



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 03 2017

VIA ELECTRONIC MAIL

Mr. Les Grober
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 Mr. Grober:

For the month of January 2017, the temperature control point was set at Balls Ferry, per the June 2016, Sacramento River Temperature Plan.

During January 2017, the average daily water temperature compliance of 56.0 °F or less was met at the Balls Ferry compliance point on the Sacramento River. During the month of January 2017, the average monthly water temperature was 47.4 °F at Balls Ferry.

Enclosed is the monitoring report for January 2017, 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
Control Point (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. Randi Field at 916-979-2066, 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 2017

Req. Sampling Frequency - Daily Average (Reading indicates daily average)							Req. Sampling Frequency - Monthly		
Date	Sta 2 Shd*	Sta 3 Kwk*	Sta 4 Spp**	Sta 5 Bsf**	Sta9 Lws*		Sta 6 Dlt***	Sta 7 Mss***	Sta 8 Pmn***
1	49.3	49.2	47.7	48.4	42.6				
2	49.0	48.8	47.4	47.5	42.5				
3	48.9	48.4	47.3	47.0	42.4				
4	48.9	48.2	47.3	45.5	42.4				
5	49.0	48.0	47.8	45.3	42.1				
6	48.9	47.9	47.6	44.6	41.6				
7	48.8	48.2	46.7	44.6	42.0				
8	48.7	48.3	46.5	45.4	42.1				
9	48.4	48.3	46.4	48.1	42.4				
10	48.2	48.0	46.1	48.1	42.3				
11	48.1	48.0	46.2	48.0	42.3		45.5		
12	49.5	48.8	46.0	47.9	42.1				
13	49.6	49.5	46.0	48.8	41.9				
14	49.3	49.4	46.0	48.9	42.0				
15	49.1	49.2	46.0	48.7	42.0				
16	49.0	49.1	46.1	48.7	42.0				
17	48.7	48.9	46.1	48.7	42.3				
18	48.2	48.6	45.9	48.2	42.3				
19	48.0	48.1	45.9	47.5	42.4				
20	47.7	47.9	45.8	47.6	42.8				
21	47.7	48.0	45.7	47.7	43.1				
22	47.4	47.7	45.7	47.7	43.1				
23	47.7	47.9	45.6	47.7	43.1				
24	47.8	47.9	45.5	47.8	43.1			44.8	
25	47.8	47.8	45.5	47.4	43.2				
26	47.7	47.8	45.4	47.7	43.0				41.1
27	47.7	47.8	45.4	47.6	42.8				
28	47.5	47.7	45.4	47.5	43.0				
29	47.4	47.4	45.5	47.3	43.2				
30	47.3	47.3	45.5	47.2	43.1				
31	47.2	47.2	45.6	47.1	43.2				

Control Point: 1/1-1/31 BSF @ 56.0 DAT

Cross Channel Gate Operation:
 January 01-31 closed

**Measurements taken by the Northern CA Area Office Personnel
January 2017**

TEMPERATURE					
Sampling Frequency					
Every two weeks May 1 through November 30.					
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
	1/12/2017				
Lake Elev	Temperature	Temperature	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F	Degrees F	Degrees F
(400 Feet Upstream of Dam)					
	Time: 10:00				
625	45.9				
650	45.9				
675	45.9				
700	46.0				
725	46.0				
750	46.2				
775	46.7				
800	46.9				
825	47.4				
850	48.2				
875	48.6				
900	49.7				
925	49.8				
950	49.8				
975	49.8				
1000	49.8				
1025	49.8				
1050					
Lake Surface	49.8 @ 1038.94'				

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	Sample 5
	1/12/2017				
Lake Elev	Turbidity	Turbidity	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu	ntu	ntu
(400 Feet Upstream of Dam)					
	Time: 10:00				
625	7.2				
650	7.2				
675	7.2				
700	7.2				
725	7.3				
750	7.0				
775	6.4				
800	5.9				
825	5.9				
850	5.0				
875	3.8				
900	2.6				
925	2.5				
950	2.5				
975	2.5				
1000	2.5				
1025	2.3				
1050					
Lake Surface	2.0 @ 1038.94'				

