Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 4/10/12 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 coordinate the work of other technical teams. DOSS notes and advice can be found at: http://www.swr.noaa.gov/ocap/doss.htm

DWR: Mike Ford, Andy Chu, Edmund Yu, Kevin Reece, Angela Llaban, Tracy Pettit, James Gleim, Dan Yamanaka, Heidi Rooks
FWS: Leigh Bartoo, Roger Guinee, Craig Anderson
NMFS: Barbara Rocco, Bruce Oppenheim, Barb Byrne, Garwin Yip
Reclamation: Lenny Grimaldo, Russ Yaworsky, Josh Israel
DFG: Bob Fujimura, Robert Vincik, Jason Roberts
EPA, **SWRCB, USGS:** not present

Agenda
1. Fish monitoring
2. Current operations
3. New proposed OMR operations for April (see attached)

Action Item [1/3/12]: Review the DOSS section of the annual review report and provide responses regarding implementation of recommendations. **Carry. See discussions below.**

> **4/3/12**: No update because the group has not yet met. A meeting notice will be sent out.

Action Item [1/17/12]: DWR, Reclamation, NMFS, and DFG will meet to discuss how best to include CWT information in available salvage databases, both going forward and perhaps retrospectively. Bob Fujimura, DFG, agreed to lead this effort and provide a list of what needs to be revised. **Carry.**

> **4/3/12:** Date was set for 4/13/12 at 9:30 a.m. at DWR offices. An agenda has been circulated.

Fish Monitoring: The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. No data were received before the conference call from Speegle at FWS. See: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.

Location	Chipps Is. Midwater Trawl	Sacramento Trawls	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST
Sample Date	4/3, 4/6	4/2, 4/6	4/2–4/7	4/2, 3, 5	4/2–4/9	4/2–4/9
Total Catch	**74**	**60**	**391**	**306**	**1,109**	**832**
FR	7	26	389	258	907	728
WR	6				2	
SR	44	20		14	188	98
LFR		1		19		
Ad-Clipped Chinook	2	12				
DS	12 (4 w/eggs; 8 w/o expression)			11		
Splittail	1			2		
Longfin						
SH (ad-clip)		1		2	6	1
SH (wild)	2		2		6	5
W. Temp. (avg. °F)	55.6	55.0		506.7	56.0	54.0
Flows (avg. cfs)					14,581	12,346
Turbidity (avg. NTU)	48.6	53.7		52.7	53.4	36.4
WR/LFR Avg. CPUE					0.013	
FR/SR Avg. CPUE					6.75	2.37

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail, CPUE = catch per unit of effort, ACT = acoustical tag

Tisdale: There was a spill event over the top of the weir on 3/29 and 3/30 at 23,000 cfs; about 3,600 cfs or 6–12 inches of water overflowed. No large fish (sturgeon or salmon) were trapped behind weir.

Mossdale: Monitoring switched to DFG on April 1; total catch above will be reported as the cumulative total since April 1.

Coleman National Fish Hatchery: Should see a big production release of fall-run within the next few weeks. Production release scheduled for April 19–20 and most likely will release throughout that week.

Additional fish data:

From San Joaquin basin newsletter report 3/19–4/1 (Byrne sent to DOSS):

- Calaveras River: From rotary screw trap (RST) at Shelton Road. Of 227 *O. mykiss* captures, 12 were 1+ fish. Of those, half were silvery parr and half were smolts.
- Stanislaus River: From rotary screw trap at Oakdale, 2,354 Chinook were sampled, mostly parr, some fry, and 61 smolts; 1 *O. mykiss* 1+, 199 mm, no indication of stage.
- Tuolumne River: From rotary trap at Waterford: 188 Chinook, no *O. mykiss* were caught.
- Mokelumne River: From rotary trap at Vino Farms. 460 Chinook, 10 *O. mykiss*, no stage information. Moklelumne River bypass trap did not capture any Chinook or *O. mykiss*. Trap at Galt ended in mid-March, no *O. mykiss* caught.

Merced River: Byrne will inquire about RST data from the Merced River.

Fish Salvage Data (4/2–4/8): Reports are also posted at ftp://ftp.delta.dfg.ca.gov/salvage: and you can locate the table under folder "DOSS salvage tables" (you can also try http://www.dfg.ca.gov/delta/apps/salvage/Default.aspx) and click on "salvage FTP site".

The following table reported by DFG shows weekly and water-year totals for salvage and loss densities of Chinook and steelhead.

DOSS Weekly Salvage Update
Reporting Period: April 2-8, 2012
Prepared by Bob Fujimura on April 9, 2012
Preliminary Results -Subject to Revision

Criteria	2-Apr	3-Apr	4-Apr	5-Apr	6-Apr	7-Apr	8-Apr	Trend
Loss Densities								
Wild winter-run CS	9.4	0.0	0.0	0.0	0.0	1.0	0.0	↘
Wild steelhead	9.1	7.0	1.3	0.0	4.6	4.6	0.0	↘
SWP daily export	2,184	1,456	546	2,175	2,184	2,184	4,186	↘
CVP daily export	1,616	3,074	2,167	1,616	1,614	1,612	1,616	↘

Loss density = fish lost/TAF; water export = AF; trend = compared to previous week; wild = adipose fin present

Chinook Salmon Weekly/Seasonal Salvage and Loss
Combined salvage and loss for both CVP and SWP fish facilities

		Weekly Total			Season Total	
Category		Salvage	Loss	Trend	Salvage	Loss
Wild						
	Winter Run	12	40	↘	821	1,999
	Spring Run	78	99	↘	330	723
	Late Fall Run	0	0	→	20	14
	Fall Run	0	0	→	8	33
	Total	90	139		1,179	2,769
Hatchery						
	Winter Run	0	0	→	440	1,148
	Spring Run	0	0	→	4	17
	Late Fall Run	0	0	→	25	20
	Fall Run	0	0	→	0	0
	Total	0	0		469	1,185

Race determined by size at date of capture; hatchery = adipose fin missing;

Steelhead Weekly/Season Salvage and Loss
Combined salvage and loss for both CVP and SWP fish facilities

	Weekly Total			Season Total	
Category	Salvage	Loss	Trend	Salvage	Loss
Wild	25	94	↘	257	886
Hatchery	9	35	↘	478	807
Total	34	129		735	1,693

Daily loss densities of wild winter-run Chinook declined during this period. The older juvenile loss-density exceeded 5.0 fish/TAF (second-stage OMR flow management trigger) on 4/2 but declined thereafter and was at zero for the next 5 days. Spring run continue to be the main species salvaged at both facilities. Salvage of both races declined from the previous week. Preliminary data indicate that on Monday, 4/9/12, there was no salvage of older juvenile Chinook or non-clipped steelhead at the SWP and 1 non-clipped steelhead but no non-clipped winter-run Chinook were salvaged at the CVP. Last week, there were 3 consecutive days of loss densities below the first- or second-stage triggers in RPA Action IV.2.3 of the BiOp; therefore, the previous OMR flow management action response was satisfied as of April 6, 2012.

