were in pre-spawn condition, while the sex of 17 fish could not be determined. SKT #2 will be in the field the week of February 7. The final 2010 FMWT Index is 29 for delta smelt and 191 for longfin smelt. The 2010 Delta Smelt Recovery Index (based on September and October) is 11. 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 larval surveys, SKT, and 20mm Surveys are available online at: <http://www.delta.dfg.ca.gov/delta>

3) Salvage

Four adult longfin smelt were salvaged at the CVP on January 14. Four adult delta smelt were salvaged at the CVP on January 15 and 17, for a total of 8 fish. No salvage has been reported for longfin smelt or delta smelt at the SWP since June 2010. Criteria for the implementation of Action 1 were not met or exceeded.

4) Expected Project Operations

Combined CVP/SWP exports are expected to remain at about 9,100 cfs this week. Vernalis flow is expected to decrease to 8,000 cfs and then increase to 10,000 cfs later in the week. The Projects will be operating to meet the -3500 cfs OMR flow requirement (as per the NMFS Biological Opinion) for most of this week.

5) Particle Tracking Modeling

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

6) Discussion for Recommendation

The Working Group reviewed and discussed all relevant data from fish surveys, Delta monitoring, salvage, and planned Project operations. No recommendation was made.

RPA Component 1, Action 1 is intended to protect pre-spawning adults during the first flush, as they move into their spawning areas. The WY 2011 first flush has likely passed through the Delta. Component 1, Action 2 (pp 280-281 and Attachment B, pp 352-356) may be implemented following the conclusion of Action 1, or the first flush. Criteria for the implementation of Action 2 are more varied and more flexible than those for Action 1.

The 2010 FMWT index for delta smelt is 29. This means that the authorized incidental take of adults is 210 (estimated) and the concern level is 157 (estimated), cumulative for the December through March period. Under the low-entrainment risk scenario for the implementation of Action 2, the salvage criterion is a Daily Salvage Index greater than or equal to 1 (i.e., 29, estimated; B.O. p 338).

Sacramento River flows have decreased over the past week and are expected to continue to decrease. Flows on the San Joaquin River currently are at 10,000 cfs and are anticipated to decrease to 8,000 cfs and return to 10,000 cfs later this week due to expected flood releases from New Exchequer.

The Working Group estimated that the overall level risk of entrainment was low given the distributional data from the SKT Survey #1. Turbidity is low and hydrology remains favorable, which indicates a low level of risk for entrainment. Apparent abundance remains very low, and the recent occurrence of first flush conditions raises concern for the species into the moderate range. Delta smelt upstream migration likely is ongoing. The risk of delta smelt entering the central and south Delta likely is to remain low, due to decreasing Delta turbidity and the anticipated level of flow for the San Joaquin River. The Working Group believes that, based upon what is known of Delta conditions and delta smelt distribution, a modification of Project operations to protect delta smelt is not yet warranted.

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

Recommendation for week of Jan. 24, 2011:

The Smelt Working Group does not have a longfin smelt recommendation at this time.

Basis for recommendation:

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 (≥ 80 mm) longfin smelt salvage (State Water Project + Central Valley Project) 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.

The first longfin smelt of the season was salvaged on Jan. 14, 2011: a single 130 mm fish was salvaged at the Central Valley Project. No other longfin smelt were salvaged through January 23, 2011. The combined salvage level threshold for advice is 955 (see criterion in #1) based on a Fall Midwater Trawl longfin smelt annual abundance index of 191 for 2010. A few longfin smelt were collected during January fish surveys within the Delta, but all came from the Sacramento River. In early January sampling, Bay Study collected 4 longfin smelt in the Sacramento River from lower Decker Island upstream to Rio Vista, but none in the San Joaquin River. The Spring Kodiak Trawl collected 8 longfin smelt in the lower Sacramento River between 3 Mile Slough and Sherman Lake; no longfin smelt were collected in the central or south Delta. No advice is warranted based on this criterion.

San Joaquin River flow declined to about 10,000 cfs (Figure 1) and Sacramento River flow declined to just over 19,000 cfs on Jan. 19 when currently available data ended (Figure 2). San Joaquin River flow remains above the lower threshold for entrainment risk to longfin smelt based on the State Water Project 2081 (i.e., 8,000 cfs at Vernalis). Also, for several weeks both projects have been operating to a National Marine Fisheries Service criteria of no more negative than -5,000 cfs Old and Middle River net flows. Such a criterion would tend to reduce the risk of entrainment of adult longfin smelt. The most recent fish survey information for longfin smelt, the January Bay Study and Kodiak Trawl surveys, also suggests very low risk. Although adult longfin smelt are moving upstream in the estuary to spawn, high Sacramento and San Joaquin river flows and X2 at 63 km in Suisun Bay make it unlikely that a high proportion of the longfin smelt population will move into the Delta. This may change as flows continue to decline. Given this information, no advice is warranted based on criterion 2 at this time.

