

SMELT WORKING GROUP Monday, June 11, 2012

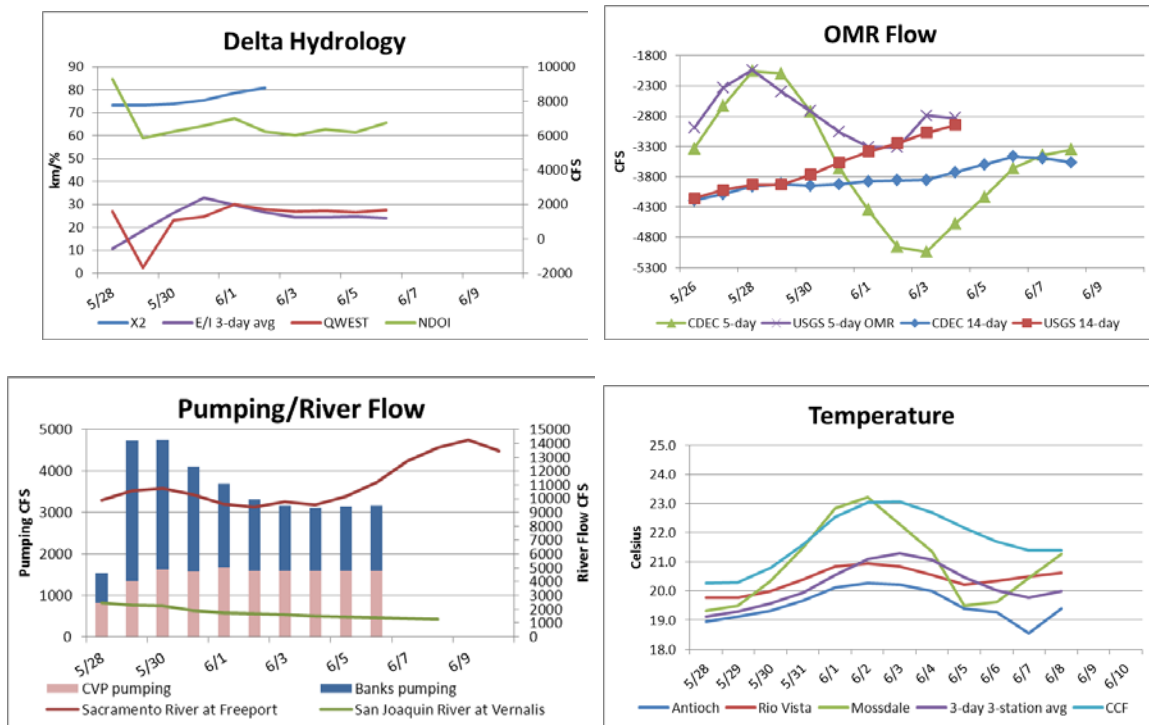
Meeting Summary:

The Working Group recommended no change in projected operations based on a review of delta smelt distribution and salvage data, current Delta conditions and projected operations. The Working Group also agreed that given their present distribution, existing constraining conditions was sufficient to protect longfin smelt. The Working Group will continue to monitor smelt salvage, larval smelt survey data, and delta hydrological conditions and will reconvene June 18, 2012, at 10 am.

Reported Data:

1) Current environmental data:

- **Water temperature** for the 3 station average as of June 8 is 20.0°C.
- **OMR:** USGS tidally-averaged OMR 5-day and 14-day averages as of June 4 are -2,834 cfs and -2,950 cfs, respectively. CDEC 5-day average and 14-day averages as of June 8 are -3,354 cfs and -3,567 cfs, respectively.
- **Flow:** Sacramento River inflow is 13,439 cfs and San Joaquin River is 1,347 cfs. X_2 calculation from CDEC is 78.81km. 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:

20-mm Survey #7 was in the field last week. Processing is ongoing. A total of 128 delta smelt larvae have been counted so far, 23 of which were from the central and southern Delta. The greatest densities were from the Sacramento Deepwater Shipping Channel and the confluence. Size ranges from 8 to 33 mm. A total of 92 longfin larvae have been counted so far, with sizes ranging from 20 to 33 mm. All but one detection of longfin smelt was at or downstream of the confluence. The first Summer Townt Survey began today. See “WEEKLY ADVICE FOR THE DEPARTMENT OF FISH AND GAME FOR LONGFIN SMELT” for additional details. The annual FMWT Delta Smelt Index for 2011 is 343 (sum of all four months). The 2011 Delta Smelt Recovery Index (based on September and October) is 55. 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 CDFG surveys are available online at: <http://www.dfg.ca.gov/delta/>.

3) Salvage:

The cumulative total for adult delta smelt for WY 2012 is 203. The table below details daily estimated juvenile delta smelt and longfin smelt salvage for the season:

Table 1: Estimated daily juvenile delta smelt and longfin smelt salvage (≥ 20 mm) for WY2012

Delta Smelt (YOY > 20mm)				Longfin Smelt (YOY > 20 mm)			
Date	CVP	SWP	Total	Date	CVP	SWP	Total
April total	18	0	18	February total	8	0	8
May total	187	1751	1938	March total	220	1568	1788
June 1	0	2	2	April total	635	1154	1789
June 2	3	38	41	May total	35	120	155
June 3	0	8	8				
June 4	0	6	6				
June 5	4	12	16				
June 9	4	0	4				

Preliminary results indicated that low numbers of juvenile delta smelt were salvaged during the period from June 4 to 10; juvenile delta smelt were only salvaged 3 out of the 7 days. Larval or prejuvenile (< 20 mm) delta smelt were observed in daily larval fish samples from June 1 to 7. No larval or juvenile longfin smelt have been observed in salvage or larval fish samples during this same period.

Current delta and longfin 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 CVP/SWP exports are approximately 4,000 cfs as of June 10. Combined exports are presently curtailed to comply with the SWRCB D-1641 minimum outflow requirement for June.

5) Particle Tracking Modeling:

No PTM runs were requested for this week.

6) Assessment of Risk:

Background:

The collection of a spent female in the SKT Survey #2 on February 15 indicates that delta smelt spawning has begun. The temperature criterion of 12°C was confirmed on February 28. The Working Group discussed the risk of entrainment for larval delta smelt and any discussion of a recommendation was intended to protect larval delta smelt (B.O., p 282). The Working Group will follow the guidance for Action 3 of the B.O. (pp. 357-368).

Combined incidental take levels for State and federal fish facilities are based on the most recent FMWT abundance index. The 2011 FMWT index for delta smelt is 343. This means that the authorized incidental take of adults is 2,487 (estimated) and the concern level is 1,862 (estimated), cumulative for the December through March period.

Table 2: Incidental Take Levels for the larval/juvenile life stage (cumulative)

	Concern Level	Take Limit
April	101	151
May	4,471	6,705
June	11,327	16,991
July	12,851	19,276

Discussion: The Working Group reviewed and discussed all relevant data from fish surveys, Delta monitoring, salvage, and planned Project operations. The first larval delta smelt were salvaged at the CVP on April 26 and the SWP on April 24. The seasonal cumulative total of salvaged juvenile delta smelt is 2,033. X2 is 78 km, NDOI is estimated at 7,000 to 8,000 cfs and the daily OMR flow is estimated at -3,000 to -4,000 cfs. The data from the 20-mm Survey # 7 indicate low levels of detection in the central and southern Delta.

Following the adaptive process parameters in the RPA for Action 3, the SWG agreed that current numbers of salvaged juvenile delta smelt do not reach the level of concern requiring a change in operations, for the following reasons: total cumulative salvage has not reached the total concern level for June of 11,327, as outlined in the OCAP BiOp and the center of delta smelt distribution appears to be out of the south and central Delta. Combined exports are curtailed to comply with the SWRCB D-1641;-5,000 cfs OMR is within the OMR range under Action 3 of the RPA.

