



# 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

**JUN 18 2015**

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

During May 1 to May 14, 2015, the average daily water temperature compliance of 56.0° F or less was met at the Clear Creek compliance point on the Sacramento. From May 15 to May 31, 2015, the average daily water temperature compliance of 58.0° F or less was met at the Clear Creek compliance point on the Sacramento.

During the month of May 2015, the average monthly water temperature was 55.2° F at Clear Creek.

Enclosed is the monitoring report for May 2015, 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

<b>Station</b>	<b>Description</b>
Spring Creek Power plant (R-4) “	Water Temperature, daily average, degrees F Turbidity, ntu, monthly Flow, average daily cfs
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**  
**May 2015**

Req. Sampling Frequency - Daily Average (Reading indicates daily average)						Control Pt 5/1 to 5/31			Req. Sampling Frequency - Monthly		
Date	Sta 2 Shd*	Sta 3 Kwk*	Sta 4 Spp**	Sta 5 Ccr**	Sta 9 Lws*			Sta 6 Dlt***	Sta 7 Mss***	Sta 8 Pmn***	
1	51.7	53.3	53.1	54.8	50.6						
2	51.5	53.2	53.2	54.8	50.2						
3	51.8	52.9	53.3	54.6	50.4						
4	51.5	53.2	53.3	54.6	50.1						
5	51.5	53.1	53.3	54.6	49.5						
6	51.8	53.2	53.3	54.4	48.5						
7	53.4	53.3	53.3	54.3	48.2						
8	52.3	53.8	53.4	55.1	48.6						
9	52.1	53.7	53.4	55.4	48.7						
10	52.0	53.4	53.5	54.8	49.2						
11	52.3	53.3	53.6	54.6	49.4						
12	52.0	53.5	53.6	54.5	49.9			58.6			
13	52.3	53.5	53.6	54.6	49.7						
14	52.9	53.7	53.7	54.9	49.4						
15	51.2	54.2	53.7	54.8	49.2						
16	52.7	53.4	53.7	55.3	49.6						
17	52.7	54.0	53.8	55.1	49.7						
18	52.7	54.0	53.8	55.4	49.9						
19	52.7	54.1	53.9	55.5	50.0						
20	52.5	54.4	53.8	55.7	49.9				55.7		
21	52.8	53.9	53.9	55.6	49.9						
22	52.6	53.9	53.9	55.2	49.9						
23	53.3	53.8	54.0	55.3	49.7						
24	53.0	54.5	54.1	55.9	49.8						
25	53.0	54.2	53.7	55.9	50.1						
26	53.3	54.3	54.1	55.9	50.5						
27	52.6	54.8	54.1	56.3	50.8					62.2	
28	52.8	54.3	53.7	56.1	51.0						
29	52.7	54.4	54.4	56.0	50.9						
30	52.8	54.4	53.5	55.9	51.1						
31	52.8	54.4	53.8	55.7	51.1						

**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 5/31/2015.**

**Cross Channel Gate Operation:**

- May 1-13 closed
- May 14-17 open
- May 18-21 closed
- May 22-25 open
- May 26-28 closed
- May 29-31 open

**Measurements taken by the Northern CA Area Office Personnel  
May 2015**

<b>TEMPERATURE</b>				
Sampling Frequency Every two weeks May 1 through November 30.				
	Sample 1	Sample 2	Sample 3	Sample 4
	5/5/2015	5/13/2015	5/26/2015	5/27/2015
Lake Elev	Temperature	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F	Degrees F
	(400 Feet Upstream of Dam)			
	Time: 13:30	Time: 10:15	Time: 13:00	Time: 13:10
625	46.9	47.0	47.0	46.9
650	47.0	47.0	47.1	47.0
675	47.1	47.1	47.1	47.1
700	47.2	47.2	47.2	47.1
725	47.3	47.3	47.4	47.3
750	47.6	47.6	47.6	47.6
775	48.0	48.0	48.2	47.9
800	48.3	48.4	48.5	48.3
825	48.5	48.7	48.7	48.6
850	48.8	48.9	49.0	48.9
875	49.3	49.4	49.8	49.7
900	50.4	50.6	51.3	51.6
925	51.8	53.0	55.7	55.6
950	55.8	61.3	62.5	61.4
975	66.1	65.8	71.0	72.1
1000				
1025				
1050				
Lake Surface	990.64' 70.0	987.37' 65.9	981.86' 72.4	981.41' 72.8