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling
 January 2017**

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				
	Discharge	Keswick	Creek PP		Sacramento	McCloud	Pit
Day	at Bridge	Discharge	Discharge	Clear Creek	River (DLT)	River	River
4	5.3		1.3				
5				4.4			
6		4.5					
11					21.6		
24	18.1					3.9	
26							20.8

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	Hour
	Shasta Dam			Time Sample
	Discharge	Keswick		Taken
Day	at Bridge	Discharge	Clear Creek	
4	10.1			10:15
5			12.5	11:50
6		11.6		13:02
24	12.1			9:45

Control Point: 1/1-1/31 BSF @ 56.0 DAT

SHASTA LAKE, DAM AND POWERPLANT

QG

GENERATION RELEASE, CFS

WATER YEAR OCTOBER 2016 TO SEPTEMBER 2017

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,289	4,929	4,122	5,765								
2	6,463	4,805	4,181	5,467								
3	6,942	4,257	4,630	4,764								
4	6,469	4,132	4,570	3,401								
5	6,546	3,985	4,123	3,865								
6	5,865	4,666	4,054	4,285								
7	4,953	4,429	4,088	8,401								
8	6,060	4,387	4,979	11,517								
9	6,089	3,948	5,086	9,821								
10	5,860	3,670	4,720	9,158								
11	6,325	4,016	4,126	12,026								
12	6,275	4,279	3,453	18,778								
13	5,812	4,781	3,964	17,022								
14	6,180	4,605	3,960	18,722								
15	5,544	4,948	1,657	18,490								
16	6,164	5,005	2,446	18,236								
17	6,027	4,610	2,801	18,215								
18	5,192	4,023	2,871	17,665								
19	4,812	4,247	2,656	17,799								
20	5,304	4,378	3,422	18,125								
21	5,789	4,357	7,632	18,065								
22	5,733	4,673	7,859	18,584								
23	5,549	4,642	9,317	18,517								
24	5,367	4,159	9,866	17,848								
25	4,817	4,461	9,186	18,354								
26	4,817	4,341	9,346	17,930								
27	4,791	4,427	8,207	18,390								
28	4,057	4,238	8,682	18,457								
29	3,861	4,423	9,191	18,487								
30	5,475	4,779	8,429	18,146								
31	4,387		7,462	18,566								
TOTAL	173,794	132,600	171,086	442,866								
MEAN	5,606	4,420	5,519	14,286								
MAX	6,942	5,005	9,866	18,778								
MIN	3,861	3,670	1,657	3,401								

WATER YEAR TOTALS

TOTAL	920,346	
DAILY MEAN	7,482	
DAILY MAX	18,778	01/12/2017
DAILY MIN	1,657	12/15/2016

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

RUN DATE: February 1, 2017

KESWICK DAM, RESERVOIR, AND POWERPLANT

QT

TOTAL RELEASE, CFS

WATER YEAR OCTOBER 2016 TO SEPTEMBER 2017

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,368	4,950	4,816	6,179								
2	7,366	5,147	4,832	5,978								
3	7,349	5,023	4,842	5,304								
4	7,021	4,831	4,840	4,756								
5	7,013	4,841	4,841	4,776								
6	6,764	4,841	4,841	4,792								
7	6,751	4,841	4,838	9,531								
8	6,756	4,840	4,835	13,032								
9	6,751	4,854	4,840	13,339								
10	6,510	4,866	4,839	13,479								
11	6,505	4,866	4,837	16,048								
12	6,537	4,866	4,841	32,098								
13	6,545	4,865	4,840	32,404								
14	6,542	4,863	4,842	32,383								
15	6,519	4,779	4,997	32,056								
16	6,515	4,865	4,946	31,833								
17	6,519	4,866	4,889	31,987								
18	6,232	4,864	4,891	28,724								
19	6,222	4,866	4,890	25,912								
20	6,225	4,862	4,870	25,968								
21	5,770	4,865	9,706	26,456								
22	5,495	4,864	9,852	25,898								
23	5,493	4,864	9,753	25,617								
24	5,444	4,866	9,762	25,936								
25	5,346	4,861	9,760	25,424								
26	4,888	4,814	9,762	26,751								
27	4,887	4,815	9,825	26,226								
28	4,889	4,810	9,839	22,215								
29	4,889	4,816	9,836	21,646								
30	4,864	4,816	8,527	21,790								
31	4,864		7,175	21,762								
TOTAL	190,839	145,987	201,004	640,300								
MEAN	6,156	4,866	6,484	20,655								
MAX	7,368	5,147	9,852	32,404								
MIN	4,864	4,779	4,816	4,756								