The group discussed the unavailability of some hydrology data for the call: OMR flow, water temperatures, Qwest, NDOI, and E/I ratio. Some members acknowledged that if this lack of data had occurred earlier in the year, we would have had a much more challenging time making an appropriate recommendation for the species. Operators suggested that the lack of data might have been caused by a server outage with CDEC. Operators were requested to investigate the cause and to develop back-up protocols in the event of future occurrences.

7) Longfin Smelt:

Longfin smelt larval distribution (Smelt Larva Survey 1, January 9-10) exceeded the criteria for advice from the SWG under the SWP's 2081 permit; CDFG therefore requested that the Working Group discuss entrainment risk for longfin smelt. The 2081 identifies OMR flow between -1,250 and -5,000 cfs as the range to select from in determining a level adequately protective of longfin larvae. With all but one detection downstream of the confluence for 20-mm Survey #6 and no salvage reported since May 19, the risk is currently very low.

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

Advice for week of June 11, 2012:

The Smelt Working Group, after reviewing partial 20mm Survey 7 data, noted that longfin smelt were no longer detected in the Delta upstream of Sherman Lake. If this pattern persists, then the period of risk entrainment for longfin smelt is over for 2012.

Summary of risk: Risk of additional entrainment into the south Delta is currently extremely low. No longfin smelt were detected in the Delta upstream of the confluence (Sherman Lake) based on partial 20m Survey 7 data. OMR remains limited to no more negative than -5,000 cfs based on the delta smelt BO and the NMFS BO. At the fish facilities, detection of larvae and salvage of juveniles has been zero since May 19.

Basis for advice:

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 (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).

4. Larva catch per tow exceeds 15 longfin smelt larvae or juveniles in 4 or more of the 12 survey stations listed.
5. For Barker Slough exports only: After January 15 through March 31 of critically dry or dry water years (Sacramento River), based on abundance and distribution and detection at Station 716.

Discussion of Criteria and Conditions

Review of past information: Longfin smelt larvae were collected in the Smelt Larva Survey #1 (January 9-10, 2012), so adult salvage and distribution are now informational and can be viewed as suggestive possible future larvae distribution. As of March 5, 2012, no ≥ 80 mm longfin smelt have been salvaged for the water year, but larva sampling began at both facilities on February 16, and longfin smelt larvae were detected by the State on February 19 and at both facilities on February 20. The Fall Midwater Trawl longfin smelt annual abundance index for 2011 is 477. The total adult salvage level threshold for advice is 2,385 (see criterion in #1).

December Fall Midwater Trawl and Bay Study surveys collected adult longfin smelt in the San Joaquin River just downstream and just upstream of the Antioch Bridge. In early January, Bay Study collected adult longfin smelt as far upstream as San Andreas Shoals on the San Joaquin River. The first Smelt Larva Survey of 2012 caught longfin smelt larvae at 9 of 12 criteria stations in the central and south Delta (criterion #3, Figure 1) triggering the need for advice. Larva catches (densities) were very low during Survey 1 and hydraulic conditions at the time posed little risk to longfin smelt larvae. Larvae numbers increased in Smelt Larva Survey 2, and then declined slightly in Survey 3 and again in Survey 4 followed by a substantial drop in survey 5 and survey 6.

Review of new and current information: Initial results from the 7th 20-mm Survey (June 4-7) detected no longfin smelt larvae or juveniles in the central and south Delta, nor elsewhere in the Delta upstream of Sherman Lake (Table 1). The risk of additional longfin smelt entrainment into the south Delta is believed to be extremely low. Longfin smelt juveniles were not salvaged in the past week, and have not been salvaged since May 19. Similarly, no larvae have been observed in fish larval samples at the Delta export facilities since May 3. It is unlikely that many if any additional longfin smelt will be salvaged during the remainder of the month given the -5,000 OMR limitation based on the Delta Smelt BO and the NMFS BO.

The longfin smelt incidental take permit restrictions for Barker Slough exports concluded for 2012 on March 31. Although longfin smelt larvae remain in the vicinity, exports remain sporadic and low, and should not entrain larvae.