<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
	5/5/2015	5/13/2015	5/26/2015	5/27/2015
Lake Elev	Turbidity	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu	ntu
	(400 Feet Upstream of Dam)			
	Time: 13:30	Time: 10:15	Time: 13:00	Time: 13:10
625	3.9	3.9	3.8	
650	3.7	3.5	3.5	
675	3.2	3.4	3.3	
700	3.4	3.2	3.2	
725	3.1	3.2	3.0	Temperature
750	3.0	3.1	2.9	profile
775	2.9	3.0	2.8	only
800	2.9	2.9	2.7	no
825	3.1	2.9	2.7	turbidity
850	3.1	3.0	2.5	
875	3.2	2.6	1.9	
900	2.0	1.5	1.0	
925	1.4	0.9	0.6	
950	1.3	1.0	0.8	
975	0.6	1.3	1.1	
1000				
1025				
1050				
Lake Surface	990.64' 0.6	987.37' 1.2	981.86' 1.0	

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling  
 May 2015**

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	5/1 to 5/31	River (DLT)	River	River	
11			1.1					
12				2.5	0.7			
20	1.8					0.9		
27							1.6	
			Per Northern California Area Office (NCAO) staff					
			Site visits not accomplished at					
				Keswick				
				in May 2015				

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
12		Per NCAO	11.8	11:40
20	10.5	no site visit		12:00
		in May 2015		

**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 5/31/2015.**

**SHASTA LAKE, DAM AND POWERPLANT**

**QG**

**GENERATION RELEASE, CFS**

**WATER YEAR OCTOBER 2014 TO SEPTEMBER 2015**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,560	2,718	3,566	2,892	1,946	1,961	3,189	5,370				
2	1,679	2,423	3,348	2,079	2,006	2,637	3,141	4,929				
3	1,082	4,236	2,346	3,469	4,376	3,292	2,783	5,231				
4	1,059	4,576	3,089	2,624	2,040	3,153	2,857	5,294				
5	1,426	4,669	3,132	2,979	3,571	3,371	2,888	5,963				
6	1,647	4,864	2,135	2,181	1,649	2,804	2,830	5,643				
7	1,511	4,950	1,989	2,654	357	2,947	2,978	4,673				
8	2,679	4,736	2,685	2,828	523	1,936	3,424	5,949				
9	3,874	4,876	2,767	3,081	2,433	3,270	2,203	5,558				
10	4,003	4,855	763	3,047	376	2,581	2,811	5,758				
11	3,435	4,221	296	3,068	1,779	3,489	2,586	5,616				
12	3,015	4,796	710	3,064	1,109	3,321	2,199	5,509				
13	3,726	4,469	1,719	4,159	1,187	3,126	3,105	5,811				
14	3,496	4,828	765	3,504	1,026	3,253	2,776	5,503				
15	4,156	4,621	1,510	2,374	1,213	3,332	3,051	5,414				
16	3,146	4,289	1,887	2,705	1,956	1,985	2,714	5,542				
17	3,618	4,151	2,167	2,413	1,504	3,281	3,353	5,536				
18	3,358	4,209	712	2,676	974	3,103	3,148	5,814				
19	3,309	3,526	214	4,264	1,802	2,936	2,734	6,321				
20	2,894	3,499	1,252	3,002	2,015	3,266	3,120	5,568				
21	2,876	4,345	1,780	2,849	1,783	2,986	3,370	6,849				
22	3,540	3,900	2,119	1,750	2,152	2,582	3,476	6,872				
23	4,896	4,292	1,739	3,308	2,181	3,094	3,685	6,414				
24	2,343	3,838	531	3,517	2,214	3,216	4,420	6,317				
25	2,453	3,537	833	1,984	2,659	2,866	4,383	6,321				
26	4,158	3,784	1,638	2,219	2,774	3,285	5,734	6,469				
27	4,106	3,682	1,345	4,244	2,869	2,877	4,926	6,709				
28	4,414	3,803	1,384	2,099	2,851	3,161	5,032	7,413				
29	2,666	3,601	2,135	3,614		2,013	5,333	6,931				
30	2,337	3,771	2,568	3,519		3,244	4,828	6,521				
31	4,519		2,705	3,610		2,729		6,735				
<b>TOTAL</b>	<b>92,981</b>	<b>124,065</b>	<b>55,829</b>	<b>91,776</b>	<b>53,325</b>	<b>91,097</b>	<b>103,077</b>	<b>184,553</b>				
<b>MEAN</b>	<b>2,999</b>	<b>4,136</b>	<b>1,801</b>	<b>2,961</b>	<b>1,904</b>	<b>2,939</b>	<b>3,436</b>	<b>5,953</b>				
<b>MAX</b>	<b>4,896</b>	<b>4,950</b>	<b>3,566</b>	<b>4,264</b>	<b>4,376</b>	<b>3,489</b>	<b>5,734</b>	<b>7,413</b>				
<b>MIN</b>	<b>1,059</b>	<b>2,423</b>	<b>214</b>	<b>1,750</b>	<b>357</b>	<b>1,936</b>	<b>2,199</b>	<b>4,673</b>				