The first Smelt Larva Survey of the season was initiated on Jan. 18 and was completed Jan. 19. Partial survey 1 results depict most longfin smelt larvae distributed in the lower Sacramento River downstream into Suisun Bay (Table 1). Longfin smelt larvae were collected in very low numbers at 4 of 12 central and south Delta criteria stations. Both frequency of occurrence and

catch at the positive stations were below levels for concern (i.e., #3 and 4 above). No advice is warranted based on these criteria.

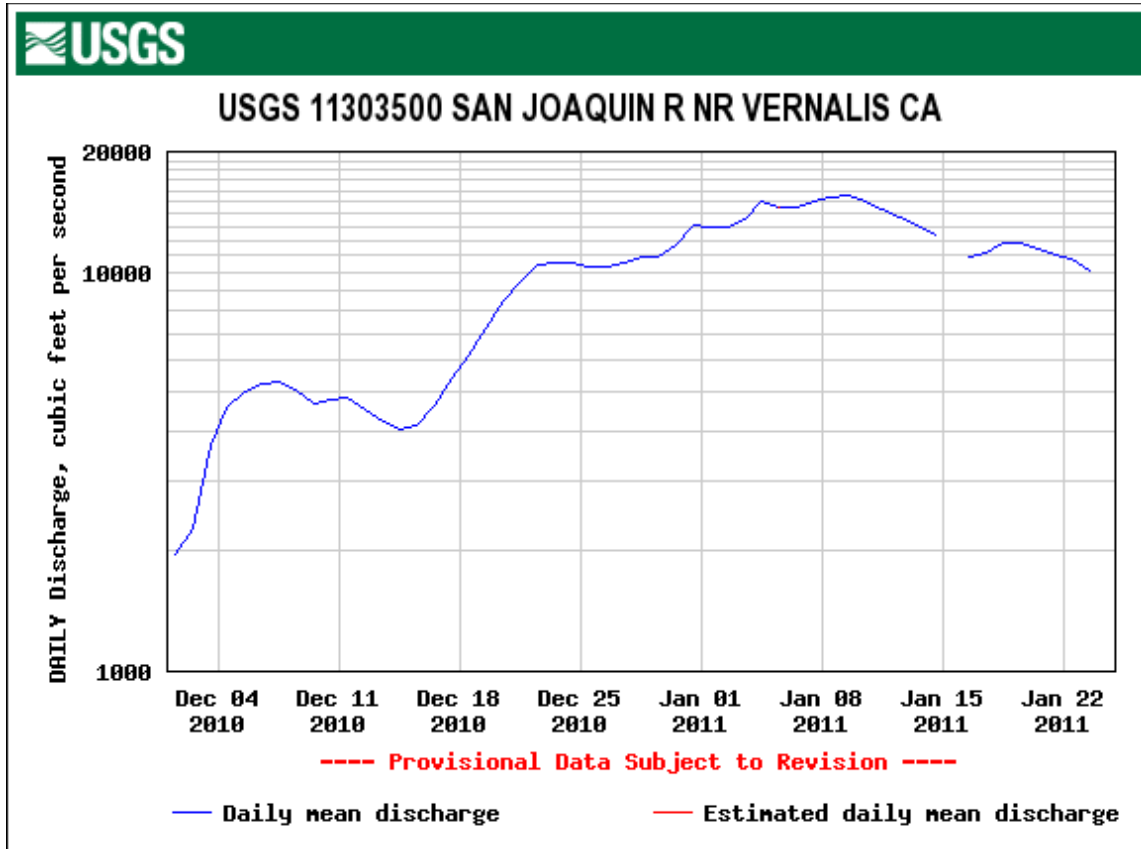


Figure 1. Tidally averaged San Joaquin River flow measured near Vernalis, Dec. 1, 2010 through Jan. 24, 2011.



