

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 10/1/2019 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 here: [CCV Water Operations DOSS page](#).

CDFW: Ken Kundargi, Duane Linander, Jason Julienne

DWR: Bryant Giorgi, Kevin Reece, Farida Islam

NMFS: Jeff Stuart, Kristin Begun

Reclamation: Elissa Buttermore, Towns Burgess

SWRCB: Chris Carr, Craig Williams, Alessia Siclari

USFWS: Felipe Carrillo, Craig Anderson

Agenda Items

1. Agenda review and introductions
2. RPA Implementation review (For the DOSS Dashboard, click on the "Triggers & Indices" tab at: [Bay Delta Live](#))
3. Current Operations
4. Smelt Working Group
5. Fish Monitoring: Salvage
6. Fish Monitoring: RSTs/trawls/seines
7. DOSS Estimates of Fish Distribution
8. DOSS Advice
9. Other Discussion Items
10. 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:

- The First Alert has two components. Capture of yearling-sized spring-run at the mouths of natal tributaries between October and April indicates that emigration from the tributaries has started or is occurring. As an environmental surrogate to the capture of the yearling-sized spring-run, which are difficult to capture in the rotary screw traps, tributary flow increases are used to signal conditions conducive to emigration. The First Alert [triggered if either the first component (>95 cfs flow threshold) or second

¹ For details, see pages 60-61 in Enclosure 2 of the [2011 Amendments to the 2009 RPA document](#). 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.

component (>50% change in mean daily flow)] in effect beginning today, 10/1, and is triggered due to flows >95 cfs.

Mill Creek (MLM)			Deer Creek (DCV)	
Date	mean daily flow (cfs)	change in mean daily flow	mean daily flow (cfs)	change in mean daily flow
9/24/2019	132	-1%	115	-2%
9/25/2019	130	-2%	113	-2%
9/26/2019	129	-1%	111	-2%
9/27/2019	129	0%	113	1%
9/28/2019	132	2%	115	2%
9/29/2019	133	1%	120	4%
9/30/2019	143	8%	139	16%

- Second Alert (triggered only if both Knights Landing temperatures less than 56.3°F and Wilkins Slough flows >7,500 cfs). Recent conditions for:
 - Wilkins Slough flow: 7,177 on 9/30
 - Knights Landing water temperature: 64.9°F on 9/28
 - The second alert is in effect beginning today, 10/1, and has not been triggered.

Action IV.1.2² (DCC gate operations):

- None of the criteria requiring DCC gate closure have been met.

Agenda Item 3.

Current Operations (10/1/19)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	6,000	Jones Pumping Plant	4,300*
Reservoir Releases (cfs)			
Feather - Oroville	8,000**	American - Nimbus	2,700
		Sacramento - Keswick	7,500***
		Stanislaus - Goodwin	400
		Trinity - Lewiston	450
Reservoir Storage (in TAF)			
San Luis (SWP)	795	San Luis (CVP)	464
Oroville	2,228	Shasta	3,425
New Melones	2,033	Folsom	714
Delta Operations			
DCC	Open	Sacramento River at Freeport (cfs)	18,650
Outflow Index (cfs)	11,400	San Joaquin River at Vernalis (cfs)	3,960

² For details, see pages 62-66 in Enclosure 2 of the [2011 Amendments to the 2009 RPA document](#).

E:I	35% (3-day avg.)	X2	76 km
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* CVP exports are scheduled to decrease to 3,500 cfs on 10/2.

** Oroville releases will ramp down by 10/15 to below 2,500 cfs.

*** Keswick releases are scheduled to decrease to 6,500 cfs on 10/2.

Factors controlling Delta exports:

- 10/1: Fall X2

Approximate OMRs as of 9/28/19:

	USGS gauges (cfs)	Index (cfs)
Daily	-6,900	-6,000
5-day	-9,200	-8,800
14-day	-9,100	-8,900

Approximate OMRs as of 9/30/19:

	Index (cfs)
Daily	-8,100
5-day	-7,700
14-day	-8,500

Weather Forecast

Sunny and clear skies are predicted for the next week with mild temperatures gradually increasing to the low 80s.

Agenda Item 4.

Smelt Working Group

The Smelt Working Group has not yet started meeting for WY 2020.

Agenda Item 5.

Fish Monitoring: Salvage

Griffiths (CDFW) provided a salvage summary for the period of 9/23-9/29 after the DOSS call.

No unclipped (wild origin) or clipped (hatchery origin) Chinook salmon or steelhead were salvaged during this period.

Operations:

The state facility is reducing counts because of heavy weed/debris flow.