Delta smelt: No delta smelt were salvaged at either facility. The water-year (10/01/2011 to present) salvage total of delta smelt at the CVP is 107. The water-year salvage total of delta smelt at the SWP is 92. No larval delta smelt <20 mm FL were reported in larval fish samples through 4/8/2012 at the CVP and through 4/5/2012 at the SWP.

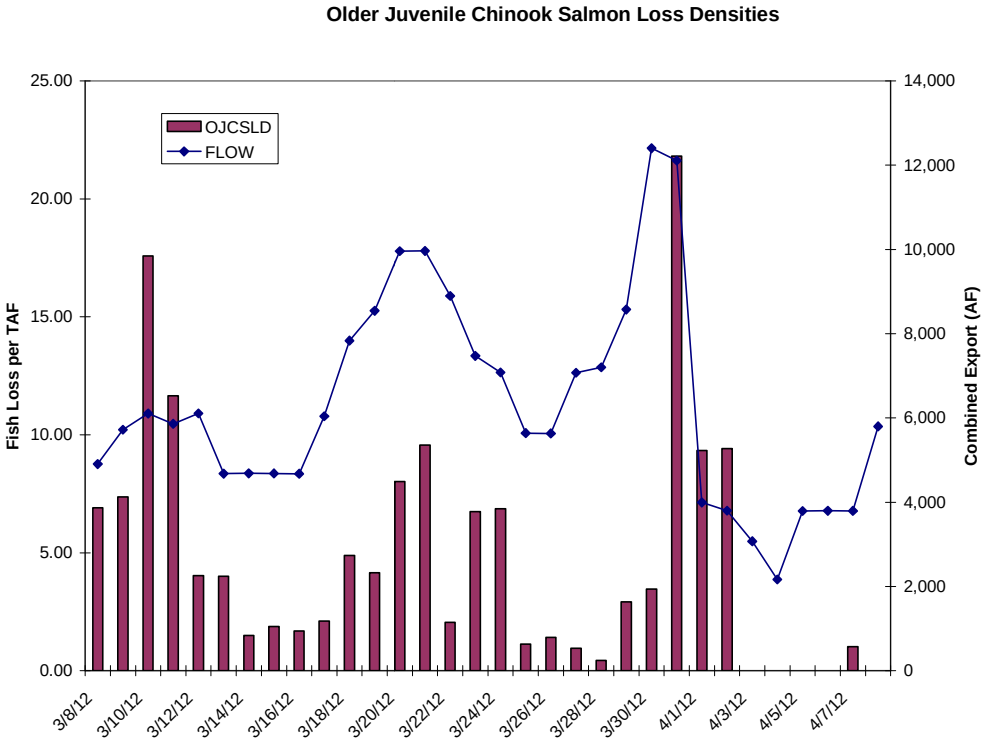
Longfin smelt: Longfin smelt were salvaged at the CVP (weekly salvage= 199) and SWP (weekly salvage= 266) facilities. The water-year salvage total of longfin smelt at the CVP is 463. The water-year salvage total of longfin smelt at the SWP is 1,896. No larval longfin smelt were reported in larval fish samples at the CVP from 4/2/2012 to 4/8/2012. Larval longfin smelt were found in larval fish samples at the SWP from 0900 hours on 3/30/2012 to 4/5/2012.

Splittail: Splittail were salvaged at the SWP (weekly salvage = 4), but not at the CVP. The water-year salvage total of splittail at the CVP is 244. The water-year salvage total of splittail at the SWP is 3,862.

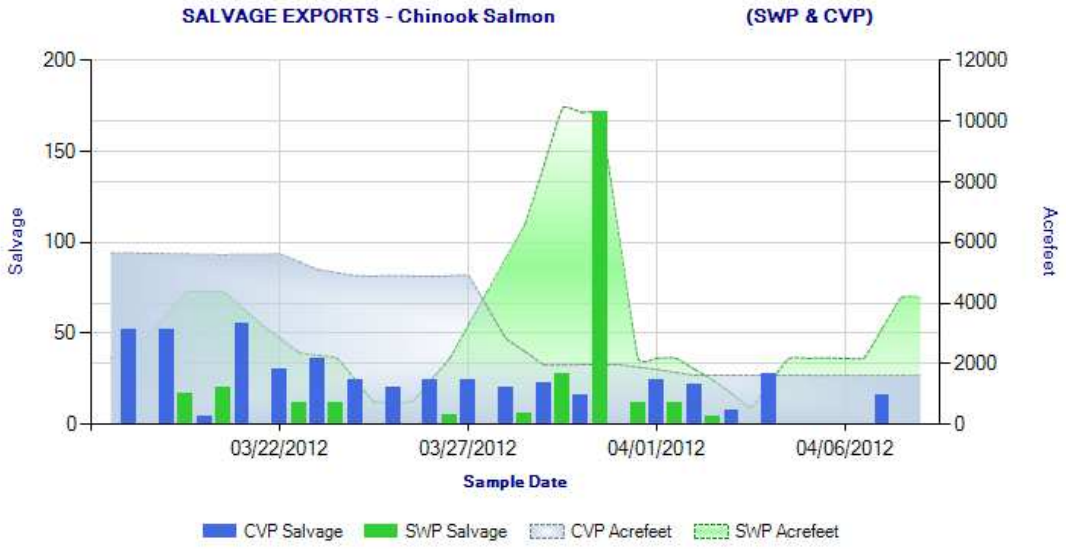
White sturgeon: No white sturgeon were salvaged at either facility. The water-year salvage total of white sturgeon at the CVP is 64. No white sturgeon have been salvaged at the SWP this water year.

Green sturgeon: No green sturgeon have been salvaged at either facility this water year.