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>796,703</b>
<b>DAILY MEAN</b>	<b>3,279</b>
<b>DAILY MAX</b>	<b>7,413 05/28/2015</b>
<b>DAILY MIN</b>	<b>214 12/19/2014</b>

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

RUN DATE: June 5, 2015

**KESWICK DAM, RESERVOIR, AND POWERPLANT**

**QT**

**TOTAL RELEASE, CFS**

**WATER YEAR OCTOBER 2014 TO SEPTEMBER 2015**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,500	4,519	3,849	2,991	3,090	3,063	3,055	6,686				
2	4,647	4,520	3,450	2,966	3,090	3,064	3,253	7,097				
3	4,409	4,549	3,375	2,963	3,088	3,093	3,138	7,109				
4	4,403	4,606	3,308	2,985	3,088	3,059	3,044	7,103				
5	4,395	4,495	3,326	2,967	3,090	3,061	2,962	7,103				
6	4,504	4,454	3,310	2,967	3,104	3,063	2,878	7,046				
7	4,462	4,406	3,306	2,940	4,733	3,062	2,745	7,074				
8	4,542	4,400	3,196	2,940	4,479	3,062	2,719	7,081				
9	4,490	4,394	3,190	3,003	3,634	3,063	2,964	7,088				
10	4,512	4,373	3,066	3,179	3,121	3,052	2,968	7,086				
11	4,545	4,267	4,723	3,168	3,041	3,093	2,969	7,083				
12	4,535	4,162	4,178	3,180	3,039	3,121	2,971	7,083				
13	4,536	4,144	3,909	3,179	3,043	3,119	2,968	7,088				
14	4,544	4,127	3,862	3,172	3,038	3,120	2,967	7,122				
15	4,521	4,177	3,854	3,066	3,041	3,118	2,967	7,200				
16	4,545	4,110	3,054	2,911	3,038	3,105	3,332	7,170				
17	4,533	4,015	3,062	2,910	3,039	3,099	3,716	7,140				
18	4,538	3,992	3,281	2,914	3,041	3,105	3,690	7,134				
19	4,533	3,924	3,558	2,911	3,039	3,101	3,689	7,168				
20	4,535	3,928	3,467	2,912	3,040	3,013	3,689	7,162				
21	4,528	3,958	3,305	2,868	3,038	3,017	4,187	7,142				
22	4,528	3,989	3,072	2,866	2,996	3,016	4,689	7,182				
23	4,540	3,933	3,125	2,865	2,975	3,016	5,320	7,152				
24	4,527	3,959	3,067	2,815	2,988	2,930	5,868	7,103				
25	4,504	3,976	3,024	2,815	3,036	2,750	6,263	7,106				
26	4,420	3,987	3,040	2,815	3,105	2,738	6,676	7,115				
27	4,449	3,981	3,038	2,812	3,064	2,733	6,683	6,916				
28	4,450	3,982	3,042	2,816	3,063	2,732	6,740	6,910				
29	4,443	3,985	3,040	2,828		2,734	6,693	6,919				
30	4,449	3,982	3,016	2,981		2,732	6,680	6,917				
31	4,503		2,991	3,090		2,732		6,916				
<b>TOTAL</b>	<b>139,570</b>	<b>125,294</b>	<b>104,084</b>	<b>91,795</b>	<b>89,181</b>	<b>92,766</b>	<b>122,483</b>	<b>219,201</b>				
<b>MEAN</b>	<b>4,502</b>	<b>4,176</b>	<b>3,358</b>	<b>2,961</b>	<b>3,185</b>	<b>2,992</b>	<b>4,083</b>	<b>7,071</b>				
