

Summary of 03/16/16 Stanislaus Operation Group Meeting 1:30-3pm

Participants

Reclamation: Liz Kiteck, Tom Patton, Amanda Bahls, Carolyn Bragg, Janice Pinero (phone),
Kristin White, John Hannon (phone)

NMFS: Barb Byrne

FWS: J.D. Wikert, Craig Anderson (phone)

DFW: Tim Heyne (phone), Dom Giudice (phone), Ken Kundargi (phone)

DWR: Mike Ford

SWRCB: Larry Lindsay (phone), Chris Carr (phone), Laurel Karren (phone)

Operations

- Reclamation is currently meeting the required critical year minimum flow of 200 cfs from October to mid-April under RPA Action III.1.3. 200 cfs is the required base flow through mid-April, with the exception of two small winter instability flows (WIFs).
 - SOG advised that due to the low storage and limited Reclamation discretion, the intent of the January and February WIFs were met through natural storm pulses. NMFS approved advice on WIFs on January 15th and February 23rd.
- Current New Melones elevation is 863' (529 TAF). This is 23% of capacity and 37% of the historical average for this time. As of March 15, New Melones has gained over 90 TAF of storage since the beginning of the month.
- The snow water equivalent for the snow pack above New Melones is slightly below average.

Spring Pulse Flows

- Tim O'Laughlin [O'Laughlin & Paris, representing Oakdale Irrigation District and South San Joaquin Irrigation District (Districts)], called into the 3/16/16 Stanislaus River Forum (SRF) and recommended that SOG shape two pulse volumes – the appendix 2-E pulse volume with and without an additional release by the Districts (see *Update on Stanislaus River Forum* below for details).
 - SOG decided that, given the uncertainty of the additional pulse operation, it was only in their purview, at this time, to shape the appendix 2-E pulse volume. SOG would be willing to coordinate and shape the additional water if those releases are approved and the timing of the release is further defined.
- SOG discussion on shaping the appendix 2-E spring pulse:
 - Last year's spring pulse was moved into late March and was not very successful in getting fish to move.
 - Coordination with the Merced and Tuolumne to meet D-1641 pulse requirements: The Merced will not have a pulse this year. The Tuolumne spring pulse volume (based on the 60-20-20 SJ basin index) is not yet determined; could be as low as 11 TAF or as much as 60 TAF.
 - Considered whether SOG should time the 2-E volume to arrive at Vernalis during the default D-1641 31-day pulse period: The State Water Board will look into the possibility of allowing flexibility of D-1641 flows

outside the normal 31-day timeframe; SOG decided to shape the pulse based on what we thought was best for fish.

- Seepage issues may occur with sustained flows above 1,500 cfs.
 - Substantial gains in productivity through inundation of shallow water habitat require at least 2-3 weeks of inundation
 - Rafting preference of high flows on the weekends.
 - Considered how to minimize risk of stranding juvenile salmonids after decreases in flows¹.
- SOG recommended doing 6 weekend pulses beginning the first weekend in April with one middle pulse being higher than the rest. Please see the *SOG Advice* for further information.

Temperatures

- See attached *RPA Implementation Update* for further information.
- As noted in the *RPA Implementation Update*, temperatures at Knights Ferry have exceeded the 52°F 7DADM as of February 12th. The 7DADM peaked just less than 55°F on March 7th and has been trending downward. Temperatures at Orange Blossom Bridge exceeded the 55°F 7DADM on February 24th and peaked around 57.5°F on March 7th and have been trending downwards. Given the high air temperatures forecasted for the remainder of the month, further exceedances at Knights Ferry may occur.
- SOG does not propose releasing additional water for temperature control at this time.
- SOG expects water temperatures to improve somewhat during the appendix 2-E spring pulse flow releases.

Fish

- See attached *RPA Implementation Update* for further information.
- In addition to the *RPA Implementation Update*, CDFW provided an update to the group that there would be snorkel surveys in the canyon this summer looking for trout.

