



# United States Department of the Interior

BUREAU OF RECLAMATION  
Central Valley Operations Office  
3310 El Camino Avenue, Suite 300  
Sacramento, California 95821

IN REPLY  
REFER TO:

CVO-400  
WTR-4.10

**FEB 26 2016**

VIA ELECTRONIC MAIL

Ms. Barbara Evoy  
Deputy Director, Division of Water Rights  
State Water Resources Control Board  
P.O. Box 2000  
Sacramento, CA 95812

Subject: Monitoring and Reporting Program on Water Rights Order No. 90-5 (Water Rights)

Dear Ms. Evoy:

For the month of January, the temperature control point was set at Clear Creek, per the recommendation of the Sacramento River Temperature Task Group.

During January 2016, the average daily water temperature compliance of 57.0° F or less was met at the Clear Creek compliance point on the Sacramento River. During the month of January 2016, the average monthly water temperature was 49.1° F at Clear Creek.

Enclosed is the monitoring report for January 2016, under Order No. 90-5. The report contains the following data:

<b>Station</b>	<b>Description</b>
Shasta Inlets (R-1) “	Water Temperature Profile Turbidity, monthly, ntu
Shasta Dam (R-2) “	Water Temperature, daily average, degrees F Turbidity, ntu, monthly
Shasta Dam (R-2a)	Flow, average daily, cfs
Keswick (R-3) “	Water Temperature, daily average, degrees F Turbidity, ntu, monthly
Keswick (R-3a)	Flow, average daily, cfs
Spring Creek Power plant (R-4) “	Water Temperature, daily average, degrees F Turbidity, ntu, monthly Flow, average daily cfs

<b>Station</b>	<b>Description</b>
Jellys Ferry (R-5) (Control Point)	Water Temperature, daily average, degrees F Turbidity, ntu, monthly
Sacramento at Delta (R-6)	Water Temperature, monthly, degrees F Turbidity, ntu, monthly
McCloud (R-7) “	Water Temperature, monthly, degrees F Turbidity, ntu, monthly
Pit River (R-8) “	Water Temperature, monthly, degrees F Turbidity, ntu, monthly
Lewiston (R-9)	Water Temperature, daily average, degrees F
Lewiston (R-9a)	Flow, average daily, cfs

Please contact Ms. Thuy Washburn at 916-979-2193, should you have any questions regarding this data.

Sincerely,



Elizabeth Kiteck  
Chief Water Operations

Enclosures

cc: Mr. Kenneth Emanuel  
Division of Water Rights  
State Water Resources Control Board  
P.O. Box 2000  
Sacramento, CA 95812  
(w/encl)

Central Valley Operations Office  
 \*Data obtained from the California Data Exchange Center  
 \*\*Data calculated by the Central Valley Operations Office  
 \*\*\*Measurements taken by the Northern CA Area Office Personnel

**Water Temperature Data in Degrees F**

**January 2016**

Req. Sampling Frequency - Daily Average (Reading indicates daily average)							Control Pt 1/1 to 1/31			Req. Sampling Frequency - Monthly		
Date	Sta 2 Shd*	Sta 3 Kwk*	Sta 4 Spp**	Sta 5 Ccr**	Sta9 Lws*	Sta10 Nfh*	Sta 6 Dlt***	Sta 7 Mss***	Sta 8 Pmn***			
1	51.1	50.2	49.2	48.8	42.1	39.0						
2	50.8	50.0	49.0	49.1	42.5	38.2						
3	50.6	49.9	48.9	49.3	43.0	40.4						
4	50.4	49.9	48.7	49.2	43.1	41.4						
5	50.3	49.8	47.8	49.1	43.4	42.7						
6	50.0	49.6	47.6	49.2	43.6	43.0						
7	50.0	49.3	47.4	49.3	43.9	43.3						
8	49.8	49.2	47.5	49.2	43.8	43.8						
9	49.6	49.2	48.0	48.9	43.8	43.6						
10	49.6	49.1	47.7	49.3	43.8	43.7						
11	49.4	49.2	47.2	49.0	44.4	43.7						
12	49.2	49.0	47.2	49.2	44.6	44.6						
13	48.8	48.8	47.3	49.2	44.5	44.8						
14	48.8	48.6	47.0	48.0	43.8	43.0						
15	48.8	48.2	47.1	48.3	44.2	42.2						
16	48.8	48.2	47.3	48.4	44.2	43.4						
17	49.0	48.4	47.1	48.9	44.3	44.5						
18	48.6	48.5	47.2	49.4	44.6	45.4						
19	48.4	48.8	47.0	49.9	44.6	46.4						
20	47.9	49.1	47.1	49.5	44.4	45.6						
21	48.1	48.6	47.1	49.3	44.8	46.6						
22	48.1	48.3	47.3	49.3	45.1	47.1						
23	47.9	48.7	47.2	49.4	44.7	46.5						
24	47.7	49.0	47.3	49.1	44.7	45.7						
25	48.0	49.2	47.3	49.9	44.7	45.7						
26	48.0	48.8	47.3	49.4	44.9	46.1	45.0					
27	47.9	48.6	47.5	49.3	45.0	46.3			44.6			
28	47.7	48.2	47.5	48.6	45.1	46.1						
29	47.9	48.1	47.4	48.8	45.2	46.1						
30	47.9	48.1	47.4	48.8	44.9	45.4						
31	47.7	47.8	47.4	47.9	44.5	44.3						

