

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 10/31/2017 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.westcoast.fisheries.noaa.gov/central_valley/water_operations/doss.html.

CDFW: Bob Fujimura, Jerry Morinaka, Ken Kundargi, Duane Linander

DWR: Kevin Reece, Bryant Giorgi, Dan Yamanaka, Mike Ford

NMFS: Jeff Stuart, Kristin McCleery

Reclamation: Tom Patton, Elissa Buttermore

SWRCB: Chris Carr

USFWS: Craig Anderson

Agenda Items

1. Agenda review and introductions
2. RPA Implementation review (For the DOSS Dashboard, click on the "Triggers & Indices" tab at: www.baydeltalive.com/djfmj)
3. Current Operations
4. Fish Monitoring: Salvage
5. Fish Monitoring: RSTs/trawls/seines
6. SacPAS - updates/ suggestions (Elissa Buttermore)
7. DOSS Estimates of Fish Distribution
8. DOSS advice
9. Next DOSS meeting

Agenda Item 2.

RPA Implementation Review

Delta RPA Actions affecting operations during October:

Action IV.1.1 (Alerts that indicate the Delta Cross Channel (DCC) gate operations may be triggered soon)¹:

- Recent (10/24-10/30, unless otherwise noted) conditions for:
 - Mill Creek flow: 128.6 cfs (mean daily flow, range 127-131 cfs).
 - Deer Creek flow was 120 cfs (10/17-18). Gage stopped sending data on 10/19 and is currently being repaired.
 - Wilkins Slough flow: Average flow 5,918 cfs (range of mean daily flow: 5,670-6,194 cfs)

¹ For details, see pages 60-61 in Enclosure 2 of the 2011 Amendments to the 2009 RPA document at: http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/Operations.%20Criteria%20and%20Plan/040711_ocap_opinion_2011_amendments.pdf. Note that in October 2014, NMFS approved a modification of the first component of the first alert to a 95 cfs mean daily flow threshold in either Mill Creek or Deer Creek in lieu of operating the Mill and Deer Creek rotary screw traps.

- Knights Landing temperature: 59°F average for period, range 58 to 62°F (latest temperatures reported at the rotary screw traps during trap check on 10/30)
- First Alert (triggered if either or both creeks >95 cfs flow or second component >50% flow change)
 - The first alert was triggered based on Mill Creek and Deer Creek flows >95 cfs. However, summer baseline flows have been greater than the trigger of 95 cfs all summer long and DOSS believes no yearling spring-run Chinook salmon outmigration has been stimulated by these flows.
- Second Alert: (triggered only if both components are met: Knights Landing temperatures <56.3°F and Wilkins Slough flows >7,500 cfs).
 - Wilkins Slough flows are less than the trigger of 7,500 cfs; flows have been relatively stable over the past week, averaging 5,918 cfs ± ~250 cfs and Knights Landing water temperatures remain above 56.3 °F.

Action IV.1.2² (DCC gate operations):

- Since 10/1/17, none of the criteria requiring DCC gate closure have been met.
- DCC gates are currently closed weekdays (from 10 a.m. on Mondays through 10 a.m. on Fridays) at the request of CDFW to minimize straying of Sacramento River fall-run Chinook salmon, and gates are opened on weekends for recreational boating (opening Friday and closing on Monday).
- These DCC Gate operations are expected to continue through November 17, unless water quality issues occur, or CDFW withdraws its request for gate closures. The DCC gates will be open from November 18 through November 30. Beginning on December 1, gates will remain closed.

Agenda Item 3.

Current Operations (10/3/17)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	2,000*	Jones Pumping Plant	4,400**
Reservoir Releases (cfs)			
Feather - Oroville	1,750	American - Nimbus	2,000
		Sacramento - Keswick	8,000
		Stanislaus - Goodwin	1,100***
		Trinity - Lewiston	300
Reservoir Storage (in TAF)			
San Luis (SWP)	766	San Luis (CVP)	739
Oroville	1,223	Shasta	3,184
New Melones	2,002	Folsom	560

² For details, see pages 62-66 in Enclosure 2 of the 2011 Amendments to the 2009 RPA document at: http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/Operations,%20Criteria%20and%20Plan/040711_ocap_opinion_2011_amendments.pdf

Delta Operations			
DCC	Closed	Sacramento River at Freeport (cfs)	9,948
Outflow Index (cfs)	~6,000	San Joaquin River at Vernalis (cfs)	3,224
E:I	~ 46 % (3-day avg.)	X2	>81 km

*SWP exports will decrease to 1,500 cfs on 11/1/17.

