

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 10/13/2015 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.

DWR: Farida Islam, Aaron Miller, Kevin Reece, Mike Ford, Reza Shahcheraghi

Reclamation: Josh Israel, Michele Palmer, Peggy Manza

NMFS: Barb Byrne, Jeff Stuart, Meiling Roddam

USFWS: Dan Welsh

CDFW: Duane Linander, Ken Kundargi, Bob Fujimura

SWRCB: Matt Holland

Agenda Items

1. Agenda review and introductions
2. RPA Implementation review
3. Current Operations
4. Smelt Working Group
5. Fish Monitoring
6. DOSS WY 2015 Annual Report
7. Compilation of DOSS fish distribution estimates vs. monitoring data
8. DOSS logistics
9. DOSS Advice
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:

- Neither of the two alerts has been triggered since 10/1/15.
- Recent (10/6-10/12/15) conditions for:
 - Wilkins Slough flow: 5,758-5,933 cfs (range of mean daily flow)
 - Knights Landing temperature: 66-68°F (range of temperatures reported at the rotary screw traps during trap checks)
 - Mill Creek flow : 73-75 cfs (range of mean daily flow)
 - Deer Creek flow: 73-74 cfs (range of mean daily flow)

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.

Action IV.1.2² (DCC gate operations):

- Since 10/1/15, none of the criteria requiring DCC gate closure have been met.

Agenda Item 3.

Current Operations (10/13/2015)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	300	Jones Pumping Plant	1,600
Reservoir Releases (cfs)			
Feather - Oroville	1,200	American - Nimbus	600
		Sacramento - Keswick	6,800
		Stanislaus - Goodwin	200
		Trinity - Lewiston	450
Reservoir Storage (in TAF)			
San Luis (SWP)	316	San Luis (CVP)	55
Oroville	1,045	Shasta	1,519
New Melones	273	Folsom	164
Delta Operations			
DCC	Open	Sacramento River at Freeport (cfs)	7,532
Outflow Index (cfs)	~ 4,300	San Joaquin River at Vernalis (cfs)	471
E:I	23.6% (3-day avg.)	X2	>81 km

Salinity management is currently controlling exports.
Current daily OMR Index is approximately -1,950 cfs.

DOSS briefly discussed El Nino forecasts, which predict the chances of precipitation in the North are increasing, but there are still no guarantees. Also, forecasts predict warmer temperatures for next spring, which may have implications for snowpack, runoff timing, and cold water pool conditions.

Agenda Item 4.

Smelt Working Group (SWG): The group has not yet met but will most likely begin meeting in late November. Previous SWG meeting notes are available at:

http://www.fws.gov/sfbaydelta/cvp-swp/smelt_working_group.cfm.

Agenda Item 5.

Fish Monitoring: The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See also:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>.

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

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	10/4-10/10	10/4-10/10	10/4-10/10	10/4-10/12	10/4-10/11	10/6-10/12	10/4-10/10
Total Catch	0	0	3	0	2	78	0
FR Chinook						3	
WR Chinook					2 (36mm-38mm)	73	
SR Chinook							
LFR Chinook						2	
Ad-Clipped Chinook							
Delta Smelt							
Splittail			3				
Longfin Smelt							
Steelhead (ad-clip)							
Steelhead (wild)							
Green Sturgeon							
Flows (avg. cfs)				5,836	6,100	955	
W. Temp. (avg. °F)				66	64	63	
Turbidity (avg. NTU)				5.1	8	3.84	

^A Data not available during call due to federal holiday on Monday, 10/12. Data was forwarded out to DOSS once available, and are reported here for convenience.

^B Sampling period was from 10/4 at 10:00 am to 10/12 at 9:15 am.

^C Sampling period was from 10/4 at 10:00 am to 10/11 at 8:00 am.

Red Bluff Diversion Dam (RBDD): USFWS biweekly report (9/24-10/7/15) 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
Winter-run Chinook (BY2015)	75,135	170,503

Fish Salvage³: No species of management concern have been salvaged during WY 2016.