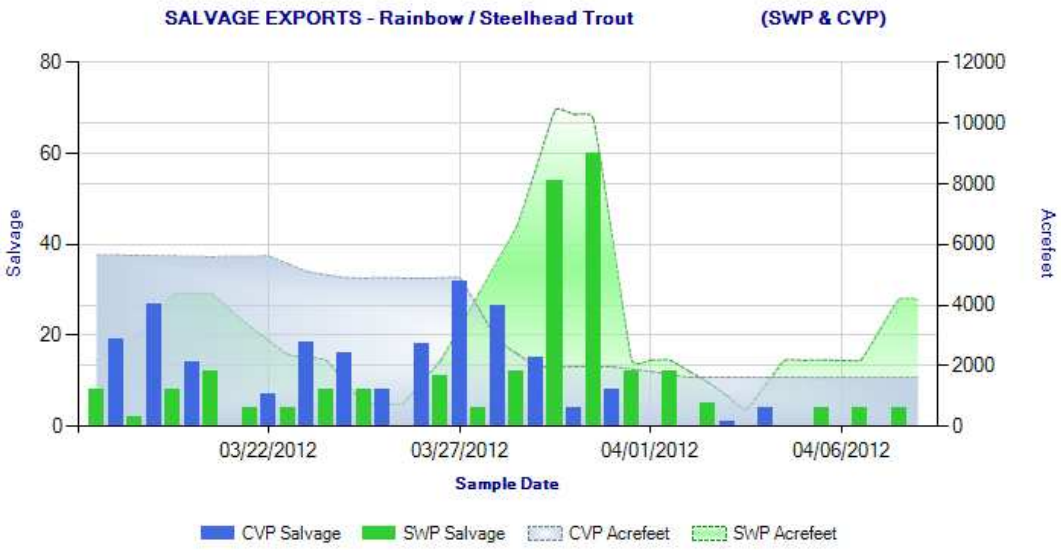
Below are summary graphs prepared by Fujimura (CDFG) showing older juvenile Chinook loss densities since March 8, 2012, Chinook salvage vs. exports since March 18, 2012, and steelhead salvage vs. exports since March 18, 2012.



Older juvenile Chinook salmon loss densities and exports for the combined CVP and SWP facilities from March 8 through April 8, 2012. Information from DFG daily salmon and smelts summary tables (G. Aasen; 4/9/12). Prepared by Bob Fujimura on April 9, 2012.

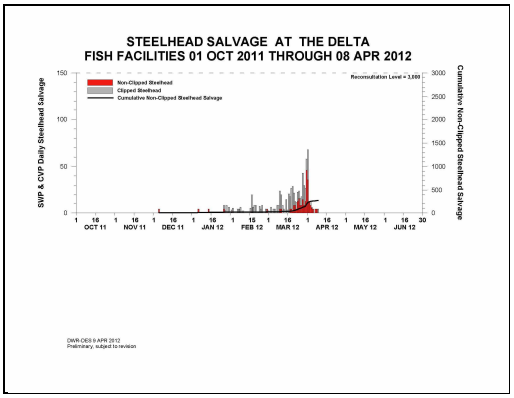


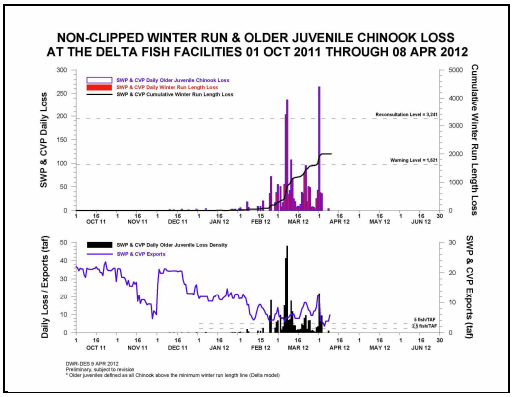
Daily salvage of Chinook salmon (all races) from the state and federal fish salvage facilities and water exports from March 18 through April 8, 2012. Graph obtained from the DFG salvage monitoring web-page: http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx.

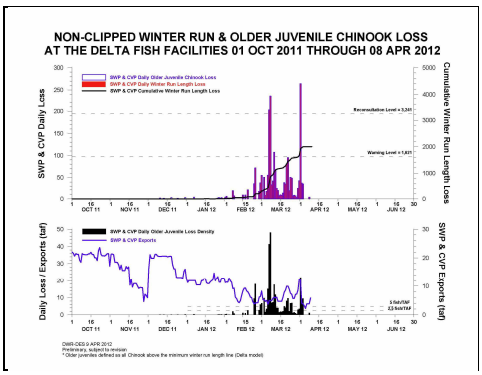


Daily salvage of steelhead from the state and federal fish salvage facilities and water exports from March 18 through April 8, 2012. Graph obtained from the DFG salvage monitoring web-page: http://www.dfg.ca.gov/delta/apps/salvage/SalvageExportCalendar.aspx

Below are the salvage and loss graphs for Chinook and steelhead from Llaban (DWR) as of 4/9/12. For additional salvage and loss graphs, please visit the DWR website at: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.







Coded Wire Tagged (CWT) Salvage and Loss as of 4/9/12 (see table below):

Coleman Hatchery Late-Fall Run and Livingston Stone Winter-Run Chinook Loss at the Delta Fish Facilities, 2011/2012

Release Date	CWT Race	Release Site	Release Type	Confirmed Loss	Number Released	Total Entering Delta	% Loss[1]	First Concern Level	Second Concern Level	Date of First Loss	Date of Last Loss
12/16/2011	LF	Battle Creek	Production	134.66	394,700	n/a	0.034	n/a	n/a	1/11/2012	3/31/2012
12/23/2011	LF	Battle Creek	Spring Surrogate	2.92	62,400	n/a	0.005	0.5%	1.0%	1/18/2012	1/31/2012
1/3/2012	LF	Battle Creek	Production	598.54	448,600	n/a	0.133	n/a	n/a	1/19/2012	3/31/2012
1/13/2012	LF	Battle Creek	Spring Surrogate	52.17	80,800	n/a	0.065	0.5%	1.0%	1/31/2012	2/18/2012
1/20/2012	LF	Battle Creek	Spring Surrogate[2]	101.04	20,000	n/a	0.505	n/a	n/a	1/30/2012	3/29/2012
2/9/2012	W	Redding	Production	16.96	194,000	96,525	0.018	0.5%	1.0%	3/31/2012	3/31/2012

For Chinook lost 10/1/2011 through 4/8/2012

SWP and CVP coded-wire tags read 10/1/2011 through 4/8/2012

[1]LF % Loss = (Confirmed Loss/Number Released)*100; W % Loss = (Confirmed Loss/Total Entering Delta)*100

[2]Because of the equipment malfunction that stranded a large proportion of the release in the gravel, this 3rd surrogate release is tracked for monitoring and information only and not for compliance with Action IV.2.3.