Restoration

- The Knights Ferry restoration project is not expected to move forward at this time because of Corps concerns.
- The Button Bush restoration project is still underway and in the permitting phase, but there is a chance to break ground on a scaled-down version this summer.
- J.D. Wikert (FWS) is working with a private landowner on another potential restoration site near Oakdale. Initial surveying and soil test pits should begin this month.
- John Hannon (Fish Biologist, Reclamation) provided an update on gravel restoration projects. The project at Two Mile Bar is still in progress, and the design is complete.

¹ See specifics on stranding considerations in the SOG Advice.

Reclamation is expecting to put gravel in at Goodwin, but there are still some permits that need to be issued.

Update on Stanislaus River Forum

- The SRF agenda covered operations and RPA implementation.
- Tim O’Laughlin shared the Districts’ plan for a spring release on the Stanislaus.
 - He reported that if the Districts can pick up all the water in the Delta, they intend to release 60-75 TAF above the 2-E flows. This water could contribute to meeting the pulse requirements at Vernalis (D-1641) and to creating a larger pulse on the Stanislaus. The Districts recommended that SOG plan on shaping a pulse that includes the base flow, the 2-E pulse volume, and the 60-75 TAF. In shaping this water, the Districts recommend:
 - Keeping in mind D-1641 requirements
 - Keeping maximum flows (up to 3,500 cfs) for no more than 3 days to prevent seepage issues
 - Sustained flows (more than 3 days) be kept below 1,500 cfs

Drought Planning

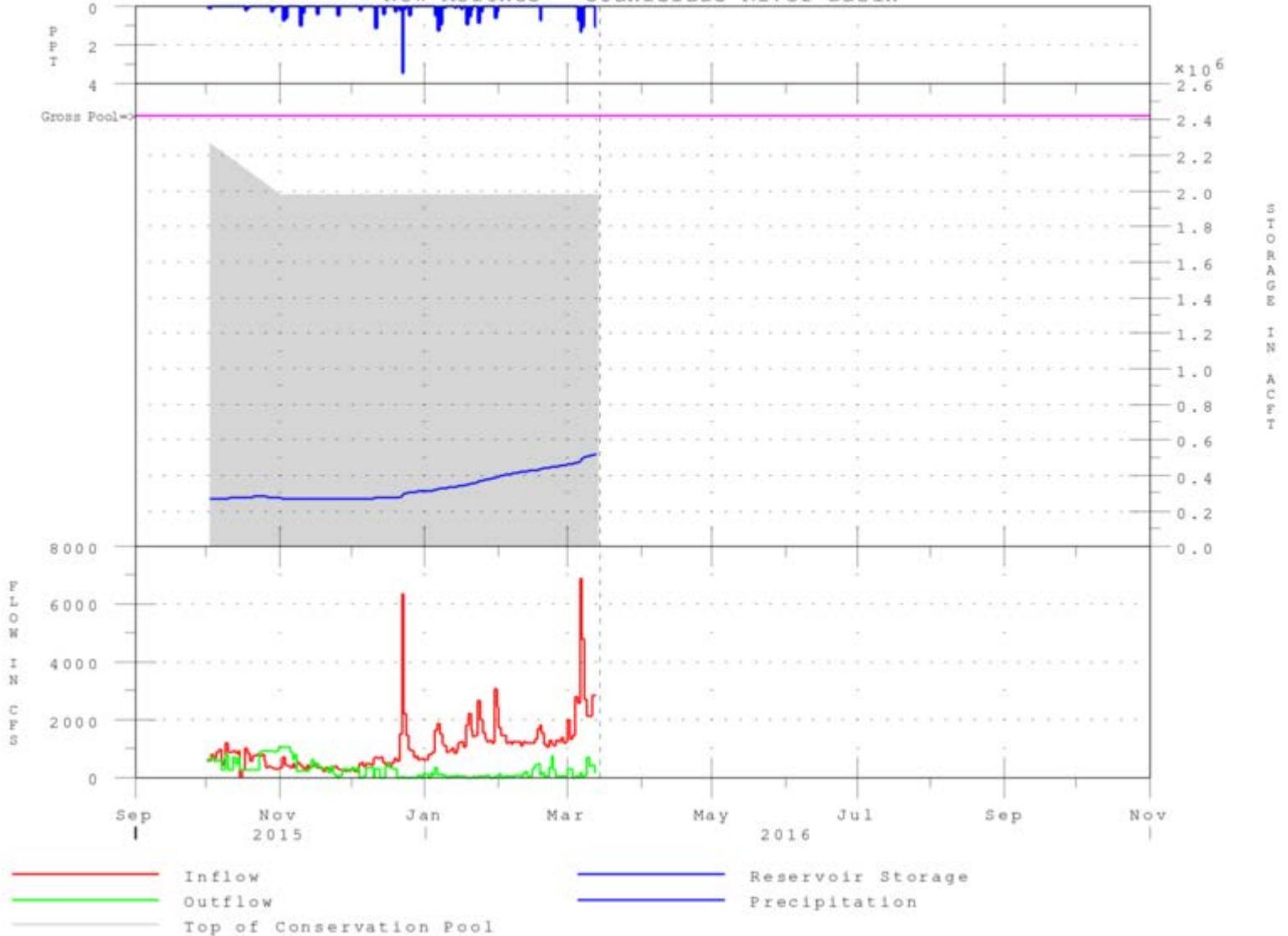
- SOG was notified of the possibility of a Temporary Urgency Change Petition (TUCP) being filed with the State Water Board that might affect flows at Vernalis.