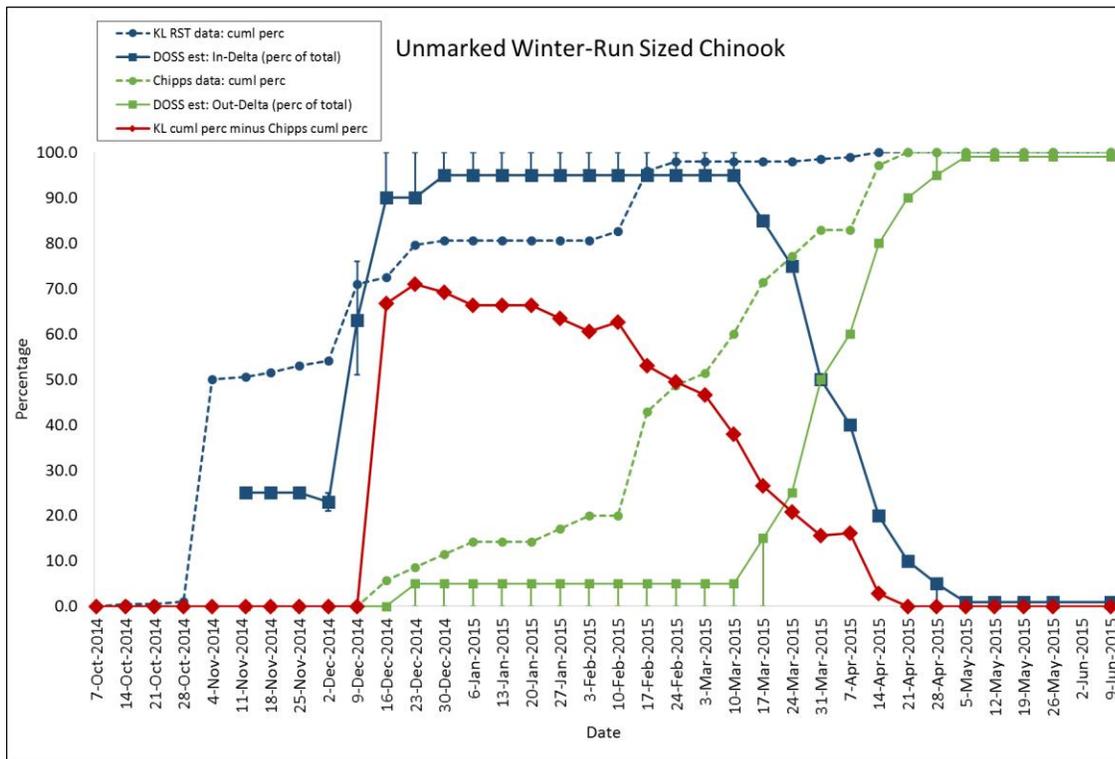
Agenda Item 6.

DOSS WY 2015 Annual Report:

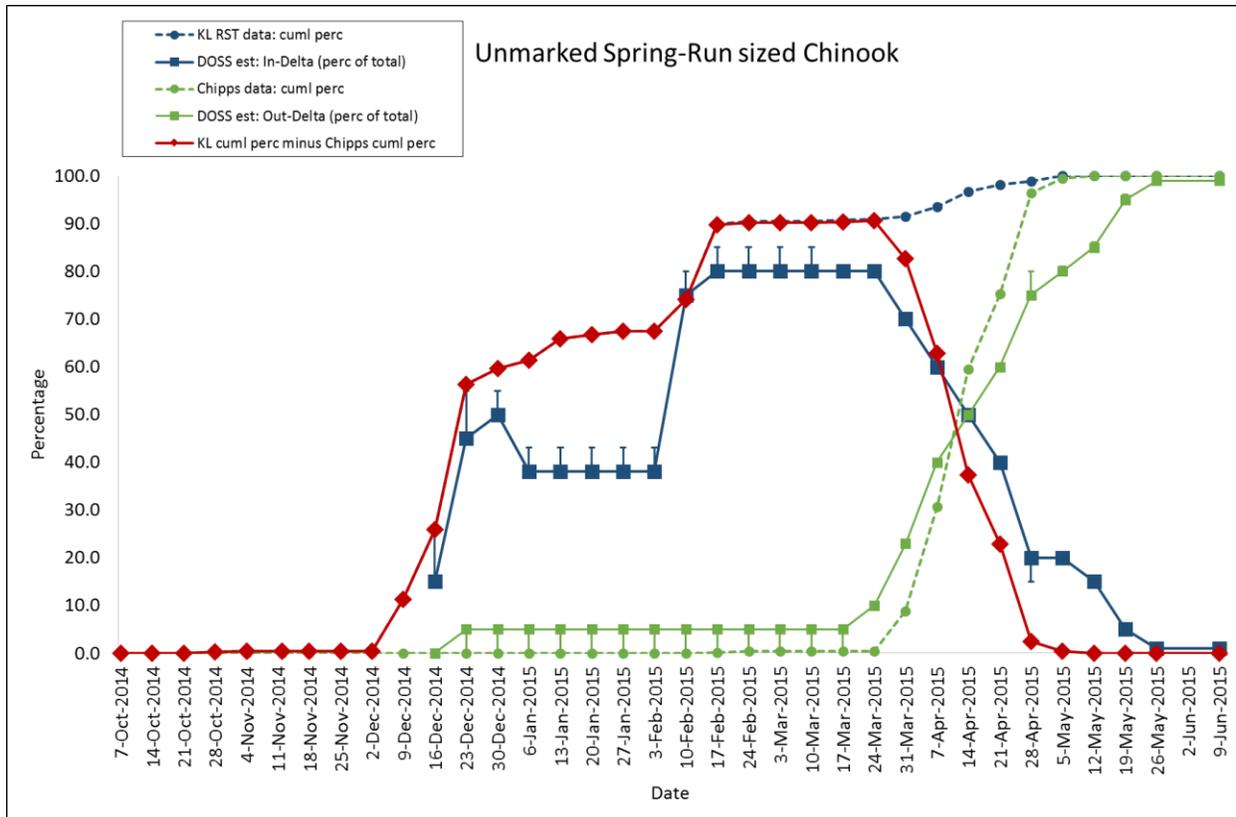
- The Delta Science Program posted a private link of the draft WY 2015 DOSS Annual Report (10/9/15 version) for the Independent Review Panel to review.
- Comments from DOSS members on the draft WY 2015 DOSS Annual Report due to Barb by COB, Friday, 10/16/15.

Agenda Item 7.

Compilation of DOSS fish distribution estimates vs. monitoring data: DOSS discussed the spreadsheet sent via email by Roddam (NMFS) that compiled and compared the WY 2015 DOSS fish distribution estimates and monitoring data (preliminary data exploration figures provided below).



³Salvage data reported in this section represent the total estimated and expanded salvage based on the number of fish observed at the fish collection facility. For example, if one steelhead is observed in the typical ½-hour sampling period within a 2-hour operation period, the single steelhead is expanded to a salvage of four.



Discussion points are summarized below:

- Suggestions for further data exploration included:
 - a comparison with Sacramento trawl data
 - a “Sacramento Trawl minus Chipps Trawl” measure (rather than the current “Knights Landing rotary screw trap minus Chipps Trawl” measure).
 - Incorporation of additional fish monitoring data (*e.g.*, upstream and tributary rotary screw traps, beach seines, salvage, Jersey and Prisoners Point trawls) and environmental data (*e.g.*, water temperature and flow at certain locations) to highlight how DOSS considers environmental data, in conjunction with fish monitoring data and historical trends, to produce weekly fish distribution estimates. These additional data sources might be described in a narrative accompanying a figure, rather than as an additional element of the figure.
- Suggestion for a further discussion on making fish distribution estimates for sub-regions within the “in Delta” bin currently used by DOSS (*i.e.*, the different routes of Sacramento origin fish vs. routes of San Joaquin origin fish to the salvage facilities).
- Potential sharing and inclusion of juvenile salmonid catches in the Spring Kodiak Trawl to add to the fish monitoring data that DOSS reviews (for both retrospective analysis and regular reporting).
- Sub-group of DOSS members will continue working on providing input and helping with compilation and comparison of DOSS fish distribution estimates and monitoring data.

Agenda Item 8.