DWR-DES Revised 4/9/2012

Preliminary, subject to revision

Operations (4/10/12)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	2,000	Jones Pumping Plant	800
Reservoir Releases (cfs)			
Feather - Oroville	1,750	American - Nimbus	1,100
		Sacramento - Keswick	3,250
		Stanislaus - Goodwin	2,000 (decreasing to 1,500)
Reservoir Storage (in TAF, % of capacity)			
San Luis (SWP)	977	San Luis (CVP)	767
Oroville	3,061	Shasta	4,094
New Melones		Folsom	736 (encroached)
Delta Operations			
DCC	Closed as of 12/1/11	Sacramento River at Freeport (cfs)	19,017
Outflow Index (cfs)	18,200	San Joaquin River (cfs) at Vernalis	2,630
Total Delta Inflow (cfs)	22,820	OMR (daily) (cfs)	
Water Temperature (°F)		OMR 5 day (cfs)	-1,840
X2 (km)	64 (Port Chicago)	OMR 14 day (cfs)	-2,231

E/I (%)	11.6 (3-d avg.)		

Weather forecast: The upcoming storm, beginning today or tomorrow, is expected to provide 1–2 inches of precipitation in the Valley and about 2 inches in the Feather and American river basins. The 10-day forecast includes 3–4 inches of snow in the northern Sierras.

X2: The D-1641 obligation for number of days in April for Chipps Island is fulfilled.

New Proposed OMR Operations for April: On 4/9/12, DOSS received a proposal from DWR and the Public Water Agencies (PWA) (provided to DOSS before the call; copy attached) suggesting alternative OMR operations during April 2012. The proposal stated that OMR operations (of OMR no more negative than -2,500 cfs) from 4/1 to 4/7/12 was based "solely on the results of PTM" (Section III of the March 16, 2012, Joint Stipulation Technical Memo [tech memo]) and suggested that additional information such as hydrodynamics and previous VAMP data be considered in calculating OMR flows. The DWR/PWA proposal suggested a target OMR of -3,500 cfs through the end of April 2012 (including a change from -2,500 cfs this week) to balance fish protections with current adverse water supply conditions. Although the Delta Conditions Team (DCT) was listed as an author of this proposal, on checking with members of the DCT, it was noted that the DCT had not been involved in developing this proposal.

As triggers to reduce (make less negative) OMR flows, DWR/PWA proposed the use of the loss-density triggers under RPA Action IV.2.3 in the NMFS BiOp or the exposure criteria of acoustically tagged steelhead as defined in the NMFS tech memo.

The DCT met and discussed this proposal on Monday, 4/9/12 and Ford (DWR) summarized that discussion during the DOSS meeting. Some DCT members viewed the proposal as being positive and others viewed it as not sufficiently protective of fish.

The DCT discussion clarified that the proposal changed OMR operations only through April 14 because the proposed operations for April 15–30 were the same as those described in the tech memo. It was noted that the fish-density triggers under RPA Action IV.2.3 of the BiOp were designed to protect Sacramento basin fish and there was some discussion about the inability to distinguish the origin of either hatchery or wild steelhead at the fish-collection facilities based on current practices. DCT also discussed the timeline of implementation for any change if NMFS were to adopt the proposal. It was estimated that no change would occur before Thursday at the earliest. DCT did not make provide additional information to DOSS during the DCT call itself.

As part of the process provided in the joint stipulation (page 5, paragraph IV), members of the DCT will provide its individual information to DOSS. E-mails were received from Brad Cavallo, Doug Obegi, Emily Brown (attached); however, as some comment e-mails were received later into Monday evening, they were not forwarded to DOSS until just before, and even during, the DOSS meeting, and most, if not all, of DOSS did not have the opportunity to review all of the comments before the discussion. DOSS suggested that it would be helpful if the DCT provided formal/written notes from its meetings rather than having verbal summaries of its discussions.

DOSS review of Alternative Proposal
Key points of discussion are summarized below.

There was some discussion noting that the proposal evaluated the effect of alternative operations (OMR of -3,500 cfs) against current operations under the stipulation (OMR of -2,500 cfs), rather than against operations that would be expected absent the stipulation; however, it was also noted that the hydrodynamics of the -2,500 cfs OMR scenario was most likely not too different from the operations expected absent the stipulation (no rock barrier and an I:E ratio of 1:1).

The email from Brad Cavallo (Cramer Fish Sciences) provided supplemental data comparing steelhead salvage to OMR levels. DOSS discussed some of the challenges of assessing OMR effects using salvage data. One participant noted that relationships can also be affected by fish presence in the system (*i.e.*, the absence of a strong relationship between OMR and steelhead salvage may be because of low steelhead presence at that time). Once steelhead are taken at the pumps they are not available to be taken again the next month.

It was also noted that the effects of the reported hydrodynamic efforts on fish depend on the real-time distribution of fish. Information on steelhead distribution throughout the Delta is limited; not having real-time fish distribution data is a limitation whether using hydrodynamic or PTM data. After the fish are released next week for the sentinel supplemental acoustic tag study, there will be some information available about how hatchery steelhead, at least, are moving through the Delta.

There was discussion about how to evaluate the cumulative hydrodynamic effects of the proposed change in OMR based on the individual hydrodynamic effects reported, and how that might compare to PTM results. Byrne indicated that Cavallo, who provided the data attached in support of the April 6 DWR/PWA proposal, agreed to be available to DOSS by phone to discuss any concerns or clarify the analyses. DOSS agreed that there were different perspectives on the relative merits of using hydrodynamics or PTM. The group agreed to focus on the DWR/PWA proposal and available information to provide DOSS advice to WOMT. DOSS noted that there was not time to request additional analysis or clarifications because it had to provide DOSS advice to WOMT and NMFS within a couple of hours.

Greater proactive in-season management might be best done by continuing the current effort (*e.g.*, acoustic-tag studies intended to provide information about fish behavior, survival, etc., at junctions and channels) to try to identify what operational and fish-protection actions may provide the most benefit. There is not much information about San Joaquin basin steelhead at this point except that they are moving out of the tributaries and being salvaged. The general assumption is that they may be present throughout the Delta and at higher densities now than in February and March. There was a suggestion to evaluate available tools for management through a much more comprehensive study (maybe workshops) and discussions at a later date.

DFG is in the process of reviewing a request from DWR to make a determination of whether the 2009 NMFS Salmon BiOp, as modified by the Joint Stipulation Agreement, is still consistent with the California Endangered Species Act Fish and Game Code section 2080.1.

