

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 11/24/2015 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: Kevin Reece, Aaron Miller, Mike Ford, Rhiannon Mulligan, James Gleim

Reclamation: Peggy Manza, Michele Palmer

NMFS: Barb Byrne, Meiling Roddam

USFWS: Craig Anderson, Leigh Bartoo

CDFW: Bob Fujimura, Duane Linander, Ken Kundargi

SWRCB: Chris Carr, Matt Holland

Agenda Items

1. Agenda review and introductions
2. RPA Implementation review
3. Current Operations
4. Fish Monitoring
5. Discuss advice on interim JPE-based trigger
6. Smelt Working Group
7. DOSS Advice
8. Next DOSS meeting

Agenda Item 2.

RPA Implementation Review

Delta RPA Actions that may affect operations during November:

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

- Recent (11/17-11/23/15) conditions for:
 - Wilkins Slough flow: 3,941-4,4242 cfs (range of mean daily flow)
 - Knights Landing temperature: 52-55°F (range of temperatures reported at the rotary screw traps during trap checks)
 - Mill Creek and Deer Creek flows [highlighted cells exceeded the first component (95 cfs flow threshold) or second component (>50% flow change) in first alert]:

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	% increase in mean daily flow	mean daily flow	% increase in mean daily flow
11/17/2015	86	-	76	-
11/18/2015	84	-2.3%	74	-2.6%
11/19/2015	83	-1.2%	74	0.0%
11/20/2015	83	0.0%	73	-1.4%
11/21/2015	82	-1.2%	72	-1.4%
11/22/2015	82	0.0%	71	-1.4%
11/23/2015	81	-1.2%	70	-1.4%

- The first alert (triggered if either component is met) was not triggered over the past week.
- The first component of the second alert was met based on Knights Landing temperatures less than 56.3°F on 11/17-11/23, but the second component (Wilkins Slough flows >7,500 cfs) was not met; the second alert is not triggered unless both components are met.

Action IV.1.2² (DCC gate operations):

- Since the action went into effect on 10/1/15, none of the criteria requiring DCC gate closure have been met.

Action IV.3³ (Reduce likelihood of entrainment or salvage at the export facilities, including alert that indicates that export operations may be need be altered)

- Third alert has not been triggered.
- Since the action went into effect on 11/1/15, no salvage-based triggers that would require export reduction have been exceeded.

Agenda Item 3.

Current Operations (11/24/2015)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	300	Jones Pumping Plant	800
Reservoir Releases (cfs)			
Feather - Oroville	1,200	American - Nimbus	500
		Sacramento - Keswick	4,250
		Stanislaus - Goodwin	200
		Trinity - Lewiston	300
Reservoir Storage (in TAF)			
San Luis (SWP)	317	San Luis (CVP)	88
Oroville	945	Shasta	1,345

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

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

New Melones	265	Folsom	138
Delta Operations			
DCC	Open	Sacramento River at Freeport (cfs)	5,570
Outflow Index (cfs)	3,695	San Joaquin River at Vernalis (cfs)	609
E:I	22% (3-day avg.)	X2	>81 km

Seasonal salinity management and concerns about M&I chloride standards are currently controlling exports.

Because of water quality concerns, Reclamation is considering whether to request DCC gate operations flexibility in December.

Agenda Item 4.

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>.

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	11/15-11/21	11/15-11/21	11/15-11/21	11/15-11/23	11/16-11/23	11/17-11/23	11/15-11/21
Total Catch	0	0	2 (Chinook adults)	0	0	47	0
FR Chinook						6	
WR Chinook						6	
SR Chinook						1	
LFR Chinook						34	
Ad-Clipped Chinook							
Delta Smelt							
Splittail							
Longfin Smelt							
Steelhead (ad-clip)							
Steelhead (wild)							
Green Sturgeon							

Flows (avg. cfs)				4,055	4,098	782	
W. Temp. (avg. °F)				53	53	57	
Turbidity (avg. NTU)				3.7	10	4.5	

^A Data not available during call. Data was forwarded out to DOSS once available, and are reported here for convenience.

^B Sampling period was from 11/15 at 11:15 am to 11/23 at 11:30 am

^C Sampling period was from 11/16 at 8:30 am to 11/23 at 9:45 am.

Red Bluff Diversion Dam (RBDD)

USFWS biweekly report (11/5-11/18/15) 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)	16,455	252,675

Fish Salvage⁴: No species of management concern have been salvaged during WY 2016.