DOSS logistics:

- Byrne (NMFS) will continue to send out DOSS email reminders with meeting agendas in addition to updating the calendar invite with the upcoming meeting agenda.
- Islam (DWR) will aim to send DAT data graphs out to DOSS by Tuesday afternoon, rather than Tuesday morning prior to DOSS call (though will send out sooner if data received fairly early on Monday). The fish monitoring data underlying the weekly update to the graphs will be shared by Byrne (NMFS), when available, prior to the DOSS call, so the data (if not the season-to-date graphic) will inform DOSS's discussion.
- Islam (DWR) will continue to send out the update on salvage of coded wire-tagged (CWT) Chinook salmon prior to the DOSS call.
- Israel (Reclamation) informed DOSS that a contract has been awarded by Reclamation to the University of Washington to develop website for the Central Valley that will link environmental data (*e.g.*, from CDEC) with fish monitoring data). The framework for the website will be based on the DART (Data Access in Real Time) website for the Columbia River (<http://www.cbr.washington.edu/dart>). Ideally, once a website is up, DOSS can be engaged at a time to review and discuss the data aggregation and forecasting utility of it. There may be opportunities for DOSS to shape how the website functions and provides output.

Agenda Item 9.

DOSS Advice to WOMT and NMFS: None.

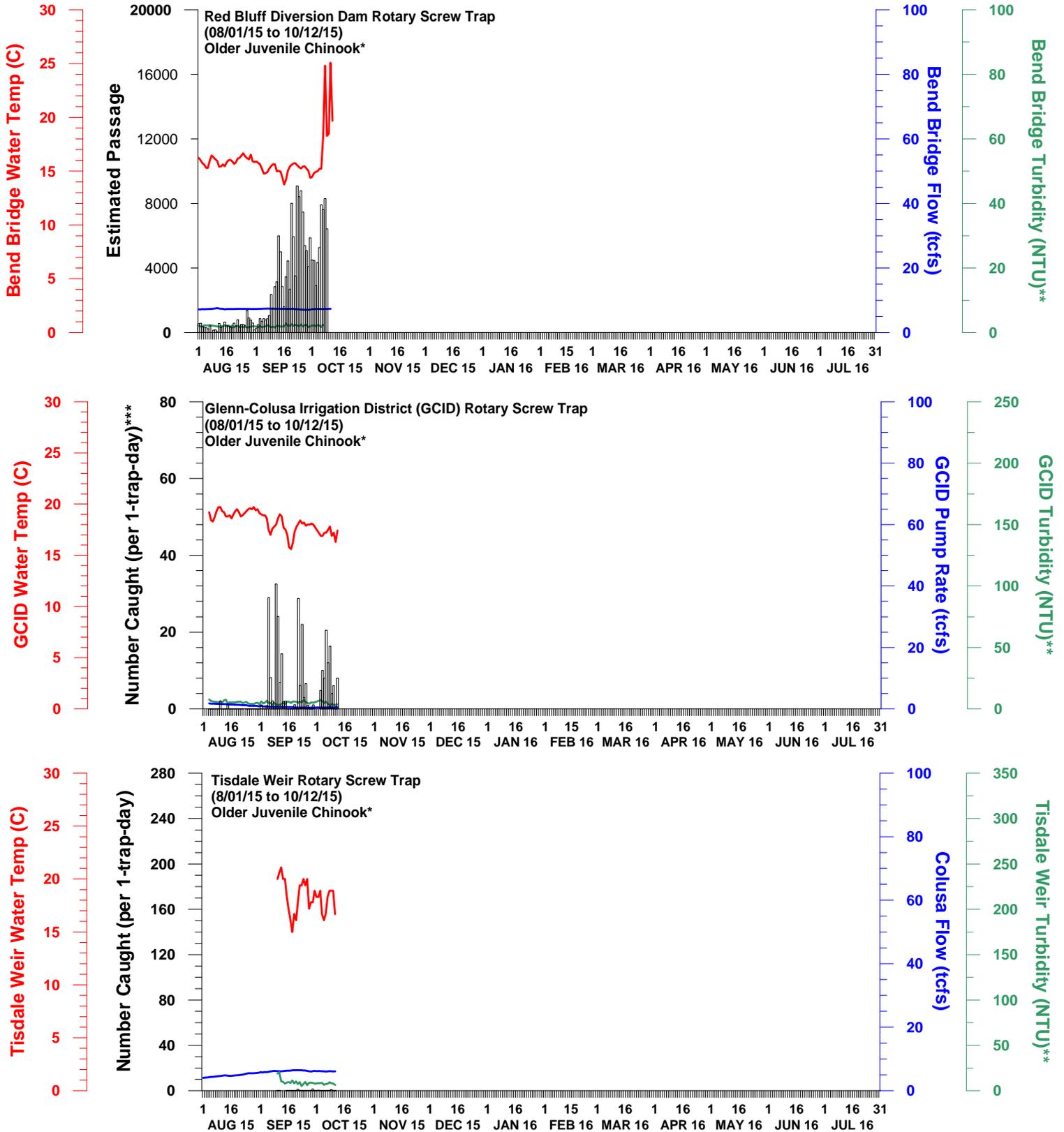
Agenda Item 10.