WATER YEAR TOTALS

TOTAL	1,178,130	
DAILY MEAN	9,578	
DAILY MAX	32,404	01/13/2017
DAILY MIN	4,756	01/04/2017

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

RUN DATE: February 1, 2017

LEWISTON DAM, LAKE, AND JUDGE FRANCIS CARR POWERPLANT

QR RELEASE TO RIVER, CFS

WATER YEAR OCTOBER 2016 TO SEPTEMBER 2017

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	313	310	306								
2	461	320	311	307								
3	440	319	307	310								
4	440	317	304	315								
5	448	316	306	312								
6	450	316	305	313								
7	450	314	306	313								
8	446	302	306	318								
9	447	311	306	318								
10	449	303	308	316								
11	463	304	309	314								
12	465	304	308	316								
13	455	302	308	315								
14	451	321	308	320								
15	447	311	313	324								
16	445	310	311	327								
17	408	313	311	324								
18	330	314	312	326								
19	301	313	309	326								
20	301	312	307	326								
21	300	313	303	324								
22	302	311	306	326								
23	305	309	308	325								
24	306	307	308	334								
25	305	311	307	333								
26	317	313	306	317								
27	321	311	307	317								
28	309	311	306	317								
29	308	311	307	313								
30	309	310	307	290								
31	308		306	290								
TOTAL	11,953	9,342	9,536	9,832								
MEAN	386	311	308	317								
MAX	466	321	313	334								
MIN	300	302	303	290								

WATER YEAR TOTALS

TOTAL	40,663	
DAILY MEAN	331	
DAILY MAX	466	10/01/2016
DAILY MIN	290	01/30/2017

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

RUN DATE: February 1, 2017

WHISKEYTOWN DAM, LAKE, AND SPRING CREEK POWERPLANT

QG

GENERATION RELEASE, CFS

WATER YEAR OCTOBER 2016 TO SEPTEMBER 2017

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	746	18	14	15								
2	349	14	293	223								
3	276	530	14	602								
4	454	481	14	859								
5	309	519	14	25								
6	808	14	62	14								
7	1,036	14	220	683								
8	398	31	215	1,255								
9	292	471	16	3,051								
10	292	654	130	3,570								
11	365	183	14	3,354								
12	417	180	414	866								
13	380	23	393	1,641								
14	14	166	583	444								
15	362	35	2,090	854								
16	417	86	2,161	190								
17	658	164	1,723	422								
18	1,086	170	1,674	1,069								
19	802	193	1,821	702								
20	730	135	703	1,405								
21	295	14	519	1,482								
22	16	336	475	719								
23	14	511	122	857								
24	14	238	315	1,272								
25	14	311	152	819								
26	19	171	200	1,322								
27	191	280	1,049	1,116								
28	14	344	353	997								
29	14	14	164	2,235								
30	14	14	82	2,514								
31	989		25	2,320								
TOTAL	11,785	6,314	16,024	36,897								
MEAN	380	210	517	1,190								
MAX	1,086	654	2,161	3,570								
MIN	14	14	14	14								

WATER YEAR TOTALS

TOTAL	71,020	
DAILY MEAN	577	
DAILY MAX	3,570	01/10/2017
DAILY MIN	14	10/14/2016