



United States Department of the Interior

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

JAN 14 2015

IN REPLY
REFER TO:

CVO-400
WTR-4.10

VIA ELECTRONIC MAIL AND U.S. 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 December, the temperature control point was set at Clear Creek, per the recommendation of the Sacramento River Temperature Task Group (SRTTG).

During December 2014, the average daily water temperature compliance of 56.0° F or less was met at the Clear Creek compliance point on the Sacramento River.

During the month of December 2014, the average monthly water temperature was 53.8° F at Clear Creek.

Enclosed is the monitoring report for December 2014, under Order No. 90-5. The report contains the following data:

Station	Description
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

Station	Description
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 Division

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

December 2014

Req. Sampling Frequency - Daily Average (Reading indicates daily average)							Control Pt 11/1 to 11/30			Req. Sampling Frequency - Monthly		
Date	Sta 2 Shd*	Sta 3 Kwk*	Sta 4 Spp**	Sta 5 Ccr**	Sta9 Lws*	Sta11 Nfh*	Sta 6 Dlt***	Sta 7 Mss***	Sta 8 Pmn***			
1	56.4	56.1	55.7	56.1	52.7	50.2						
2	56.2	56.0	56.1	55.9	52.5	50.3						
3	56.2	55.9	55.5	55.8	52.6	50.0						
4	55.8	55.7	55.9	56.2	52.7	50.1						
5	55.6	55.8	56.0	Out of Service	52.9	50.7						
6	55.5	55.7	55.3	Out of Service	52.7	50.2						
7	55.5	55.4	55.3	55.6	52.7	49.6						
8	55.1	55.3	55.3	55.7	52.9	50.5						
9	54.7	55.3	55.2	55.7	53.0	51.0						
10	55.5	55.2	55.1	55.4	52.8	51.0						
11	55.4	54.9	55.1	54.9	52.4	49.8	Per Northern California Area Office staff,					
12	55.3	54.5	54.9	54.6	52.3	49.2	Site visits not accomplished at Mss & Pmn					
13	54.7	54.4	54.8	54.5	52.1	48.4	in December 2014					
14	54.4	54.2	54.5	53.8	51.6	47.6						
15	54.2	54.1	54.3	53.7	51.3	47.2						
16	54.5	53.8	54.3	53.4	51.4	47.0						
17	54.0	53.5	54.2	53.5	50.9	47.9						
18	53.9	53.3	53.4	53.4	50.3	48.3						
19	53.8	53.2	53.2	53.3	50.0	48.5						
20	53.5	53.2	53.0	53.5	49.9	48.7						
21	53.4	53.4	53.1	53.8	50.2	49.0						
22	53.3	53.7	53.0	54.6	49.8	48.9						
23	53.2	53.7	53.1	54.3	50.0	48.9						
24	53.2	53.5	53.2	53.7	49.5	48.4						
25	52.8	53.0	53.1	52.7	48.6	45.1						
26	52.7	52.7	52.9	52.1	48.6	44.0						
27	52.8	52.4	52.6	51.8	48.5	43.3						
28	52.6	52.0	52.5	51.6	48.2	43.6						
29	52.4	51.6	52.2	51.1	47.5	42.9						
30	52.5	51.1	52.5	50.1	46.0	42.2						
31	52.1	50.7	52.5	49.5	45.8	39.9	39.8					

**Control Point: 56.0 degrees at Balls Ferry from 03/01/2014 to 03/27/2014.
58.0 degrees at Clear Creek from 03/28/2014 to 04/24/2014.
56.0 degrees at Clear Creek from 04/25/2014 to 12/31/2014.**

Cross Channel Gate Operation:

December 1-31 closed

**Measurements taken by the Northern CA Area Office Personnel
December 2014**

TEMPERATURE				
Sampling Frequency				
Every two weeks May 1 through November 30.				
	Sample 1	Sample 2	Sample 3	Sample 4
	12/9/2014			
Lake Elev	Temperature	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F	Degrees F
(400 Feet Upstream of Dam)				
	Time: 11:00			
625	47.6			
650	50.4			
675	52.4			
700	52.7			
725	53.1			
750	53.7			
775	54.8			
800	55.7			
825	56.9			
850	57.5			
875	57.5			
900				
925				
950				
975				
1000				
1025				
1050				
Lake Surface	897.87' 57.6			

TURBIDITY				
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
	12/9/2014			
Lake Elev	Turbidity	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu	ntu
(400 Feet Upstream of Dam)				
	Time: 11:00			
625	13.2			
650	16.6			
675	10.8			
700	8.9			
725	7.1			
750	7.7			
775	9.3			
800	8.0			
825	15.0			
850	5.2			
875	5.5			
900				
925				
950				
975				
1000				
1025				
1050				
Lake Surface	897.87' 5.6			

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling
 December 2014**

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	11/1 to 11/30	River (DLT)	River	River	
3				10.0				
18			9.8					
23		17.1						
30	30.7							
31					1.6			
			Per Northern California Area Office staff					
			Site visit not accomplished at					
			McCloud and Pit					
			in December 2014					

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		
	Discharge	Keswick	
Day	at Bridge	Discharge	Clear Creek
	No Requirement October through April		

Temperature Control Point:

56.0 degrees at Balls Ferry from 03/01/2014 to 03/27/2014.