Next Meeting: The next DOSS conference call will be on 10/20/15 at 9am.

The following graphs were provided by DWR for Chinook salmon and steelhead observed at monitoring locations in the Sacramento and San Joaquin rivers and Delta. For additional graphs, please visit the DWR website at:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER

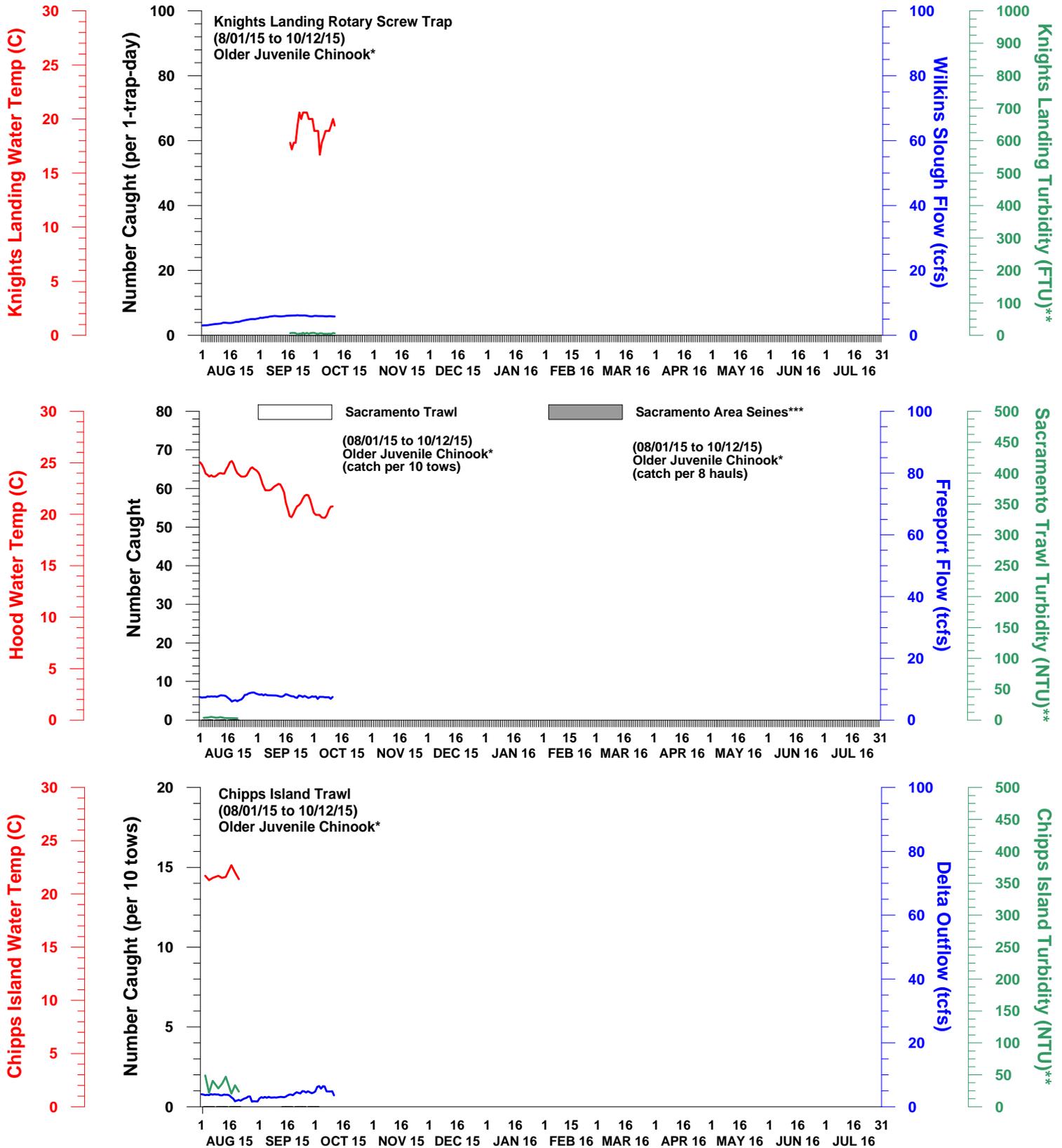


DWR-DES 13 OCTOBER 2015
Preliminary data from DFW, FWS, GCID, and CDEC; subject to revision.