Table 1. Longfin smelt catch per station from 20mm Survey #7, 2012 (partially processed).

Year	Survey	Station	Date	# Tows Processed	Species	Total Catch	Min. Length	Max. Length	Avg. Length	
2012	7	323	06-Jun-12	0	Not Yet Processed	0				Suisun Bay & West
2012	7	340	06-Jun-12	1	Longfin Smelt	1	30	30	30	
2012	7	342	06-Jun-12	0	Not Yet Processed	0				
2012	7	343	06-Jun-12	0	Not Yet Processed	0				
2012	7	344	06-Jun-12	0	Not Yet Processed	0				
2012	7	345	06-Jun-12	0	Not Yet Processed	0				
2012	7	346	06-Jun-12	0	Not Yet Processed	0				
2012	7	405	07-Jun-12	1	No Longfin Catch	0				
2012	7	411	07-Jun-12	1	Longfin Smelt	2	30	31	30.5	
2012	7	418	05-Jun-12	1	Longfin Smelt	13	22	33	27.4615	
2012	7	501	06-Jun-12	1	Longfin Smelt	7	20	32	27.7143	
2012	7	504	06-Jun-12	1	No Longfin Catch	0				
2012	7	519	06-Jun-12	1	Longfin Smelt	5	25	29	27.4	
2012	7	602	05-Jun-12	1	Longfin Smelt	23	21	31	26.1304	
2012	7	606	05-Jun-12	0	Not Yet Processed	0				
2012	7	609	05-Jun-12	1	Longfin Smelt	1	28	28	28	
2012	7	610	05-Jun-12	1	No Longfin Catch	0				
2012	7	508	06-Jun-12	1	Longfin Smelt	19	25	33	28.3158	Confluence
2012	7	513	06-Jun-12	1	Longfin Smelt	3	25	33	29	
2012	7	520	06-Jun-12	1	No Longfin Catch	0				
2012	7	801	05-Jun-12	1	Longfin Smelt	17	20	30	24	
2012	7	804	05-Jun-12	1	No Longfin Catch	0				Sac. River System
2012	7	703	06-Jun-12	1	Longfin Smelt	1	23	23	23	
2012	7	704	05-Jun-12	1	No Longfin Catch	0				
2012	7	705	05-Jun-12	1	No Longfin Catch	0				
2012	7	706	05-Jun-12	1	No Longfin Catch	0				
2012	7	707	05-Jun-12	1	No Longfin Catch	0				
2012	7	711	04-Jun-12	1	No Longfin Catch	0				
2012	7	716	04-Jun-12	1	No Longfin Catch	0				
2012	7	718	04-Jun-12	1	No Longfin Catch	0				
2012	7	719	04-Jun-12	1	No Longfin Catch	0				
2012	7	720	04-Jun-12	1	No Longfin Catch	0				
2012	7	723	04-Jun-12	1	No Longfin Catch	0				
2012	7	724	04-Jun-12	1	No Longfin Catch	0				
2012	7	726	04-Jun-12	1	No Longfin Catch	0				Central & South Delta
2012	7	809	04-Jun-12	1	No Longfin Catch	0				
2012	7	812	05-Jun-12	1	No Longfin Catch	0				
2012	7	815	05-Jun-12	1	No Longfin Catch	0				
2012	7	901	04-Jun-12	2	No Longfin Catch	0				
2012	7	902	04-Jun-12	1	No Longfin Catch	0				
2012	7	906	05-Jun-12	2	No Longfin Catch	0				
2012	7	910	04-Jun-12	2	No Longfin Catch	0				
2012	7	912	04-Jun-12	1	No Longfin Catch	0				
2012	7	914	04-Jun-12	3	No Longfin Catch	0				
2012	7	915	04-Jun-12	2	No Longfin Catch	0				
2012	7	918	04-Jun-12	3	No Longfin Catch	0				
2012	7	919	05-Jun-12	1	No Longfin Catch	0				

Processing complete through 6/8/2012