Next Steps

- Next SOG meeting is April 20th at 1:00 pm at Reclamation’s Central Valley Office.

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New Melones - Stanislaus River Basin



UNITED STATES DEPARTMENT OF THE INTERIOR
 U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

MARCH 2016

TULLOCH RESERVOIR DAILY OPERATIONS

RUN DATE: 03/14/2016

DAY	ELEV	STORAGE ACRE-FEET RES.	CHANGE	COMPUTED* INFLOW C.F.S.	NEW MELONES RELEASE	POWER	RELEASE - C.F.S. SPILL	OUTLET	EVAP C.F.S. (1)
		54,567							
1	499.55	54,823	+256	344	319	211	0	0	4
2	499.71	54,994	+171	305	294	207	0	7	5
3	499.34	54,599	-395	22	10	217	0	0	4
4	499.02	54,257	-342	46	27	217	0	0	1
5	498.92	54,152	-105	164	63	217	0	0	0
6	499.66	54,940	+788	625	165	217	0	0	11
7	500.47	55,812	+872	661	29	218	0	0	3
8	499.92	55,218	-594	302	105	586	0	15	0
9	499.90	55,196	-22	806	695	815	0	0	2
10	499.25	54,503	-693	470	383	581	91	145	2
11	499.60	54,876	+373	889	425	700	0	0	1
12	499.56	54,834	-42	595	194	614	0	0	2
13	500.92	56,300	+1,466	1,361	236	616	0	0	6
TOTALS			+1,733	6,590	2,945	5,416	91	167	41
ACRE-FEET			+1,733	13,071	5,841	10,743	180	331	81

*COMPUTED INFLOW IS SUM OF CHANGE IN STORAGE, RELEASES, AND EVAPORATION.

SUMMARY
 RELEASE (ACRE-FEET)

