



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

AUG 09 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 July 2017, the temperature control point was set at Balls Ferry, per the June 2017, Sacramento River Temperature Plan.

During July 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 July 2017, the average monthly water temperature was 54.9°F at Balls Ferry.

Enclosed is the monitoring report for July 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
Spring Creek Power plant (R-4) “	Water Temperature, daily average, degrees F Turbidity, ntu, monthly Flow, average daily cfs

Station	Description
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
July 2017

Req. Sampling Frequency - Daily Average (Reading indicates daily average)							Req. Sampling Frequency - Monthly		
	Sta 2	Sta 3	Sta 4	Sta 5	Sta9		Sta 6	Sta 7	Sta 8
Date	Shd*	Kwk*	Spp**	Bsf**	Lws*		Dlt***	Mss***	Pmn***
1	49.3	51.2	52.2	54.9	48.1				
2	49.4	51.2	52.3	55.0	48.4				
3	49.3	51.4	52.4	55.1	48.4				
4	49.4	51.3	52.4	54.9	48.5				
5	49.4	51.3	52.4	54.8	48.6				
6	49.4	51.3	52.5	54.7	48.8				
7	49.4	51.4	52.6	54.8	48.5				
8	49.4	51.2	52.7	54.8	48.5				
9	49.4	51.3	52.7	54.8	48.7				
10	49.5	51.3	52.8	54.7	48.7				
11	49.5	51.4	53.0	54.9	49.0				
12	49.5	51.5	52.9	54.9	49.1				
13	49.7	51.6	53.2	54.9	49.0				
14	49.6	51.6	53.2	55.1	49.0				
15	49.6	51.6	53.4	55.0	48.9				
16	49.6	51.6	53.4	55.2	49.0				
17	49.7	51.6	53.4	55.0	49.0				
18	49.8	51.8	53.6	54.9	49.1				66.3
19	49.7	51.9	53.7	55.0	49.0				
20	49.6	51.7	53.7	55.0	48.4				
21	49.7	51.5	53.9	54.9	49.0		64.5		
22	49.7	51.6	53.8	54.9	49.3				
23	49.8	51.4	53.9	54.9	49.4				
24	49.9	51.5	53.9	54.6	49.3				
25	49.9	51.5	54.0	54.9	49.3				
26	49.9	51.5	54.1	54.7	49.7			59.7	
27	49.9	51.7	54.0	54.8	49.8				
28	49.4	51.9	54.0	55.1	49.9				
29	49.4	51.4	53.9	55.0	49.7				
30	49.1	51.2	54.1	54.4	49.8				
31	49.1	51.0	54.1	54.1	50.2				

Control Point: 7/1-7/31 BSF @ 56.0 DAT

Cross Channel Gate Operation:
 July 01-31 open

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling
 July 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	
5				4.8				
14			22.5					
17		4.1						
18							1.7	
21					0.8			
26						1.8		
27	3.9							

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
5			14.5	10:40
17		11.3		13:02
27	11.4			10:05