<b>MAX</b>	<b>4,647</b>	<b>4,606</b>	<b>4,723</b>	<b>3,180</b>	<b>4,733</b>	<b>3,121</b>	<b>6,740</b>	<b>7,200</b>				
<b>MIN</b>	<b>4,395</b>	<b>3,924</b>	<b>2,991</b>	<b>2,812</b>	<b>2,975</b>	<b>2,732</b>	<b>2,719</b>	<b>6,686</b>				

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>984,374</b>	
<b>DAILY MEAN</b>	<b>4,051</b>	
<b>DAILY MAX</b>	<b>7,200</b>	<b>05/15/2015</b>
<b>DAILY MIN</b>	<b>2,719</b>	<b>04/08/2015</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: June 5, 2015

**QR** **RELEASE TO RIVER, CFS**

**WATER YEAR OCTOBER 2014 TO SEPTEMBER2015**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	490	315	312	299	311	310	311	1,814				
2	494	301	312	302	301	310	311	2,841				
3	512	317	312	300	311	311	312	3,851				
4	517	312	309	301	313	312	311	4,823				
5	517	301	310	303	314	313	309	4,964				
6	498	304	310	302	315	313	310	4,964				
7	487	305	310	299	316	314	308	4,965				
8	488	305	310	302	310	315	309	4,401				
9	488	303	311	300	309	311	310	3,114				
10	486	303	311	302	308	306	308	2,921				
11	474	303	310	302	307	297	309	2,926				
12	454	303	312	301	309	296	309	2,773				
13	450	304	310	301	307	297	306	2,089				
14	452	305	305	304	308	297	313	2,041				
15	399	306	308	304	308	297	319	2,034				
16	370	307	312	304	308	298	319	2,042				
17	311	309	314	304	310	295	319	2,035				
18	303	311	313	304	311	296	316	2,031				
19	302	310	317	304	311	295	318	2,037				
20	305	308	315	304	310	295	324	2,017				
21	298	310	304	305	309	294	322	2,004				
22	292	309	302	305	309	296	401	2,024				
23	307	309	301	306	307	307	492	2,038				
24	320	311	301	307	309	314	488	1,944				
25	323	307	302	309	311	314	485	1,882				
26	318	307	302	309	310	313	486	1,802				
27	318	307	302	308	310	313	494	1,789				
28	317	310	301	307	309	312	584	1,794				
29	317	310	301	305		310	723	1,805				
30	315	310	298	307		311	1,093	1,626				
31	316		301	308		311		1,252				
<b>TOTAL</b>	<b>12,238</b>	<b>9,222</b>	<b>9,538</b>	<b>9,418</b>	<b>8,671</b>	<b>9,473</b>	<b>11,819</b>	<b>80,643</b>				
<b>MEAN</b>	<b>395</b>	<b>307</b>	<b>308</b>	<b>304</b>	<b>310</b>	<b>306</b>	<b>394</b>	<b>2,601</b>				
<b>MAX</b>	<b>517</b>	<b>317</b>	<b>317</b>	<b>309</b>	<b>316</b>	<b>315</b>	<b>1,093</b>	<b>4,965</b>				
<b>MIN</b>	<b>292</b>	<b>301</b>	<b>298</b>	<b>299</b>	<b>301</b>	<b>294</b>	<b>306</b>	<b>1,252</b>				

