

## Delta Operations for Salmonids and Sturgeon (DOSS) Group

04/20/10 Conference call 9:00 am

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project to salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://swr.nmfs.noaa.gov/ocap/actions.htm>

**Attendees:** Mike Ford, Carol Stroble, & Andy Chu (DWR); Nick Hindman (FWS); Bruce Oppenheim, Jeff Stuart, Garwin Yip & Barbara Byrne (NMFS); Thuy Washburn, Racheal Barnett-Johnson, Josh Israel (USBR); Dan Kratville (DFG), Greg Wilson (SWRCB), Bruce Herbold (EPA)

**Agenda:** fish monitoring, Delta water operations, & DCC Gate Study

### Fish Monitoring:

*Mill and Deer Creek (4/13 to 4/19):* The Mill Cr trap fished 6 days during the reporting period. The trap catch included: 29 YOY Chinook (25-65 mm fl), 5 spring-run Chinook yearlings (103-123 mm fl), and 6 steelhead (25-234 mm fl). Flows ranged from 382-464 cfs. The Deer Cr trap fished 6 days. The trap catch included: 35 YOY Chinook (34-64 mm fl), 1 spring-run Chinook yearling, and 2 steelhead (198, 210 mm fl). Flows ranged from 382-464 cfs.

Rearing surveys in upper Mill at 2100' elevation captured spring-run Chinook from 35-40 mm fl. Survey effort was limited due to high flows.

*Knights Landing Summary (4/10 – 4/19):* The daily catch peaked on 4/16 at 3,806 Chinook. The majority of these were fall-run likely due to the production releases from Coleman NFH near Battle Creek. In addition, 1 winter-run, 1,012 spring-run, 64 late-fall, and 3 non-clipped steelhead were caught. These fish are expected to enter the Delta next week. The average weekly CPUE was 4.87 for winter-run/late-fall combined and 0.23 for non-clipped steelhead.

Date	Flow cfs	Water T (F)	Turbidity NTU	Daily CATCH	Min FL	Max FL	Fall	Spring	Winter	Late fall	Ad-clip	Ad-clip	Nonclip
											CS	SH	SH
04/10/10	8201	59	6.9	1	90	90	0	1	0	0	0	0	0
04/12/10	8490	57	6.2	5	80	105	0	5	0	0	0	0	0
04/14/10	19817	55	132.0	49	62	86	24	15	0	0	14	0	0
04/15/10	19654	56	252.0	2445	35	108	2109	334	0	2	210	7	0
04/16/10	17821	58	117.0	3806	34	155	3208	551	1	46	135	10	3
04/17/10	16167	59	93.7	813	33	92	735	63	0	15	115	2	0
04/19/10		63		449	36	93	405	43	0	1	109	1	0
			weekly totals	7568			6481	1012	1	64	583	20	3

*FWS Sampling Data (4/11- 4/17):*

Sacramento MWTR; 93 fall-run Chinook, 81 spring-run Chinook, 9 tagged Chinook, 2 clipped steelhead & 1 steelhead non-clipped

Chippis Island MWTR; 52 spring-run Chinook, 4 winter-run Chinook, 1 tagged Chinook, 1 clipped steelhead, & 1 splittail

Beach Seine; 79 fall-run Chinook, 59 spring-run Chinook, 1 winter-run Chinook, 13 tagged Chinook, 12 splittail, & 2 delta smelt (Clarksburg)

*Mossdale Kodiak trawl (4/11- 4/18):* 28 non-clipped Chinook salmon and no steelhead

*CVP and SWP Fish Salvage Facilities (4/12 Monday – 4/18 Sunday):* This week 26 non-clipped winter-run Chinook were lost; (4) at CVP and (22) at the SWP. The cumulative loss to date is 1,653 non-clipped winter-run. 30 non-clipped steelhead were salvaged this week; (28) at CVP, and (2) at SWP. The cumulative salvage YTD is 821 non-clipped steelhead.

*Sturgeon and Smelt:* No green sturgeon have been observed this season (since October 1<sup>st</sup>). No delta smelt were salvaged at either facility. Cumulative loss YTD for delta smelt is still 92 adults.

*Daily loss densities for Chinook salmon (4/12 to 4/18):* Loss densities of older juveniles (i.e., winter-run, spring-run and late-fall Chinook) declined to zero this week.

**SWP & CVP UNTAGGED OLDER JUVENILE CHINOOK LOSS & LOSS DENSITY 4/12 through 4/18/2010**

Date	OLDER JUVENILE LOSS**			Combined Older Juv Loss Density
	In # fish			
	SWP	CVP	Combined	In fish/TAF
4/12/2010	0.00	0.00	0.00	0.00
4/13/2010	0.00	0.00	0.00	0.00
4/14/2010	4.33	0.00	4.33	0.00
4/15/2010	0.00	0.00	0.00	0.00
4/16/2010	0.00	3.88	3.88	0.00
4/17/2010	0.00	0.00	0.00	0.00
4/18/2010	0.00	0.00	0.00	0.00

\*\* Loss data obtained from DFG, Stockton  
DWR-DES 4/19/2010 Preliminary, subject to revision

*CWT data:* No change this week in the spring-run surrogate or hatchery winter-run loss; clipped fish were last salvaged on 3/24 and there are still 8 unread tags.

