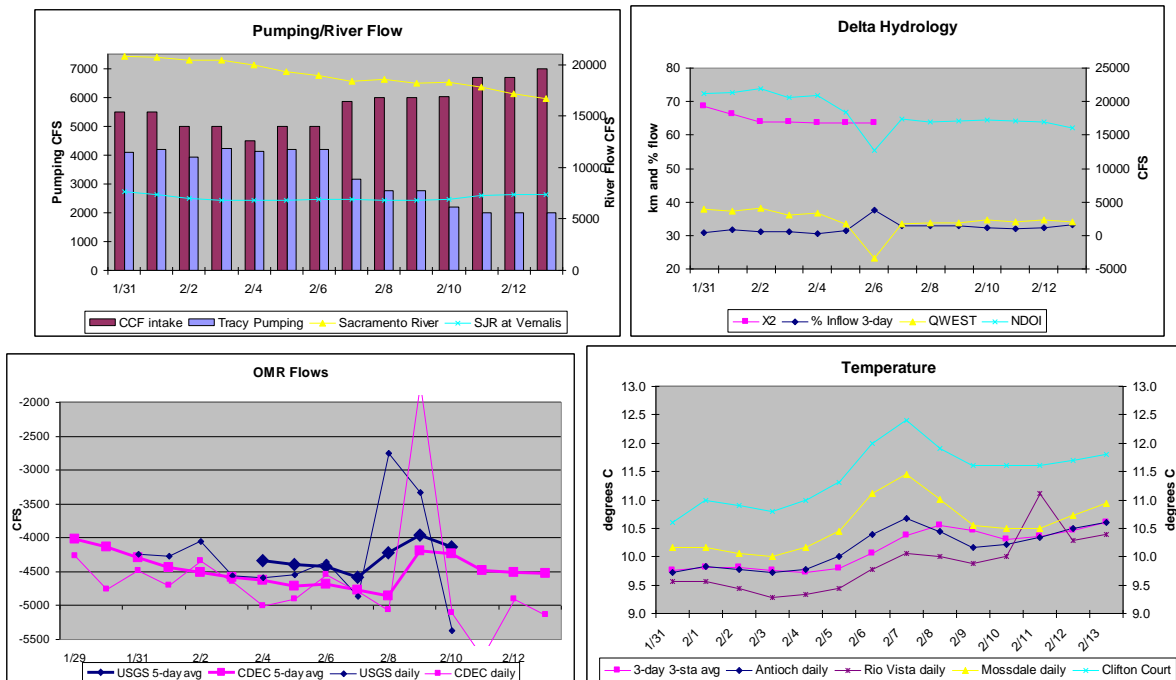


SMELT WORKING GROUP  
Monday, February 14, 2011

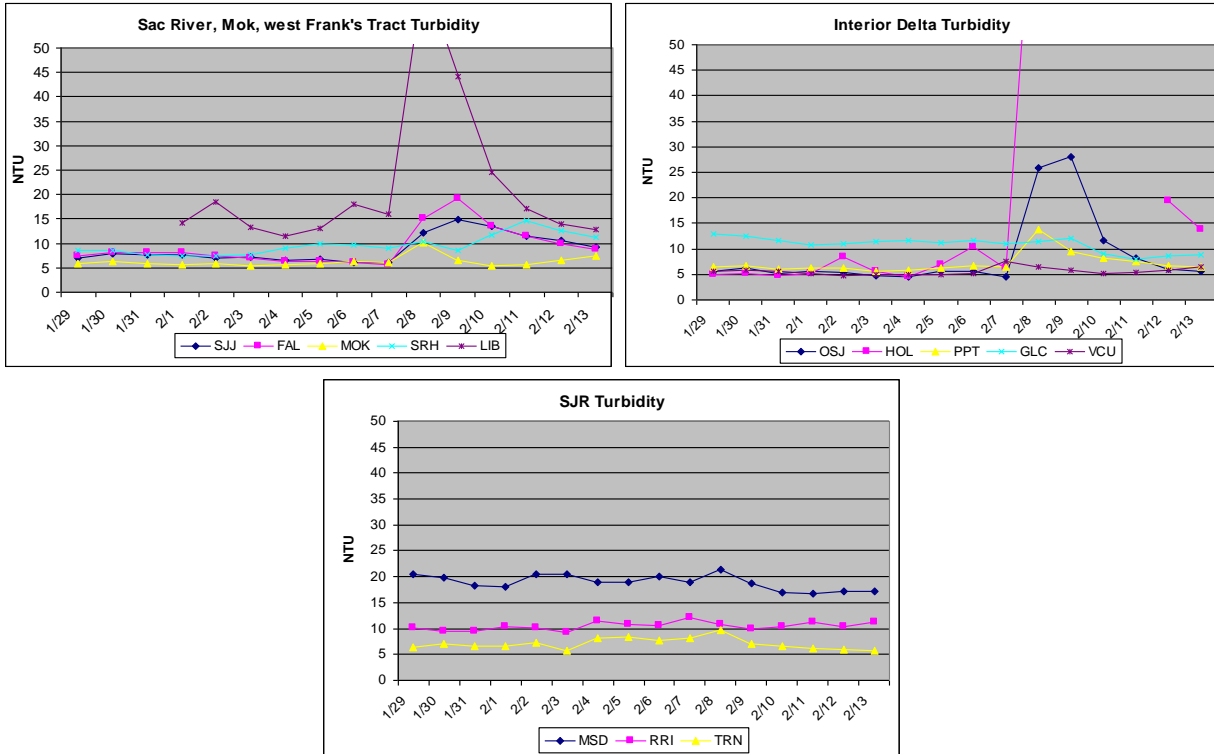
**The Working Group will continue to monitor salvage, survey data, and hydrological conditions and will reconvene Feb. 22. No recommendation was made.**

1) Current environmental data.

- **Water temperature** for the 3 station average is 10.6°C.
- **OMR** USGS tidally-averaged OMR was -5,240 cfs on Feb. 11, 2011. The 5-day average OMR was -4,312 cfs. The OMR average estimate from CDEC on Feb. 13 was -5,144 cfs. The 5-day CDEC OMR is -4,531 cfs.
- **Flow** Sacramento River inflow is 16,705 cfs and San Joaquin 7,397 cfs. X<sub>2</sub> calculation from CDEC has been unavailable since Feb. 6. As of Feb. 13 E/I ratio is 33.3%, QWEST is 1,963 cfs, and NDOI is 16,060 cfs. The graphs below show the most recent trends in Delta hydrology and water quality that were evaluated by the Working Group.



- **Turbidity** Turbidity readings at a number of stations became elevated from the high winds in the Delta on Feb. 7 and 8. The duration of elevated turbidity readings from this wind-generated turbidity event lasted from two to four days, depending on the particular station. The Working Group reviewed turbidity data for several stations in and around the Delta.



## 2) Delta fish monitoring:

Smelt Kodiak Trawl #2 was in the field last week. A total of 128 delta smelt were collected, the majority of which were either downstream of the confluence or in the Sacramento River. Two fish were collected on the San Joaquin River, one at station 809 and one at station 910. The tow at station 719 (Sacramento River Deepwater Shipping Channel) was 5 minutes, rather than the standard 10 minute tow. Kodiak Trawl #3 is in the field the week of March 7. Smelt Larva Survey #3 is in the field this week. Results will be available early next week. 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

No longfin or delta smelt were salvaged from Jan. 18 through Feb. 13. 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 an action were not met or exceeded.

