

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 2/11/2020 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 (CVP) and the State Water Project (SWP) 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: Duane Linander, Kyle Griffiths, Chris McKibbin, Jonathan Williams, Geir Aasen, Page Uttley

DWR: Chris Cook, Brittany Davis, Farida Islam, Tracy Petit, Norman Lee, Mike Ford

NMFS: Jeff Stuart, Kristin Begun

Reclamation: Suzanne Manugian, Tom Patton, Elissa Buttermore, Towns Burgess

SWRCB: Craig Williams, Michael Macon

USFWS: Craig Anderson

Kearns & West: Matt Marvin

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: RSTs/trawls/seines
6. Fish Monitoring: Salvage
7. DOSS Estimates of Fish Distribution
8. Risk of Entrainment
9. Other Topics
10. DOSS Advice
11. Next DOSS Meeting

Agenda Item 2.

RPA Implementation Review

Delta RPA Actions affecting operations during February:

Action IV.1.1 Alerts that indicate the Delta Cross Channel (DCC) gate operations may be triggered soon¹:

- The First Alert has two components. Capture of yearling-sized spring-run Chinook salmon 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 Chinook salmon, which are difficult to capture in the rotary screw traps, tributary flow increases are used to signal conditions

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.

conducive to emigration. The First Alert is triggered if either the first component (greater than 95 cfs flow threshold) or second component (greater than 50% change in mean daily flow) are exceeded. The First Alert was triggered (yellow highlights) due to flows greater than 95 cfs every day this past week.

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
2/4/2020	202	-7%	224	-9%
2/5/2020	193	-4%	213	-5%
2/6/2020	187	-3%	207	-3%
2/7/2020	182	-3%	199	-4%
2/8/2020	178	-2%	191	-4%
2/9/2020	172	-3%	183	-4%
2/10/2020	167	-3%	175	-5%

- The Second Alert is triggered only if **both** Wilkins Slough flows are greater than 7,500 cfs and Knights Landing temperature is less than 56.3°F. The second alert is in effect beginning 10/1/2019, and was triggered on 2/4 to 2/8/2020.

Date	Wilkins Slough (WLK)	Knights Landing (KL)
	Mean Daily Flow (cfs)	Daily water temperature (°F)
2/4/2020	9,477	49.9
2/5/2020	8,971	48.3
2/6/2020	8,476	47.8
2/7/2020	8,072	48.6
2/8/2020	7,701	48.9
2/9/2020	7,373	49.1
2/10/2020	7,094	49.6

Action IV.1.2² (DCC gate operations):

- DCC gates are closed per operations described in RPA Action IV.1.2 starting 12/1/2019 and are expected to remain closed until mid-May.

Action IV.2.3³ (OMR Management):

- Implementation of this action in WY 2020 began on 1/1/2020, and requires that Old and Middle River (OMR) flow be no more negative than -5,000 cfs. OMR flows are reported weekly with the OMR index and the tidally filtered USGS gauges at the 5-day and 14-day running averages.

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

³ For details, see pages 74-79 in Enclosure 2 of the [2011 Amendments to the 2009 RPA document](#).

- The official [Juvenile Production Estimate \(JPE\) letter](#) from NMFS was signed and issued to Reclamation on 2/3/2020. The JPE for natural-origin brood year 2019 Sacramento River winter-run Chinook salmon is 854,941. The first stage natural older juvenile Chinook salmon loss density trigger based on the BY 2019 JPE is 8.55 [(854,941 x 2 percent)/ 2,000 = 8.55] fish per TAF, and the second stage trigger is 17.10 [(854,941 x 2 percent)/1,000] fish per TAF. RPA Action IV.2.3 has default older juvenile Chinook salmon loss density triggers of 8 and 12 fish/TAF for the first and second stage triggers, respectively. Since the latter are lower than the JPE-based loss density trigger, they would be triggered first.
- When applying the rapid genetic analysis protocol, the first stage trigger is exceeded if genetically verified combined daily loss density of older-juvenile-sized winter-run Chinook salmon exceeds 4.27 fish per TAF of water exported, and the second stage trigger is exceeded if the genetically verified daily loss density of older-juvenile-sized winter-run Chinook salmon exceeds 8.55 fish per TAF of water exported.