The data indicate that a large number of fall-run Chinook will be entering the Delta this week as seen at Knights Landing. A few spring-run and steelhead are still emigrating from the Sacramento River. On the San Joaquin River small numbers of juvenile fall run Chinook have

been observed entering the Delta, but no steelhead. Salvage and loss at the fish facilities is very low with few salmon being observed. Current loss rates and loss densities are below the triggers identified in the NMFS opinion.

*DOSS subgroup update:* The subgroup met on Monday 4/12 to discuss the 2<sup>nd</sup> trigger in the NMFS BiOp. The historical data was reviewed and the analysis for the formula used in the Salmon Decision Process was discussed (basis for NMFS BiOp). A corrected calculation that best represents the original formula was derived. Sheila Green (DWR) agreed to test the calculation with the historical data and write up the notes of the meeting.

*Smelt Working Group (SWG):* This group has suspended meetings. However, the SWG is still reviewing the data. Recent 20 mm and spring Kodiak trawl surveys have indicated that a few larval smelt have been recovered in the upper San Joaquin River. The first long fin smelt larvae was recovered at the CVP on April 18, 2010, and was 17 mm in length. CDF&G reported that currently, tows from 27 of the 47 stations have been fully processed and QC'd. Delta and longfin smelt catch data are reported in the attached tables. To date, 5 delta smelt larvae have been collected in the Sacramento River system (stations 716, 719 and 720), and 4 delta smelt larvae have been collected in the San Joaquin River system (stations 906 and 910).

For fish data at other monitoring sites see:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

**1) Other Compliance Standards:** Old and Middle River (OMR) flow update from USGS CDEC data reported 4/20 from DWR delta operations. Daily OMR is running positive (1,000 cfs yesterday) due to increased San Joaquin River flows. Tuolumne River increased released to 2,000 cfs due to flood control and will likely stay up until June 15. San Joaquin River restoration flows are still being released and are adding to the flows at Vernalis. The VAMP flow target has been revised upward to 4,450 cfs based on April 1<sup>st</sup> forecast.

	<b>Current</b>	<b>NMFS Limit</b>	<b>FWS/DFG limit</b>
14-Day running average	= 587 cfs	-5000 cfs	-5000 cfs
5-Day running average	= 781 cfs	-6250 cfs	

**2) Water operations (4/20):**

Clifton Court Inflow (SWP) =	700 cfs
Jones Pumping Plant (CVP) =	800 cfs
Total Delta Inflow ~	30,715 cfs
Sacramento River =	21,564 cfs
San Joaquin River =	4,862 cfs
% Inflow Diverted =	5.9% (14-day average)

Weather outlook: Dry this week, no significant precipitation until next week.

Reservoir releases: Keswick increased releases from the minimum 3,250 cfs to 5,500 cfs this week due to pre-flood control management and temperature control. Nimbus is 1750 cfs, Goodwin is 1,000 cfs, and Oroville is 800 cfs.

3) SWP Export shut down: The SWP will stop exporting for 10 days from 5/11 through 5/21 (partial operations on the first and last day of the shutdown) due to work on the South Bay Aqueduct power lines. The CVP proposed adding another unit to bring total exports to 1600 cfs during the outage (800 cfs is the capacity of each unit). However, this is 100 cfs more than the NMFS BiOp requirement of 1500 cfs. The DOSS group discussed the change and advised that the SWP pump 100 cfs less for 10 days before the shutdown and that the CVP pump 100 cfs more during the outage. Therefore, the average export rate would equal 1500 cfs for the three week period starting May 1<sup>st</sup>.

4) DCC Gate Study: Cramer Fish Sciences is proposing a flow and predation study on the effects on survival of natural-origin Mokelumne River Chinook salmon smolts. YOY Fall-run Chinook smolts would be tagged with JSAT acoustic tags from the Woodbridge rotary screw traps. Predators would be removed by electro-shocking a ½ mile section of the North Fork Mokelumne River downstream of the DCC gates. The study would require the DCC gates to be opened for 3 days in mid-May to determine how flows through the DCC effect survival of salmon smolts. The study is being coordinated with EBMUD & DFG.

The DOSS group discussed the schedule for gate openings and advised delaying the study until late May, so as not to interfere with the VAMP study design. VAMP study fish should be through the Delta by the last week in May. The DCC gates are required to be closed until May 20 in D-1641, and closed for 14 days between May 21 and June 15. A temporary emergency change order would be needed from the SWRCB to open the gates before May 20<sup>th</sup>. Reclamation must consultation with DFG, FWS, and NMFS for gate openings after May 20.

**DOSS advice for NMFS and WOMT (4/20 – 4/26).** The DOSS group advises that the projects reduce their export rate by 100 cfs (to 1400 cfs total) from May 1 to May 10 and increase their export rate by 100 cfs (to 1600 cfs total) from May 11 to May 21 (SWP outage). The DOSS group also advises that the DCC gate opening for 3 days proposed by Cramer Fish Sciences be scheduled after May 25 to avoid potential interference with the VAMP studies taking place before May 25.

Next Mtg: April 27th at 9:00 am.

Agenda:

- 1) DCC Gate Study schedule
- 2) SWP exports in May