Site not visited in January 2016, per NCAO staff.

**Control Point: 56.0 degrees at Clear Creek from 4/1/2015 to 4/17/2015.  
 58.0 degrees at Clear Creek from 4/18/2015 to 5/14/2015.  
 56.0 degrees at Clear Creek from 5/15/2015 to 6/4/2015.  
 Target 57.0 degrees not to exceed 58.0 degrees at Clear Creek from 6/5/2015 to 1/31/2016.**

**Cross Channel Gate Operation:**  
 January 1 - 31 closed

**Measurements taken by the Northern CA Area Office Personnel  
January 2016**

<b>TEMPERATURE</b>				
Sampling Frequency				
Every two weeks May 1 through November 30.				
	Sample 1	Sample 2	Sample 3	Sample 4
	1/20/2016			
Lake Elev	Temperature	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F	Degrees F
	(400 Feet Upstream of Dam)			
	Time: 11:50	Time:	Time:	Time:
625	45.3			
650	45.4			
675	45.4			
700	45.5			
725	45.7			
750	46.3			
775	46.8			
800	47.0			
825	47.7			
850	48.9			
875	49.0			
900	49.0			
925	49.1			
950				
975				
1000				
1025				
1050				
Lake Surface	947.0' - 49.1			

<b>TURBIDITY</b>				
Sampling Frequency				
Monthly, except weekly May 1 through Sep 30, when turbidity at Station 2 is equal to or greater than 10 NTU				
	Sample 1	Sample 2	Sample 3	Sample 4
	1/20/2016			
Lake Elev	Turbidity	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu	ntu
	(400 Feet Upstream of Dam)			
	Time: 11:50	Time:	Time:	Time:
625	4.3			
650	3.7			
675	3.5			
700	3.3			
725	2.8			
750	2.0			
775	1.8			
800	2.1			
825	2.6			
850	2.0			
875	1.8			
900	1.7			
925	1.7			
950				
975				
1000				
1025				
1050				
Lake Surface	947.0' - 1.6			

Central Valley Operations Office  
 Measurements taken by the Northern CA Area Office Personnel

**Summary of Turbidity and Dissolved Oxygen Water Sampling  
 January 2016**

Turbidity Measurements, NTU

Sampling Frequency

Monthly, except weekly from May 1 through September 30, when turbidity at Station 2 is equal to or greater than 10 NTU.

Station								
	R-2	R-3a	R-4	R-5	R-6	R-7	R-8	
	Shasta Dam		Spring	Clear Creek				
	Discharge	Keswick	Creek PP	Control Point	Sacramento	McCloud	Pit	
Day	at Bridge	Discharge	Discharge	1/1 to 1/31	River (DLT)	River	River	
7			1.0			Site not visited in January 2016, per NCAO staff.		
12	3.0							
13				6.0				
25		6.3						
26					3.0			
27								31.9

Dissolved Oxygen, mg/l

Sampling Frequency

Every two weeks from May 1 through September 30; samples to be taken before 1000 hours.

Station				
	R-2	R-3	R-5	
	Shasta Dam			Hour
	Discharge	Keswick		Time Sample
Day	at Bridge	Discharge	Clear Creek	Taken
	No Requirement October through April.			

**Temperature Control Point:**

56.0 degrees at Clear Creek from 4/1/2015 to 4/17/2015.