Action IV.3⁴ (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 is triggered during November 1-February 28 when Knights Landing Catch Index (KLCI) or Sacramento Catch Index (SCI) >10 older juvenile fish. The third alert was not triggered this past week.
- Since the action went into effect on 11/1/2019, no salvage-based triggers that would require export reduction have been exceeded.

Agenda Item 3.

Current Operations (2/11/2020)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	1,200	Jones Pumping Plant	2,600*
Reservoir Releases (cfs)			
Feather - Oroville	1,750	American - Nimbus	1,750
		Sacramento - Keswick	4,000
		Stanislaus - Goodwin	800**
		Trinity - Lewiston	300
Reservoir Storage (TAF)			
San Luis (SWP)	962	San Luis (CVP)	580
Oroville	2,241	Shasta	3,527
New Melones	1,964	Folsom	482

⁴ For details, see pages 79-80 in Enclosure 2 of the [2011 Amendments to the 2009 RPA document](#).

Delta Operations			
DCC	Open	Sacramento River at Freeport (cfs)	13,321
Outflow Index (cfs)	11,400	San Joaquin River at Vernalis (cfs)	2,171
E:I	27.9% (3-day avg.) 22.9% (14-day)	X2	79 km

*CVP exports are scheduled to decrease tomorrow (2/12/2020) to 1,800 cfs, and on Thursday (2/13/2020) to 900 cfs (1 unit) to help meet the Delta outflow standard for February. (After the DOSS call, a change order was distributed to revise the targeted export rate to 800 cfs on Thursday.)

**Goodwin releases are scheduled to decrease to 600 cfs tomorrow (2/12/2020).

Factors controlling Delta exports:

- 2/4/2020 – 2/7/2020: OMR limit of no more negative than -5,000 cfs per RPA Action IV.2.3
- 2/8/2020 – 2/11/2020: Delta outflow requirements

Approximate OMRs as of 2/8/2020:

	USGS gauges (cfs)	Index (cfs)
Daily	-5,170	-4,645
5-day	-5,166	-4,806
14-day	-4,754	-4,921

Approximate OMRs as of 2/10/2020:

	Index (cfs)
Daily	-2,600
5-day	-4,000
14-day	-4,600

Weather Forecast

Breezy northeast winds continue today in the Sacramento area. Dry this week except a slight chance of showers mainly over the mountains beginning late Thursday and continuing into the weekend.

Agenda Item 4.

Smelt Working Group

The Smelt Working Group met on Monday, 2/10/2020, at 10 am.

The Smelt Working Group SWG met this morning and did not provide advice to the Service for delta smelt protections but did provide a risk assessment based on OMR flow bins from the SWG guidance framework. The SWG was in agreement that with highly elevated turbidity readings in the south Delta near Franks Tract and the approaching historical period of smelt movement and spawning, the risk to delta smelt this week is higher than last week. Based on projected operations, which are currently controlled by

D-1641 outflow requirements, OMR was reported at -4,000 cfs today and is expected to become more positive to around -3,000 cfs by Wednesday. The SWG agreed that any protective advice that would have been generated today would have likely mirrored the reported operational changes for OMR expected this week. For this reason, the SWG did not provide a specific recommendation to implement an RPA under the BiOp. The following are the bins defining risk based on OMR flows.

OMR Flow Risk Assessment for the week of February 10:

- 1250 to -2000 cfs: Low/moderate risk
- 2000 to -3500 cfs: Moderate risk
- 3500 to -5000 cfs: High Risk

The SWG plans to meet again at 10 a.m. on Tuesday, 2/18/2020, due to the President's Day holiday.

Agenda Item 5.

Fish Monitoring: The following table presents fish monitoring data summarized over the past week. Unless otherwise noted, reported races are based on fork length (length-at-date).

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	2/4-2/10	2/3-2/10	2/3-2/10	2/3-2/6	2/2-2/4, 2/6-2/7	2/2-2/4, 2/6-2/7	2/3, 2/5, 2/7
FR Chinook	452 juveniles	102	224	157	27		1
SR Chinook				9			
WR Chinook			1	1	5	1	
LFR Chinook							
Chinook (ad-clip)						6	
Steelhead (natural)						2	
Steelhead (ad-clip)	6					4	
Green Sturgeon							
Flows (avg. cfs)	1,050	7,343	8,194				
W. Temp. (avg. °F)	50.0	49	48.9				
Turbidity (avg. NTU)	N/A	6.2	10.8				

^A Tisdale RST sampling period was from 2/3/2020 at 10:00 am to 2/10/2020 at 9:45 am. Cone effort 50% on 2/3/2020 and 100% the rest of the week.

