



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 14 2014

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:

During July 2014, average daily water temperature compliance of 56.0 °F or less was met at the Clear Creek compliance point on the Sacramento River with the exception of July 20 (56.2 °F), July 30 (56.2 °F), and July 31 (56.3 °F). The following actions were taken to avoid exceedences and bring temperatures back into compliance: July 21, 2014, PRG #4 gate was opened and July 30, 2014, Middle gate #4 was closed.

During the month of July 2014, the average monthly water temperature was 55.6 °F at Clear Creek.

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

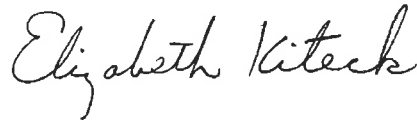
Station	Description
Shasta Inlets (R-1)	Water Temperature Profile
“	Turbidity, monthly, ntu
Shasta Dam (R-2)	Water Temperature, daily average, degrees F
“	Turbidity, ntu, monthly
Station	Description
Shasta Dam (R-2a)	Flow, average daily, cfs
Keswick (R-3)	Water Temperature, daily average, degrees F
“	Turbidity, ntu, monthly
Keswick (R-3a)	Flow, average daily, cfs

Subject: Monitoring and Reporting Program on Water Rights Order No. 90-5 (Water Rights) 2

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, with any questions regarding this data.

Sincerely,



Elizabeth Kiteck
Chief Water Operations

Enclosures

cc: 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 2014

Req. Sampling Frequency - Daily Average (Reading indicates daily average)						Control Pt 7/1 to 7/31			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	50.6	54.3	56.3	55.9	52.9						
2	50.6	54.3	56.3	55.8	52.4						
3	50.3	54.7	56.5	56.0	52.6						
4	50.4	54.4	56.6	55.8	52.7						
5	50.2	54.5	56.6	55.8	52.6						
6	50.2	54.4	56.7	55.7	52.4						
7	50.2	54.1	56.7	55.5	52.1						
8	50.2	54.2	56.8	55.1	51.1						
9	50.4	53.9	56.8	55.3	51.9						
10	50.6	54.0	56.8	55.4	52.0						
11	50.7	54.0	56.8	55.2	52.6						
12	50.7	53.8	56.8	55.2	52.3						
13	51.5	54.0	56.8	55.3	52.0						
14	50.8	54.3	56.8	55.7	52.2						
15	50.7	53.9	56.8	55.1	52.4						
16	51.1	53.8	56.8	54.9	52.3						
17	51.0	54.0	56.8	55.2	53.0						
18	51.3	54.1	56.9	55.4	53.1						
19	51.4	54.4	57.0	55.7	53.3						
20	51.4	54.8	57.0	56.2	52.5						
21	51.1	54.8	57.1	55.8	52.4		73.9				
22	50.7	54.2	57.2	55.5	52.1						
23	50.9	53.8	57.2	55.2	52.3			63.0			
24	51.1	54.1	57.2	55.4	52.2						
25	51.3	54.0	57.2	55.4	52.4						
26	51.5	54.1	57.1	55.4	52.1						
27	51.3	54.3	57.1	55.4	51.7						
28	51.9	54.1	57.0	55.6	51.9						
29	51.8	54.6	57.0	55.9	52.3					67.7	
30	51.4	54.8	57.0	56.2	52.3						
31	51.4	54.6	56.9	56.3	52.4						

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 07/31/2014.

Cross Channel Gate Operation:
 July 1-31 Open

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

TEMPERATURE			
Sampling Frequency Every two weeks May 1 through November 30.			
	Sample 1	Sample 2	Sample 3
	7/16/2014	7/28/2014	
Lake Elev	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F
(400 Feet Upstream of Dam)			
	Time: 10:00	Time: 14:20	
625	45.5	45.6	
650	45.6	45.7	
675	45.7	45.8	
700	45.8	45.9	
725	46.0	46.1	
750	46.3	46.5	
775	46.8	47.3	
800	47.7	48.4	
825	49.3	51.2	
850	52.4	57.6	
875	60.4	64.9	
900	66.8	70.9	
925	79.8	79.7	
950			
975			
1000			
1025			
1050			
Lake Surface	939.96' 80.2	932.65' 81.5	

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
	7/16/2014	7/28/2014	
Lake Elev	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu
(400 Feet Upstream of Dam)			
	Time: 10:00	Time: 14:20	
625	1.2	No	
650	0.9	Turbidity	
675	0.9	readings	
700	1.0	due	
725	1.1	to	
750	1.2	equipment	
775	1.2	problems	
800	1.2		
825	1.1		
850	0.5		
875	0.4		
900	0.5		
925	1.4		
950			
975			
1000			
1025			
1050			
Lake Surface	939.96' 1.1		

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling
 July 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.

