

**Delta Operations for Salmonids and Sturgeon (DOSS) Group**  
**Conference call: 1/15/13 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 work with other technical teams. DOSS notes and advice can be found at: <http://www.swr.noaa.gov/ocap/doss.htm>.

**DWR:** Edmund Yu, Kevin Reece, Dan Yamanaka, Mike Ford, Tracy Pettit, James Gleim, Andy Chu

**FWS:** Roger Guinee, Craig Anderson, Leigh Bartoo

**NMFS:** Jeff Stuart, Bruce Oppenheim, Barbara Rocco, Garwin Yip, Barb Byrne

**Reclamation:** Russ Yaworsky, Josh Israel

**DFW:** Bob Fujimura, Jason Roberts, Krystal Acierto, Robert Vincik

**EPA:** Erin Foresman

**SWRCB, USGS:** not present

**Agenda**

1. Fish monitoring
2. Current operations
3. RPA Action IV.3 clarification language

**Fish Monitoring:** The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See also:

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

Location	Chippis Is. Midwater Trawl	Sacramento Trawls	Mossdale Kodiak Trawl	Beach Seines
<b>Sample Date</b>	1/7, 1/9, 1/11	1/7, 1/9, 1/11	1/7, 1/9, 1/22	1/7, 1/9–1/11
<b>Total Catch</b>	<b>159</b>	<b>4</b>	<b>1</b>	<b>748</b>
<b>FR</b>		4	1	697
<b>WR</b>	1 adult			16
<b>SR</b>				33
<b>LFR</b>				
<b>Ad-Clipped Chinook</b>	1			2
<b>DS</b>	10			
<b>Splittail</b>	12			
<b>Longfin</b>	135			
<b>SH (ad-clip)</b>				
<b>SH (wild)</b>			1 (215 mm)	

<b>W. Temp. (avg. °F)</b>	45.7	46.2	46.8	46.0
<b>Flows (avg. cfs)</b>				
<b>Turbidity (avg. NTU)</b>	66.1	32.4	35.3	27.4
<b>WR/LFR Avg. CPUE</b>				
<b>FR/SR Avg. CPUE</b>				

**Key:** FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; CPUE = catch per unit of effort; N/A = not available

**Fish Salvage:** The fish salvage report covering 1/14/13 was provided by Geir Aasen (DFW) and emailed to DOSS participants. This report is posted at <ftp://ftp.delta.dfg.ca.gov/salvage> and you can locate the table under folder “DOSS salvage tables” (also try <http://www.dfg.ca.gov/delta/apps/salvage/Default.aspx> and click on “salvage FTP site”).

**January 7–13 from Bob Fujimura (DFW):** Relatively few salmonids were salvaged during the reporting period and all were at the CVP.

Four ad-clipped Chinook salmon (CS) were salvaged on January 7th. These fish were identified as winter-run by length-at-date, although coded wire tags (CWTs) indicate they were hatchery late-fall run. A smaller number of ad-clipped CS were salvaged this week compared to the previous week: four versus 26, respectively. No wild CS were salvaged this week.

Four wild steelhead were salvaged at the CVP on 1/13/13. The estimated loss density was 0.22 fish/TAF on that day. The cumulative salvage for steelhead YTD is 33 for the combined facilities (see table below).

Two white sturgeon were salvaged at the SWP on 1/12/13. No green sturgeon have been salvaged this water year (since 10/1/12).

Thirty-nine *O. mykiss* were reported in the Stanislaus weir count; six were >16 inches. There seems to be a discrepancy between the net upstream count and the net weir count. Stuart (NMFS) has e-mailed FishBio for clarification.

The following daily summary graphs and table were prepared by Bob Fujimura (DFW) as of 1/14/13.

Compiled by Bob Fujimura on January 14, 2013



Figure 1. Daily salvage of Chinook salmon (all races) and water exports from the state and federal fish salvage facilities during December 1 through January 13, 2013. Graph obtained from the DFG salvage monitoring web-page: <http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx>.