^B Knights Landing RST sampling period was from 2/3/2020 at 10:45 am to 2/10/2020 at 10:30 am.

^c Data reported in the 2/2 to 2/8/2020 DJFMP sampling summary.

Hatchery Releases

On 2/3/2020, the California Department of Fish and Wildlife (CDFW) released an estimated 49,677 brood year 2019 spring-run Chinook salmon from the San Joaquin River Restoration Program's (SJRRP) Salmon Conservation and Rearing Facility (SCARF) into the San Joaquin River. This release consisted of marked (adipose fin clip and CWT) juveniles, released at the Fremont Ford Bridge (Highway 140).

Juvenile Green Sturgeon Monitoring Summary for DOSS; 2/4/2020 Sampling Season Summary. 2020 Season sampling initiated on 1/2/2020.

- **One juvenile white sturgeon was captured and tagged on 2/4/2020; 47 cm fork length (A.9-1602-11453)**
- **One juvenile green sturgeon was captured and tagged on 2/6/2020; 33 cm fork length (A.9-1602-11439)**
- One juvenile green sturgeon tagged on 12/12/2019 was detected at sampling site northwest of Sherman Lake on 02/4 and 2/6/2020 (A69-1602-12220).
- One adult white sturgeon tagged on 3/11/2014 in the San Joaquin River by USFWS Lodi staff was detected at sampling site northwest of Sherman Lake on 2/6/2020 (A69-9001-27541).
- One adult white sturgeon tagged on 3/31/2016 in the San Joaquin River by USFWS Lodi staff was detected at sampling site northwest of Sherman Lake on 2/06/2020 (A69-9001-19546).

Feather River RST Data

Cook (DWR) provided Feather River RST data for two RST sites on the Feather River. At the Eye Side Channel from 2/3 to 2/9/2020, 4,894 juvenile fall-run and 27 spring-run Chinook salmon and 3 late fall-run Chinook salmon were observed. Flows at the Eye Side Channel were an average 800 cfs, water temperature 46°F, and turbidity 1.2 NTU. At the Herringer site for 2/3 to 2/9/2020, 3,664 fall-run and 36 spring-run Chinook salmon were observed. Flows were an average 1,750 cfs, water temperature 48°F, and turbidity 2.0 NTU.

297 mortalities were observed at the Eye Side Channel and 30 at the Herringer site. Mortalities are decreasing compared to earlier in the season.

Stanislaus River Caswell RST Data

Pacific States Marine Fisheries Commission provided the catch summary for the Stanislaus River Caswell RST. For the period of 1/31 to 2/6/2020, 123 unclipped juvenile Chinook salmon were observed. Traps were only able to fish less than 25% on 2/5 to 2/6/2020 due to debris jams.

Lower American River RST Data

Linander (CDFW) provided the catch summary for the lower American River RST data. For the period of 1/31 to 2/6/2020, 8,559 length-at-date juvenile fall-run, 13 spring-run, and 46 winter-run Chinook salmon were observed.

Agenda Item 6.

Fish Monitoring: Salvage

Griffiths (CDFW) provided the following salvage summary for the period of 2/3 to 2/9/2020.

Chinook salmon:

Unclipped (natural origin) Chinook salmon: Weekly salvage of natural-origin Chinook salmon: 4 winter-run and 16 fall-run Chinook salmon. Total WY 2020 salvage of natural-origin Chinook salmon: 52 fish.

Clipped (hatchery origin) Chinook salmon: zero ad-clipped Chinook salmon were observed this week in salvage. Total WY 2020 salvage of ad-clipped Chinook salmon: 352 fish.

Steelhead:

Zero ad-clipped steelhead was observed in salvage during the reporting period. Total WY 2020 salvage of steelhead: zero natural origin steelhead and 8 ad-clipped steelhead.

Green sturgeon:

No green sturgeon have been salvaged at either facility during WY 2020.

Operations:

Salvage minutes at the CVP were slightly reduced due to a malfunctioning dewatering pump Sunday through Thursday (2/3/2020 to 2/6/2020). The pump was fixed and normal salvage minutes were restored late on Friday (2/7/2020). Change in salvage minutes was approximately 3 to 5 minutes shorter than the standard 120 minute periods of collection.