Control Point: 7/1-7/31 BSF @ 56.0 DAT

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

RUN DATE: August 3, 2017

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	18,164	18,613	9,138	8,534	8,655	7,960		
2	6,463	4,805	4,181	5,467	18,257	19,433	8,916	7,407	8,250	7,912		
3	6,942	4,257	4,630	4,764	18,708	18,909	8,346	6,498	8,864	8,119		
4	6,469	4,132	4,570	3,401	18,806	18,656	8,960	4,939	8,675	8,102		
5	6,546	3,985	4,123	3,865	18,609	19,005	8,875	4,285	9,573	7,764		
6	5,865	4,666	4,054	4,285	18,763	18,880	8,577	3,909	8,769	8,154		
7	4,953	4,429	4,088	8,401	18,323	18,041	7,181	8,544	8,682	8,556		
8	6,060	4,387	4,979	11,517	17,804	17,999	8,741	9,211	7,706	8,315		
9	6,069	3,948	5,086	9,821	15,665	16,282	8,620	9,752	7,754	8,292		
10	5,860	3,670	4,720	9,158	15,331	13,566	8,816	9,129	7,360	8,535		
11	6,325	4,016	4,126	12,026	17,378	11,446	8,366	8,624	8,007	8,560		
12	6,275	4,279	3,453	18,778	17,716	9,556	10,318	8,628	7,800	7,931		
13	5,812	4,781	3,964	17,022	18,573	7,667	13,679	8,965	6,926	7,596		
14	6,180	4,605	3,960	18,722	18,464	8,523	13,615	10,082	7,311	8,306		
15	5,544	4,948	1,657	18,490	18,653	7,245	13,502	9,565	7,596	8,269		
16	6,164	5,005	2,446	18,236	18,669	6,079	13,779	8,896	6,784	7,978		
17	6,027	4,610	2,801	18,215	19,050	6,497	14,001	9,578	6,730	8,594		
18	5,192	4,023	2,871	17,665	19,430	6,412	13,659	10,061	8,413	7,362		
19	4,812	4,247	2,656	17,799	18,887	6,703	13,857	9,004	7,878	7,518		
20	5,304	4,378	3,422	18,125	18,688	6,592	14,202	9,023	8,356	8,532		
21	5,789	4,357	7,632	18,065	18,948	5,997	14,493	9,390	8,973	8,756		
22	5,733	4,673	7,859	18,584	19,369	4,845	15,458	9,173	8,529	8,495		
23	5,549	4,642	9,317	18,517	19,679	6,213	15,228	9,246	8,453	8,536		
24	5,367	4,159	9,866	17,848	19,804	6,131	16,893	9,975	8,255	8,569		
25	4,817	4,461	9,186	18,354	19,768	5,675	16,436	8,041	7,278	9,257		
26	4,817	4,341	9,346	17,930	19,346	6,851	17,351	8,885	8,557	9,202		
27	4,791	4,427	8,207	18,390	19,604	7,480	16,969	9,044	7,987	8,443		
28	4,057	4,238	8,682	18,457	19,393	7,390	12,334	8,489	8,599	7,477		
29	3,861	4,423	9,191	18,487		9,551	11,642	8,596	8,237	9,135		
30	5,475	4,779	8,429	18,146		9,117	10,678	9,061	8,466	8,649		
31	4,387		7,462	18,566		8,778		8,290		8,693		
TOTAL	173,794	132,600	171,086	442,866	519,849	334,132	362,630	262,824	243,423	257,567		
MEAN	5,606	4,420	5,519	14,286	18,566	10,778	12,088	8,478	8,114	8,309		
MAX	6,942	5,005	9,866	18,778	19,804	19,433	17,351	10,082	9,573	9,257		
MIN	3,861	3,670	1,657	3,401	15,331	4,845	7,181	3,909	6,730	7,362		

WATER YEAR TOTALS

TOTAL	2,900,771
DAILY MEAN	9,542
DAILY MAX	19,804 02/24/2017
DAILY MIN	1,657 12/15/2016

UNITED STATES DEPARTMENT OF THE INTERIOR
 U.S. BUREAU OF RECLAMATION-CENTRAL VALLEY PROJECT-CALIFORNIA
KESWICK DAM, RESERVOIR, AND POWERPLANT