58.0 degrees at Clear Creek from 03/28/2014 to 04/24/2014.

56.0 degrees at Clear Creek from 04/25/2014 to 12/31/2014.

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	1,679	2,423	3,348									
3	1,082	4,236	2,346									
4	1,059	4,576	3,089									
5	1,426	4,669	3,132									
6	1,647	4,864	2,135									
7	1,511	4,950	1,989									
8	2,679	4,736	2,685									
9	3,874	4,876	2,767									
10	4,003	4,855	763									
11	3,435	4,221	296									
12	3,015	4,796	710									
13	3,726	4,469	1,719									
14	3,496	4,828	765									
15	4,156	4,621	1,510									
16	3,146	4,289	1,887									
17	3,618	4,151	2,167									
18	3,358	4,209	712									
19	3,309	3,526	214									
20	2,894	3,499	1,252									
21	2,876	4,345	1,780									
22	3,540	3,900	2,119									
23	4,896	4,292	1,739									
24	2,343	3,838	531									
25	2,453	3,537	833									
26	4,158	3,784	1,638									
27	4,106	3,682	1,345									
28	4,414	3,803	1,384									
29	2,666	3,601	2,135									
30	2,337	3,771	2,568									
31	4,519		2,705									
TOTAL	92,981	124,065	55,829									
MEAN	2,999	4,136	1,801									
MAX	4,896	4,950	3,566									
MIN	1,059	2,423	214									

WATER YEAR TOTALS

TOTAL	272,875	
DAILY MEAN	2,966	
DAILY MAX	4,950	11/07/2014
DAILY MIN	214	12/19/2014

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	4,647	4,520	3,450									
3	4,409	4,549	3,375									
4	4,403	4,606	3,308									
5	4,395	4,495	3,326									
6	4,504	4,454	3,310									
7	4,462	4,406	3,306									
8	4,542	4,400	3,196									
9	4,490	4,394	3,190									
10	4,512	4,373	3,066									
11	4,545	4,267	4,723									
12	4,535	4,162	4,178									
13	4,536	4,144	3,909									
14	4,544	4,127	3,862									
15	4,521	4,177	3,854									
16	4,545	4,110	3,054									
17	4,533	4,015	3,062									
18	4,538	3,992	3,281									
19	4,533	3,924	3,558									
20	4,535	3,928	3,467									
21	4,528	3,958	3,305									
22	4,528	3,989	3,072									
23	4,540	3,933	3,125									
24	4,527	3,959	3,067									
25	4,504	3,976	3,024									
26	4,420	3,987	3,040									
27	4,449	3,981	3,038									
28	4,450	3,982	3,042									
29	4,443	3,985	3,040									
30	4,449	3,982	3,016									
31	4,503		2,991									
TOTAL	139,570	125,294	104,084									
MEAN	4,502	4,176	3,358									
MAX	4,647	4,606	4,723									
MIN	4,395	3,924	2,991									

WATER YEAR TOTALS

TOTAL	368,948	
DAILY MEAN	4,010	
DAILY MAX	4,723	12/11/2014
DAILY MIN	2,991	12/31/2014

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: January 12, 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									
2	494	301	312									
3	512	317	312									
4	517	312	309									
5	517	301	310									
6	498	304	310									
7	487	305	310									
8	488	305	310									
9	488	303	311									
10	486	303	311									
11	474	303	310									
12	454	303	312									
13	450	304	310									
14	452	305	305									
15	399	306	308									
16	370	307	312									
17	311	309	314									
18	303	311	313									
19	302	310	317									
20	305	308	315									
21	298	310	304									
22	292	309	302									
23	307	309	301									
24	320	311	301									
25	323	307	302									
26	318	307	302									
27	318	307	302									
28	317	310	301									
29	317	310	301									
30	315	310	298									
31	316		301									
TOTAL	12,238	9,222	9,538									
MEAN	395	307	308									
MAX	517	317	317									
MIN	292	301	298									

WATER YEAR TOTALS

TOTAL	30,998	
DAILY MEAN	337	
DAILY MAX	517	10/04/2014
DAILY MIN	292	10/22/2014

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

RUN DATE: January 12, 2015

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	545	2,062	218									
2	510	2,150	15									
3	654	965	1,016									
4	689	19	18									
5	646	14	14									
6	704	14	746									
7	849	14	665									
8	761	14	228									
9	660	14	727									
10	676	14	1,586									
11	1,266	14	699									
12	1,240	14	1,981									
13	1,056	14	1,536									
14	997	18	2,067									
15	585	14	2,132									
16	1,185	92	1,723									
17	1,106	18	28									
18	1,154	14	1,849									
19	1,012	97	1,374									
20	1,570	64	1,254									
21	1,620	991	299									
22	1,662	14	572									
23	1,235	14	805									
24	2,019	15	1,938									
25	2,068	14	2,143									
26	1,018	14	770									
27	476	14	1,321									
28	178	14	2,069									
29	1,439	159	685									
30	2,111	14	17									
31	718		14									
TOTAL	32,409	6,902	30,509									
MEAN	1,045	230	984									
MAX	2,111	2,150	2,143									
MIN	178	14	14									

WATER YEAR TOTALS

TOTAL	69,820	
DAILY MEAN	759	
DAILY MAX	2,150	11/02/2014
DAILY MIN	14	11/05/2014