DOSS Weekly Salvage Update

Reporting Period: February 3-February 9, 2020

Prepared by Kyle Griffiths on February 10, 2020 16:14

Preliminary Results -Subject to Revision

Criteria	3-Feb	4-Feb	5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	Trend	
Loss Densities									
Wild older juvenile CS	0	0	0	0	0	0	0.31	↘	0.04
Wild steelhead	0	0	0	0	0	0	0	→	0.00
Exports									
SWP daily export	7,191	7,740	5,062	6,555	5,912	5,908	5,028	↗	6,199
CVP daily export	5,208	5,198	6,899	6,902	7,051	7,135	5,228	↘	6,232
SWP reduced counts	0	0	0	0	0	0	0		
CVP reduced counts	66%	100%	100%	100%	92%	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	4	3	↘	20	14
Spring Run	0	0	→	0	0
Late Fall Run	0	0	→	12	8
Fall Run	16	10	↘	20	13
Unclassified	0	0	→	0	0
Total	20	13		52	35
Hatchery					
Winter Run	0	0	↘	8	5
Spring Run	0	0	→	128	88
Late Fall Run	0	0	↘	195	153
Fall Run	0	0	→	21	14
Unclassified	0	0	→	0	0
Total	0	0		352	261

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	↘	8	5
Total	0	0		8	5

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

DWR provided the below summary of hatchery Chinook salmon loss at the facilities.

CONFIRMED HATCHERY (ADIPOSE-FIN CLIPPED) CHINOOK SALMON LOSS AT THE SWP & CVP DELTA FISH FACILITIES as of 2/6/2020

Release Date	CWT Race	Hatchery	Release Site	Release Type	Confirmed Loss	Number Released ¹	Total Entering Delta	% Loss of Number Released ²	% Loss of Total Entering Delta ³	First Stage Trigger	Date of First Loss ⁴	Date of Last Loss ⁴
12/9/2019	LF	Coleman NFH	Battle Creek	Spring Surrogate	20.21	84,869	n/a	0.024	n/a	0.5%	12/22/2019	1/9/2020
12/18/2019	LF	Coleman NFH	Battle Creek	Spring Surrogate	25.03	77,672	n/a	0.032	n/a	0.5%	1/1/2020	1/4/2020
1/13/2020	LF	Coleman NFH	Battle Creek	Spring Surrogate		77,866	n/a		n/a	0.5%		

SWP and CVP adipose-fin clipped Chinook lost from 10/1/2019 through 2/6/2020.

¹Number released with the adipose-fin clipped and a coded-wire tag (CWT).

²% Loss of Number Released = (Confirmed Loss/Number Released)*100.

³% Loss of Total Entering Delta= (Confirmed Loss/Total Entering Delta)*100.

⁴Date of first and last loss accounts for all CWT loss even those from special studies where salvage and loss=0.

DWR-DES Revised 2/7/2020

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

Agenda Item 7.

DOSS Estimates of Fish Distribution

DOSS estimates of the current distribution of listed Chinook salmon, 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>	5-20% Last week: 10-25%	76-90% Last week: 72-86%	4-5% Last week: 3-4%
<i>Young-of-year (YOY) spring-run Chinook salmon</i>	45-48% Last week: 45-50%	52-55% Last week: 50-55%	0% Last week: same