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>151,022</b>
<b>DAILY MEAN</b>	<b>621</b>
<b>DAILY MAX</b>	<b>4,965</b> <b>05/07/2015</b>
<b>DAILY MIN</b>	<b>292</b> <b>10/22/2014</b>



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

RUN DATE: June 5, 2015

**QG** **GENERATION RELEASE, CFS**

**WATER YEAR OCTOBER 2014 TO SEPTEMBER2015**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	545	2,062	218	14	14	14	15	14				
2	510	2,150	15	349	14	14	26	14				
3	654	965	1,016	14	14	14	14	14				
4	689	19	18	27	14	23	15	14				
5	646	14	14	86	16	14	14	14				
6	704	14	746	309	899	14	14	14				
7	849	14	665	14	1,529	18	16	20				
8	761	14	228	14	1,794	551	16	14				
9	660	14	727	15	943	22	16	17				
10	676	14	1,586	14	2,015	15	14	14				
11	1,266	14	699	17	1,900	49	14	14				
12	1,240	14	1,981	14	1,906	46	20	17				
13	1,056	14	1,536	15	1,969	24	19	14				
14	997	18	2,067	378	705	14	14	14				
15	585	14	2,132	17	795	14	14	14				
16	1,185	92	1,723	23	1,898	27	15	14				
17	1,106	18	28	16	1,940	14	17	14				
18	1,154	14	1,849	14	825	112	16	14				
19	1,012	97	1,374	16	1,675	14	20	14				
20	1,570	64	1,254	93	1,297	14	16	17				
21	1,620	991	299	14	1,342	14	14	14				
22	1,662	14	572	14	695	17	14	17				
23	1,235	14	805	373	619	15	16	14				
24	2,019	15	1,938	288	523	17	14	14				
25	2,068	14	2,143	14	560	20	14	51				
26	1,018	14	770	14	351	14	14	15				
27	476	14	1,321	14	112	14	14	24				
28	178	14	2,069	14	14	36	14	91				
29	1,439	159	685	19		21	14	14				
30	2,111	14	17	16		17	14	268				
31	718		14	15		17		101				
<b>TOTAL</b>	<b>32,409</b>	<b>6,902</b>	<b>30,509</b>	<b>2,254</b>	<b>26,378</b>	<b>1,229</b>	<b>467</b>	<b>918</b>				
<b>MEAN</b>	<b>1,045</b>	<b>230</b>	<b>984</b>	<b>73</b>	<b>942</b>	<b>40</b>	<b>16</b>	<b>30</b>				
<b>MAX</b>	<b>2,111</b>	<b>2,150</b>	<b>2,143</b>	<b>378</b>	<b>2,015</b>	<b>551</b>	<b>26</b>	<b>268</b>				
<b>MIN</b>	<b>178</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>				

**WATER YEAR TOTALS**

<b>TOTAL</b>	<b>101,066</b>
<b>DAILY MEAN</b>	<b>416</b>
<b>DAILY MAX</b>	<b>2,150</b> <b>11/02/2014</b>
<b>DAILY MIN</b>	<b>14</b> <b>11/05/2014</b>