

Salmon Monitoring Team (SaMT) Weekly Meeting
Conference call: 5/26/20 at 9:00 a.m.

Executive Summary:

- Due to Memorial Day holiday on Monday, DSM2 runs for the assessment were not provided prior to the SaMT call. Initial estimates of Old and Middle River (OMR) flows ranged from -1,000 cfs to -4,500 cfs during the period 5/26/20 to 6/1/20. However, OMR flow values were later estimated to be more positive as noted in the Weekly Fish and Water Operations Outlook document. Additionally, those more negative values will only possibly occur on 6/1/20.
- No Delta performance measures have been exceeded.
 - The Delta Performance threshold with the highest potential for exceedance is the 50% of single year natural steelhead loss threshold for the period of April 1 through June 15.
 - Preliminary estimate indicates that current (through 5/25/20) steelhead loss (324 fish) is approximately 42% of the threshold (776 fish) set between April 1 and June 15.
- SaMT did not have any recommendations for Water Operations Management Team (WOMT) or any advice to change Delta Operations.

Objective: Provide information to the WOMT, the U.S. Bureau of Reclamation (Reclamation) and California Department of Water Resources (DWR) 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. SaMT notes and other meeting materials (e.g., weekly outlook and assessment) will be accessible on [Reclamation's web page](#).

- **California Department of Fish and Wildlife (CDFW):** Kristal Davis-Fadtke, Kyle Griffiths, Sheena Holley, Jason Julienne, Ken Kundargi, Johnathan Williams
- **DWR:** Chris Cook, Brittany Davis, Bryant Giorgi, Farida Islam, Kevin Reece, Ian Uecker
- **Kearns & West:** Matt Marvin
- **National Marine Fisheries Service (NMFS):** Kristin Begun, Jeff Stuart
- **Reclamation:** Elissa Buttermore, Suzanne Manugian, Tom Patton
- **State Water Resources Control Board (SWRCB):** Erin Foresman, Chris Carr, Michael Macon, Craig Williams
- **US Fish and Wildlife Service (USFWS):** Geoff Steinhart, Katherine Sun

Agenda Items:

1. Introductions
Purpose: Provide an accurate record of who is attending these calls.
2. Relevant Actions and Triggers
Purpose: Review of relevant actions and triggers status and discuss any changes.
3. Outlook, Project Operations, and Weather Forecast

Purpose: Review operations and weather sections on Weekly Outlook. Discuss Delta operations to consider context for evaluating Assessment questions about Delta operation effects.

4. Review of Environmental Data

Purpose: Review environmental data to consider context for evaluating Assessment questions about Delta operations effects.

5. Fish Abundance and Distribution

Purpose: Review fish monitoring data to inform fish distribution estimates, fish exposure, and behaviour cues that is part of the next section.

- a. Hatchery Releases
- b. Historical Fish Monitoring Data
- c. Fish Monitoring: RSTs/trawls/seines
- d. Fish Monitoring: Salvage
- e. Migration Status: Estimates of Fish Distribution

6. Fish Exposure and Behavioural Cues

Purpose: Assist in assessing entrainment risk of Delta operations on salmonids and sturgeon. Complete Evaluation section questions of the Assessment. Review draft Assessment.

- a. Historical Patterns (Comparison of abundance, timing, and loss to prior years)
- b. Current Conditions (DSM2, Entrainment Models)
- c. Sensitivity to Operational Actions - review Assessment document

7. Other Topics

Purpose: Identify additional topics that are not in the regular agenda.

8. Additional Considerations for WOMT

Purpose: Highlight information that SaMT would like WOMT to consider related to changes to Delta water operations.

9. Next SaMT Meeting

Agenda Item 2.

Relevant Actions and Triggers Review

Delta Cross Channel (DCC) Gate Operations

- DCC gates are currently closed per operations described in the SWRCB's D-1641, and Reclamation's Proposed Action section 4.10.5.3 and are expected to remain closed until 5/22/20.
- DCC gates were opened on 5/22/20 at 1000 hours for the Memorial Day weekend and then closed on 5/26/20 at 1000 hours. Gates will then be opened for weekends at 1000 hours on Saturday morning and closed at 1000 hours on Monday morning until 6/15/20.