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 estimates the bulk of young-of-year winter-run Chinook are still upstream of the Delta. Young-of-year spring-run Chinook are assumed still scarce; some young-of-year spring-run Chinook juveniles have likely not emerged yet from redds.

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>	>95% (same last week)	<5% (same last week)	0% (same last week)

Agenda Item 5.

Discuss advice on interim JPE-based trigger

DOSS had no further edits to the revised advice sent to DOSS on 11/23/15, regarding interim implementation of Action IV.2.3 using the minimum trigger values for the JPE-based triggers if NMFS does not issue its JPE letter to Reclamation and DWR prior to January 1, 2016. Byrne (NMFS) will accept those revisions to finalize the language for the advice, but DOSS will wait until mid-December to decide if advice is warranted.

⁴Salvage 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.

Agenda Item 6.

Smelt Working Group Update

SWG will begin routine meetings starting on Monday, 11/30/15. SWG notes will be posted at:
http://www.fws.gov/sfbaydelta/cvp-swp/smelt_working_group.cfm

Agenda Item 7.

DOSS Advice to WOMT and NMFS: None.

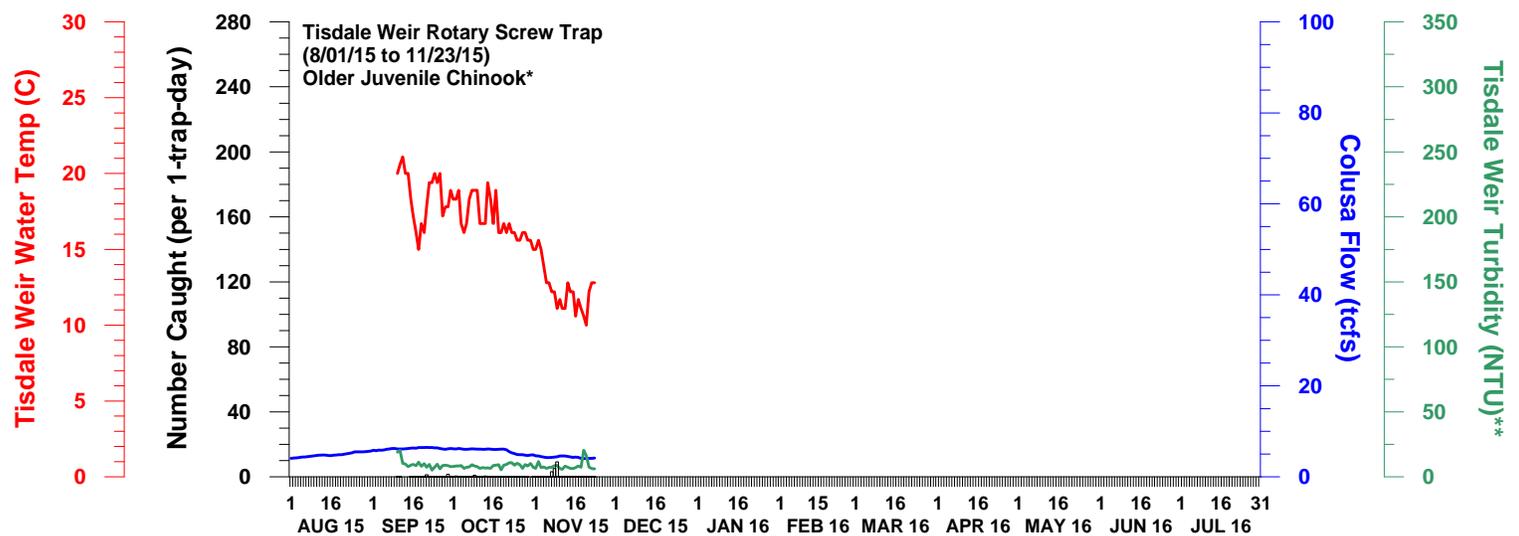
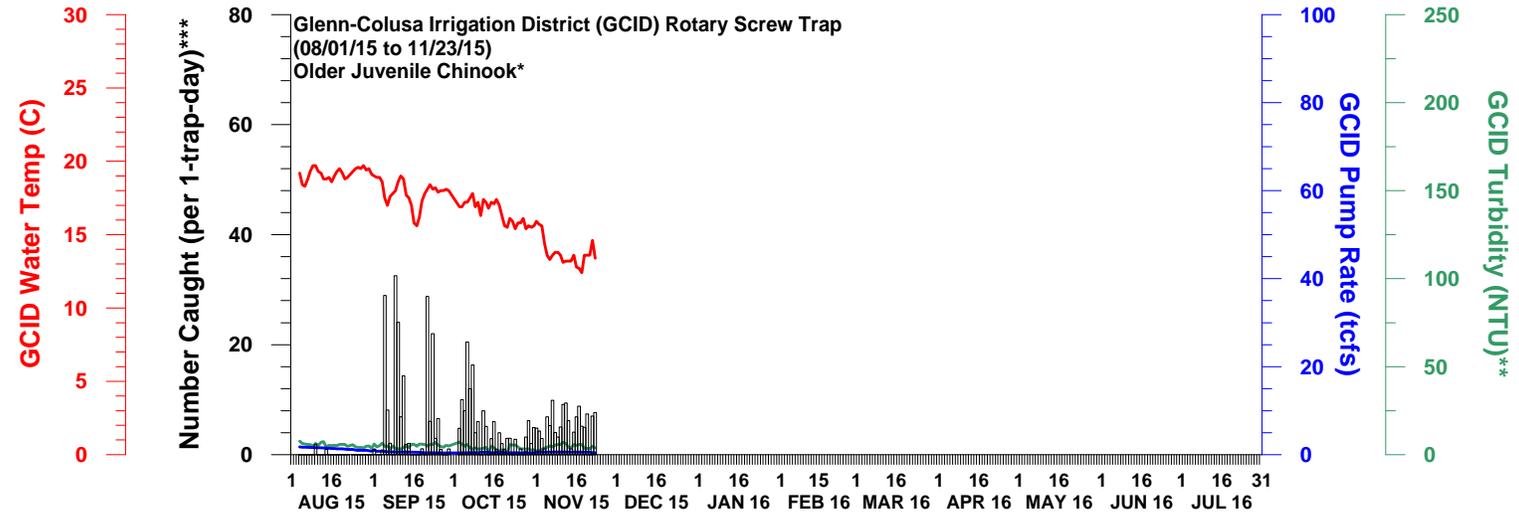
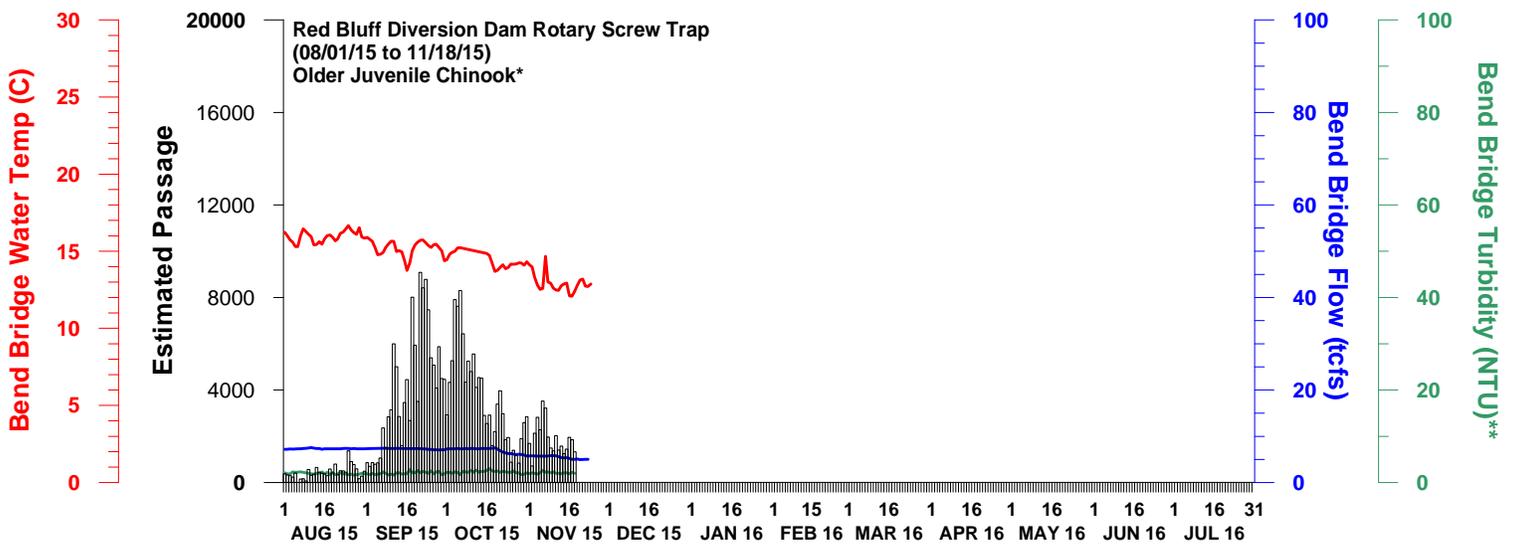
Agenda Item 8.