Figure 2. Daily salvage of steelhead and water exports from the state and federal fish salvage facilities during December 1 through January 13, 2013. Graph obtained from the DFG salvage monitoring web-page: <http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx>

**DOSS Weekly Salvage Update**  
**Reporting Period: January 7-13, 2013**  
*Prepared by Bob Fujimura on January 14, 2013*  
**Preliminary Results -Subject to Revision**

Criteria	7-Jan	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	Trend
<b>Loss Densities</b>								
Wild older juvenile CS	0	0	0	0	0	0	0	↘
Wild steelhead	0	0	0	0	0	0	0.2	↗
<b>Exports</b>								
SWP daily export	6,176	7,971	8,983	8,405	6,803	6,950	7,167	↗
CVP daily export	5,578	1,384	0	0	952	3,882	4,962	↘

Loss Density = fish lost/TAF; water export = AF; Trend = compared to previous week; wild = adipose fin present  
 Loss = estimated number of fish lost at the CVP and SWP Delta export facilities based on estimated salvage (see below)

**Chinook Salmon Weekly/Season Salvage and Loss**  
 Combined salvage and loss for both CVP and SWP fish facilities  
 Race determined by size at date of capture; hatchery = adipose fin missing;

Category	Weekly Total			Season Total	
	Salvage	Loss	Trend	Salvage	Loss
<b>Wild</b>					
Winter Run	0	0	↘	74	242
Spring Run	0	0	→	0	0
Late Fall Run	0	0	→	85	277
Fall Run	0	0	→	19	52
Unclassified	0	0	→	8	5
<b>Total</b>	<b>0</b>	<b>0</b>		<b>186</b>	<b>576</b>
<b>Hatchery</b>					
Winter Run	4	3	↘	71	245
Spring Run	0	0	→	0	0
Late Fall Run	0	0	↘	767	2,850
Fall Run	0	0	↘	415	1,522
Unclassified	0	0	→	0	0
<b>Total</b>	<b>4</b>	<b>3</b>		<b>1,253</b>	<b>4,617</b>

Trend = weekly loss per race; Salvage = estimated number of fish collected by the CVP and SWP fish protective facilities per unit of time

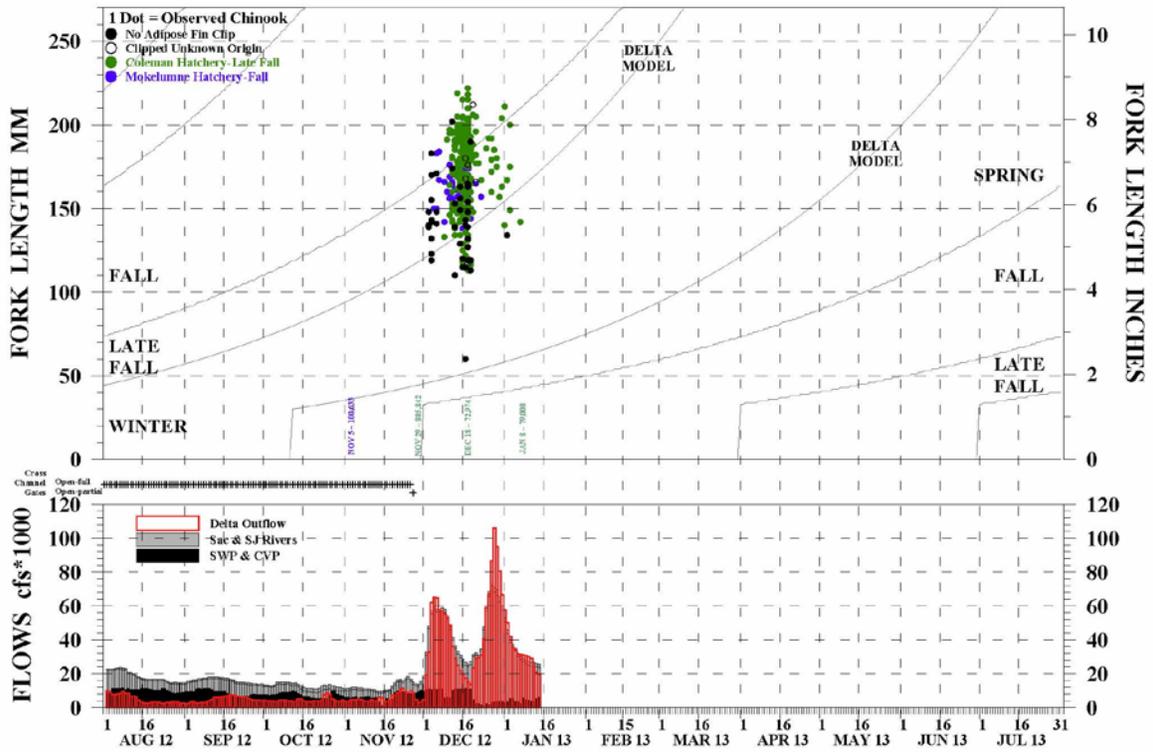
**Steelhead Weekly/Season Salvage and Loss**  
 Combined salvage and loss for both CVP and SWP fish facilities