OMR Flow Management

- Implementation of this action in water year (WY) 2020 began on 1/1/20 under the 2009 NMFS Long Term Operations (LTO) biological opinion and was superseded by Reclamation's Proposed Action section 4.10.5.10 (OMR Management) on 2/18/20 following the signing of the Record of Decision, and requires that OMR flow be no more negative than -5,000 cfs. OMR flows are reported weekly with the OMR index and the tidally filtered U.S. Geological Survey (USGS) gauges at the daily, 5-day and 14-day running averages.
- Reclamation's Proposed Action section 4.10.5.10.4: End of OMR flow Management occurs when more than 95 percent of salmonids have migrated past Chipps Island, as determined by their monitoring working group, or after daily average water temperatures at Mossdale exceed 71.6°F for 7 days during June (the 7 days do not have to be consecutive).
- DWR's ITP Section 8.8: End of OMR Flow Management:
 - 1) More than 95% of winter-run and spring-run migrated past Chipps Island, AND
 - 2) Daily average water temperatures at Mossdale exceed 22.2°C for 7 days in June (days do not have to be consecutive), AND
 - 3) Daily average water temperatures at Prisoner's Point exceed 22.2°C for 7 days in June (days do not have to be consecutive).
- On 3/27/20, NMFS provided a revised winter-run Chinook salmon juvenile production estimate (JPE) letter ([Revised JPE letter](#)) to Reclamation reflecting updated hatchery information. The revised JPE letter provides the Reclamation with the revised JPE and incidental take limit (ITL) for hatchery origin juvenile Sacramento River winter-run Chinook salmon for WY 2020 based on the estimated number of hatchery fish released.
 - The revised incidental take for juveniles released from Livingston Stone National Fish Hatchery into the Sacramento River is **923 hatchery-produced (adipose fin clipped)** winter-run Chinook salmon.
 - The revised incidental take of juveniles released into Battle Creek is **622 hatchery produced (adipose fin clipped and left ventral fin clipped)** winter-run Chinook salmon.
- On 5/11/20, a preliminary injunction required the CVP to operate to the San Joaquin River inflow to export (I:E) ratio of 2:1 required in the 2009 NMFS Biological Opinion reasonable and prudent alternative action IV.2.1 for a dry water year type.
- Refer to the weekly operations and fish outlook for more triggers relevant to the CDFW Incidental Take Permit (ITP) and the 2019 ROC Proposed Action (see Agenda Item 3), which will be posted to [Reclamation's web page](#)
- DWR's ITP was signed on 3/31/20 and can be found online here: [Incidental Take Permit for Long Term Operations of the State Water Project](#)

Agenda Item 3.

Weekly Fish and Water Operations Outlook.

SaMT reviewed the Outlook document. The Outlook document will be posted to the [WOMT web page](#).

Project Operations

Operations Category	Location	Operations on 5/19/20	Operations on 5/26/20
Clifton Court Inflow	Clifton Court Forebay	600 cfs continuing through end of May. Banks and Skinner offline from evening of 5/17/20 through evening of 5/23/20 (6 – 7 days).	600 cfs. Likely holding through the end of May into June.
SWP Reservoir Releases	Feather – Oroville	2,050 cfs. Releases will potentially decrease this week.	2,050 cfs. Releases will likely increase by 500 cfs by the end of week (5/29/20).
SWP Reservoir Storage	San Luis (SWP)	928 TAF	911 TAF
SWP Reservoir Storage	Oroville	2,438 TAF	2,449 TAF
Environmental Parameters	Sacramento River at Freeport	12,600 cfs	10,900 cfs
Environmental Parameters	San Joaquin River at Vernalis	1,720 cfs	1,850 cfs
Environmental Parameters	Delta Outflow Index	11,800 cfs	11,050 cfs
Environmental Parameters	E:I (14-day)	8% (14-day average)	9% (14-day average)
Environmental Parameters	X2	> 81 km but close to 81 so potential to move with tides	80 km currently, expected to move upstream with decreasing Delta outflow
CVP Exports	Jones Pumping Plant	900 cfs and holding.	900 cfs and holding through end of May.
CVP Reservoir Releases	American – Nimbus	1,750 cfs. Scheduled to decrease to 1,500 cfs on 5/19/20 and then to	1,250 cfs currently. Releases scheduled to increase to 1,750 cfs on 5/28/20.

