

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 5/17/11 at 9:00 a.m.

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 on 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/htm>

DWR: Andy Chu, Mike Ford, Angela Llaban
FWS: Nick Hindman
NMFS: Barbara Rocco, Bruce Oppenheim, Jeff Stuart, Garwin Yip
DFG: Dan Kratville, Robert Vincik
Reclamation: Thuy Washburn, Josh Israel
EPA, SWRCB: not present

Action Items

1. **NMFS (Oppenheim)** will draft real-time-monitoring data needs and submit it to DOSS group for review.
2. **Amendment to BiOp:** Discussion of NMFS BiOp amendments. Carry until 5/17/11.

There was a general discussion about the amendments to the NMFS BiOp that were circulated to the DOSS group a few weeks ago for comment. It was noted to the group that all the revisions were in response to the annual science panel review from last November. Only one comment, DWR (Llaban): Asked that the text should clarify that the first and second OMR triggers are for non-clipped Chinook salmon (see page 76 of the BiOp for discussion of the triggers regarding older juvenile Chinook). NMFS (Oppenheim & Yip) replied that clarification will be added to this section in the next iteration. There being no further discussion, it was agreed to remove this action item. If there are any further concerns from members of the DOSS group, they will be presented during upcoming conference call meetings.

Agenda

- 1) Fish monitoring data
- 2) Project operations
- 3) Review of DOSS subgroup report on inflow-to-export ratio
- 4) NMFS 2011 BiOp amendment discussion

Fish Monitoring: The following table presents the fish monitoring data from 5/7 to 5/16/11. For additional info: <http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

Location	Chippis Is. Midwater Trawl	Sacramento Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST	Moulton Weir RST	Deer/Mill Creeks RST
Sample Date	5/9, 5/11, 5/13	5/10, 5/12	5/9, 5/10	5/10, 5/12, 5/13	5/9, 5/12, 5/14, 5/16	5/9-5/16	N/A	N/A

Total Catch	1532	268	178	3758	42	406		
FR	1097	196	7	63	34	322		
LFR				1				
WR								
SR	42	1	76	1		1		
(Ad-clips)	391	70	2	1 & 2 PUC	8	82		
DS								
LFS								
SPTL			93	3690				
SH (ad-clip)						1		
SH (natural)	2	1						
Water Temp. (avg. °F)	61.7	68.0	61.0	62.0	64.3	60.8		
Flows (avg. cfs)					6,142.5	9,471		
Turbidity (avg. NTU)					11.6	11.4		
FR/SR Avg. CPUE					1.43	20.3		
WR/LFR Avg. CPUE					0	0		

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail.

Tisdale: More fish are being caught here than at Knights Landing, which is expected for this time of year.

Beach Seines: 2 marked Chinook were caught with an “E” code designating efficiency study.

Knights Landing: The catch is slowing down now. We should request whether the tagged fish are from Nimbus Hatchery, or other releases. We don’t know right now. Reclamation (Israel): DOSS should assign a work team to interpret the marks and get the CWT data about where these fish are coming from. We need to consider the time course. The time may not be as critical for some studies based on seasonal or annual data. The DOSS group would like to have the CWT information faster than that. If we request real-time data from FWS, we will get only what they collect and not CWT data from the other monitoring stations.

There was a general discussion of the needs to have real-time data. It was noted that there are a lot of surveys in which CWT fish are sampled; however, DOSS (and perhaps other groups) do not received the data to consider and inform real-time operations. There was consensus that CWT data should be available and in a central location so that people and access and utilize the information. **Action:** NMFS and DWR agreed to raise the issue at the 5-agencies meeting.

Reclamation (Israel) commented that the proposal to the 5 agencies should not include the timing of CWT reading because he was working with the fish facilities and is awaiting a response from Ron Silva (USBR facility manager).

FWS (Speegle): Responding to today's call, FWS emailed the CWT data file for the fish facilities, and monitoring locations up to 3/29/11. Results were: 372 fall run; 84 late fall run; 2 winter run; Tags: = 6 LT, 1 NR, 1 no tag, and 1- 06746, 1- 055271.

Salvage data (5/9 to 5/15/11):

Chinook Loss*	CVP	SWP
Winter-run	0	0
Spring-run	1,006	8861
Fall-run	160	969
Late fall-run	0	0

*Non-clipped Chinook

SWP: Catching approximately 1,100–1,200 spring run size fish per day. 1 hatchery winter run was salvaged on 5/10/11 for total loss of 4 ad-clipped winter-run.