**CVP exports will drop from 5 units to 3 units, targeting 2,700 cfs after today.

*** Goodwin releases are currently 1,100 cfs; flows will drop to 600 cfs by 11/03/17 as fall pulse flows end.

Factors controlling Delta exports:

- 10/25 to 10/31: Seasonal X2 (salinity) management

Agenda Item 4.

Fish Monitoring: Salvage

Fujimura (CDFW) provided a salvage summary. No listed fish species have been observed in salvage since the start of the current water year on 10/1/17. One juvenile white sturgeon observed in salvage on 10/28/17 at the TFCF (264 mm FL, 290 mm TL).

DOSS Weekly Salvage Update

Reporting Period: October 23-October 29, 2017

Prepared by Bob Fujimura on October 30, 2017 21:4

Preliminary Results -Subject to Revision

Criteria	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct	29-Oct	Trend	
Loss Densities									
Wild older juvenile CS	0	0	0	0	0	0	0	→	0
Wild steelhead	0	0	0	0	0	0	0	→	0
Exports									
SWP daily export	3,613	0	0	135	6,913	6,308	5,561	↗	3,219
CVP daily export	8,619	8,639	8,663	8,666	8,664	8,647	8,672	→	8,653
SWP reduced counts	0%			0%	0%	0%	0%	→	0%
CVP reduced counts	0%	0%	0%	0%	0%	0%	0%	→	0%

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)

Reduced counts = percentage of time that routine salvage sample time were less than 30 min per 2 hours of salvage and export operations

Yellow highlighted dates indicate TFCF salvage outage occurred

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
Wild					
Winter Run	0	0	→	0	0
Spring Run	0	0	→	0	0
Late Fall Run	0	0	→	0	0
Fall Run	0	0	→	0	0
Unclassified	0	0	→	0	0
Total	0	0		0	0
Hatchery					
Winter Run	0	0	→	0	0
Spring Run	0	0	→	0	0
Late Fall Run	0	0	→	0	0
Fall Run	0	0	→	0	0
Unclassified	0	0	↘	1	NC
Total	0	0		1	0

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

NC = cannot be calculated; hatchery salmon salvage and loss estimates have been corrected using CWT readings when available

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	0	0	→	0	0
Hatchery	0	0	→	0	0
Total	0	0		0	0