POWER	10,743	OUTLET	331
SPILL	180	TOTAL	11,254

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA

MARCH 2016

NEW MELONES LAKE DAILY OPERATIONS

RUN DATE: March 14, 2016

DAY	ELEV	STORAGE		COMPUTED* INFLOW C.F.S.	RELEASE - C.F.S.			EVAPORATION		PRECIP INCHES
		1000 ACRE-FEET IN LAKE	CHANGE		POWER	SPILL	OUTLET	C.F.S.	INCHES	
		458.7								
1	849.28	462.0	+3.3	1,996	319	0	0	19	.13	.00
2	849.73	464.0	+2.0	1,328	294	0	0	22	.15	.00
3	850.36	466.8	+2.8	1,447	10	0	0	16	.11	.00
4	851.58	472.3	+5.5	2,797	27	0	0	4	.03	.08
5	852.69	477.3	+5.0	2,597	63	0	0	0	.00	.78
6	855.58	490.6	+13.2	6,886	165	0	0	46	.31	1.37
7	857.61	500.0	+9.4	4,796	29	0	0	12	.08	1.13
8	858.72	505.2	+5.2	2,728	105	0	0	0	.00	.05
9	859.33	508.1	+2.9	2,153	695	0	0	9	.06	.01
10	860.07	511.6	+3.5	2,155	383	0	0	8	.05	.00
11	861.07	516.3	+4.8	2,825	425	0	0	5	.03	.00
12	862.17	521.6	+5.3	2,857	194	0	0	11	.07	1.14
13	863.80	529.4	+7.9	4,220	236	0	0	25	.16	.42
TOTALS			+70.8	38,785	2,945	0	0	177	1.18	4.98
ACRE-FEET			+70,800	76,930	5,841	0	0	351		

COMMENTS:

* COMPUTED INFLOW IS THE SUM OF CHANGE IN STORAGE, RELEASES AND EVAPORATION.

SUMMARY

	RELEASE (ACRE-FEET)			PRECIPITATION	
POWER	5,841	OUTLET	0	THIS MONTH =	4.98
SPILL	0	TOTAL	5,841	JULY 1, 2015 TO DATE =	25.74

OAKDALE IRRIGATION DISTRICT
 SOUTH SAN JOAQUIN IRRIGATION DISTRICT
 TRI DAMS PROJECT-CALIFORNIA

MARCH 2016

GOODWIN RESERVOIR DAILY OPERATIONS

RUN DATE: March 14, 2016

DAY	ELEV	STORAGE		TULLOCH	RIVER		RELEASE - C.F.S.	
		ACRE-FEET	CHANGE		RELEASE	OUTLET	SPILL	JOINT
		RES.					MAIN	MAIN
		525						
1	359.83	525	+0	211	0	201	5	0
2	359.83	525	+0	214	0	201	11	0
3	359.83	525	+0	217	0	203	8	0
4	359.83	525	+0	217	0	205	8	0
5	359.83	525	+0	217	0	207	8	0
6	359.83	525	+0	217	0	213	7	0
7	359.83	525	+0	218	0	223	8	0
8	359.81	524	-1	601	0	205	383	0
9	359.81	524	+0	815	0	202	599	0
10	359.81	524	+0	817	0	211	599	0
11	359.83	525	+1	700	0	215	489	0
12	359.81	524	-1	614	0	209	406	0
13	359.83	525	+1	616	0	230	406	0
TOTALS			+0	5,674	0	2,725	2,937	0
ACRE-FEET			+0	11,254	0	5,405	5,826	0

JOINT MAIN OPERATED BY SSJID AND OID.
 SOUTH MAIN OPERATED BY OID.

SUMMARY
 RELEASE (ACRE-FEET)