Operations Category	Location	Operations on 5/19/20	Operations on 5/26/20
		1,250 cfs on 5/20/20. Hold at 1,250 cfs for immediate future	
CVP Reservoir Releases	Sacramento – Keswick	8,500 cfs. Scheduled to drop to 8,250 cfs on 5/20/20, 8,000 cfs on 5/21/20. Will hold at 8,000 cfs for immediate future	8,000 cfs currently. Releases scheduled to increase to: 9,000 cfs on 5/27/20; 9,500 cfs on 5/28/20; and 10,000 cfs on 5/29/20.
CVP Reservoir Releases	Stanislaus - Goodwin	1,500 cfs ramped up for Vernalis flows last week. Will hold for immediate future	1500 cfs and holding.
CVP Reservoir Releases	Trinity - Lewiston	1,000 cfs. Pulse flow continuing	900 cfs. Scheduled pulse flows continuing into June.
CVP Reservoir Storage	San Luis (CVP)	481 TAF and decreasing storage	449 TAF and decreasing
CVP Reservoir Storage	Shasta	3,578 TAF and decreasing (after a small increase from storm last week)	3,568 TAF and decreasing
CVP Reservoir Storage	Folsom	750 TAF and increasing storage	775 TAF and increasing
CVP Reservoir Storage	New Melones	1,876 TAF and decreasing storage	1,858 TAF and decreasing
CVP	DCC Gates	Closed. Opening 5/22/20 for Memorial Day weekend. Weekend openings through 6/15/20.	Gates closed as of 10am 5/26/20 following opening for the Memorial Day weekend. Weekend openings continuing until 6/15/20.

cfs = cubic feet per second

MAF = million acre feet

TAF = thousand acre feet

km = kilometer

Location of X2 measured from the Golden Gate

Factors controlling Delta exports, 5/19/20 – 5/25/20: Controlling factors for the previous week include Delta water quality criteria that may have limited exports [i.e., Emmaton electrical conductivity (EC), Delta outflow, Collinsville EC]. Additionally, the Court’s preliminary injunction for the CVP and DWR’s ITP for the SWP, both of which limits combined exports to 1,500 cfs through the end of May (health and safety) due to 2:1 San Joaquin River I:E ratio (dry water year requirement). Controlling factors will remain the same through the end of May (5/31/20). Beginning on 6/1/20, the preliminary injunction and ITP cease to be controlling factors, however water quality constraints will remain as controlling factors [i.e., Delta outflow, Emmaton electrical conductivity (EC), and Collinsville EC].

Agenda Item 4.

Review of Environmental Data

OMR Index and USGS Tidally Filtered Values are displayed on SacPAS.

http://www.cbr.washington.edu/sacramento/data/delta_loss.html

Approximate OMR gauge data as of 5/23/20

	USGS gauges (cfs)	Index (cfs)
Daily	-1,200 cfs	-1,100 cfs
5-day	NA*	-1,100 cfs
14-day	NA*	-1,100 cfs

* Middle River gauge not operating for several days last week so only daily value available

Approximate OMRs as of 5/25/20:

	Index (cfs)
Daily	-1,100 cfs
5-day	-1,100 cfs
14-day	-1,100 cfs

Agenda Item 5.

Fish Abundance and Distribution

Hatchery Releases

On 5/20/20 and 5/21/20, CDFW released approximately 1,194,392 brood year 2019 fall-run Chinook salmon from Nimbus Fish Hatchery into the San Pablo Bay at the Mare Island net pen site. This release included 25% adipose fin clip and Coded Wire Tagged (CWT) fish.

On 5/20/20, CDFW released approximately 160,000 brood year 2019 fall-run Chinook salmon from Mokelumne River Fish Hatchery into the Monterey Bay at the Monterey Municipal Wharf. This release included 100% adipose fin clip and CWT.

On 5/23/20 and 5/24/20, CDFW released approximately 1,292,045 brood year 2019 fall-run Chinook salmon from the Feather River Fish Hatchery into San Pablo Bay at the Mare Island net pen site. This release includes 25% adipose fin clip and CWT fish.