Category	Weekly Total			Season Total	
	Salvage	Loss	Trend	Salvage	Loss
Wild	4	3	↗	33	81
Hatchery	0	0	→	0	0
<b>Total</b>	<b>4</b>	<b>3</b>		<b>33</b>	<b>81</b>

State Water Project loss = salvage x 4.33; Central Valley Project loss = salvage x 0.68

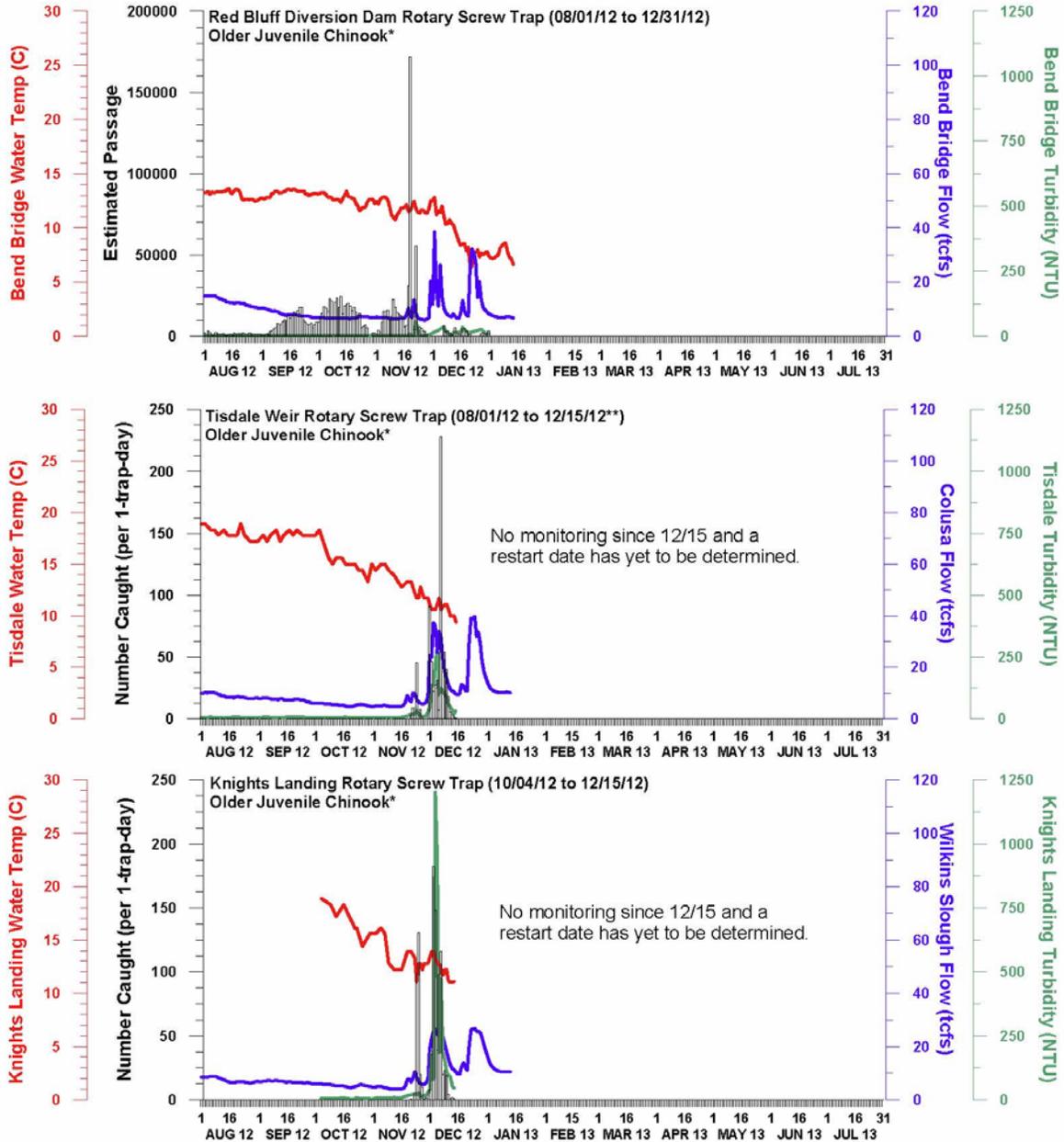
NOTE: Below are graphs provided by DWR through 1/14/13 for Chinook salmon salvaged at the Delta fish facilities and for older juvenile Chinook salmon and steelhead observed in the Sacramento and San Joaquin rivers. For additional graphs, please visit the DWR website at: <http://www.water.ca.gov/swp/operationscontrol/calFed/calFedMonitoring.cfm>.