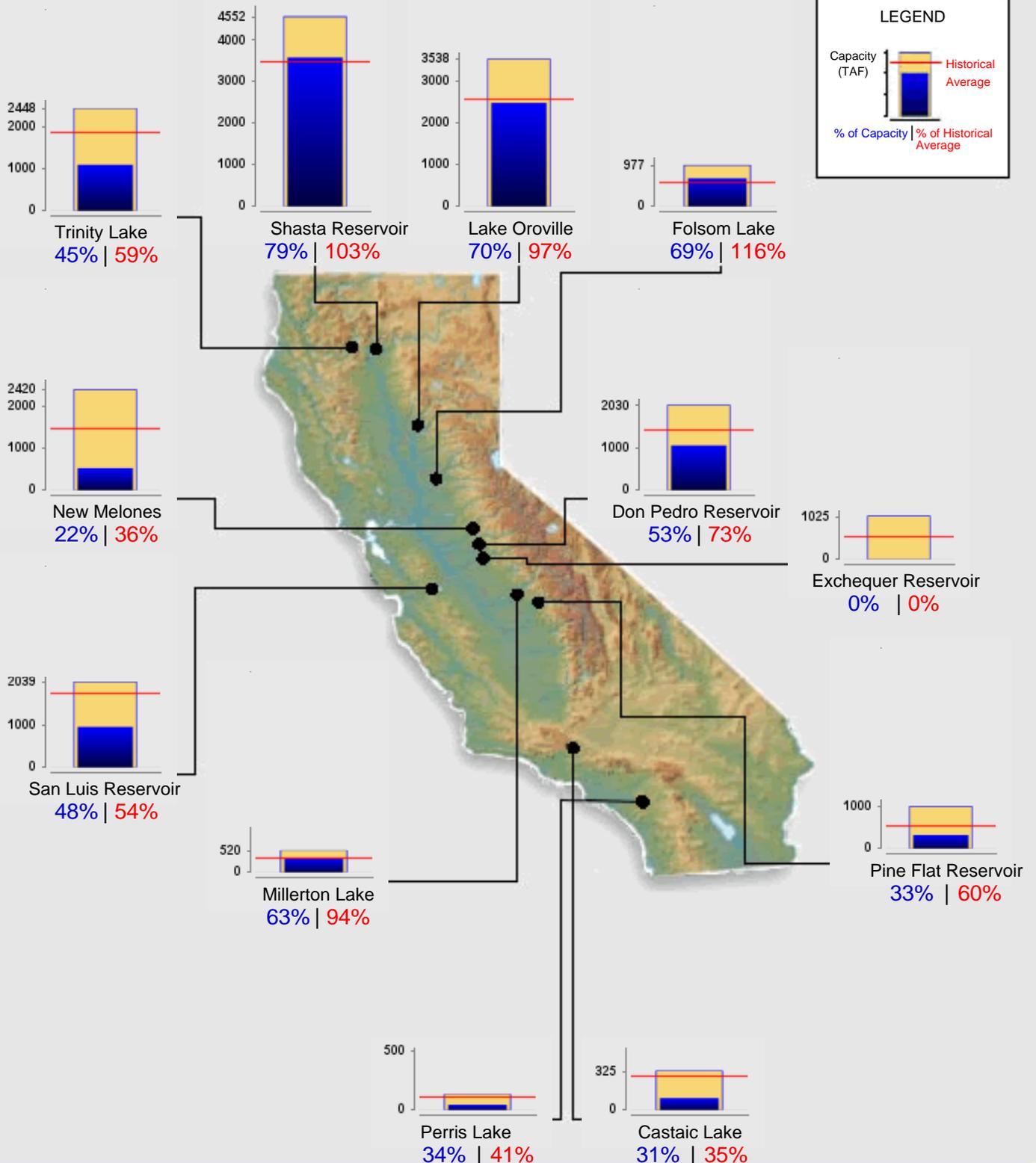
JOINT MAIN CANAL	5,826	OUTLET	0
SOUTH MAIN CANAL	0	SPILL	5,405
		TOTAL	11,231



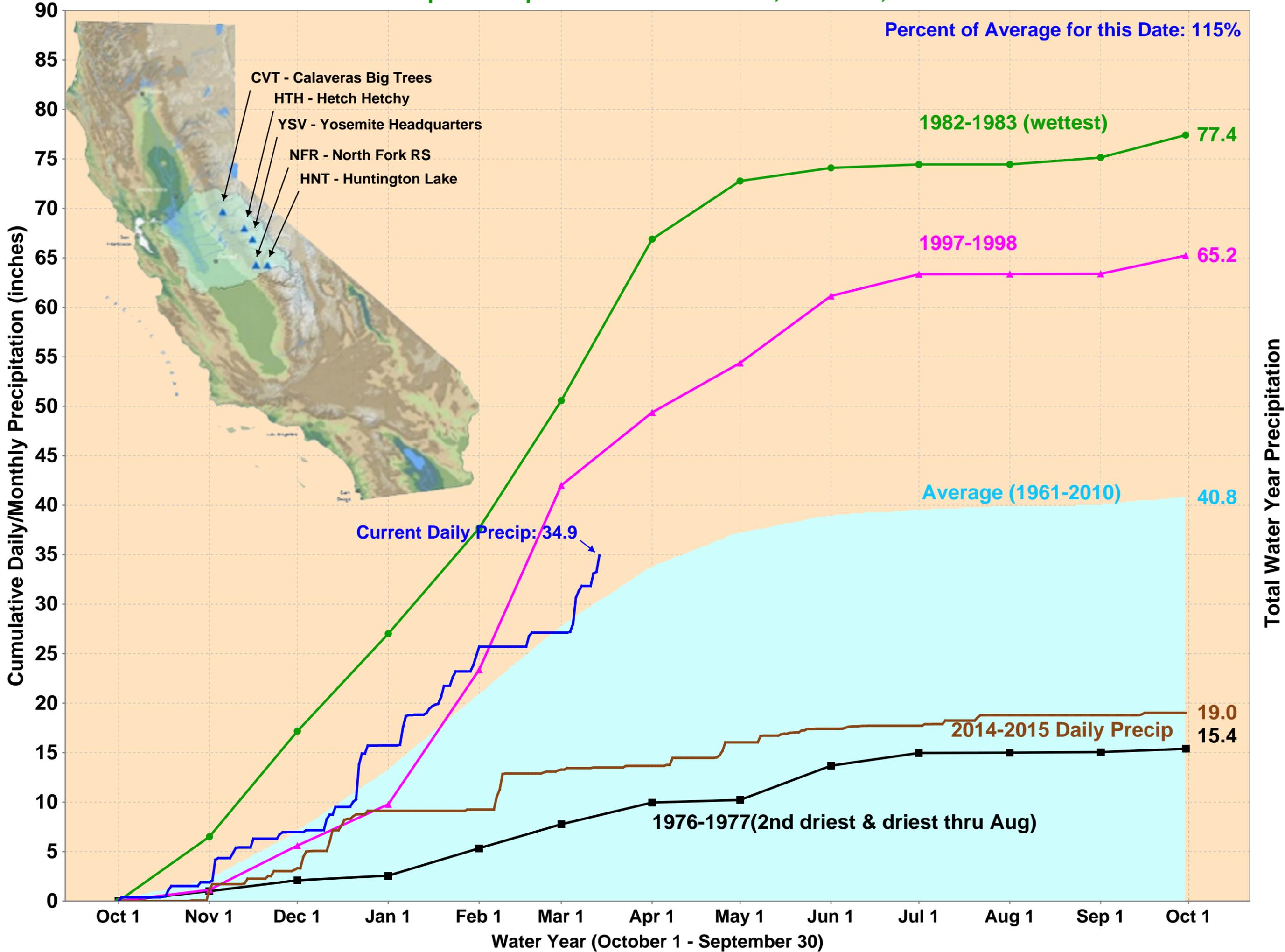
Reservoir Conditions

Ending At Midnight - March 13, 2016

CURRENT RESERVOIR CONDITIONS



San Joaquin Precipitation: 5-Station Index, March 14, 2016



3/16/2016

Update on NMFS RPA Implementation:

Reasonable and prudent alternative (RPA) Action III.1.3

October through mid-April, the Appendix 2-E minimum flow schedule for the Critical yeartype (based on the New Melones Water supply parameter, not the San Joaquin “60-20-20” Index) requires minimum instream flows of 200 cfs. In January and February, the Critical year schedule required one small winter instability flow (793 AF in addition to the 200 cfs base flow) in each month. The Critical year schedule also requires a spring outmigration pulse (30,842 AF, calculated against a base flow of 200 cfs in April and a 150 cfs base flow in May).