DOSS Weekly Salvage Update

Reporting Period: September 23-September 29, 2019

Prepared by Kyle Griffiths on October 2, 2019 12:59

Preliminary Results -Subject to Revision

Criteria	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	Trend	
Loss Densities									
Wild older juvenile CS	0	0	0	0	0	0	0	→	0.00
Wild steelhead	0	0	0	0	0	0	0	→	0.00
Exports									
SWP daily export	12,417	13,572	12,754	13,088	13,165	6,174	5,697	↘	10,981
CVP daily export	8,543	8,526	8,549	8,570	8,589	8,584	8,570		↘
SWP reduced counts	100%	100%	100%	100%	100%	100%	100%		
CVP reduced counts	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	→	184	537
Spring Run	0	0	→	2,179	6,101
Late Fall Run	0	0	→	3	13
Fall Run	0	0	→	9,259	12,535
Unclassified	0	0	→	4	NC
Total	0	0		11,629	19,187
Hatchery					
Winter Run	0	0	→	87	366
Spring Run	0	0	→	1,258	4,406
Late Fall Run	0	0	→	354	776
Fall Run	0	0	→	4	3
Unclassified	0	0	→	4	NC
Total	0	0		1,707	5,550

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	→	446	1,482
Hatchery	0	0	→	1,845	5,778
Total	0	0		2,291	7,260

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

Agenda Item 6.

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

Location	GCID RST	Tisdale RST ^A	Knights Landing RST ^B	Beach Seines ^C	Sacramento Trawl ^C	Chippis Is. Midwater Trawl ^C	Mossdale Kodiak Trawl ^C
Sample Date	9/20-9/30	9/20-9/27	9/20-9/29	9/24-9/27	9/23, 9/25, 9/27	9/23, 9/25	9/23, 9/25, 9/27
FR Chinook	3 smolts						
SR Chinook							
WR Chinook	875 juveniles	1	7				
LFR Chinook	10 juveniles 2 smolts						
Chinook (ad-clip)							
Steelhead (wild)							
Steelhead (ad-clip)							
Green Sturgeon							
Flows (avg. cfs)	1,169	7,861	7,887				
W. Temp. (avg. °F)	60.6	63.5	64.7				
Turbidity (avg. NTU)	6.8	4.7	5.7				

^A Tisdale RST sampling period was from 9/20 at 10:00 am to 9/27 at 10:15 am.

^B Knights Landing RST sampling period was from 9/20 at 10:00 am to 9/29 at 10:45 am.

^C Data reported in the 9/22 to 9/28 DJFMP sampling summary.

DOSS members inquired if the green sturgeon acoustic tag receivers were still out in the field and if any new information has been collected since last season. CDFW responded that they will check with the principal investigator as to current status and information.

CDFW reported out that very high numbers of adult spring-run have been seen in Butte Creek during the current spawning surveys. CDFW will check on the plans for installation of RSTs within the system to monitor for juveniles later in the season.

Red Bluff Diversion Dam (RBDD)

USFWS biweekly report (9/10-23/19) for preliminary estimates of passage by brood-year and run for unmarked juvenile Chinook salmon captured by rotary screw traps at RBDD included:

Run and Species	Biweekly Total	Brood Year Total (90% CI)
Winter-run Chinook (BY2019)	682,969	1,690,458 (1,219,248-2,161,668)

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>Young-of-year (YOY) winter-run Chinook salmon</i>	99%	1%	0%
<i>Young-of-year (YOY) spring-run Chinook salmon</i>	100%	0%	0%

Rationale for changes in distribution

Wild winter-run Chinook salmon:

Nearly 1.7 million Brood Year 2019 (BY19) winter-run have passed RBDD this year. Approximately 2,500 BY19 winter-run have been captured by the GCID RSTs since August 1, 2019. 19 BY19 winter-run have been captured by Knights Landing RST this season (first on 9/5/19). No juvenile salmonids have been captured at other locations in the Delta (beach seines, Sacramento Trawl, Mossdale Trawl, and Chipps Island) since last season.

Wild spring-run Chinook salmon:

Since no spring-run-sized fish have been observed at monitoring locations in or upstream of the Delta so far this water year, DOSS assumes that 100% are upstream of Knights Landing.

Agenda Item 8.

DOSS Advice to WOMT and NMFS:

None.

Agenda Item 9.

Other discussion items:

JPE Letter

The next JPE will not use the minimum fish triggers due to the high number of winter-run already observed at RBDD. DOSS should start to think about how to estimate the JPE towards the end of this year. Reece (DWR) stated that a winter-run project work team will again have a sub team, and will attempt to get an estimate to NMFS prior to January 1, although data availability may result in a delay until early 2020.

Check-in on DOSS Annual Report

Islam (DWR) informed the group that the Incidental Take Monitoring Report is currently being reviewed, and should be finalized soon. TBD early October.

Rapid Genetic Protocol

Buttermore (Reclamation) informed DOSS that they will include rapid genetic testing this year and have a contract with Cramer through July 2020, and are working to get a contract for up to 5 years beyond that.

Agenda Item 10.

Next Meeting: The next DOSS conference call will be on **10/8/19 at 9am.**