## OBSERVED CHINOOK SALVAGE AT THE SWP & CVP DELTA FISH FACILITIES 08/01/2012 THROUGH 01/13/2013



DWR-DES 14 JAN 2013  
 Preliminary data from DFW, DWR, FWS, Reclamation, and CDEC; subject to revision.  
 \*Chinook outside of the length-at-date criteria (Delta model) are not reported.

## NUMBER OF OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER



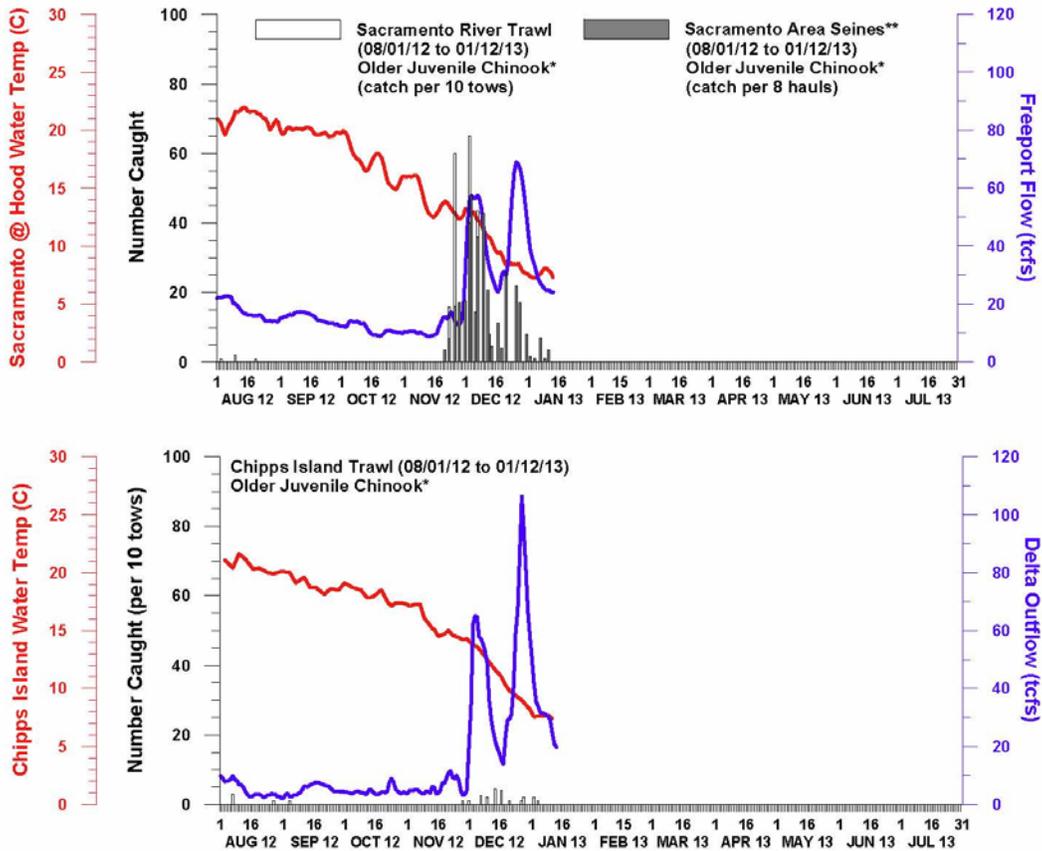
DWR-DES 14 JAN 2013

Preliminary data from DFW, FWS, and CDEC; subject to revision.

\*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).