Day	Station						
	R-2	R-3a	R-4	R-5	R-6	R-7	R-8
	Shasta Dam Discharge at Bridge	Keswick Discharge	Spring Creek PP Discharge	Clear Creek Control Point 7/1 to 7/31	Sacramento River (DLT)	McCloud River	Pit River
2			1.0	2.1			
9	1.7						
21					1.9		
23		1.4				4.4	
29							1.4

Dissolved Oxygen, mg/l

Sampling Frequency

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

Day	Station			Hour Time Sample Taken
	R-2	R-3	R-5	
	Shasta Dam Discharge at Bridge	Keswick Discharge	Control Point 7/1 to 7/31 Clear Creek	
2			12.8	14:00
9	10.2			10:05
23		10.3		13:00

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 07/31/2014.

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

RUN DATE: August 8, 2014

SHASTA LAKE, DAM AND POWERPLANT

QG

GENERATION RELEASE, CFS

WATER YEAR OCTOBER 2013 TO SEPTEMBER 2014

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,649	6,198	3,315	3,087	3,350	2,732	1,127	4,514	7,767	7,145		
2	5,514	5,264	3,424	3,230	3,261	2,497	1,854	5,187	7,819	5,733		
3	5,223	4,608	3,402	3,086	3,354	2,762	2,037	5,061	7,571	6,195		
4	5,533	4,848	3,346	2,944	3,331	2,262	1,013	5,197	7,012	6,856		
5	5,227	4,431	3,182	2,641	3,144	2,383	478	5,135	7,401	6,216		
6	5,255	4,615	3,634	2,837	3,312	1,844	1,066	5,939	7,105	6,296		
7	5,505	4,309	3,239	2,603	3,238	2,265	1,235	6,840	7,056	6,238		
8	5,572	4,122	3,032	2,759	3,774	2,582	660	6,761	6,764	6,200		
9	6,048	3,788	3,362	2,777	3,779	1,619	808	7,424	6,914	6,133		
10	5,630	4,109	3,027	3,117	4,079	1,853	1,398	7,237	5,646	7,072		
11	5,380	3,843	3,061	3,138	3,415	1,752	1,567	6,893	7,654	6,820		
12	5,869	3,813	3,083	3,048	3,496	1,112	1,379	6,928	7,160	6,887		
13	5,370	4,238	3,195	2,745	3,152	1,548	2,669	6,568	7,887	7,034		
14	5,483	4,196	3,117	2,729	2,864	1,785	2,150	7,189	7,325	7,315		
15	5,659	3,796	3,008	2,681	2,595	1,915	2,636	7,239	6,964	6,782		
16	5,747	3,741	3,190	2,893	2,466	2,550	2,618	7,367	7,473	7,056		
17	5,431	3,233	3,065	2,914	2,691	2,400	2,559	8,072	7,350	7,045		
18	5,611	3,139	3,033	2,820	2,492	2,983	3,454	7,401	7,557	6,717		
19	5,208	2,998	3,223	2,795	3,762	3,661	3,288	6,422	7,503	6,756		
20	4,947	3,185	3,469	2,671	2,322	2,413	3,657	6,884	8,526	6,709		
21	5,443	3,065	3,209	2,804	2,467	2,533	3,556	7,058	9,192	7,299		
22	5,172	3,016	3,170	2,894	2,569	2,565	3,773	7,499	9,190	6,997		
23	5,530	3,081	3,692	2,802	2,678	2,860	3,147	7,174	8,969	7,196		
24	5,207	3,233	3,393	3,078	2,714	2,988	3,056	7,300	9,665	6,674		
25	4,968	3,412	3,198	2,714	2,794	2,898	3,734	7,585	9,621	6,967		
26	4,879	3,381	3,271	2,506	3,061	3,020	3,157	7,862	9,080	7,132		
27	4,982	3,240	3,363	3,040	2,132	2,410	3,616	7,585	8,739	6,729		
28	4,855	3,264	3,325	3,332	2,336	3,061	3,397	7,761	8,447	7,558		
29	4,560	3,246	3,031	3,162	1,432	1,432	3,665	6,673	8,731	6,480		
30	4,961	3,288	3,187	2,999		1,675	3,828	8,139	8,558	6,391		
31	5,015		2,941	3,343		2,098		7,978		6,176		
TOTAL	165,433	114,700	100,187	90,189	84,628	72,458	72,582	212,872	236,646	208,804		
MEAN	5,337	3,823	3,232	2,909	3,022	2,337	2,419	6,867	7,888	6,736		
MAX	6,048	6,198	3,692	3,343	4,079	3,661	3,828	8,139	9,665	7,558		
MIN	4,560	2,998	2,941	2,506	2,132	1,112	478	4,514	5,646	5,733		