Next Meeting: The next DOSS conference call will be on 12/1/15 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. This week, both these figures and some of the data summarized (see the Table under Agenda Item 4 for details) were provided after the DOSS call. For additional graphs, please visit the DWR website at:

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

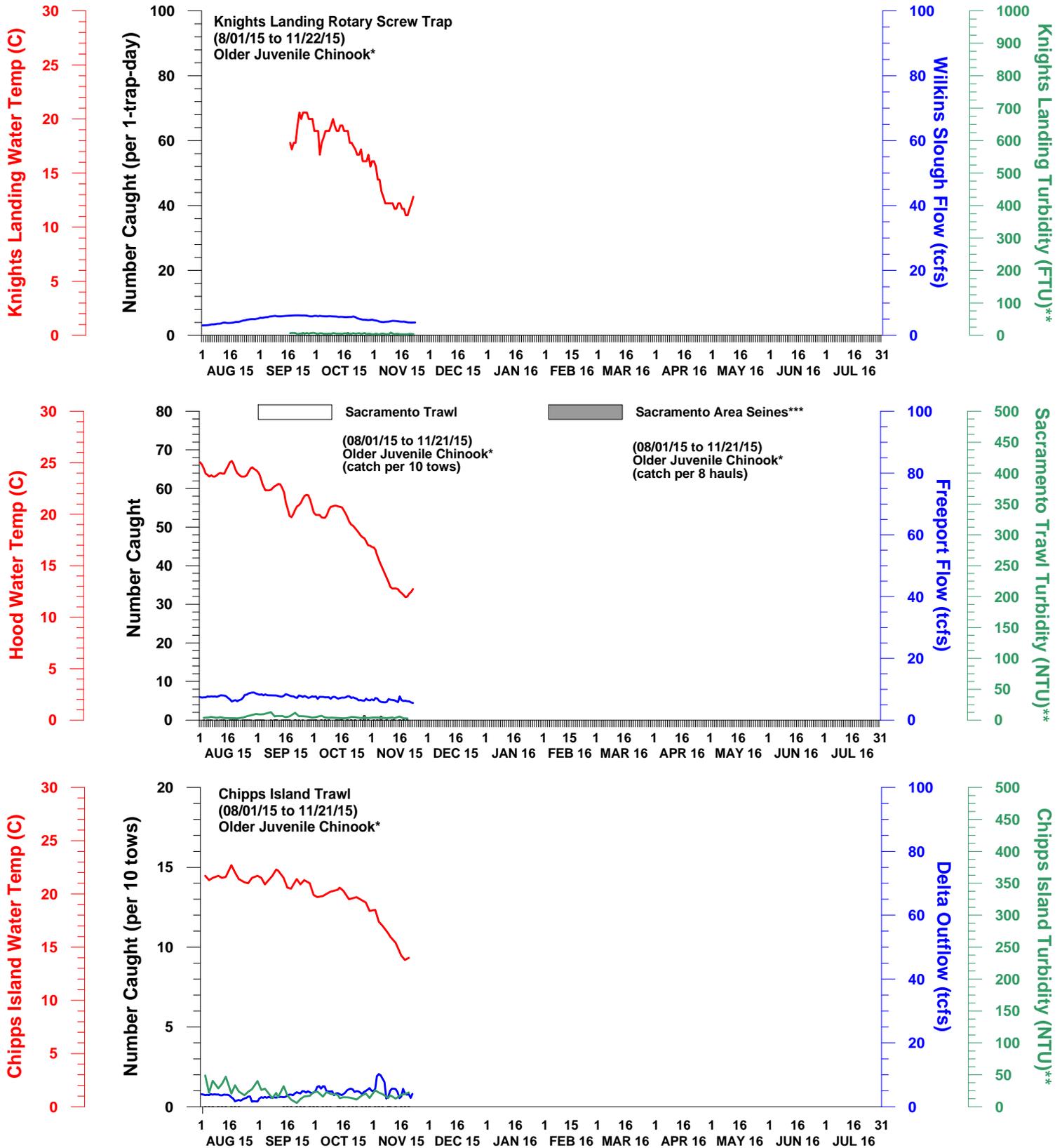
NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER



DWR-DES 24 November 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.