\*\* Tisdale Weir: One older juvenile caught on 9/14 and 43 older juveniles caught on 11/25. However, CPUE was not calculated due to problems with the cone pickers. As a result, data are not presented on the graph.

## NUMBER OF OLDER JUVENILE CHINOOK MEASURED IN THE LOWER SACRAMENTO RIVER & CHIPPS ISLAND



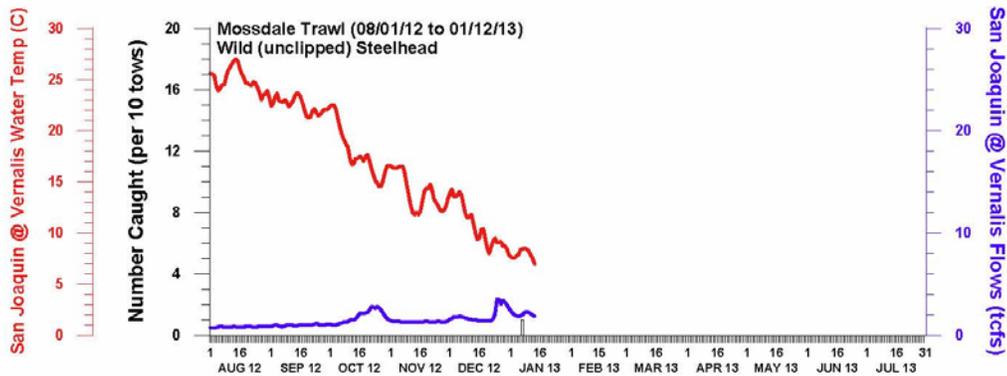
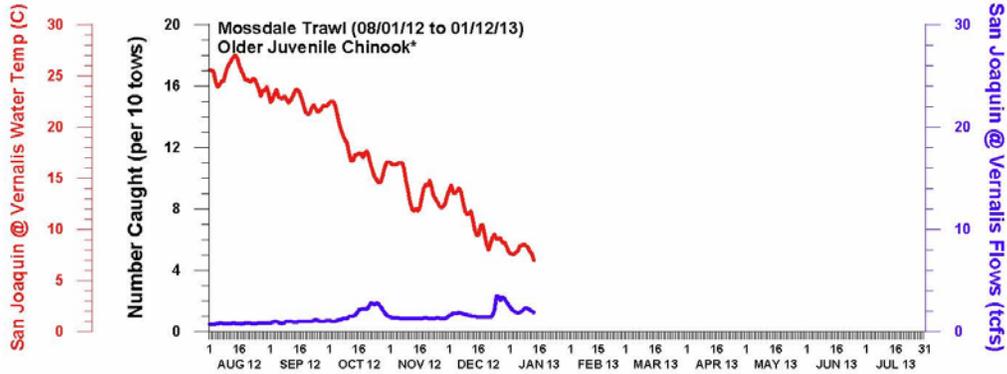
DWR-DES 14 JAN 2013

Preliminary data from FWS and CDEC; subject to revision.

\*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).