SOG advised, and NMFS approved, that for January 2016, the natural storm pulse January 5-7, 2016 (realized storm flow in-river at Orange Blossom Bridge was 1169 AF in addition to the 200 cfs base flow) be considered to satisfy the January winter instability flow (Critically Dry yeartype) in the Appendix 2-E flow schedule. Details were provided in the handouts for the 1/20/16 SRF & SOG meetings.

SOG advised, and NMFS approved, that for February 2016, the multiple natural storm events in the second half of January (realized storm flow in-river at Orange Blossom Bridge was 2,705 AF in addition to the 200 cfs base flow; see Figure 1) be considered to satisfy the February winter instability flow (Critically Dry yeartype) in the Appendix 2-E flow schedule.

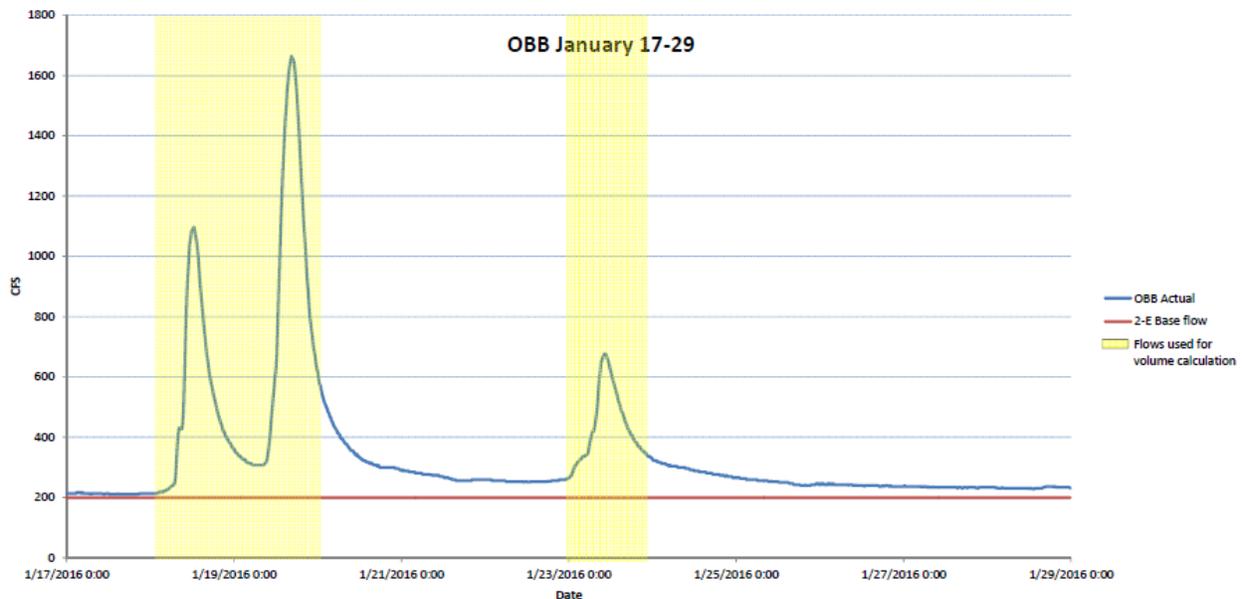


Figure 1: January storm events advised by SOG to be considered to satisfy the February 2016 winter instability flow.

SOG will discuss implementation of the spring pulse flow at today’s SOG meeting.

RPA Action III.1.2

From January 1 to May 31, the temperature criteria in Action III.1.2 of the 2009 NMFS BiOp are that water temperature (measured as the 7 day average of daily maximum temperature, or 7DADM) be below 55°F at Orange Blossom Bridge for steelhead spawning and incubation and be below 52°F at Knights Ferry for steelhead smoltification. The 7DADM temperature at Orange Blossom Bridge exceeded the 55°F temperature criterion in late February but is now trending downward (Figure 2). The 7DADM temperature at Knights Ferry exceeded the 52°F criterion in mid-February and is also now trending downward (Figure 2). Action III.1.2 provides an exception procedure; SOG will discuss this afternoon.