## 4) Expected Project Operations

Combined CVP/SWP exports are at 9,000 cfs as of Feb. 13. The CVP filled their share of San Luis Reservoir on Feb. 6 and have reduced their pumping to 2,000 cfs. They are expected to maintain pumping to match demand, between 1,600 and 2,700 cfs. SWP currently is pumping 7,000 cfs and expects to decrease pumping on February 16 to 6,500 cfs in coordination with CVP's projected increase. The SWP is approximately 60TAF short of filling San Luis Reservoir; however, with increased water demands, uncertain runoff from upcoming storms, and other contributing factors, it is unclear if they will be able to fill their share. Due to the increased water demand, the SWP has been unable to add water to San Luis Reservoir since Feb. 11. The projects are operating to meet the -5,000 cfs OMR flow requirement (as per the NMFS Biological Opinion).

#### 5) Particle Tracking Modeling

The Working Group did not request 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 flow decreased while San Joaquin River flow increased slightly over the past week.

The Working Group estimated that the overall risk of entrainment was low given the distributional data from recent surveys. Hydrology remains favorable and turbidity has returned to lower levels, which also indicates a low level of risk for entrainment. Apparent abundance remains very low, which raises concern for the species into the moderate range. The risk of delta smelt entering the central and south Delta is expected to remain low, due to low 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 Feb. 14, 2011:**

The Smelt Working Group does not have any advice based on longfin smelt information and believes that the current OMR limit in place for salmon and steelhead (no more negative than -5000 cfs) is protective of longfin smelt 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 ( $\geq 80$ 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.

As of Feb. 13, no longfin smelt had been salvaged since the first longfin smelt of the season was salvaged on January 14, 2011 and none had been collected in the central or south Delta in fish surveys. No advice is warranted based on this criterion.

Longfin smelt larvae were detected during the Smelt Larva Survey #1 (Jan. 18-19), providing evidence of spawning and initiating SWP Longfin Smelt ITP section 5.2 to protect larval and juvenile longfin smelt. However, OMR restrictions under section 5.2 are not required when river flows are: 1) greater than 55,000 cfs on the Sacramento River at Rio Vista; or 2) greater than 8,000 cfs on the San Joaquin River at Vernalis. Sacramento River flow at Rio Vista was briefly above 55,000 cfs Dec. 21-23 and San Joaquin River flow surpassed 8,000 cfs on Dec. 20 and dropped below the 8000 cfs on Jan. 31. San Joaquin River flow declined to 6790 on Feb 4 then increased to 7,410 cfs on Feb. 13 (Figure 1) and Sacramento River flow declined to just over 11,300 cfs on Feb. 8 before increasing to 13,400 on Feb 11 (Figure 2).

During the most recent Smelt Larva Survey (SLS #2, Jan. 31- Feb. 1), longfin smelt larvae were collected at 10 of 12 central and south Delta sampling stations, surpassing the threshold for criteria #3 above and **OMR flow advice is warranted. However, no advice is given, because the current OMR limit (-5,000 cfs) implemented to protect Chinook and steelhead is deemed protective for the population.** During Smelt Larva Survey 2 (Jan. 31 – Feb. 1), longfin smelt larvae were caught at 10 of 12 central and south Delta criteria stations (see list in #3 above) in very low numbers, except at the 3 western-most San Joaquin River stations (809, 812, 815) and in Franks Tract (i.e., 901; Table 1). A revised Delta Hydrology Conditions summary (DWR

Delta Status and Operations web page) depicts Qwest as consistently positive during and after SLS #2 sampling, which would tend to transport larvae in the San Joaquin River and Franks Tract westward rather than southward. In SLS #2, most larvae were collected in the lower Sacramento River and Suisun Bay, well outside the region where entrainment is possible, and only about 7% of the total larva catch came from central and south Delta stations (Table 1). Current OMR -4518 cfs, 5-day avg. Feb 13) remains within the target range listed in the longfin smelt ITP of -5,000 cfs to -1250 cfs. No additional advice to protect larvae is warranted at this time based on criteria 3 and 4.

Smelt Larva Survey #3 began on Feb. 14, 2011 and results will be reported at next week's Smelt Work Group meeting Tuesday February 22.