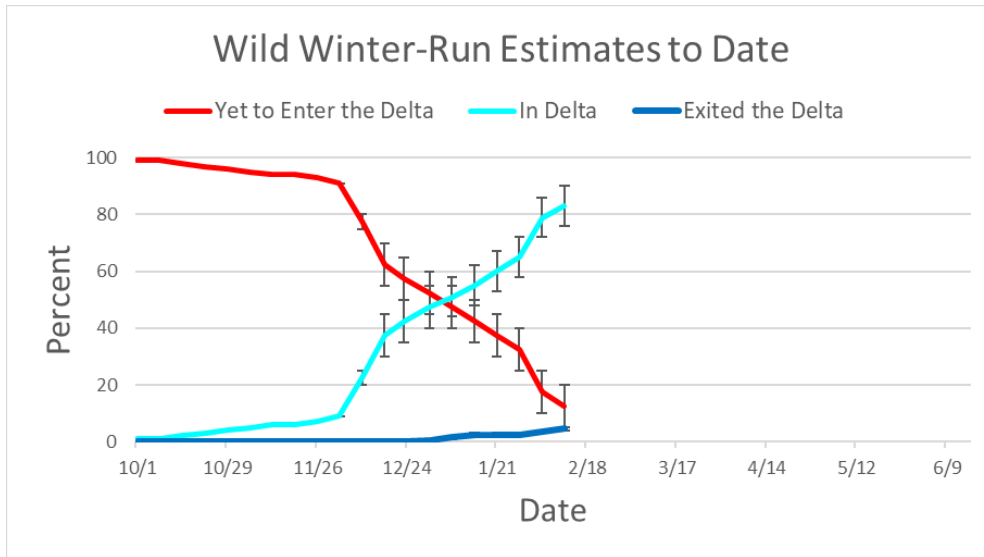
Rationale for changes in distribution

Natural winter-run Chinook salmon:

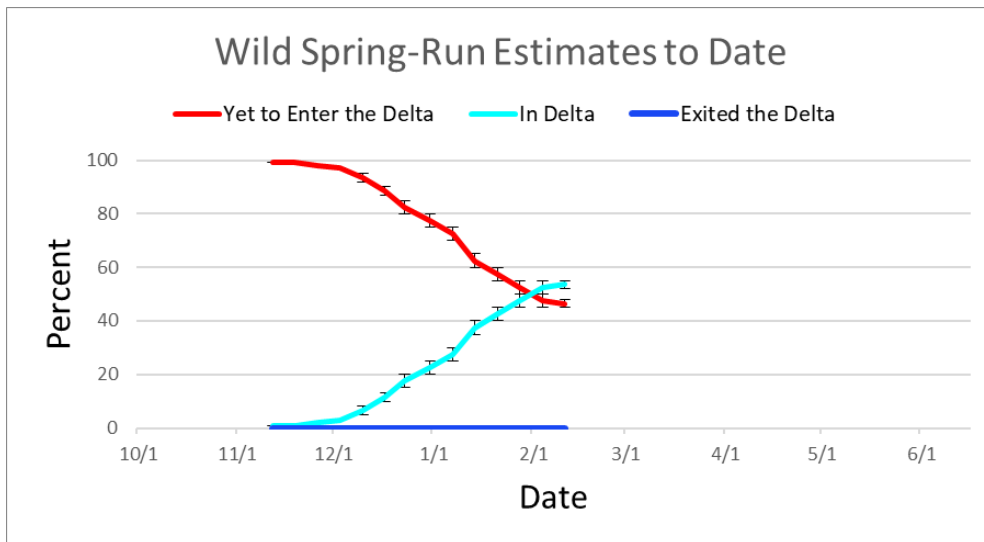
Over 3.7 million brood year (BY) 2019 winter-run Chinook salmon have passed RBDD so far in water year 2020. In the last week, 1 length-at-date winter-run Chinook salmon was captured at Knights Landing, 1 in the beach seines, 5 in the Sacramento trawl, and 1 at Chipps Island Trawl. Because winter-run Chinook salmon were observed at monitoring locations in the lower Sacramento River and Delta, DOSS estimates that an additional 5% of the winter-run Chinook salmon population has entered the Delta from upstream. Since 1 winter-run Chinook salmon was observed at Chipps Island trawl, DOSS estimates that an additional 1% of the winter-run Chinook salmon population has exited the Delta. Based on the time of year, winter-run Chinook salmon juveniles are likely to be rearing in the Delta after emigrating from upstream locations on the Sacramento River.

Natural spring-run Chinook salmon:

9 length-at-date spring-run Chinook salmon were observed in the beach seines and at no other monitoring locations this past week. Because of the small number of spring-run Chinook salmon observed at monitoring locations this past week, DOSS estimates that an additional 0-2% of the spring-run Chinook salmon population has entered the Delta. The DOSS team notes that monitoring activities on the eastside tributaries (i.e. Butte Creek, Mill Creek, Deer Creek) have not provided data yet this year, so the migratory impact of these populations to the mainstem Sacramento population are not known yet for this year. No spring-run Chinook salmon have been observed in the Chipps Island Trawl this season.



WY 2020 natural winter-run distribution estimates to date.



WY 2020 natural spring-run distribution estimates to date.

Agenda Item 8.