RUN DATE: August 3, 2017

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	21,870	66,365	8,737	9,068	10,043	9,402		
2	7,366	5,147	4,832	5,978	21,947	56,516	8,627	7,786	10,572	9,483		
3	7,349	5,023	4,842	5,304	22,318	47,139	8,665	6,298	10,569	9,471		
4	7,021	4,831	4,840	4,756	22,445	40,147	8,689	5,200	10,521	9,474		
5	7,013	4,841	4,841	4,776	22,619	33,474	8,694	4,829	10,474	9,463		
6	6,764	4,841	4,841	4,792	27,729	28,177	8,691	4,766	10,517	9,426		
7	6,751	4,841	4,838	9,531	25,848	23,006	9,050	11,736	10,531	9,641		
8	6,756	4,840	4,835	13,032	21,361	18,958	8,812	12,356	9,736	10,160		
9	6,751	4,854	4,840	13,339	17,284	15,948	8,770	12,178	9,581	10,136		
10	6,510	4,866	4,839	13,479	38,612	13,659	8,698	12,230	9,587	9,825		
11	6,505	4,866	4,837	16,048	49,030	12,190	8,937	12,182	9,515	9,595		
12	6,537	4,866	4,841	32,098	59,280	10,960	11,281	12,414	9,578	9,710		
13	6,545	4,865	4,840	32,404	67,438	9,632	17,654	12,754	9,533	9,879		
14	6,542	4,863	4,842	32,383	73,966	9,401	20,955	12,149	9,529	9,917		
15	6,519	4,779	4,997	32,056	65,398	8,109	22,556	12,107	9,544	9,921		
16	6,515	4,865	4,946	31,833	46,123	7,997	22,460	12,235	9,536	9,844		
17	6,519	4,866	4,889	31,987	53,728	7,928	22,451	12,690	9,459	9,699		
18	6,232	4,864	4,891	28,724	45,624	7,857	25,572	12,688	9,191	9,860		
19	6,222	4,866	4,890	25,912	45,427	7,697	26,855	12,688	9,330	9,873		
20	6,225	4,862	4,870	25,968	26,418	7,697	26,377	12,692	9,541	9,871		
21	5,770	4,865	9,706	26,456	29,828	7,702	26,352	12,691	9,540	9,844		
22	5,495	4,864	9,852	25,898	57,422	7,816	26,899	12,105	9,503	9,770		
23	5,493	4,864	9,753	25,617	66,552	8,942	28,032	11,673	9,450	9,776		
24	5,444	4,866	9,762	25,936	68,035	9,091	28,046	10,982	9,536	9,725		
25	5,346	4,861	9,760	25,424	68,631	9,141	22,653	10,175	9,496	9,611		
26	4,888	4,814	9,762	26,751	68,906	8,887	18,492	10,067	9,466	9,499		
27	4,887	4,815	9,825	26,226	68,287	8,886	15,477	10,069	9,467	9,579		
28	4,889	4,810	9,839	22,215	68,444	8,889	12,929	10,193	9,422	9,434		
29	4,889	4,816	9,836	21,646		8,891	11,190	10,182	9,455	9,276		
30	4,864	4,816	8,527	21,790		8,889	10,065	10,178	9,380	9,353		
31	4,864		7,175	21,762		8,679		9,844		9,428		
TOTAL	190,839	145,987	201,004	640,300	1,270,570	528,670	492,666	329,205	291,602	299,945		
MEAN	6,156	4,866	6,484	20,655	45,378	17,054	16,422	10,620	9,720	9,676		
MAX	7,368	5,147	9,852	32,404	73,966	66,365	28,046	12,754	10,572	10,160		
MIN	4,864	4,779	4,816	4,756	17,284	7,697	8,627	4,766	9,191	9,276		

WATER YEAR TOTALS

TOTAL	4,390,788
DAILY MEAN	14,443
DAILY MAX	73,966 02/14/2017
DAILY MIN	4,756 01/04/2017

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: August 3, 2017

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	290	325	316	6,033	4,171	1,995		
2	461	320	311	307	290	324	315	4,403	4,045	1,939		
3	440	319	307	310	291	312	315	3,339	3,956	1,868		
4	440	317	304	315	291	313	315	2,786	3,874	1,860		
5	448	316	306	312	291	316	1,037	2,502	3,780	1,731		
6	450	316	305	313	292	316	1,511	2,228	3,715	1,630		
7	450	314	306	313	298	315	1,519	2,091	3,588	1,593		
8	446	302	306	318	296	311	1,522	2,217	3,515	1,510		
9	447	311	306	318	296	314	1,517	2,424	3,379	1,439		
10	449	303	308	316	312	312	1,528	4,865	3,328	1,402		
11	463	304	309	314	320	313	1,534	5,423	3,249	1,325		
12	465	304	308	316	318	317	1,540	5,427	3,183	1,275		
13	455	302	308	315	315	316	1,515	5,438	3,088	1,263		
14	451	321	308	320	324	315	1,508	5,497	3,006	1,237		
15	447	311	313	324	333	316	1,509	5,301	2,898	1,146		
16	445	310	311	327	334	317	1,507	5,026	2,766	1,131		
17	408	313	311	324	335	316	1,507	4,971	2,702	1,160		
18	330	314	312	326	334	317	1,511	4,905	2,660	1,160		
19	301	313	309	326	339	315	1,336	4,744	2,572	1,167		
20	301	312	307	326	338	313	757	4,686	2,517	1,140		
21	300	313	303	324	335	315	393	4,521	2,400	1,184		
22	302	311	306	326	334	316	539	4,380	2,361	1,152		
23	305	309	308	325	337	316	1,643	4,203	2,324	1,001		
24	306	307	308	334	338	317	2,988	4,359	2,229	955		
25	305	311	307	333	330	318	6,006	4,260	2,171	902		
26	317	313	306	317	293	320	9,629	4,397	2,048	860		
27	321	311	307	317	290	317	11,029	4,279	1,979	846		
28	309	311	306	317	326	316	11,129	4,417	1,978	800		
29	308	311	307	313	313	317	10,032	4,263	1,982	761		
30	309	310	307	290	317	317	8,000	4,359	1,978	706		
31	308		306	290		316		4,310		652		
TOTAL	11,953	9,342	9,536	9,832	8,820	9,798	85,507	132,054	87,442	38,790		
MEAN	386	311	308	317	315	316	2,850	4,260	2,915	1,251		
MAX	466	321	313	334	339	325	11,129	6,033	4,171	1,995		
MIN	300	302	303	290	290	311	315	2,091	1,978	652		