On 5/26/20, CDFW released approximately 250,000 brood year 2019 fall-run Chinook salmon from Mokelumne River Fish Hatchery into the San Joaquin River at the Sherman Island net pen site. This release included 25% adipose fin clip and CWT fish.

Fish Monitoring

Historical Fish Monitoring Data

Average percent of annual emigrating population for each species of interest (based on LAD) captured at the following locations by 5/24 for the years 2005 to 2018. [SacPAS Migration Timing Website](#)

Species	Red Bluff Diversion Dam	Tisdale RST	Knights Landing RST	Sac Trawl (Sherwood)	Chippis Island Trawl	Average Percent Salvaged at SWP and CVP Delta Facilities
Winter-run Chinook salmon	100%	100%	100%	100%	100%	100%
Spring-run Chinook salmon	99.8%	100%	100%	100%	99.5%	95.7%
Steelhead	20.7%	92.5%	97.6%	98.6%	98.5%	92%

Current Fish Monitoring Data

Location	Feather River RST Eye Channel ^A	Feather River RST Herring ^B	GCID RST ^C	Tisdale RST ^D	Knights Landing RST ^E	LAR RST ^G	Sacramento Trawls ^F	Chippis Island Midwater Trawl ^F	Caswell RST ^H
Sample Dates	5/18/20 – 5/22/20	5/18/20 – 5/22/20	5/19/20-5/24/20	5/18/20-5/21/20	5/18/20-5/25/20	5/19/20-5/22/20	5/18/20, 5/20/20, 5/22/20	5/18/20, 5/20/20, 5/22/20	5/19/20-5/22/20
Chinook									5 juv.
FR Chinook	1,468	164	340 juv.	3	6	378	14	37	
SR Chinook			2 smolt						
WR Chinook									
LFR Chinook	8								
Chinook (ad-clip)								14	
Steelhead (natural)	10		2 juv.			3 fry	3	1	
Steelhead (ad-clip)								1	
Green Sturgeon									
Flows (avg. cfs)	650	2,050	1,587	10,765	8,623				
W. Temp. (avg. °F)	57.5	62.5	59.7	62.7	65.1				
Turbidity (avg. NTU)	1.53	2.48	31.07	13.1	11.0				

^A Feather River RST data from Eye Side Channel sampling period was from 5/18/20 at 12:37 to 5/22/20 at 13:27.

^B Feather River RST data at Herring sampling period was from 5/18/20 at 10:33 to 5/22/20 at 12:07.

^C GCID RST sampling period was from 5/19/20 to 5/24/20. 5/18/20 RST cone raised due to fluctuating flows and heavy debris, 5/21/20 RST cone lowered. RST operating at half cone.

^D Tisdale RST sampling period was from 5/18/20 at 9:45 to 5/21/20 at 9:30. RST operating at full cone.

^E Knights Landing RST sampling period was from 5/18/20 at 10:15 to 5/25/20 at 8:00. RST operating at half cone. Note between 5/19/20 and 5/20/20: trapping halted due to heavy debris in front of traps.

^F DatCall sampling period was from 5/17/20 to 5/23/20.

Fish Monitoring Gear Efficiency/Disruptions: COVID-19 impacts.

