

**Delta Operations for Salmonids and Sturgeon (DOSS) Group
DOSS Data Summary for the week of: 11/15/2016**

NOTE: Due to conflict with the Bay Delta Science Conference, the 11/15/16 DOSS call was cancelled. Fish monitoring and operations data were shared with DOSS members via email and DOSS members updated the winter-run Chinook distribution estimate via e-mail discussion.

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.

Reporting Items

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

Reporting Item 1.

RPA Implementation Review

Delta RPA Actions affecting operations during November:

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

- **First Alert**
 - Recent conditions for Mill Creek and Deer Creek flows [highlighted cells exceed the first component (>95 cfs flow threshold) or second component (>50% flow change)]:

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.

Date	Mill Creek (MLM)		Deer Creek (DCV)	
	mean daily flow (cfs)	change in mean daily flow	mean daily flow (cfs)	change in mean daily flow
11/8/2016	184	-6%	130	-5%
11/9/2016	178	-3%	125	-4%
11/10/2016	171	-4%	122	-3%
11/11/2016	165	-4%	119	-2%
11/12/2016	163	-1%	117	-1%
11/13/2016	170	4%	119	2%
11/14/2016	158	-7%	117	-2%

- The first alert was triggered based on Mill Creek and Deer Creek flows >95 cfs on 11/8-11/14 (see table above for details).

- **Second Alert**

- Recent conditions for 11/8-11/14:
 - Wilkins Slough flow: 5,018-5,931 cfs (range of mean daily flow)
 - Knights Landing water temperature: 60-62°F (range of temperatures reported at the rotary screw traps)
- The second alert is triggered only if both components are met (Knights Landing temperatures less than 56.3°F and Wilkins Slough flows >7,500 cfs). The second alert has not been triggered this week.

Action IV.1.2² (DCC gate operations):

- The Seine SCI of 4 on 11/10/16 exceeded the index threshold of 3 and triggered a DCC closure of at least three days, and until all catch indices are less than 3 for two consecutive days.
- The DCC was closed on the morning of 11/12/16.
- The action response was satisfied on 11/14/16 and the DCC was opened the morning of 11/15/16.

Date	KLCI	Seine SCI	Trawl SCI	DCC position	Day of Action
11/10/16	0	4	0	Open	--
11/11/16	0	No sampling	No sampling	Open	--
11/12/16	0	No sampling	No sampling	Closed in AM	1
11/13/16	0	No sampling	No sampling	Closed	2
11/14/16	0	0	0	Closed	3

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

11/15/16		Opened in AM	--
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Action IV.3³ (Reduce likelihood of entrainment or salvage at the export facilities, including alert that indicates that export operations may need to be altered)

- The third alert (November 1-February 23: Knights Landing Catch Index (KLCI) or Sacramento Catch Index (SCI) >10) was not triggered over the past week.
- Since the action went into effect on 11/1/16, no salvage-based triggers that would require export reduction have been exceeded.

Reporting Item 2.

Current Operations (11/15/16)*

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	2,500	Jones Pumping Plant	1,000
Reservoir Releases (cfs)			
Feather - Oroville	2,450	American - Nimbus	1,250
		Sacramento - Keswick	5,000
		Stanislaus - Goodwin	201
		Trinity - Lewiston	321
Reservoir Storage (in TAF)			
San Luis (SWP)	505	San Luis (CVP)	226
Oroville	1,525	Shasta	2,822
New Melones	513	Folsom	385
Delta Operations			
DCC	Open	Sacramento River at Freeport (cfs)	10,200
Outflow Index (cfs)	6,900	San Joaquin River at Vernalis (cfs)	858
E:I	23.9% (14-day avg.)	X2	>81 km

*Water operations data was taken from the 11/15/2016 Executive Operations Summary at <http://www.water.ca.gov/swp/operationscontrol/docs/delta/deltaops.pdf> and [CDEC](#) reservoir data.

Factors controlling Delta exports:

11/8/16-11/14/16: seasonal salinity management.

Reporting Item 3.

Fish Monitoring: Salvage

No listed species have yet been salvaged during WY 2017.

³ For details, see pages 79-80 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

Reporting Item 4.