58.0 degrees at Clear Creek from 4/18/2015 to 5/14/2015.

56.0 degrees at Clear Creek from 5/15/2015 to 6/4/2015.

Target 57.0 degrees not to exceed 58.0 degrees at Clear Creek from 6/5/2015 to 1/31/2016.

**QG**  
**GENERATION RELEASE, CFS**  
**WATER YEAR OCTOBER 2015 TO SEPTEMBER 2016**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,701	4,248	4,120	2,851								
2	5,680	4,351	3,597	2,573								
3	5,648	5,011	4,233	2,570								
4	5,222	4,048	3,150	2,693								
5	5,649	4,740	2,511	2,020								
6	5,732	4,341	3,604	2,058								
7	6,419	4,456	3,756	2,175								
8	6,374	4,480	4,236	2,223								
9	5,750	4,508	3,565	2,199								
10	5,635	4,975	3,349	2,245								
11	5,559	4,165	3,288	2,621								
12	6,084	4,206	3,219	2,790								
13	5,843	4,281	3,129	1,760								
14	5,619	4,308	3,404	1,382								
15	4,995	4,018	3,847	1,851								
16	5,560	3,170	4,295	1,753								
17	5,747	4,073	4,139	827								
18	5,165	3,737	3,327	1,070								
19	5,503	3,900	3,626	1,098								
20	6,131	3,685	3,497	962								
21	4,776	3,481	2,724	109								
22	4,020	3,554	3,411	400								
23	4,646	3,593	3,556	762								
24	4,441	4,062	3,346	764								
25	4,711	4,045	3,848	867								
26	4,218	3,492	2,388	1,993								
27	4,444	3,605	2,222	1,784								
28	3,627	3,796	3,235	1,072								
29	4,538	3,572	2,967	1,077								
30	4,774	3,771	2,958	491								
31	4,687		2,974	393								
<b>TOTAL</b>	<b>162,898</b>	<b>121,672</b>	<b>105,521</b>	<b>49,433</b>								
<b>MEAN</b>	<b>5,255</b>	<b>4,056</b>	<b>3,404</b>	<b>1,595</b>								
<b>MAX</b>	<b>6,419</b>	<b>5,011</b>	<b>4,295</b>	<b>2,851</b>								
<b>MIN</b>	<b>3,627</b>	<b>3,170</b>	<b>2,222</b>	<b>109</b>								

WATER YEAR TOTALS		
TOTAL	439,524	
DAILY MEAN	3,573	
DAILY MAX	6,419	10/07/2015
DAILY MIN	109	01/21/2016

**QT** **TOTAL RELEASE, CFS**

**WATER YEAR OCTOBER 2015 TO SEPTEMBER 2016**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,542	5,068	3,995	3,121								
2	6,544	4,685	3,996	3,121								
3	6,545	4,698	3,993	3,121								
4	6,543	4,702	3,997	3,119								
5	6,545	4,704	4,058	3,076								
6	6,544	4,704	4,208	3,080								
7	6,544	4,701	4,211	3,091								
8	6,536	4,704	4,213	3,086								
9	6,505	4,702	4,204	3,078								
10	6,534	4,701	4,161	3,051								
11	6,510	4,697	4,190	3,064								
12	6,511	4,505	4,192	3,065								
13	6,509	4,288	4,139	3,068								
14	6,506	4,290	4,137	3,033								
15	6,510	4,150	4,156	3,088								
16	6,509	3,953	4,162	3,120								
17	6,506	3,944	4,171	3,013								
18	6,498	4,039	4,171	2,994								
19	6,652	4,081	4,172	2,970								
20	6,188	4,035	4,171	2,981								
21	5,913	4,053	4,170	2,974								
22	5,732	4,054	4,153	2,973								
23	5,472	4,061	3,889	2,932								
24	5,467	4,054	3,632	2,961								
25	5,388	4,044	3,335	3,045								
26	5,164	4,017	3,079	3,047								
27	5,164	4,012	3,082	3,046								
28	5,166	4,005	3,092	3,046								
29	5,168	3,996	3,133	3,063								
30	4,866	3,996	3,101	3,044								
31	4,803		3,103	2,999								
<b>TOTAL</b>	<b>188,584</b>	<b>129,643</b>	<b>120,466</b>	<b>94,470</b>								
<b>MEAN</b>	<b>6,083</b>	<b>4,321</b>	<b>3,886</b>	<b>3,047</b>								
<b>MAX</b>	<b>6,652</b>	<b>5,068</b>	<b>4,213</b>	<b>3,121</b>								
<b>MIN</b>	<b>4,803</b>	<b>3,944</b>	<b>3,079</b>	<b>2,932</b>								