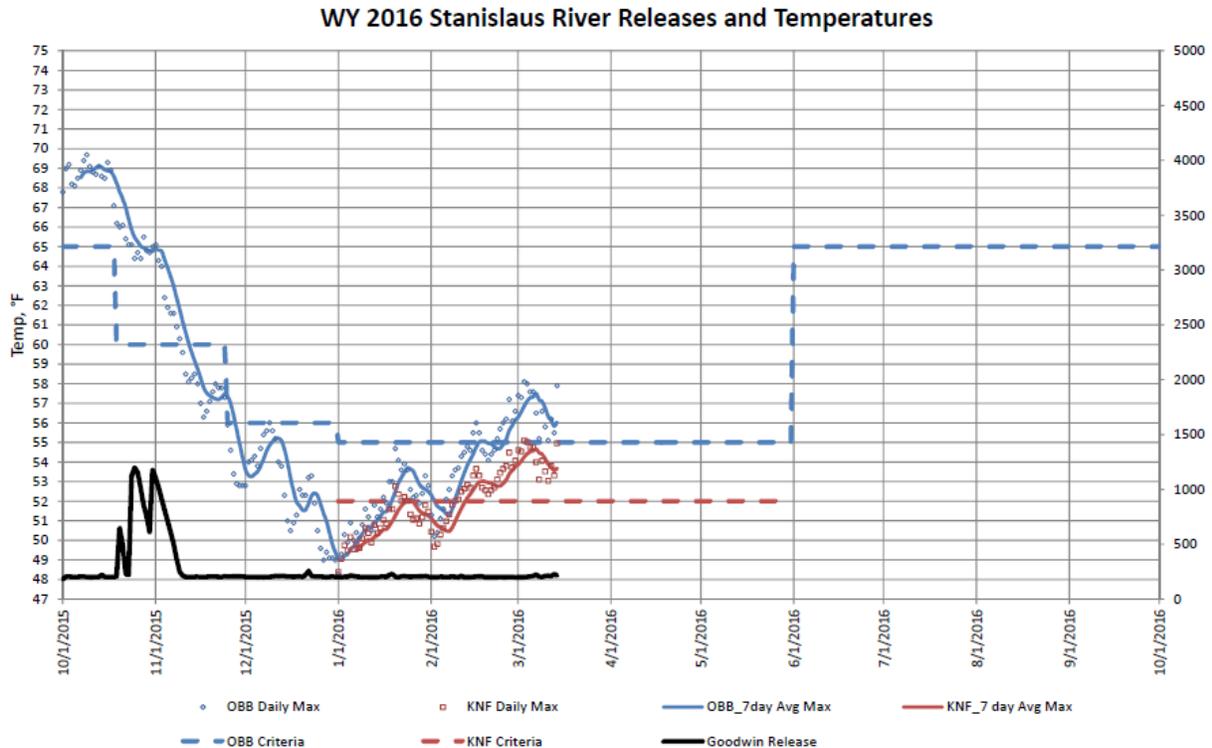


Figure 2: Stanislaus water temperatures at Orange Blossom Bridge (measured) and Knights Ferry (estimated). The 7DADM targets October through December are per the temperature management plan submitted to the SWRCB in August 2015; the 7DADM targets January through September are per Action III.1.2 in the NMFS BiOp.

Update on Fish Monitoring

The California Department of Fish & Wildlife (CDFW) concluded their fall-run Chinook carcass and redd surveys in January; the latest information on this monitoring effort was reported in the fish monitoring update for the 1/20/16 SRF meeting.

The Stanislaus weir near Riverbank began sampling on Friday, 9/15/15, and was removed on 2/12/16, completing monitoring for the season. The latest information on this monitoring effort was reported in the fish monitoring update for the 2/17/16 SRF meeting.

Rotary screw trapping at Oakdale and Caswell began in early January. Chinook catch at these sampling locations is summarized in the figures below, provided by FISHBIO in their 3/15/16 San Joaquin Basin Update.