WATER YEAR TOTALS

TOTAL	1,358,499
DAILY MEAN	4,469
DAILY MAX	9,665 06/24/2014
DAILY MIN	478 04/05/2014

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

RUN DATE: August 8, 2014

KESWICK DAM, RESERVOIR, AND POWERPLANT

QT

TOTAL RELEASE, CFS

WATER YEAR OCTOBER 2013 TO SEPTEMBER 2014

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,250	5,658	3,891	3,779	3,349	2,684	2,502	4,533	8,494	9,244		
2	6,244	5,536	3,996	3,630	3,350	2,687	2,626	5,068	8,467	9,251		
3	6,251	5,146	4,068	3,562	3,340	2,544	2,663	5,068	8,217	9,248		
4	6,252	5,195	4,066	3,280	3,307	2,602	2,692	5,066	8,245	9,252		
5	6,247	4,924	4,064	3,107	3,275	2,608	2,664	5,094	8,244	9,243		
6	6,239	4,786	4,067	3,102	3,258	2,595	2,736	5,854	8,254	9,242		
7	6,239	4,628	4,057	3,098	3,411	2,648	2,730	6,438	8,200	9,263		
8	6,219	4,583	3,967	3,047	3,709	2,633	2,693	6,421	8,188	9,253		
9	6,149	4,722	3,974	2,955	3,453	2,639	2,697	6,970	8,184	9,217		
10	6,169	4,665	3,986	3,042	3,469	2,644	2,688	6,998	8,186	9,077		
11	6,154	4,618	4,047	3,002	3,312	2,641	2,672	6,997	8,162	9,204		
12	6,088	4,478	3,990	2,975	3,174	2,619	2,575	7,008	8,582	9,285		
13	6,168	4,420	3,993	2,979	3,075	2,631	2,500	6,986	8,563	9,238		
14	6,140	4,158	3,995	2,952	2,994	2,629	2,489	6,989	8,589	9,359		
15	6,111	3,920	3,991	2,895	2,890	2,670	2,512	6,965	8,624	9,221		
16	6,111	3,848	3,992	2,887	2,890	2,684	2,952	6,944	8,628	9,193		
17	6,135	3,792	3,990	2,888	2,889	2,692	3,018	6,996	8,656	9,230		
18	6,112	3,962	3,993	2,892	2,894	2,637	3,737	7,001	9,165	9,207		
19	6,117	3,998	3,925	2,898	2,932	2,713	3,741	6,993	9,150	9,277		
20	6,104	3,985	3,834	2,893	2,897	3,321	3,748	7,009	10,256	9,275		
21	6,004	4,006	3,844	2,895	2,751	3,166	3,747	7,081	9,933	9,300		
22	5,950	4,006	3,843	2,894	2,773	3,072	3,684	7,559	9,839	9,039		
23	5,943	3,965	3,838	2,898	2,731	3,095	3,488	7,564	9,873	9,250		
24	5,950	3,909	3,858	2,882	2,708	3,095	3,356	7,562	9,925	9,297		
25	5,957	3,913	3,885	2,846	2,712	3,077	3,372	7,559	9,942	9,307		
26	5,904	3,960	3,821	2,842	2,710	3,068	3,369	7,558	10,143	9,285		
27	5,877	4,039	3,787	3,082	2,618	2,935	3,530	7,566	9,696	9,277		
28	5,879	4,033	3,794	3,352	2,688	2,863	3,755	7,634	9,671	9,246		
29	5,894	4,047	3,651	3,349		2,702	3,797	7,490	9,650	8,758		
30	5,878	3,983	3,628	3,343		2,699	4,142	8,555	9,441	8,902		
31	5,883		3,794	3,348		2,546		8,498		8,838		
TOTAL	188,618	130,883	121,629	95,594	85,559	85,839	92,875	212,024	269,167	285,278		
MEAN	6,084	4,363	3,924	3,084	3,056	2,769	3,096	6,839	8,972	9,203		
MAX	6,252	5,658	4,068	3,779	3,709	3,321	4,142	8,555	10,256	9,359		
MIN	5,877	3,792	3,628	2,842	2,618	2,544	2,489	4,533	8,162	8,758		