Other points made by DOSS members concerning the alternative proposal:

1) Using the RPA Action IV.2.3 loss-density triggers at the fish salvage facilities as a trigger for the DWR/PWA proposal is not appropriate since it occurs after the fish have been exposed to the action (-3,500 cfs OMR). In addition, the second-stage steelhead trigger

(12 wild steelhead/TAF) is relatively high in consideration of the numbers of steelhead outmigrating daily from the San Joaquin River and its tributaries.
2) Continue to use this line of analysis for next year; steelhead are already moving out of the San Joaquin basin in higher densities than in February.
3) There is no compelling evidence presented in the proposal to change the OMR.
4) Steelhead need protection similar to what they would have received under the I:E ratio.

DOSS participants were asked for any final comments relating to support for, or concerns about, the DWR/PWA proposal. No additional points were raised.

Based on the discussion, DOSS agreed that because there was (1) uncertainty about the risk to steelhead from changing OMR flows from -2,500 cfs to -3,500 cfs, and (2) no clear consensus that the approach taken in the proposal to assess the relative protection provided to steelhead by different scenarios provided more certainty than the approach taken in the OMR tech memo, the action should remain as specified in the April 4, 2012, NMFS determination.

DOSS agenda for next week's meeting: DOSS should continue considering any possible changes to the ordering of OMR levels during May and provide advice at next week's meeting, and not wait until the end of April to provide advice. The discussion should include the merits of switching the OMR flows of -1,250 cfs (currently scheduled for the first 2 weeks in May) with the OMR flows of -5,000 cfs (currently scheduled for the last 2 weeks in May). The tech memo provides the flexibility to switch the order of the experimental OMR flows if it is determined that switching the order is still protective or more protective of steelhead.

Smelt Working Group (SWG) update: SWG determined that the existing operations and constraints, or existing conditions, are sufficient for the protection of the smelt species. SWG will have 20-mm data available later this week to review. It might meet again on Friday to consider the DOSS advice and additional 20 mm data.

DOSS advice to WOMT and NMFS: The following advice is provided to WOMT and NMFS from today's conference call.

Remainder of April 8–14, 2012, time period: For the remainder of the April 8–14 time period, DOSS advises to *not* adopt the DWR/PWA proposed change to a target OMR of -3,500 cfs (and, therefore, continue implementing the OMR limit of -2,500 cfs as provided in the April 4, 2012, NMFS determination. Compliance will be measured using a 5-day running average that may be no more than 25% more negative than the target OMR [*i.e.* no more negative than -3,125 cfs.]).

April 15–30: For the first experimental period of April 15–April 30, DOSS advises WOMT and NMFS to accept the DWR/PWA proposal to operate to an OMR limit of -3,500 cfs from April 15–30, unless the acoustically tagged steelhead exposure criterion, as defined in the tech memo, is exceeded. An OMR target of -3,500 cfs over this period is consistent with the operations proposed for April 15–30 in the tech memo (see Table 1 of the tech memo).

Next meeting: The next regular DOSS conference call will be on 4/17/12 at 9:00 a.m.

Garwin Yip <garwin.yip@noaa.gov>

Fwd: DCT - Alternate OMR Proposal

1 message

Bruce Oppenheim <bruce.oppenheim@noaa.gov> Tue, Apr 10, 2012 at 8:53 AM
To: "Anderson, Craig" <Craig_Anderson@fws.gov>, "Barnett-Johnson, Racheal" <rbarnettjohnson@usbr.gov>, "Bartoo, Aondrea" <aondrea_bartoo@fws.gov>, Brandes <Pat_Brandes@fws.gov>, "Burau, Jon" <jrburau@usgs.gov>, "Byrne, Barbara" <Barbara.Byrne@noaa.gov>, "Cantrell, Scott" <SCANTREL@dfg.ca.gov>, "Chu, Andy" <andychu@water.ca.gov>, "Dibble, Chad" <cdibble@dfg.ca.gov>, "Ford, Mike" <jmford@water.ca.gov>, "Fujimura, Bob" <bfujimura@dfg.ca.gov>, "Fujitani, Paul" <pfujitani@mp.usbr.gov>, "Gleim, Jim" <jamesg@water.ca.gov>, "Guinee, Roger" <Roger_Guinee@fws.gov>, "Hannon, John" <JHannon@usbr.gov>, "Herbold.Bruce@EPA.gov" <Herbold.Bruce@epa.gov>, "Israel, Josh" <JAIsrael@usbr.gov>, Jason Roberts <JDROBERTS@dfg.ca.gov>, "Johnson, J." <jrjohnson@dfg.ca.gov>, "Kiteck, Elizabeth" <EKITECK@mp.usbr.gov>, "Kyler, Kari" <KKyler@waterboards.ca.gov>, "LeDoux-Bloom, Cynthia" <cledoux@water.ca.gov>, "Llaban, Angela" <allaban@water.ca.gov>, "Low, Alice" <ALOW@dfg.ca.gov>, "Morstein-Marx, Tom" <tmorsteinmarx@usbr.gov>, "Oppenheim, Bruce" <Bruce.Oppenheim@noaa.gov>, "Pettit, Tracy" <pettit@water.ca.gov>, "Reese, Kevin" <creece@water.ca.gov>, "Rocco, Barbara" <barbara.rocco@noaa.gov>, "Snider, Anne" <asnider@waterboards.ca.gov>, "Stuart, Jeff" <J.stuart@noaa.gov>, "Swart, Brycen" <Brycen.Swart@noaa.gov>, "Vincik, Robert" <rvincik@dfg.ca.gov>, "Washburn, Thuy" <twashburn@usbr.gov>, "Yamanaka, Dan" <dany@water.ca.gov>, "Yaworsky, Russell" <rpyaworsky@mp.usbr.gov>, "Yip, Garwin" <Garwin.Yip@noaa.gov>, "Yu, Edmund" <eyu@water.ca.gov>

DOSS group,
This message from Brad was additional info pertaining to the proposal we will be discussing today.

Bruce

---------- Forwarded message ----------
From: **Brad Cavallo** <bcavallo@fishsciences.net>
Date: Mon, Apr 9, 2012 at 4:46 PM
Subject: Re: DCT - Alternate OMR Proposal
To: bruce.oppenheim@noaa.gov
Cc: Elizabeth G' 'Kiteck <EKiteck@usbr.gov>, Joshua A Israel <jaisrael@usbr.gov>, Jason Roberts <JDROBERTS@dfg.ca.gov>, Tom Boardman <tboardman@apex.net>, Terry Erlewine <terlewine@swc.org>, Paul H Hutton <phutton@mwdh2o.com>, Doug Obegi <dobegi@nrdc.org>, ebrown@earthjustice.org, Igor Lać an <igor@bay.org>, "John M Ford (Mike)" <jmford@water.ca.gov>, Lenny F Grimaldo <lgrimaldo@usbr.gov>

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Thanks.