WATER YEAR TOTALS

TOTAL	403,074
DAILY MEAN	1,326
DAILY MAX	11,129 04/28/2017
DAILY MIN	290 01/30/2017

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

RUN DATE: August 3, 2017

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	2,665	3,513	14	580	1,881	2,013		
2	349	14	293	223	3,047	3,534	852	111	1,654	1,652		
3	276	530	14	602	2,256	1,058	1,105	16	1,650	1,771		
4	454	481	14	859	2,033	1,051	932	14	1,660	1,604		
5	309	519	14	25	1,680	865	1,190	457	1,158	1,744		
6	808	14	62	14	1,487	1,038	806	780	1,568	1,729		
7	1,036	14	220	683	2,028	1,645	2,093	2,853	1,341	1,807		
8	398	31	215	1,255	2,004	1,694	808	2,858	2,265	1,312		
9	292	471	16	3,051	1,108	1,792	912	3,022	1,648	1,570		
10	292	654	130	3,570	2,697	1,838	779	3,617	1,731	1,497		
11	365	183	14	3,354	3,004	1,474	873	3,419	1,876	1,526		
12	417	180	414	866	2,117	1,412	839	3,332	1,696	1,517		
13	380	23	393	1,641	1,928	1,460	660	3,065	2,358	2,135		
14	14	166	583	444	2,495	695	1,057	2,856	1,967	1,798		
15	362	35	2,090	854	1,143	1,934	1,468	3,424	2,207	1,691		
16	417	86	2,161	190	1,315	1,692	1,193	3,339	2,289	1,563		
17	658	164	1,723	422	1,250	1,372	1,037	3,159	2,543	1,729		
18	1,086	170	1,674	1,069	14	1,368	681	2,817	1,277	2,268		
19	802	193	1,821	702	1,130	1,366	1,262	3,197	1,858	2,082		
20	730	135	703	1,405	2,702	1,441	833	3,152	1,175	1,424		
21	295	14	519	1,482	2,415	1,659	572	3,021	1,175	1,212		
22	16	336	475	719	2,484	3,192	130	3,001	1,572	1,356		
23	14	511	122	857	2,156	2,446	67	3,188	1,646	707		
24	14	238	315	1,272	2,104	2,875	219	1,810	1,661	1,371		
25	14	311	152	819	2,096	3,250	38	2,363	2,181	666		
26	19	171	200	1,322	3,615	2,855	163	1,288	1,786	875		
27	191	280	1,049	1,116	3,767	1,701	141	2,278	1,957	1,402		
28	14	344	353	997	3,505	1,713	903	2,031	999	1,909		
29	14	14	164	2,235	44	44	668	1,643	1,804	1,499		
30	14	14	82	2,514	199	199	422	1,809	1,606	1,253		
31	989		25	2,320		239		2,298		1,395		
TOTAL	11,785	6,314	16,024	36,897	60,245	52,415	22,717	70,798	52,189	48,077		
MEAN	380	210	517	1,190	2,152	1,691	757	2,284	1,740	1,551		
MAX	1,086	654	2,161	3,570	3,767	3,534	2,093	3,617	2,543	2,268		
MIN	14	14	14	14	14	44	14	14	999	666		

WATER YEAR TOTALS

TOTAL	377,461
DAILY MEAN	1,242
DAILY MAX	3,767
DAILY MIN	14
	02/27/2017
	10/14/2016