Cumulative YTD totals: Non-clipped: fall run = 2,608, spring run = 38,377, winter run = 4,360. The majority seen are spring run at the salvage facilities as defined by length and date.

There was a discussion about how the races were being identified at the facilities. The spring-run Chinook that are not ad-clipped could be San Joaquin fall-run fish based on the data alone. We know that the fish facilities are getting some San Joaquin fish because of those with efficiency markings. Technically, we don't have spring run in the San Joaquin except those released in the studies, and all of those are ad-clipped (hatchery origin). The spring-run Chinook are identified by length and date curves revised for the Delta; most of the salmon sampled at Mossdale this year are in the spring-run size category. There has also been a significant increase in juvenile splittail, which is consistent with the wet year and floodplain inundation; there are more this year at the salvage facilities and Mossdale. Chipps trawl had a lot of fall-run-sized fish.

According to Reclamation, protocols were set up at the CVP to collect otoliths and samples; however, there is no funding to analyze the results. The goal is to find funding for the genetic study and Reclamation would like to have this in place before the DOSS annual report is presented at the end of summer. We might be able to leverage some funding from the other genetics studies. Currently, the genetic data being used is at least 10 years old. It would be great to have new data also streamline the sampling protocols.

Steelhead salvage: CVP: 4 hatchery and 6 non-clipped, SWP: 34 hatchery and 24 non-clipped, Cumulative YTD salvage: non-clipped = 505. Steelhead numbers have usually peaked by now but there are still some coming out because of the wet-year conditions. There were no delta smelt or longfin, but CVP caught 1 white sturgeon; no green sturgeon at either facility.

Ad-clipped steelhead are being released in the San Joaquin River, but if these are being caught in the salvage facilities, there should have been a notation in the reports that there were sutures on the fish. CVP biologists always check for sutures. There seems to be a different response between steelhead and Chinook to the current water and weather conditions. The steelhead must be coming from Sacramento River side. Reclamation released acoustically tagged fish in March and the first week in May, but because of the way these are counted, the origin of the fish caught at the facilities won't be known for several months.

SWP & CVP older juvenile Chinook loss and loss density for 05/09/2011 through

05/15/2011: There were no older juvenile Chinook salvaged; therefore, there was no loss.

Steelhead Loss Density (loss density is calculated using the same formula as used for Chinook loss density. There has not been a DFG-approved formula for steelhead but this is a good indication of loss based on salvage data): Density was 0 on 5/9, 2.33 on 5/10, 4.36 on 5/11, 0 on 5/12, and 8.04 on 5/13, which met first-stage trigger; however, the density went back to below 1 after 5/13.

The steelhead loss density met the first stage OMR trigger of Action IV.2.3 (8.0 fish/TAF). There was a discussion regarding whether DOSS should advise WOMT and NMFS to implement the action response of OMR no more negative than -3,500 cfs, especially considering (1) the loss density only slightly exceeded the trigger (0.04), (2) the trigger was met 4 days ago, (3) loss density decreased quickly to less than 1 the next day, and (4) OMR continues to be considerably positive. DOSS consensus was to not advise WOMT and NMFS to implement the action response for the first stage OMR trigger.

Clarification was requested for multiple actions that apply at the same time DWR (*i.e.*, Actions IV.2.1 and IV.2.3 in April and May), and which action is more important. The San Joaquin inflow-to-export ratio Action IV.2.1 is more important to steelhead outmigrating from the San Joaquin River Basin, and the OMR action IV.2.3 is more important to salmonids outmigrating from the Sacramento River Basin. The controlling action is the one that is the more conservative at any given time. In most water-year types, Action IV.2.1 will most likely be controlling over Action IV.2.3.

Coded wire tags: DWR (Llaban) reported that there is still no news from the fish facilities on the missing tags. The recent tags were identified as 1 winter run (216 mm) on 5/10, which might be from the late-fall or Mokelumne releases. The 4 other tags were from Chinook in the spring- or fall-run size categories. We requested the tag data from all monitoring stations. The percent loss from the 12/21/10 and 1/14/11 releases has not changed. DWR (Llaban) will send an update if more data are received this week.