Fish Monitoring: The following table presents fish monitoring data summarized over the identified sampling dates. Unless otherwise noted, any 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 ^D	Mossdale Kodiak Trawl ^A
Sample Date	11/7-11/10	11/7, 11/9, 11/10	11/7-11/10	11/6-11/14	11/7-11/13	11/7-11/15	11/7, 11/9, 11/10
Total Catch							
FR Chinook							
WR Chinook			6	5	1	12 juveniles	
SR Chinook			2	1			
LFR Chinook						1 juvenile	
Adult Chinook	2						
Ad-Clipped Chinook							
Delta Smelt							
Splittail			1				
Longfin Smelt							
Steelhead (ad-clip)							
Steelhead (wild)							
Green Sturgeon							
Flows (avg. cfs)				5456	5572	914	
W. Temp. (avg. °F)				61	57	58	
Turbidity (avg. NTU)				12.1	15.6	16.1	

^A Data reported in the 11/6 to 11/12 DJFMP sampling summary.

^BKnights Landing RST Sampling period was from 11/6 at 11:00 am to 11/14 at 10:45 am.

^CTisdale RST sampling period was from 11/7 at 9:30 pm to 11/13 at 10:00 am.

^DGCID sampling period was from 11/7 at 12:00 am to 11/15 at 8:00 am. On 11/12/16 debris loads had subsided and 24-hr sampling periods were resumed.

Reporting Item 5.

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. DOSS

discussion on this topic occurred via e-mail this week since no DOSS call was held due to conflict with the Bay Delta Science Conference.

Location	Yet to Enter Delta (Upstream of Knights Landing)	In the Delta	Exited the Delta (Past Chipps Island)
Wild young-of-year (YOY) winter-run Chinook salmon	75% - 85% (Last week: same)	15% - 25% (Last week: same)	0% (Last week: same)

Rationale for changes in distribution

Wild winter-run Chinook: Recent monitoring data shows few winter-run observed at monitoring stations upstream of and near the Delta entrance and there was no significant precipitation this week which would trigger movement into the Delta. Young-of-year winter-run-sized fish have not yet been observed exiting the Delta at Chipps Island. Therefore, DOSS did not change the distribution estimates for winter-run this week.

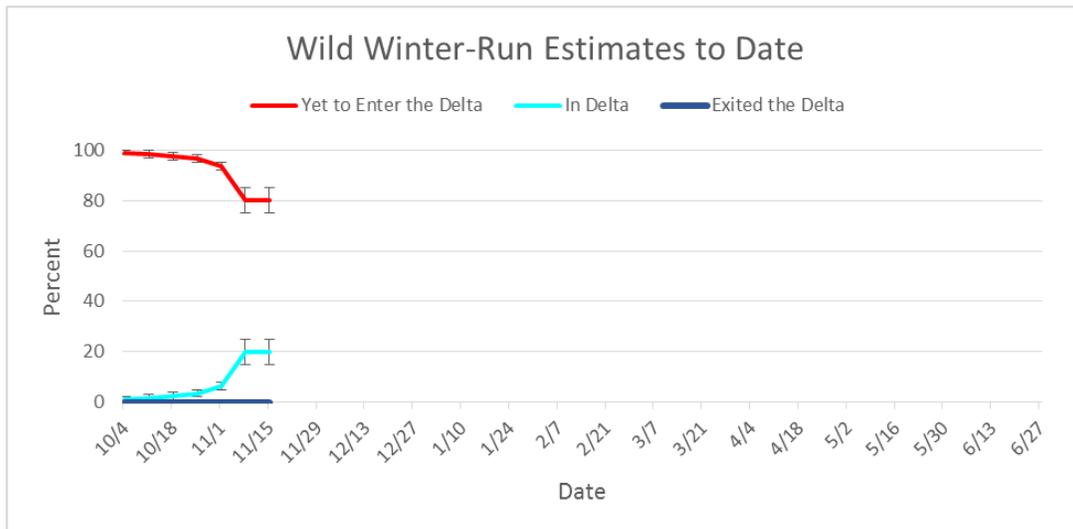


Figure 1. WY 2017 wild winter-run distribution estimates to date.

Reporting Item 6.

DOSS Advice to WOMT and NMFS: None

Reporting Item 7.

Next Meeting: The next DOSS conference call will be on **11/22/16 at 9am.**