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



DWR-DES 24 November 2015

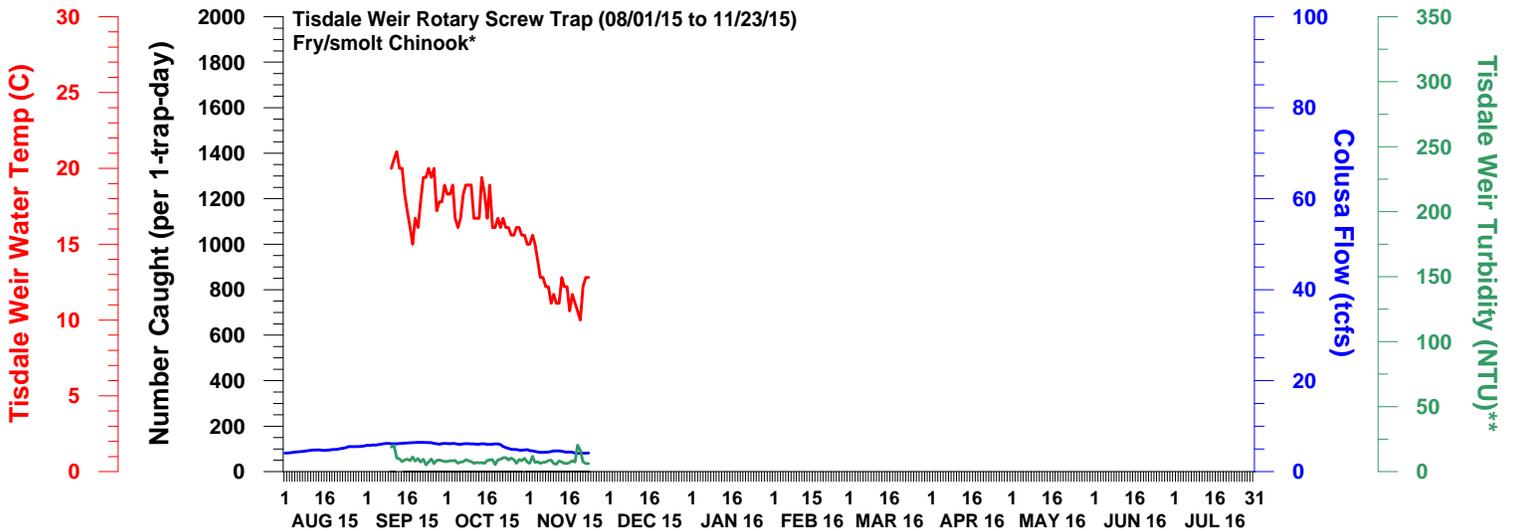
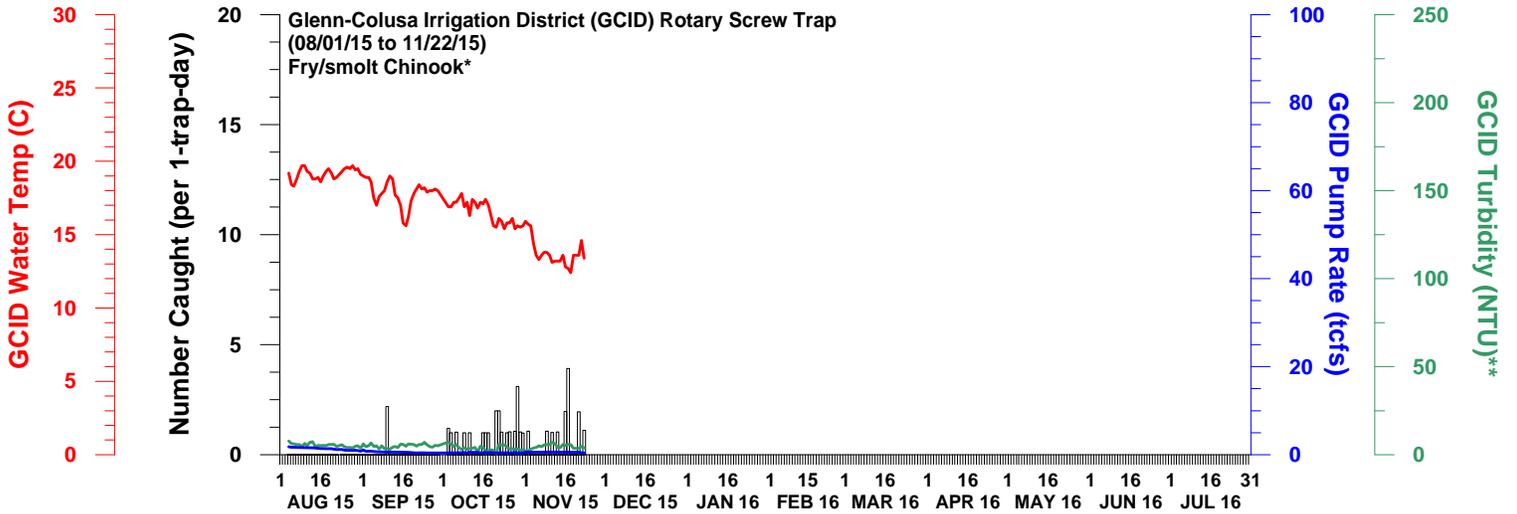
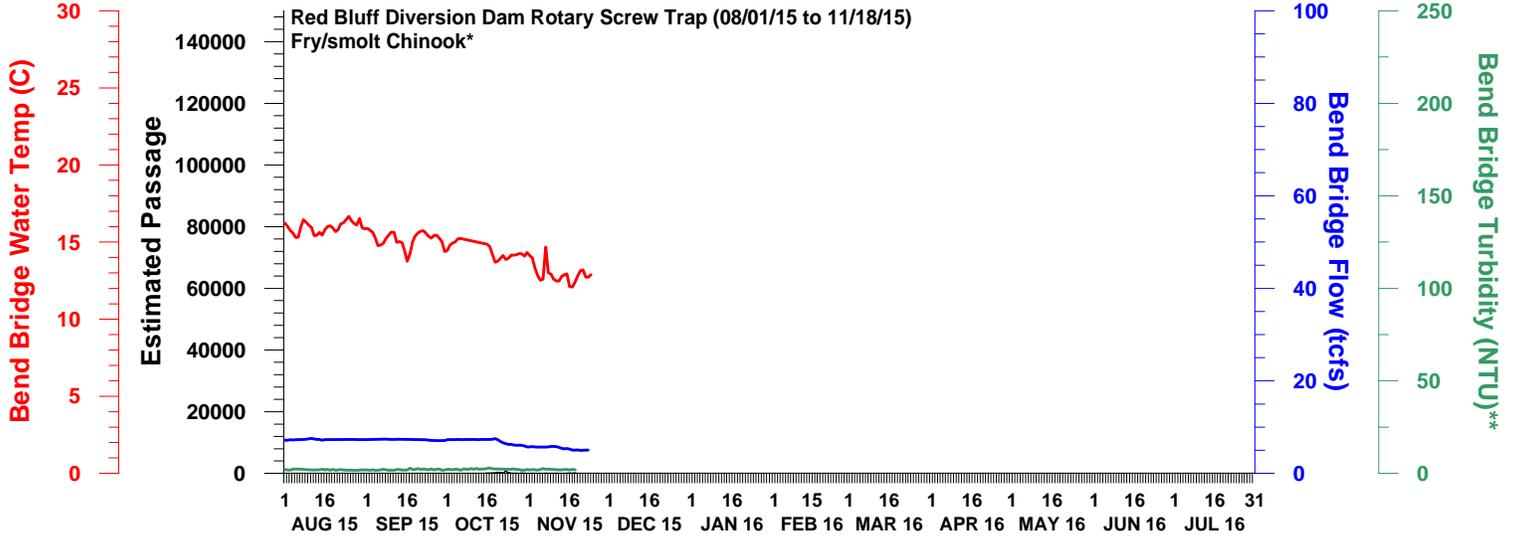
Preliminary data from DFW, FWS, and CDEC; subject to revision.

*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 FRY/SMOLT CHINOOK MEASURED IN THE SACRAMENTO RIVER



DWR-DES 24 November 2015
Preliminary data from DFW, FWS, GCID, and CDEC; subject to revision.

*Fry/smolt Chinook defined as all Chinook less than the minimum winter run length-at-date criteria (Frank Fisher model).

**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.

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).