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

Generated by Bob Fujimura on October 30, 2017

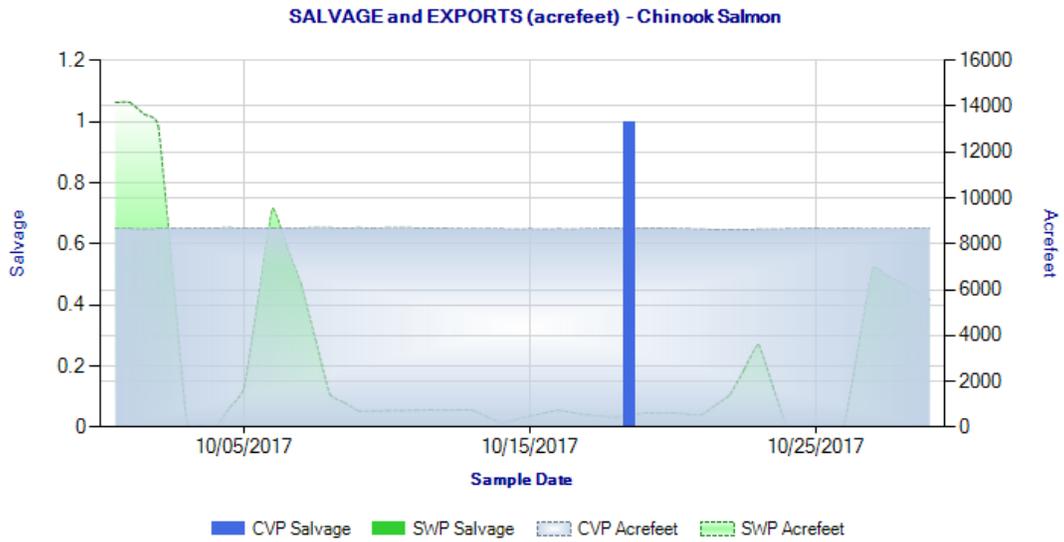


Figure 1. Daily salvage of Chinook Salmon (all races) and water exports from the state and federal fish salvage facilities during October 1 through 29, 2017. Graph obtained from the DFG salvage monitoring web-page: <http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx>.

Agenda Item 5.

Fish Monitoring: The following table presents fish monitoring data summarized over the past week. Unless otherwise noted, reported sizes are fork length.

Location	Chippis Is. Midwater Trawl ^A	Sacramento Trawl ^A	Beach Seines ^A	Knights Landing RST ^B	Tisdale RST ^C	GCID RST	Mossdale Kodiak Trawl ^A
Sample Date	10/23, 10/25, 10/27	10/23/10-25	10/23/10-25, 10/27	10/23-10/30*	10/23-10/30**	10/24-10/29	10/24, 10/26, 10/27
Chinook							
FR Chinook						4 smolts	
SR Chinook			1		1	40 juveniles	
WR Chinook						8 juveniles	
LFR Chinook						3 juveniles, 1 smolt	
Ad-Clipped Chinook							
Steelhead (ad-clip)							
Steelhead (wild)							
Green Sturgeon							
Flows (avg. cfs)				5,945	6,600	1,021	
W. Temp. (avg. °F)	62	60		59	60	58	60
Turbidity (avg. NTU)	20.2	10.5		5.97	10.9	8.2	26.3

^A Data reported in the 10/22 to 10/28 DJFMP sampling summary.

^B Knights Landing RST sampling period was from 10/23 at 10:15 am to 10/30 at 11:30 am.

^C Tisdale RST sampling period was from 10/23 at 9:00 am to 10/30 at 8:15 am.

*Updated Knights Landing data was posted after the fish monitoring table was distributed, and was discussed on the call.

**Updated Tisdale RST data was posted after the fish monitoring table was distributed, and was discussed on the call, which included 1 spring-run collected on 10/30.

Agenda Item 6.

SacPAS - updates/ suggestions - E. Buttermore (Reclamation)

Demonstration of the new, updated graphing capability for fish salvage, which allows for selection of selected runs and groupings within the graphical display. Request was made to the DOSS group to submit any new suggestions or requests to the portal designers (UW Columbia Basin Research Center) using the web link or to E. Buttermore (Reclamation).

Agenda Item 7.

DOSS Estimates of Fish Distribution

DOSS estimates of the current distribution of listed Chinook and steelhead, as a percentage of the population, are based on recent monitoring data and historical migration timing patterns.

Location	Yet to Enter Delta (Upstream of Knights Landing)	In the Delta	Exited the Delta (Past Chipps Island)
<i>Wild young-of-year winter-run Chinook salmon</i>	96-97% (Last week: 97-98%)	3-4% (Last week: 2-3%)	0% (Last week: same)
<i>Wild young-of-year spring-run Chinook salmon</i>	~100%	0%	0%

Rationale for changes in distribution

Wild winter-run Chinook: Although winter-run were only observed at GCID and at no other monitoring locations this week, DOSS estimated that an additional 1% have moved into the Delta based on historical timing and outmigration. Clear water and low flow may reduce trap efficiency. The majority of winter-run are likely to be holding and continuing to rear upriver since no environmental cues (drop in water temperature, increases in turbidity, increased flow) were observed this week.

Wild spring-run Chinook: Very few spring-run have been observed at monitoring locations in the lower Sacramento River to date for this brood year. Since the vast majority of spring-run are still considered to be rearing upriver, the percentage of the population still located in the upper river is essentially 100 percent; no spring-run are expected to have entered the Delta this early in the season.

Agenda Item 7.

DOSS Advice to WOMT and NMFS: None

Agenda Item 8.

Next Meeting: The next DOSS conference call will be on **11/7/17 at 9am.**