Monitoring Survey	Status (5/26/20, new changes in green)
Delta	
SWP regular counts, CWT reading, and larval sampling	Ongoing through modified staffing
CVP regular counts, CWT reading, and larval sampling	Ongoing through modified staffing.
Smelt Larval Survey	Suspended temporarily. Completed data analysis ongoing.
20mm Survey	Starting 4/13/20, modified (prioritizing South/Central Delta). Starting on 5/11/20, increased to predominantly an entire survey with 44 of 47 stations representing all strata.
Bay Study	Suspended temporarily
DJFMP - Chipps and Sacrament Trawls	Occurring
DJFMP- Seines	Suspended since 3/17/20
EDSM	Occurring
EMP Continuous	Occurring
EMP Discrete	Suspended temporarily
Mossdale	Suspended since 3/16/20
USGS Flow monitoring	Occurring
Sacramento River	
Acoustic tagging - Battle Creek "Jumpstart" hatchery winter run Chinook	Tagged ~ 250 fish
Acoustic tagging - Offsite Release study of fall run Chinook	Postponed until 2021
Acoustic tagging - Spring run Chinook	CDFW taking on tagging in Butte (14 tagged 5/15/20, 9 tagged 5/18/20) – as fish come into trap and as staff are available
Acoustic tagging - Pulse Flow experiment	One group will be tagged the week of 5/11/20, with future groups possible if pulse flow occurs, or there is interest in late May survival with no Sacramento River pulse
Red Bluff Diversion Dam screw trap	Suspended on 3/26/20 until further notice
Knights Landing screw trap	Ongoing through modified staffing
Tisdale screw trap	Ongoing through modified staffing
Redd dewatering and stranding surveys	Suspended March and April of 2020. Resumed May 2020
Sacramento Carcass and Redd Surveys	Carcass surveys continuing. Redd surveys suspended March and April but resumed and partially in May 2020 Aerial surveys likely to occur this week.
San Joaquin River	
SJRRP CDFW and USFWS Field Monitoring	On hold until further notice
SJRRP USBR Field Monitoring	Ongoing with modified staffing
San Joaquin River Steelhead (Mokelumne Hatchery) acoustic tagging	Cancelled

Green Sturgeon

Two juvenile green sturgeon were tagged at Sherman Lake on 5/21/20. Five juvenile green sturgeon were detected on 5/21/20 on the Sacramento River north of Sherman Lake. All five were first tagged in 2020 (2/6/20 through 5/14/20).

DOSS Weekly Salvage Update

Reporting Period: May 18-May 24, 2020

Prepared by Kyle Griffiths on May 26, 2020 14:56

Preliminary Results -Subject to Revision

Criteria	18-May	19-May	20-May	21-May	22-May	23-May	24-May	Trend	
Loss Densities									
Wild older juvenile CS	0	0	0	0	0	0	0	→	0.00
Wild steelhead	1.53	1.53	0	0	0	0	0	↗	0.44
Exports									
SWP daily export	0	0	0	0	0	0	1,670	↘	239
CVP daily export	1,779	1,776	1,775	1,787	1,787	1,790	1,797	→	1,784
SWP reduced counts	NA	NA	NA	NA	NA	NA	0		
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		Season Total - LAD	
	Salvage	Loss	Trend	Salvage	Loss	Salvage	Loss
Wild							
Winter Run	0	0	→	47	88	107	196.71
Spring Run	0	0	↘	838	2,456	2261.25	4,164
Late Fall Run	0	0	→	12	8	12	8.36
Fall Run	96	78	↗	2,461	3,323	982	1,509
Unclassified	0	0	→	0	0	0	0
Total	96	78		3,358	5,875	3,362	5,879
Hatchery							
Winter Run	0	0	→	18	16	80	94.3
Spring Run	0	0	→	1,177	1,595	1048	1,473
Late Fall Run	0	0	→	195	153	186	143.62
Fall Run	0	0	→	49	35	125	88
Unclassified	0	0	→	0	0	0	0
Total	0	0		1,439	1,799	1,439	1,799

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		Season Total > Apr. 1	
	Salvage	Loss	Trend	Salvage	Loss	Salvage	Loss
Wild	8	5	↗	300	726	149	324
Hatchery	0	0	→	428	659		
Total	8	5		728	1,385		

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

- SaMT members noted that the fork lengths of fish observed at the Federal Tracy Fish Collection Facility (80-90mm) match up with the fork lengths of the fall-run Chinook salmon being seen at the Caswell rotary screw trap on the Stanislaus River.
- SaMT members also noted that the State Skinner Delta Fish Protective Facility had been generally offline for maintenance and came back online on 5/25/20.
- Confirmed loss based on CWT is reported during Agenda Item 3 – the Outlook document, which will be posted to [Reclamation’s web page](#).
- Additional salvage figures are found in the Assessment (Figures 1-3).