-Brad

Bradley J. Cavallo
President, Senior Scientist

Cramer Fish Sciences
13300 New Airport Road, Suite 102
Auburn CA 95602

office 530.888.1443
mobile 530.613.8459
www.fishsciences.net
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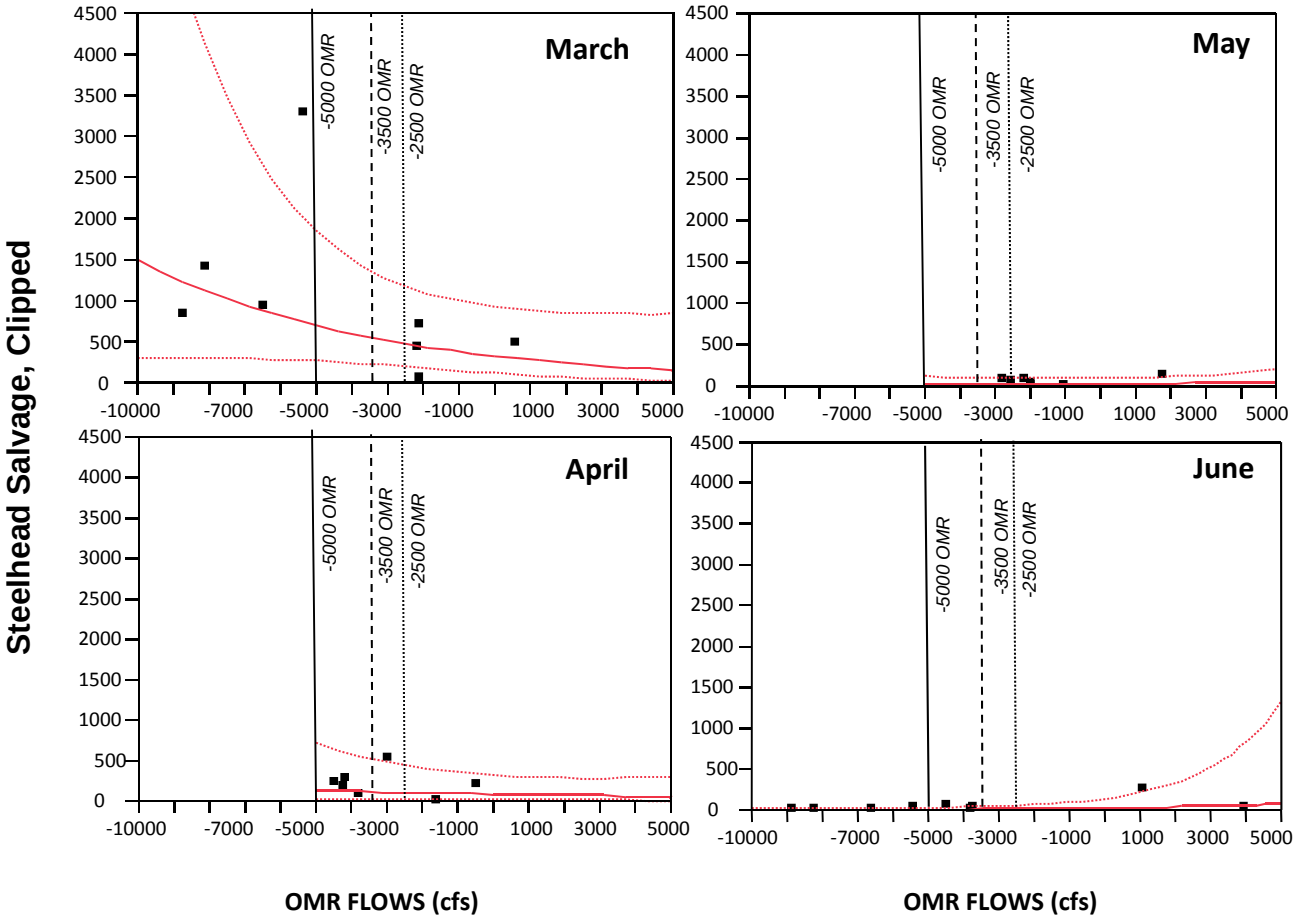
----- Original Message -----
From: John M Ford (Mike) <jmford@water.ca.gov>
To: Elizabeth G' 'Kiteck <EKiteck@usbr.gov>, Joshua A Israel <jaisrael@usbr.gov>, Jason Roberts <JDROBERTS@dfg.ca.gov>, Tom Boardman <tboardman@apex.net>, 'Terry Erlewine' <terlewine@swc.org>, Paul H Hutton <phutton@mwdh2o.com>, Doug Obegi <dobegi@nrdc.org>, ebrown@earthjustice.org, Igor Laćan <igor@bay.org>, Brad Cavallo <bcavallo@fishsciences.net>
Sent: Mon, 09 Apr 2012 16:00:02 -0700 (PDT)
Subject: DCT - Alternate OMR Proposal

If you have any comments re: the OMR proposal you would like to be considered at tomorrow's DOSS meeting, please send them via e-mail to bruce.oppenheim@noaa.gov