*Older juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher model) for which a race is assigned on a given sampling date.

Trap was not in operation on 12/3/14-1/6/15, 2/5/15-2/16/15, and 4/25/15-5/4/15 due to various reasons.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE LOWER SACRAMENTO RIVER AND CHIPPS ISLAND



DWR-DES 13 OCTOBER 2015

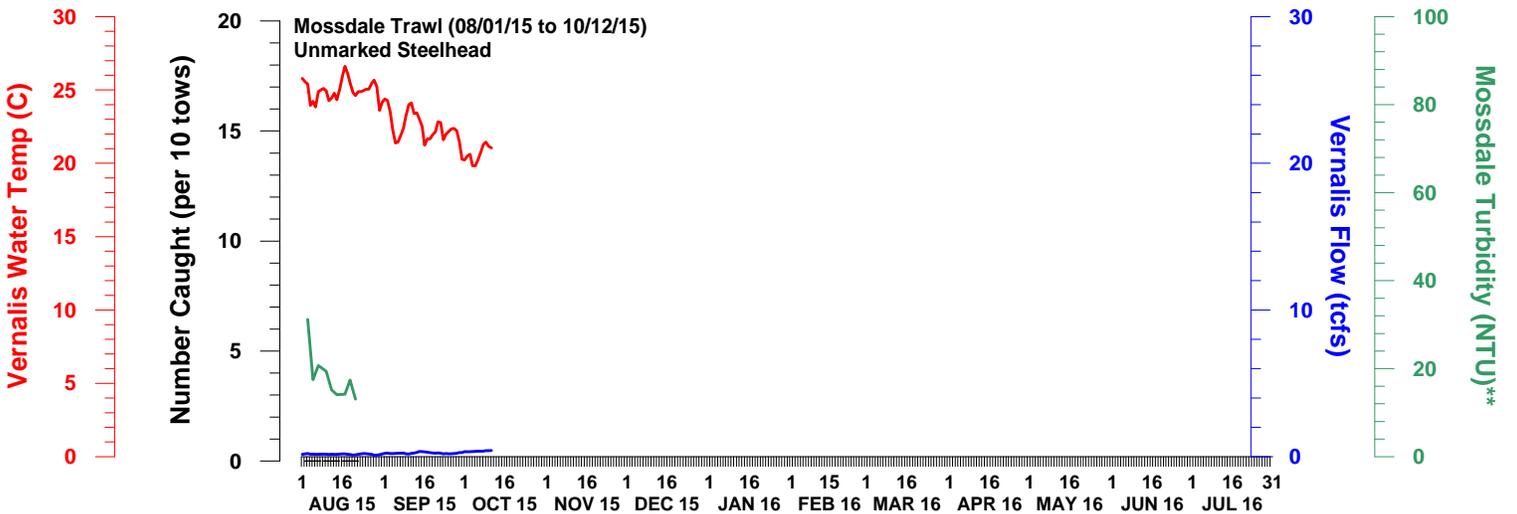
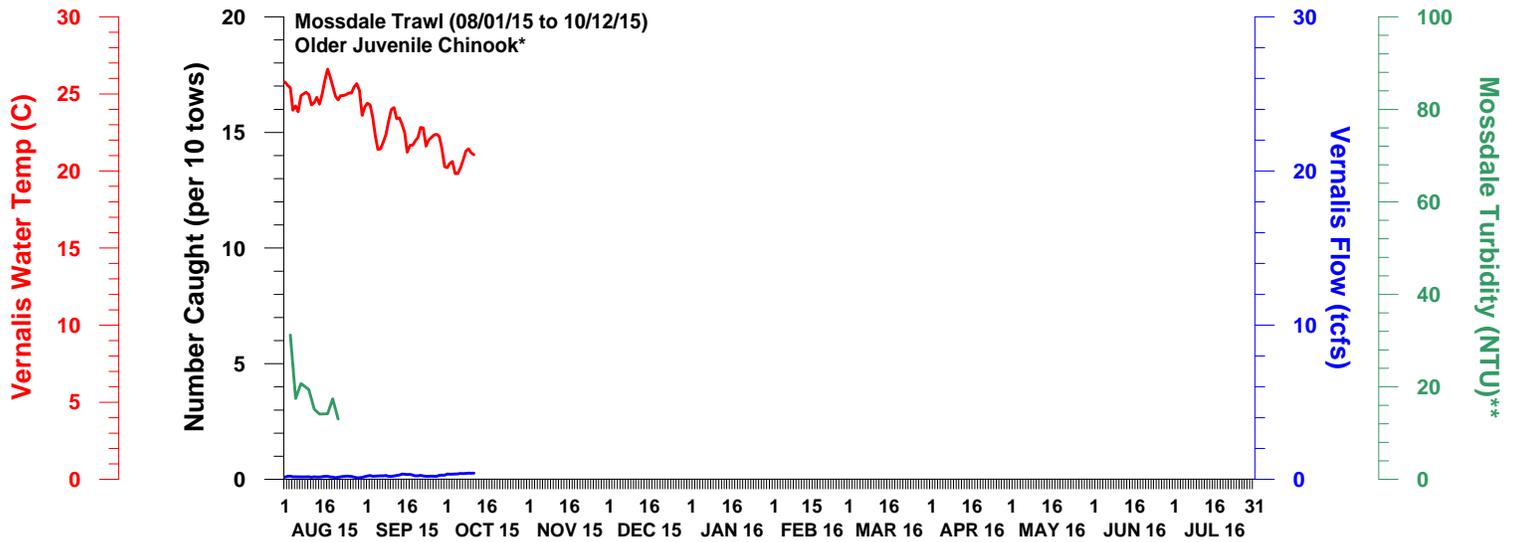
Preliminary data from DFW, FWS, and CDEC; subject to revision.