SaMT Estimates of Fish Distribution

SaMT 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>	0-1% Last week: 0-1%	0-1% Last week: 0-2%	98-100% Last week: 97-99%
<i>YOY spring-run Chinook salmon</i>	0-5% Last week: 0-5%	10-25% Last week: 20-35%	75-85% Last week: 65-75%
<i>YOY hatchery winter-run Chinook salmon</i>	0-1% Last week: 0-1%	0-1% Last week: 0-2%	98-100% Last week: 97-99%
<i>Natural origin steelhead</i>	0-5% Last week: 0-5%	25-50% Last week: 35-55%	50-70% Last week: 45-60% *

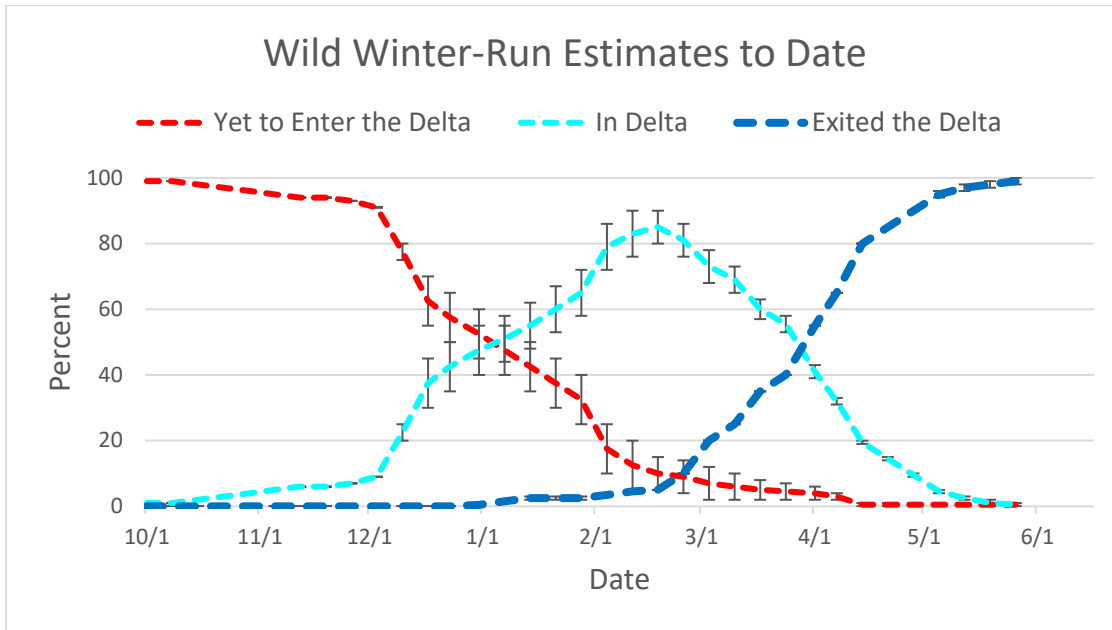
* In the previous week’s notes, the lower end of the range was calculated incorrectly.

Rationale for changes in distribution

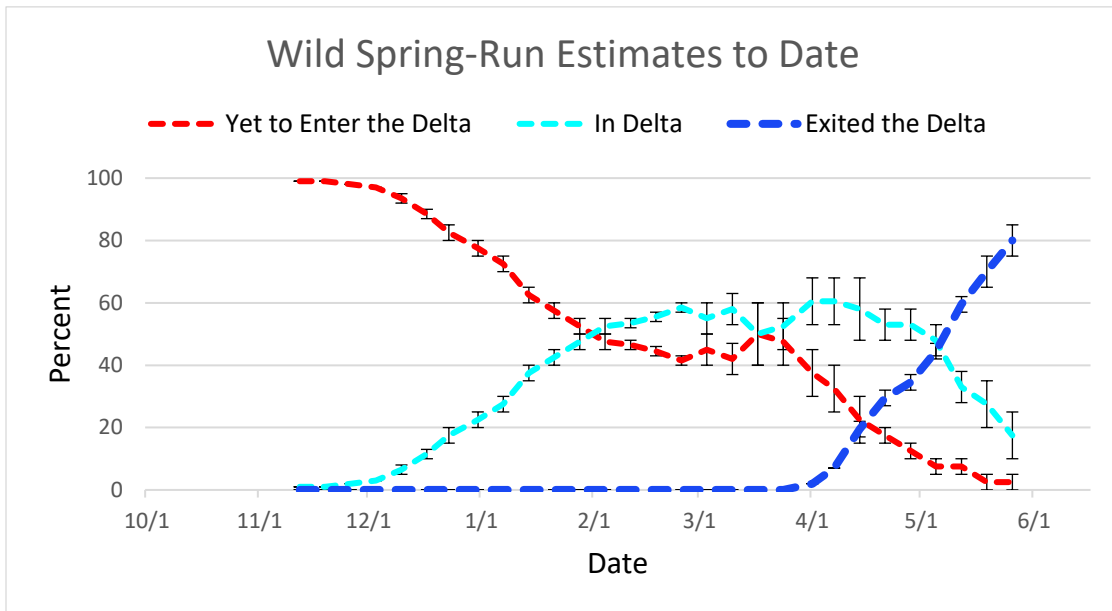
Described in the SaMT’s Assessment document in abundance and distribution sections. A draft Assessment document is sent to SaMT members prior to the weekly call. Final weekly Assessment documents will be posted to the [WOMT web page](#).