Barker Slough export pumping advice shall apply January 15 through March 31 of dry and critically dry years. Currently the Sacramento River is classified as above normal (<http://cdec.water.ca.gov/cgi-progs/reports/EXECSUM>), so no Barker Slough advice is warranted.

### USGS 11303500 SAN JOAQUIN R NR VERNALIS CA

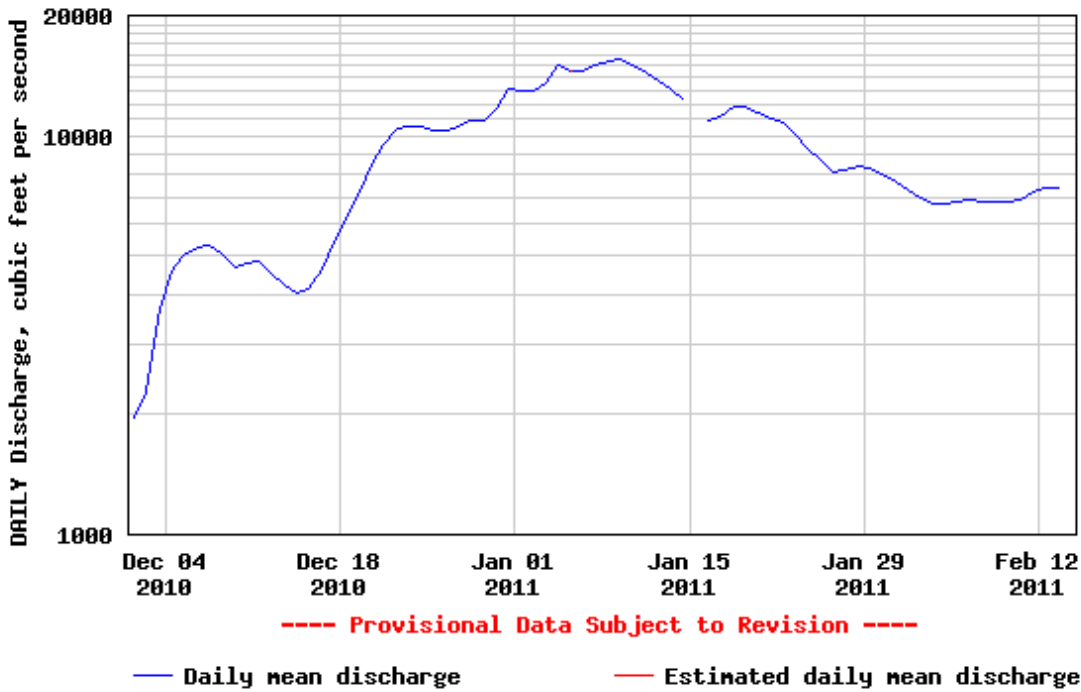


Figure 1. Tidally averaged San Joaquin River flow measured near Vernalis, December 1, 2010 through February 13, 2011.