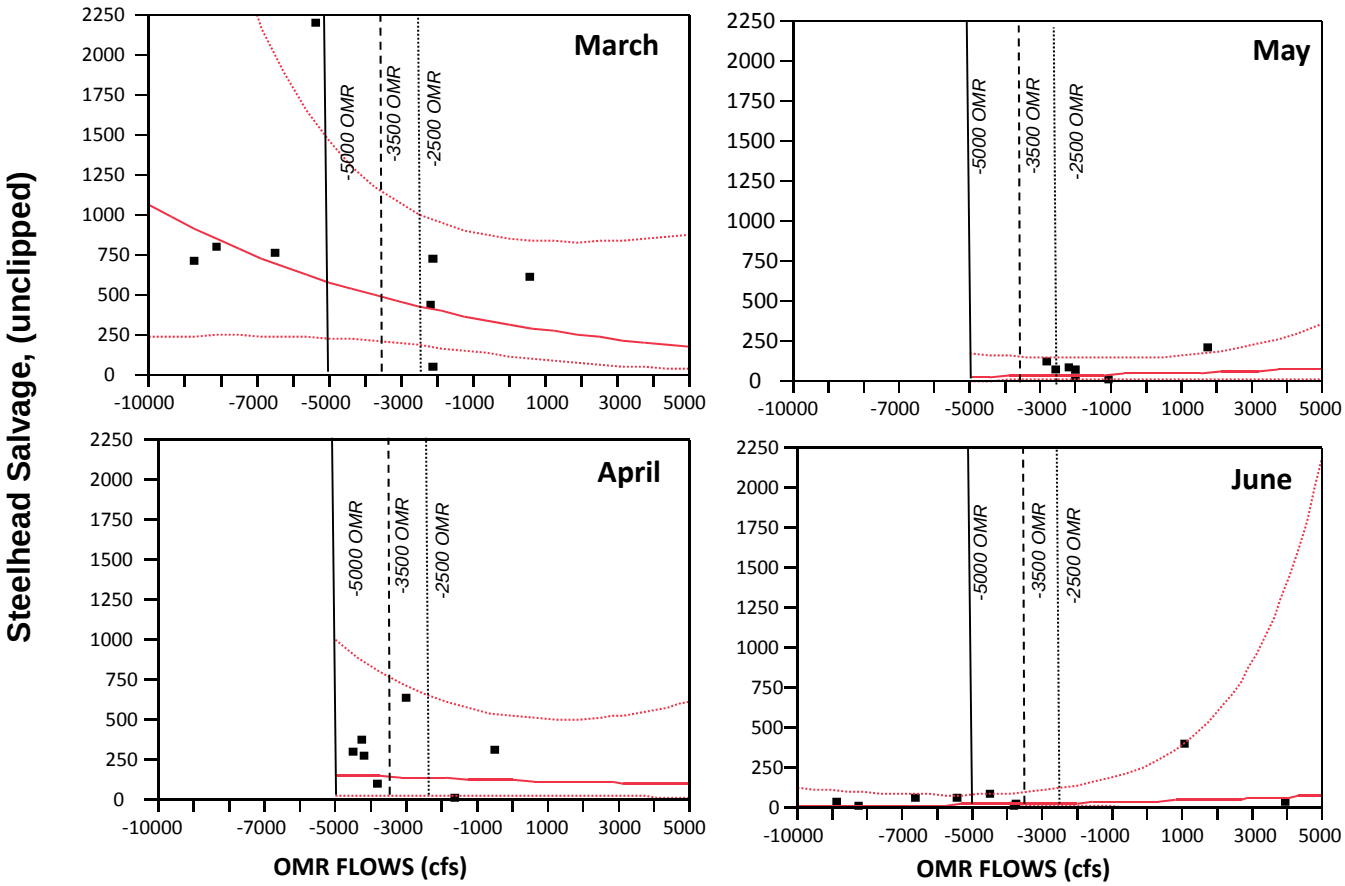
Montly_Steelhead_Salvage_Loss_vs_OMR.pptx
119K

Steelhead (Clip) Salmon Salvage Loss by Month



Salvage loss (SWP and CVP combined) of hatchery origin (clipped) steelhead . Curves are best fit log transformed salvage loss for Steelhead (Clip) where red dotted lines represent 95% confidence intervals. Figures illustrate that unlike delta smelt OMR limits, salmonid OMR limits are not supported or related to loss of steelhead smolts. Data source: same as used in NMFS BiOp Figure 6-71.

Steelhead (NON) Salmon Salvage Loss by Month



Salvage loss (SWP and CVP combined) of natural origin (unclipped) steelhead . Curves are best fit log transformed salvage loss for Steelhead (NON) salmon where red dotted lines represent 95% confidence intervals. Figures illustrate that unlike delta smelt OMR limits, salmonid OMR limits are not supported or related to loss of steelhead smolts. Data source: same as used in NMFS BiOp Figure 6-71.

Garwin Yip <garwin.yip@noaa.gov>

Fwd: DCT - Alternate OMR Proposal

1 message

Garwin Yip <garwin.yip@noaa.gov> Tue, Apr 10, 2012 at 10:07 AM
To: "Anderson, Craig" <Craig_Anderson@fws.gov>, "Barnett-Johnson, Racheal" <rbarnettjohnson@usbr.gov>, "Bartoo, Aondrea" <aondrea_bartoo@fws.gov>, Brandes <Pat_Brandes@fws.gov>, "Burau, Jon" <jrburau@usgs.gov>, "Byrne, Barbara" <Barbara.Byrne@noaa.gov>, "Cantrell, Scott" <SCANTREL@dfg.ca.gov>, "Chu, Andy" <andychu@water.ca.gov>, "Dibble, Chad" <cdibble@dfg.ca.gov>, "Ford, Mike" <jmford@water.ca.gov>, "Fujimura, Bob" <bfujimura@dfg.ca.gov>, "Fujitani, Paul" <pfujitani@mp.usbr.gov>, "Gleim, Jim" <jamesg@water.ca.gov>, "Guinee, Roger" <Roger_Guinee@fws.gov>, "Hannon, John" <JHannon@usbr.gov>, "Herbold.Bruce@EPA.gov" <Herbold.Bruce@epa.gov>, "Israel, Josh" <JAIsrael@usbr.gov>, Jason Roberts <JDROBERTS@dfg.ca.gov>, "Johnson, J." <jrjohnson@dfg.ca.gov>, "Kiteck, Elizabeth" <EKITECK@mp.usbr.gov>, "Kyler, Kari" <KKyler@waterboards.ca.gov>, "LeDoux-Bloom, Cynthia" <cledoux@water.ca.gov>, "Llaban, Angela" <allaban@water.ca.gov>, "Low, Alice" <ALOW@dfg.ca.gov>, "Morstein-Marx, Tom" <tmorsteinmarx@usbr.gov>, "Pettit, Tracy" <pettit@water.ca.gov>, "Reese, Kevin" <creece@water.ca.gov>, "Rocco, Barbara" <barbara.rocco@noaa.gov>, "Snider, Anne" <asnider@waterboards.ca.gov>, "Stuart, Jeff" <J.stuart@noaa.gov>, "Swart, Brycen" <Brycen.Swart@noaa.gov>, "Vincik, Robert" <rvincik@dfg.ca.gov>, "Washburn, Thuy" <twashburn@usbr.gov>, "Yamanaka, Dan" <dany@water.ca.gov>, "Yaworsky, Russell" <rpyaworsky@mp.usbr.gov>, "Yu, Edmund" <eyu@water.ca.gov>

DOSS,

The following are some comments from Doug Obegi.