\*\*Sacramento area seine route consists of the following seine sites: Verona, Elkhorn, Sand Cove, Discovery Park, American River, Miller Park, Sherwood Harbor, and Garcia Bend. Bars are stacked if Chinook caught from the trawl and seines are from the same day.

## NUMBER OF OLDER JUVENILE CHINOOK AND STEELHEAD MEASURED IN THE SAN JOAQUIN RIVER



DWR-DES 14 JAN 2013  
 Preliminary data from FWS and CDEC; subject to revision.  
 \*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).

**Coded Wire Tag (CWT)/Hatchery Chinook Salvage:** Edmund Yu, DWR, reported that no spring-run surrogates have been salvaged this week. All of the ad-clipped Chinook salmon reported in salvage this week are from the late-fall-run production release on 11/29/12 (see table below). It normally takes only 1 day for the CWTs to be read and recorded after the fish are

salvaged; however, there might be a delay over weekends/holidays or when a large number of ad-clipped Chinook are salvaged. All CWTs have been read through 1/13/13.

HATCHERY (ADIPOSE FIN CLIPPED) CHINOOK SALMON LOSS AT THE SWP & CVP DELTA FISH FACILITIES, 2012/2013

Release Date	CWT Race	Hatchery	Release Site	Release Type	Confirmed Loss	Number Released <sup>1</sup>	Total Entering Delta	% Loss <sup>2</sup>	First Concern Level	Second Concern Level	Date of First Loss	Date of Last Loss
11/5/2012	F	Mokelumne River Hatchery	Mokelumne River	**	554.28	100,633	n/a	0.551	n/a	n/a	12/5/2012	12/23/2012
11/29/2012	LF	Coleman NFH	Battle Creek	Production	3916.21	805,842	n/a	0.486	n/a	n/a	12/9/2012	1/7/2013
12/18/2012	LF	Coleman NFH	Battle Creek	Spring Surrogate	30.89	72,974	n/a	0.042	0.5%	1.0%	12/31/2012	1/3/2013
1/8/2013	LF	Coleman NFH	Battle Creek	Spring Surrogate	0.00	79,000	n/a	0.000	0.5%	1.0%	n/a	n/a

Facility	Unknown CWT Loss <sup>3</sup>	Unread CWT Loss <sup>4</sup>	Unknown Hatchery Loss <sup>5</sup>
SWP	36.71	0.00	73.10
CVP	5.20	0.00	0.00
<b>TOTAL</b>	<b>41.91</b>	<b>0.00</b>	<b>73.10</b>

SWP CWTs read from 10/1/2012 through 1/13/2013.

CVP CWTs read from 10/1/2012 through 1/13/2013.

<sup>1</sup>Number released with the adipose fin clipped and a CWT.

<sup>2</sup>LF & F % Loss = (Confirmed Loss/Number Released)\*100; W % Loss = (Confirmed Loss/Total Entering Delta)\*100

<sup>3</sup>Adipose fin clipped Chinook was observed during fish count, but tag code could not be determined (e.g., damaged tag, lost tag, no tag, or Chinook released).

<sup>4</sup>Adipose fin clipped Chinook was collected during fish count and has not been processed yet.

<sup>5</sup>CWT has been read, but hatchery release information not yet available.

\*\* Information not yet available.

DWR-DES Revised 1/14/2013

Preliminary data from DFW, DWR, FWS, and Reclamation; subject to revision.

## Operations (1/15/13)

SWP		CVP	
<b>Exports (cfs)</b>			
Clifton Court Forebay	2,500	Jones Pumping Plant	2,800
<b>Reservoir Releases (cfs)</b>			
Feather - Oroville	1,750	Nimbus	3,500 (down to 3,000 this afternoon, to 2,500 tomorrow)
		Sacramento - Keswick	4,500
		Stanislaus - Goodwin	275
<b>Reservoir Storage (in TAF, % of capacity)</b>			
San Luis (SWP)	483 (45)	San Luis (CVP)	697 (72)
Oroville	2,592	Shasta	3,411
New Melones		Folsom	557
<b>Delta Operations</b>			
DCC	Closed	Sacramento River at Freeport (cfs)	23,000 (receding)
Outflow Index (cfs)	19,900	San Joaquin River (cfs) at Vernalis	1,800 (receding)
Total Delta Inflow (cfs)	25,897	OMR (daily) (cfs)	-3,200
Water Temperature (°F)		OMR 5 day (cfs)	-2,900
X2 (km)	~63	OMR 14 day (cfs)	-2,200
E/I (%)	16.1 (14-day avg)		