### USGS 11455420 SACRAMENTO R A RIO VISTA CA

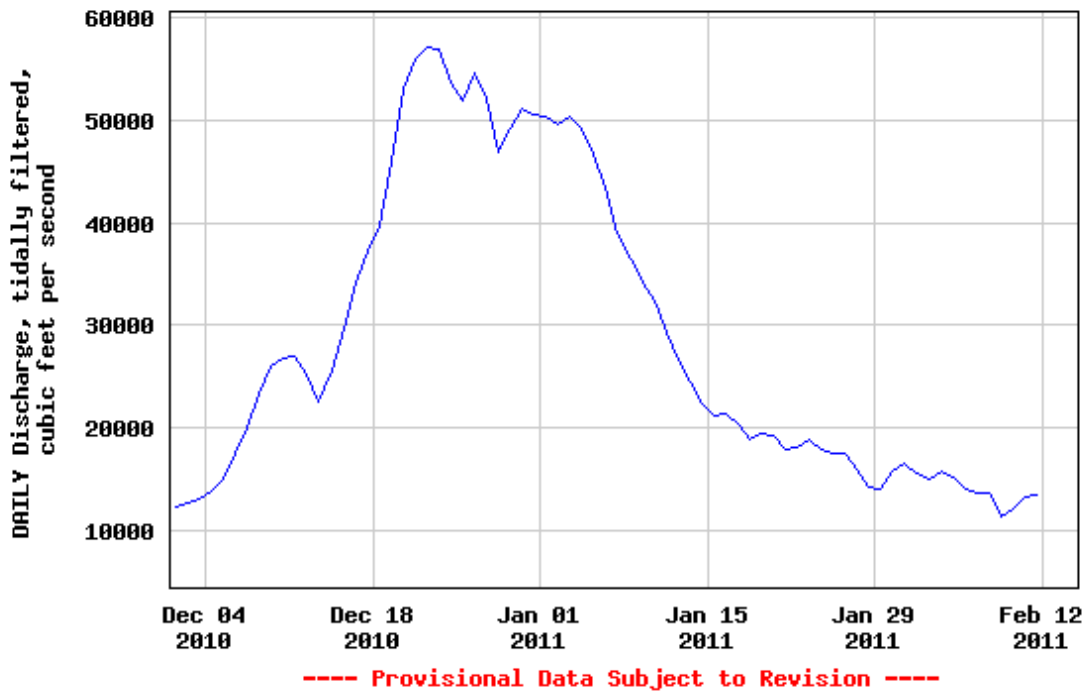


Figure 2. Tidally averaged Sacramento River flows measured at Rio Vista, December 1, 2010 through February 11, 2011.

Table 1. Longfin smelt catch per station from 2011 Smelt Larva Survey, Survey 2 (sample processing complete).

Year	Survey	SLS Station	Sample Status	Species	Smelt Catch
2011	2	405	Processed	Longfin Smelt	53
2011	2	411	Processed	Longfin Smelt	180
2011	2	418	Processed	Longfin Smelt	83
2011	2	501	Processed	Longfin Smelt	170
2011	2	504	Processed	Longfin Smelt	130
2011	2	508	Processed	Longfin Smelt	152
2011	2	513	Processed	Longfin Smelt	74
2011	2	519	Processed	Longfin Smelt	118
2011	2	520	Processed	Longfin Smelt	91
2011	2	602	Processed	Longfin Smelt	100
2011	2	606	Processed	Longfin Smelt	43
2011	2	609	Processed	Longfin Smelt	54
2011	2	610	Processed	Longfin Smelt	53
2011	2	703	Processed	Longfin Smelt	5
2011	2	704	Processed	Longfin Smelt	170
2011	2	705	Processed	Longfin Smelt	26
2011	2	706	Processed	Longfin Smelt	187
2011	2	707	Processed	Longfin Smelt	187
2011	2	711	Processed	Longfin Smelt	8
2011	2	716	Processed	Longfin Smelt	125
2011	2	723	Processed	Longfin Smelt	99
2011	2	723	Processed	Delta Smelt	1
2011	2	801	Processed	Longfin Smelt	45
2011	2	804	Processed	Longfin Smelt	64
2011	2	809	Processed	Longfin Smelt	113
2011	2	812	Processed	Longfin Smelt	8
2011	2	815	Processed	Longfin Smelt	7
2011	2	901	Processed	Longfin Smelt	32
2011	2	902	Processed	Longfin Smelt	1
2011	2	906	Processed	Longfin Smelt	1
2011	2	910	Processed		No Smelt Catch
2011	2	912	Processed	Longfin Smelt	1
2011	2	914	Processed		No Smelt Catch
2011	2	915	Processed	Longfin Smelt	1
2011	2	918	Processed	Longfin Smelt	1
2011	2	919	Processed	Longfin Smelt	2

The Working Group will reconvene on Tuesday, February 22 at 9am to review the updated flow, turbidity, and other appropriate data.