-Garwin-

Garwin Yip
NOAA's National Marine Fisheries Service
Water Operations and Delta Consultations Branch Supervisor
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
Office: 916-930-3611
Cell: 916-716-6558
FAX: 916-930-3629

From: Obegi, Doug [dobegi@nrdc.org]
Sent: Monday, April 09, 2012 7:14 PM
To: Brad Cavallo; bruce.oppenheim@noaa.gov
Cc: Kiteck, Elizabeth G; Israel, Joshua A; Jason Roberts; Tom Boardman; 'Terry Erlewine'; Paul H Hutton; ebrown@earthjustice.org; Igor Laćan; John M Ford (Mike); Grimaldo, Lenny F
Subject: RE: DCT - Alternate OMR Proposal

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memorandum is hit.
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Thanks,
Doug

From: Brad Cavallo [bcavallo@fishsciences.net]
Sent: Monday, April 09, 2012 4:46 PM
To: bruce.oppenheim@noaa.gov
Cc: Elizabeth G' 'Kiteck; Joshua A Israel; Jason Roberts; Tom Boardman; 'Terry Erlewine'; Paul H Hutton; Obegi, Doug; ebrown@earthjustice.org; Igor Laćan; John M Ford (Mike); Lenny F Grimaldo
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--

Barb Byrne
Fish Biologist

barbara.byrne@noaa.gov | office: 916-930-5612 | fax: 916-930-3629
NMFS Central Valley Office | 650 Capitol Mall, Suite 5-100 | Sacramento, CA 95814

GAM reponse entrainment.pdf
151K

Garwin Yip <garwin.yip@noaa.gov>

Fwd: Re: DCT - Alternate OMR Proposal

1 message

Garwin Yip <garwin.yip@noaa.gov> Tue, Apr 10, 2012 at 10:15 AM
To: "Anderson, Craig" <Craig_Anderson@fws.gov>, "Barnett-Johnson, Racheal" <rbarnettjohnson@usbr.gov>, "Bartoo, Aondrea" <aondrea_bartoo@fws.gov>, Brandes <Pat_Brandes@fws.gov>, "Burau, Jon" <jrburau@usgs.gov>, "Byrne, Barbara" <Barbara.Byrne@noaa.gov>, "Cantrell, Scott" <SCANTREL@dfg.ca.gov>, "Chu, Andy" <andychu@water.ca.gov>, "Dibble, Chad" <cdibble@dfg.ca.gov>, "Ford, Mike" <jmford@water.ca.gov>, "Fujimura, Bob" <bfujimura@dfg.ca.gov>, "Fujitani, Paul" <pfujitani@mp.usbr.gov>, "Gleim, Jim" <jamesg@water.ca.gov>, "Guinee, Roger" <Roger_Guinee@fws.gov>, "Hannon, John" <JHannon@usbr.gov>, "Herbold.Bruce@EPA.gov" <Herbold.Bruce@epa.gov>, "Israel, Josh" <JAIsrael@usbr.gov>, Jason Roberts <JDROBERTS@dfg.ca.gov>, "Johnson, J." <jrjohnson@dfg.ca.gov>, "Kiteck, Elizabeth" <EKITECK@mp.usbr.gov>, "Kyler, Kari" <KKyler@waterboards.ca.gov>, "LeDoux-Bloom, Cynthia" <cledoux@water.ca.gov>, "Llaban, Angela" <allaban@water.ca.gov>, "Low, Alice" <ALOW@dfg.ca.gov>, "Morstein-Marx, Tom" <tmorsteinmarx@usbr.gov>, "Pettit, Tracy" <pettit@water.ca.gov>, "Reese, Kevin" <creece@water.ca.gov>, "Rocco, Barbara" <barbara.rocco@noaa.gov>, "Snider, Anne" <asnider@waterboards.ca.gov>, "Stuart, Jeff" <J.stuart@noaa.gov>, "Swart, Brycen" <Brycen.Swart@noaa.gov>, "Vincik, Robert" <rvincik@dfg.ca.gov>, "Washburn, Thuy" <twashburn@usbr.gov>, "Yamanaka, Dan" <dany@water.ca.gov>, "Yaworsky, Russell" <rpyaworsky@mp.usbr.gov>, "Yu, Edmund" <eyu@water.ca.gov>, "Oppenheim, Bruce" <Bruce.Oppenheim@noaa.gov>

DOSS,

Here's another comment from a Emily Brown, a member of the DCT.

-Garwin-

Garwin Yip
NOAA's National Marine Fisheries Service
Water Operations and Delta Consultations Branch Supervisor
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
Office: 916-930-3611
Cell: 916-716-6558
FAX: 916-930-3629

---------- Forwarded message ----------
From: **Jason Roberts** <JDROBERTS@dfg.ca.gov>
Date: Tue, Apr 10, 2012 at 10:10 AM
Subject: Fwd: Re: DCT - Alternate OMR Proposal
To: garwin.yip@noaa.gov

Garwin,

This is another email from the DCT group that should probably be sent out to DOSS.

Jason

>>> Emily Brown <ebrown@earthjustice.org> 4/10/2012 7:24 AM >>>
In addition to the concerns expressed by Doug below, which I share,

the
data gaps in our knowledge regarding current distribution of salmonids
and
Delta smelt, as well as the uncertainty surrounding real-time and
cumulative impacts of DWR's proposed flow adjustments on these fish
populations, caution against any immediate action this week. It would
be
premature to modify the flow targets already set for this week to the
less
protective levels identified in this proposal without a much more
thorough
examination of the potential impacts, including but not limited to the
impacts on Calaveras and Mokelumne River steelhead, and better data on
fish distribution in the Delta.

Thanks,
Emily

On 4/9/12 7:14 PM, "Obegi, Doug" <dobegi@nrdc.org> wrote:

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>
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it
>interacts with DOSS, but more importantly I don't believe that a
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>in operations this week is warranted or would provide adequate
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>Thanks,
>Doug
>
>_____
>From: Brad Cavallo [bcavallo@fishsciences.net]
>Sent: Monday, April 09, 2012 4:46 PM
>To: bruce.oppenheim@noaa.gov
>Cc: Elizabeth G' 'Kiteck; Joshua A Israel; Jason Roberts; Tom Boardman;
>'Terry Erlewine'; Paul H Hutton; Obegi, Doug; ebrown@earthjustice.org;
>Igor Lać an; John M Ford (Mike); Lenny F Grimaldo
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