USGS 11455420 SACRAMENTO R A RIO VISTA CA

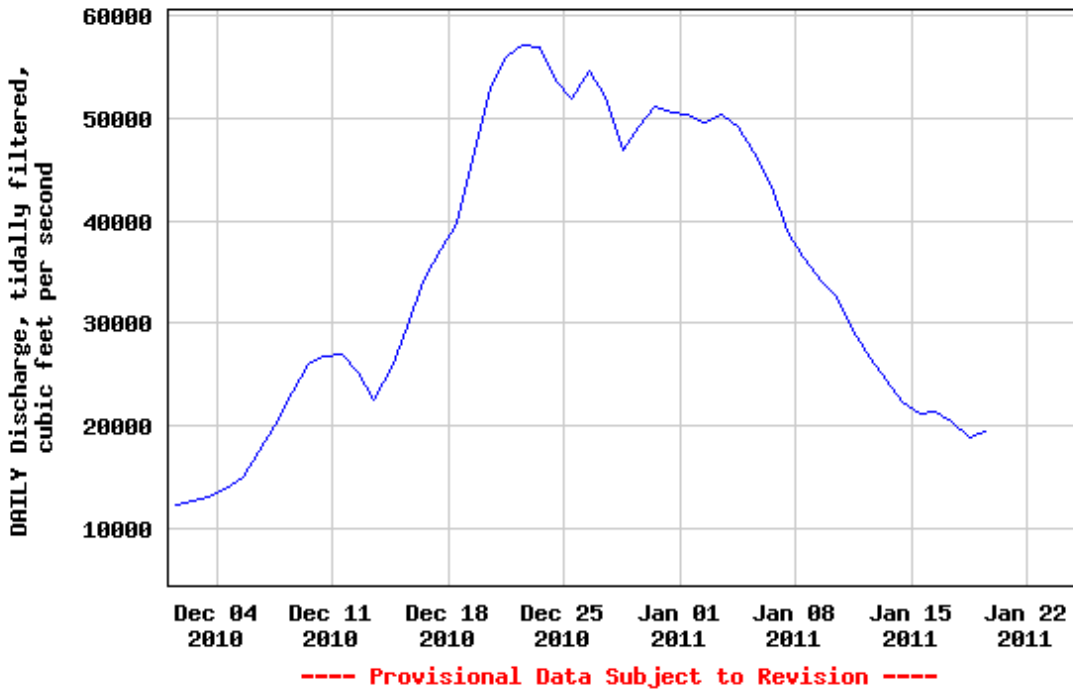


Figure 2. Tidally averaged Sacramento River flows measured at Rio Vista, Dec. 1, 2010 through Jan. 24, 2011 (no data available for Jan. 20-24, 2011).

Table 1. Longfin smelt catch per station from 2011 Smelt Larva Survey, Survey 1.

Year	Survey	SLS Station	Sample Status	Species	Smelt Catch
2011	1	405	Not yet processed		
2011	1	411	Not yet processed		
2011	1	418	Not yet processed		
2011	1	501	Not yet processed		
2011	1	504	Processed	Longfin Smelt	24
2011	1	508	Processed	Longfin Smelt	100
2011	1	513	Processed	Longfin Smelt	26
2011	1	519	Processed	Longfin Smelt	38
2011	1	520	Processed	Longfin Smelt	35
2011	1	602	Not yet processed		
2011	1	606	Not yet processed		
2011	1	609	Not yet processed		
2011	1	610	Processed	Longfin Smelt	3
2011	1	703	Processed	Longfin Smelt	12
2011	1	704	Processed	Longfin Smelt	50
2011	1	705	Processed	Longfin Smelt	11
2011	1	706	Processed	Longfin Smelt	33
2011	1	707	Processed	Longfin Smelt	40
2011	1	711	Processed		No Smelt Catch
2011	1	716	Processed	Longfin Smelt	2
2011	1	723	Processed	Longfin Smelt	2
2011	1	801	Processed	Longfin Smelt	1
2011	1	804	Processed	Longfin Smelt	15
2011	1	809	Processed	Longfin Smelt	9
2011	1	812	Processed		No Smelt Catch
2011	1	815	Processed		No Smelt Catch
2011	1	901	Processed	Longfin Smelt	1
2011	1	902	Processed	Longfin Smelt	1
2011	1	906	Processed		No Smelt Catch
2011	1	910	Processed		No Smelt Catch
2011	1	912	Processed		No Smelt Catch
2011	1	914	Processed		No Smelt Catch
2011	1	915	Processed		No Smelt Catch
2011	1	918	Processed		No Smelt Catch
2011	1	919	Processed	Longfin Smelt	1

SWP ITP Criteria Stations

Processing as of 1/20/11.

The Working Group will reconvene on Monday, Jan. 31 at 10am to review the updated flow, turbidity, and other appropriate data.