**Qwest:** As of 1/13/13, Qwest was -261 cfs.

There was a question about when there would be a pulse flow on the Stanislaus River in January (per RPA Action III.1.3 and NMFS' Opinion, Appendix 2E). Because the weather has been dry, there has been no opportunity to schedule an increase concurrent with a storm event. The Stanislaus Operations Group (SOG) is meeting tomorrow to discuss this and look at the upcoming weather events; it will schedule the winter instability pulse (the Appendix 2-E schedule calls for a 2- to 6-day pulse of 400–600 cfs, depending on water year type; SOG has advised and NMFS concurred with a slightly reshaped flow of the same volume) coincident with a storm event or by the end of the month, whichever is sooner.

**Smelt Working Group (SWG):** The SWG met on Monday, 1/14/13, and reviewed all flow information including turbidity, which is increasing in the Old River corridor. SWG was concerned about continued salvage at the CVP and recommended an OMR limit of no more negative than -2,500 cfs as a 14-day average and -3,125 cfs 5-day corresponding average. The current OMR flow criteria for delta smelt is -3,500 cfs, so this recommendation is a more conservative operation. USFWS has not yet made its determination.

**RPA Action IV.3 Language Clarification:** Byrne (NMFS) sent a revised version of the RPA Action IV.3 language to DOSS last week after the subgroup had met. The version sent around this morning includes additional edits received by Monday (1/14) afternoon. Most of the edits pertain to implementation procedures related to and for clarification of the table listing the triggers and action response for the action, although some relate to the “Third Alert” component of Action IV.3. The footnotes and implementation procedures are the meat of the new language.

DWR and Reclamation would like some time to get feedback from colleagues on the implementation procedures clarification. DOSS discussed some of the suggested edits and, as a group, made some additional revisions to the document.

Israel also noted that reducing exports changes the bypass ratios; therefore, reducing exports might not actually reduce delta smelt salvage. Salvage efficiency is most likely reduced during the VAMP period and might be happening now during low exports under the delta smelt action.

Byrne asked DOSS to please submit comments soon. DOSS agreed to have comments submitted by Thursday, 1/24/13, and to discuss the revisions at the DOSS call on 1/29/13.

**JPE Update:** Oppenheim (NMFS) reported on the status of the official winter-run JPE being developed by NMFS. NMFS received a letter from DFW on 1/4/13 with the official annual escapement estimates for winter run. The numbers are the same as those used for the preliminary estimate; however, some additional data have been added. The daily loss-density triggers will be close to the ones provided earlier using the preliminary JPE but might change slightly because of some pre-spawn mortality that was not included in the first estimates (six females observed had died before spawning). This is the first time that DFW has estimated a confidence interval (CI) on any adult escapement. The total number of estimated in-river winter run was 2,581 (plus an additional 93 collected at the Livingston Stone National Fish Hatchery) and the 90% CI was 2,451 to 2,896. For the JPE, each water-year type will have an estimate with a CI and this will be included in the NMFS letter that goes to Reclamation, which is currently in draft form and will be out shortly.

**Topics for Next Meeting:** Israel would like to discuss the 6-year study plan for 2013. This is part of DOSS' required activities per RPA Action IV.5(5).

Yip (NMFS) mentioned that the federal fish facilities sent a request to NMFS and USFWS asking for a reduction in sampling time from 30 minutes to 10 minutes because of water hyacinth in the holding tanks. Roberts (DFW) asked that this request be sent to Chad Dibble and Carl Wilcox, DFW, and that they be kept in the loop on this.

**DOSS advice to WOMT and NMFS:** None.

**Next Meeting:** Given that Monday, 1/21/13, is a holiday, the next DOSS meeting was changed to Wednesday, 1/23/13, at 9:00 a.m.