*Older juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher Model) for which a race is assigned on a given sampling date.

**Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured unless data are missing for more than five days. Knights Landing turbidity measured in FTU, which should be roughly equivalent to NTU.

***Sacramento area seine route consists of the following seine sites: Verona, Elkhorn, Sand Cove, Discovery Park, American River, Miller Park, Sherwood Harbor, and Garcia Bend. Bars are stacked if Chinook caught from the trawl and seines are from the same day.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK AND STEELHEAD MEASURED IN THE SAN JOAQUIN RIVER

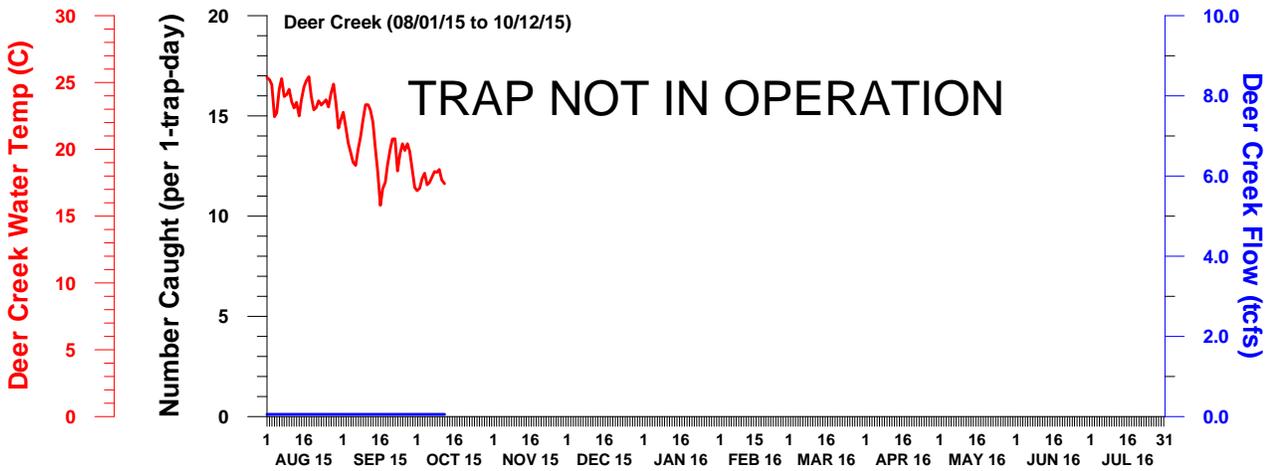
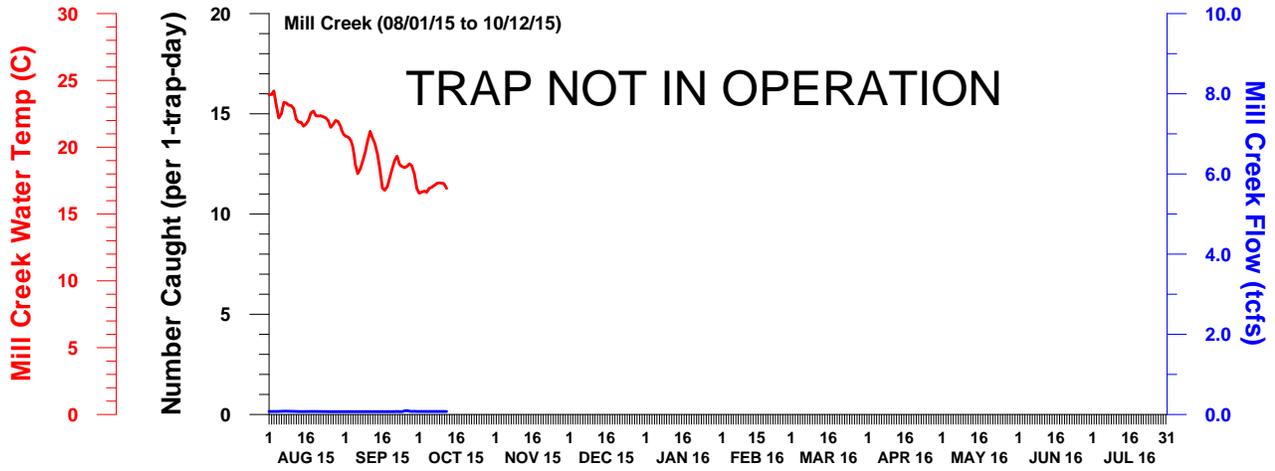


DWR-DES 13 OCTOBER 2015
Preliminary data from FWS and CDEC; subject to revision.

*Older juvenile Chinook defined as all Chinook greater than or equal to the minimum winter run length-at-date criteria and less than the maximum size included in the length-at-date criteria (Frank Fisher model) for which a race is assigned on a given sampling date.

**Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured unless data are missing for more than five days.

WATER TEMPERATURE AND FLOW MEASURED AT MILL AND DEER CREEK



Data Acquisition:

All data are preliminary and subject to revision.

The estimated passage data for the Red Bluff Diversion Dam were obtained directly from the US Fish and Wildlife Service (FWS), Red Bluff Fish and Wildlife Office (http://www.fws.gov/redbluff/rbdd_biweekly_final.html).

The catch data for Glenn-Colusa Irrigation District (GCID) were obtained directly from GCID.

The catch data for Tisdale Weir and Knights Landing were obtained directly from the California Department of Fish and Wildlife (DFW)¹, North Central Region.

Sacramento River Trawl, Sacramento Area Beach Seine, and Chipps Island Trawl data were obtained directly from FWS, Stockton Fish and Wildlife Office (<http://www.fws.gov/stockton/ifmp/>).

Mossdale Trawl data were either obtained directly from FWS, Stockton Fish and Wildlife Office or from DFW (Region 4).

The hydrology data were either downloaded from the California Data Exchange Center (CDEC) (<http://cdec.water.ca.gov>) or obtained directly from the California Department of Water Resources, Operations Control Office.

¹ Formerly known as the California Department of Fish and Game (DFG).