Distribution estimate figures

Distribution estimate figures for wild winter-run and spring-run Chinook salmon as discussed during the SaMT meetings.



WY 2020 natural winter-run Chinook salmon distribution



WY 2020 natural spring-run Chinook salmon distribution

Agenda Item 6.

Fish Exposure and Behavioral Cues:

Historical Patterns

Described in the SaMT’s Assessment document in abundance and distribution sections (Figures 3 and 4).

Current Conditions

Entrainment into the Interior Delta:

Described in the SaMT’s Assessment document.

DSM2

DSM2 – Results are provided in the Assessment documents weekly on Mondays and Fridays. Due to Memorial Day holiday on Monday, DSM2 runs for the assessment were not provided prior to the SaMT call. Initial estimates of Old and Middle River (OMR) flows ranged from -1,000 cfs to -4,500 cfs during the period 5/26/20 to 6/1/20. However, OMR flow values were later refined with newer information and estimated to be more positive as noted in the Weekly Fish and Water Operations Outlook document. Additionally, those more negative values will only possibly occur on 6/1/20. SaMT had the opportunity to review the latest DSM2 results in Attachment A of the Assessment the afternoon of 5/26/20 before the Assessment was finalized and sent to WOMT.

Sensitivity to Operational Actions - SaMT Feedback on Entrainment Risk

SaMT was provided a draft Assessment on the previous Friday. Input that was received last Friday was incorporated into the draft Assessment document that SaMT reviewed during the call on Tuesday morning. This week’s Assessment document will be posted to the [WOMT web page](#).

Agenda Item 7.

Other Topics

SaMT discussed [DWR’s ITP](#) categorization for entrainment, exposure, export, and overall risk.

8.1.5.1.C. Assessment of risk of entrainment into the central Delta and CVP/SWP facilities for winter-run Chinook salmon and spring-run Chinook salmon in the Sacramento River:

8.1.5.1.C.ii. Exposure Risk:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
8.1.5.1.C.iii. Routing risk:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
8.1.5.1.C.iv. Overall Risk:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low

8.1.5.1.D. CVP/SWP facilities entrainment risk for winter-run Chinook salmon and spring-run Chinook in the central Delta over the next week:

8.1.5.1.D.iii. Exposure risk assessments:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low-Medium
8.1.5.1.D.iv. Reporting OMR/export risk:	
OMR -1,000 cfs:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
OMR -1,200 cfs:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
OMR -1,500 cfs: (1 day with exports more negative than -3,000 cfs)	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
8.1.5.1.D.v. Overall entrainment risk:	
OMR -1,000 cfs:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
OMR -1,100 cfs:	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low
OMR -1,500 cfs: (1 day with exports more negative than -3,000 cfs)	Winter-run Chinook salmon: N/A Spring-run Chinook salmon: Low

Other discussed items:

- In the near future, a professor at Fresno State University might study bioenergetics at the southern end of spring-run Chinook salmon range. SaMT members will be invited to participate/provide insight.

Agenda Item 8.

Additional Considerations for WOMT

- No recommendations to change Delta Operations.

Agenda Item 9.

Next SaMT Meeting is scheduled for Tuesday, 6/2/20 at 9:00 a.m.