DOSS Feedback on Entrainment Risk

DOSS provides weekly entrainment risk outlooks by considering (a) two different categories of entrainment risk based on listed fish distribution and (b) factors that influence their potential for entrainment. The two entrainment risk categories considered include:

- **Interior Delta Entrainment Risk**- fish in the Sacramento River that have the potential to be entrained into the Interior Delta through the Delta Cross Channel (when open) and/or Georgiana Slough; and
- **CVP/SWP Facilities Entrainment Risk**- fish in the Interior Delta that have the potential to be entrained into the CVP/SWP facilities.

Influencing factors considered include:

- **Exposure Risk** (both categories): estimated scale (low, medium, high) of fish anticipated to be in vicinity of an entrainment risk,
- **Routing Risk** (Interior Delta Entrainment Risk): estimated scale (low, medium, high) that flow split conditions could result in fish migrating into the Interior Delta instead of remaining in main channel, and
- **OMR/Export Risk** (CVP/SWP Facilities Entrainment Risk): for fish in the Interior Delta, estimated scale (low, medium, high) that OMR and/or export levels could result in entrainment into the CVP/SWP facilities.

To provide an overall assessment of entrainment risk, the estimated current status of these influencing factors are described below for each of the entrainment risk categories.

Interior Delta Entrainment Risk for listed salmonids in the Sacramento River over the next week:

- **Exposure Risk: HIGH** (Lower flows in the lower Sacramento River predicted)
 - Approximately 76-90% of the juvenile BY19 population of winter-run Chinook salmon are estimated to be in the Delta.
 - Approximately 52-55% of the juvenile BY19 population of spring-run Chinook salmon are estimated to be in the Delta.
 - California Central Valley steelhead are in the lower Sacramento and Northern Delta based on monitoring data.
 - Clipped steelhead have been seen at the fish salvage facilities.
 - Anticipate emigration to continue into the Delta.
- **Routing Risk: MEDIUM**
 - DCC is closed.
 - Flows are predicted to decrease compared to last week, currently ~13,300 cfs inflow to the Delta from the Sacramento River, lower flows enhance the effects of tides around Georgiana Slough and Threemile Slough, leading to a higher probability of routing into these waterways.
- **Overall Entrainment Risk: MEDIUM-HIGH**

CVP/SWP Facilities Entrainment Risk for listed salmonids in the Interior Delta over the next week:

- **Exposure Risk: MEDIUM**
 - Listed Chinook salmon from the Sacramento River basin continue to be observed in monitoring sites in the lower Sacramento River and northern Delta (more fish at the junctions of Georgiana Slough, Mokelumne River, and San Joaquin River confluences). 4 natural winter-run sized Chinook salmon were salvaged last week, indicating that at least some fish from the Sacramento River basin have moved into the central and southern Delta.
 - Flows into the Delta are expected to decrease this week.

- Salvage is expected to remain at stable levels this week. Exports will continue to be managed to the no more negative than -5,000 cfs OMR limit from Action IV.2.3 of the NMFS 2009 BiOp.
 - Exports have the potential to decrease even more than required for the -5,000 cfs OMR criteria in the next week as CVP exports are scheduled to decrease to 900 cfs by the end of the week in order to meet Delta outflow and X2 location requirements.
- **OMR/Export Risk:**
 - OMR -2,500 cfs: LOW
 - OMR -3,500 cfs: LOW
 - OMR -5,000 cfs: MEDIUM
 - OMR -6,250 cfs⁵: MEDIUM-HIGH
 - OMR -7,500 cfs⁵: HIGH
 - OMR -9,000 cfs⁵: HIGH
 - **Overall Entrainment Risk:**
 - OMR -2,500 cfs: LOW
 - OMR -3,500 cfs: LOW
 - OMR -5,000 cfs: MEDIUM
 - OMR -6,250 cfs⁵: MEDIUM-HIGH
 - OMR -7,500 cfs⁵: HIGH
 - OMR -9,000 cfs⁵: HIGH

These assessments are based on anticipated and current hydrology and fish distributions for the next week.

Agenda Item 9.

Other Topics

Stuart (NMFS) reminded the DOSS team that Reclamation is prepared to lead the DOSS group once the Record of Decision (ROD) for the reinitiation of consultation on long-term operation of the CVP and SWP is signed. This may occur in the near future.

Agenda Item 10.

DOSS Advice to WOMT and NMFS:

No recommendations for changes to current operations.

Agenda Item 11.

Next Meeting: The next DOSS conference call will be on **2/18/2020 at 9 a.m.**

⁵ By request of management, DOSS also assessed risks at an OMR flow more negative than -5,000 cfs.