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>533,163</b>
<b>DAILY MEAN</b>	<b>4,335</b>
<b>DAILY MAX</b>	<b>6,652</b>
<b>DAILY MIN</b>	<b>2,932</b>
	<b>10/19/2015</b>
	<b>01/23/2016</b>

UNITED STATES DEPARTMENT OF THE INTERIOR  
 U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA  
**LEWISTON DAM, LAKE, AND JUDGE FRANCIS CARR POWERPLANT**

RUN DATE: February 10, 2016

QR

RELEASE TO RIVER, CFS

**WATER YEAR OCTOBER 2015 TO SEPTEMBER 2016**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439	331	313	305								
2	439	321	305	305								
3	439	321	305	305								
4	436	323	305	305								
5	449	323	305	305								
6	466	323	305	305								
7	468	324	305	305								
8	464	323	305	305								
9	467	308	305	305								
10	468	300	305	305								
11	464	300	305	305								
12	465	299	305	305								
13	467	296	305	305								
14	467	296	305	305								
15	467	295	305	305								
16	467	297	305	305								
17	467	305	305	305								
18	467	326	305	305								
19	467	323	305	305								
20	426	326	305	305								
21	346	328	305	305								
22	309	327	305	305								
23	301	325	305	305								
24	301	325	305	305								
25	303	327	305	305								
26	305	326	305	305								
27	305	325	305	305								
28	309	327	305	305								
29	318	328	305	305								
30	318	327	305	305								
31	319	305	305	305								
<b>TOTAL</b>	<b>12,593</b>	<b>9,525</b>	<b>9,463</b>	<b>9,455</b>								
<b>MEAN</b>	<b>406</b>	<b>318</b>	<b>305</b>	<b>305</b>								
<b>MAX</b>	<b>468</b>	<b>331</b>	<b>313</b>	<b>305</b>								
<b>MIN</b>	<b>301</b>	<b>295</b>	<b>305</b>	<b>305</b>								

WATER YEAR TOTALS

TOTAL	41,036
DAILY MEAN	334
DAILY MAX	468 10/07/2015
DAILY MIN	295 11/15/2015



UNITED STATES DEPARTMENT OF THE INTERIOR  
 U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA  
**WHISKEYTOWN DAM, LAKE, AND SPRING CREEK POWERPLANT**

RUN DATE: February 10, 2016

**QG**

**GENERATION RELEASE, CFS**

**WATER YEAR OCTOBER 2015 TO SEPTEMBER 2016**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	344	69	14								
2	669	353	16	14								
3	670	14	35	14								
4	593	14	1,064	14								
5	667	22	1,612	430								
6	589	30	14	1,011								
7	458	42	50	346								
8	375	33	109	656								
9	807	16	14	14								
10	788	34	45	14								
11	14	86	36	771								
12	511	87	22	351								
13	535	19	216	900								
14	571	17	361	1,220								
15	677	52	14	685								
16	811	18	14	207								
17	270	227	15	733								
18	597	24	277	792								
19	654	17	15	703								
20	664	57	14	1,960								
21	409	21	550	2,467								
22	865	20	401	1,325								
23	609	15	495	1,306								
24	803	16	71	753								
25	632	23	103	1,640								
26	800	14	14	1,362								
27	729	25	14	2,047								
28	788	14	14	1,903								
29	214	14	16	1,401								
30	188	15	14	2,144								
31	185	14	14	2,112								
<b>TOTAL</b>	<b>17,898</b>	<b>1,683</b>	<b>5,718</b>	<b>29,309</b>								
<b>MEAN</b>	<b>577</b>	<b>56</b>	<b>184</b>	<b>945</b>								
<b>MAX</b>	<b>865</b>	<b>353</b>	<b>1,612</b>	<b>2,467</b>								
<b>MIN</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>								

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>54,608</b>
<b>DAILY MEAN</b>	<b>444</b>
<b>DAILY MAX</b>	<b>2,467</b>
<b>DAILY MIN</b>	<b>14</b>
	<b>01/21/2016</b>
	<b>10/11/2015</b>