SWP		CVP	
Flows/Exports (cfs)			
Clifton Court Forebay	2,200	Jones Pumping Plant	1,900
Outflow	48,034	American- Nimbus	7,000
Total Delta Inflow	52,695	Sacramento-Keswick	7,500 to 8,500 on

			5/18
		Stanislaus - Goodwin	2,000
Feather - Oroville	12,000	Merced	
Sacramento River at Freeport	35,209	Mokelumne	
San Joaquin at Vernalis	12,921	Tuolumne	
OMR (daily)	+1,746		
OMR 5 day	+2,221		
OMR 14 day	+3,411		
Reservoir Storage (TAF)			
San Luis	975	San Luis	955
		Shasta	4,432
Folsom	829		
New Melones			
Oroville	3,336		12,000
Delta Operations			
DCC	Closed	X2 (km)	61.4 (West of Port Chicago)
Outflow Index (cfs)	49200		
Inflow diverted (%)	7.0 (14-day avg.)		
Water Temperature (°F)			

Operations (May 17, 2011)

CVP: Jones pumping plant: Two units running tomorrow, down to one unit (1,000 cfs) to comply with 4:1 export ratio.

SWP: Vernalis: The SJR flow will decrease by about 2,000 cfs on Thursday because of an applied rating shift at the CDEC gauge.

San Joaquin River import/export ratio: The DOSS group reviewed the subgroup document that was sent from Byrne last week and made recommendations on changes. The document is attached this report, with the edits incorporated. DWR is working toward including reporting the I:E ratio in the daily operations summary.

The 14-day averaging period for the I:E ratio was discussed at DOSS and advice provided to WOMT and NMFS before formulation of the DOSS I:E subgroup (see previous DOSS notes); therefore, it is not reflected in the I:E subgroup notes. The averaging period came from language in the NMFS BiOp for implementing Phase 2 of the I:E ratio. DWR recognizes that Vernalis is not substantially tidally controlled; therefore, the decision on the 4:1 ratio was based largely on fact that exports are governed by tidal flows.

There was some discussion on how the data should be reported as far as how many decimal points to use as a significant figure. DOSS could make that recommendation without going back to the subgroup. DWR suggested that the SWRCB for E/C is either 1.0 or 0.7; therefore, the report considers up to one decimal point. DWR monitors to two decimal points but this has nothing to do with compliance. Since this difference in reporting represents only 100 or 200 cfs

of Vernalis flows it may not be necessary to report to a decimal place. The DOSS consensus was to advise that the 4:1 ratio be reported to one decimal point for monitoring purposes only and not for compliance. DOSS has accepted the subgroup report with the changes recommended.

NMFS RPA Action IV.2.1 ~ 4:1 ratio
May 1, 2011

Date	Vernalis	4:1 Ratio	Vernalis 4:1	Actual Combined Export
4/30/2011	20158	4.5	5040	4458
5/1/2011	19279	4.3	4930	4750
5/2/2011	18338	4.3	4815	4363
5/3/2011	17438	4.2	4701	4284
5/4/2011	16629	4.0	4592	5135
5/5/2011	16025	3.8	4494	5164
5/6/2011	15612	3.8	4410	4489
5/7/2011	15558	3.8	4345	4002
5/8/2011	15488	3.9	4292	2763
5/9/2011	15342	4.0	4247	3427
5/10/2011	15004	4.0	4202	3180
5/11/2011	14604	4.0	4156	3260
5/12/2011	14171	4.1	4109	3159
5/13/2011	13704	4.1	4060	3318
5/14/2011	13321	4.0	3938	3167
5/15/2011	13108	4.0	3828	3570
5/16/2011	12921	4.0	3731	3836

Ratios in red are progressive daily means for monitoring, and not compliance, purposes
Ratios in blue are 14-day average inflow-to-export ratios for compliance with Action IV.2.1

DOSS advice to WOMT and NMFS: The DOSS advises that the first trigger for steelhead in the NMFS BiOp for action 4.2.3 was triggered on 5/13/11 for one day. However, since OMR flows are currently positive the response (no more negative than -3,500 cfs) is already being met and therefore no action is necessary. Also, the DOSS group approved of the implementation criteria for NMFS BiOp action 4.2.1 (San Joaquin River Inflow to Export Ratio) recommended by the DOSS subgroup with minor clarification. DOSS advises that the reporting out of the 4:1 ratio be rounded to the nearest tenth decimal place and included in the DWR daily operations summary until May 31 (end of 4.2.1 action).

Next Meeting: Conference call on Monday, 5/24/11, 11:00 a.m.