WATER YEAR TOTALS

TOTAL	1,567,466
DAILY MEAN	5,156
DAILY MAX	10,256 06/20/2014
DAILY MIN	2,489 04/14/2014

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: August 8, 2014

QR

RELEASE TO RIVER, CFS

WATER YEAR OCTOBER 2013 TO SEPTEMBER 2014

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	305	314	314	304	308	303	1,516	1,211	467		
2	466	305	312	315	306	310	303	1,514	1,210	484		
3	463	293	313	316	307	311	321	1,520	1,204	453		
4	462	302	315	316	307	310	319	1,525	1,208	456		
5	461	304	312	317	306	316	316	1,528	1,207	456		
6	463	303	314	317	306	316	316	1,536	1,183	457		
7	459	303	312	315	306	316	314	1,526	1,136	460		
8	461	308	313	318	308	316	317	1,527	1,098	462		
9	463	309	317	317	308	319	313	1,527	1,059	461		
10	464	308	318	318	302	320	318	1,529	1,011	461		
11	461	309	313	318	305	317	315	1,530	922	460		
12	458	310	312	320	306	301	315	1,535	833	463		
13	461	311	315	321	306	293	315	1,534	783	463		
14	447	312	315	320	305	288	314	1,527	738	465		
15	402	311	314	312	306	290	317	1,532	700	462		
16	347	311	312	312	306	292	317	1,538	697	458		
17	312	312	310	310	309	298	318	1,536	709	456		
18	308	313	312	313	305	296	317	1,532	709	454		
19	306	316	315	315	298	294	315	1,547	664	460		
20	307	313	318	313	296	293	313	1,538	605	459		
21	306	310	315	312	304	293	313	1,539	613	458		
22	307	310	316	312	316	293	314	1,528	601	463		
23	308	311	312	313	314	291	749	1,541	515	455		
24	303	315	314	313	313	289	1,349	1,536	497	456		
25	300	314	312	315	313	289	1,497	1,541	478	459		
26	299	314	313	312	313	295	1,526	1,537	466	459		
27	298	314	314	323	308	299	1,517	1,539	469	460		
28	301	314	314	298	308	300	1,532	1,539	469	458		
29	299	315	312	304		303	1,562	1,532	470	460		
30	302	312	312	305		301	1,541	1,443	468	456		
31	305		312	305		304		1,256		455		
TOTAL	11,765	9,287	9,722	9,729	8,591	9,361	18,196	47,128	23,933	14,256		
MEAN	380	310	314	314	307	302	607	1,520	798	460		
MAX	466	316	318	323	316	320	1,562	1,547	1,211	484		
MIN	298	293	310	298	296	288	303	1,256	466	453		

WATER YEAR TOTALS

TOTAL	161,968
DAILY MEAN	533
DAILY MAX	1,562 04/29/2014
DAILY MIN	288 03/14/2014

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

RUN DATE: August 8, 2014

QG

GENERATION RELEASE, CFS

WATER YEAR OCTOBER 2013 TO SEPTEMBER 2014

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	638	83	109	76	14	14	1,459	54	699	2,501		
2	794	586	85	74	14	14	501	14	793	3,109		
3	798	565	81	74	14	14	646	14	698	3,174		
4	728	606	80	74	14	14	1,710	14	890	2,906		
5	722	622	80	75	14	8	1,438	14	1,245	3,185		
6	665	447	80	73	14	0	997	18	1,423	3,096		
7	641	724	80	73	14	118	2,013	14	1,543	3,172		
8	799	740	80	73	14	146	1,586	197	1,293	2,961		
9	380	575	80	73	14	382	1,797	148	1,299	2,970		
10	738	111	80	73	14	72	888	14	1,451	2,329		
11	721	107	80	73	14	1,301	894	314	950	2,523		
12	750	125	78	73	14	1,373	873	14	1,530	2,303		
13	768	88	78	74	14	1,056	18	169	1,543	2,308		
14	750	115	78	74	14	7	146	305	1,567	2,266		
15	660	128	78	57	14	7	146	144	1,589	2,285		
16	725	202	77	14	14	7	145	144	1,476	2,355		
17	692	90	77	14	14	7	145	98	1,394	2,382		
18	736	115	77	14	14	88	14	14	1,375	2,460		
19	939	214	77	14	14	7	42	679	1,374	2,420		
20	1,017	119	77	14	14	56	14	170	1,256	2,402		
21	1,030	128	77	14	14	499	14	14	977	2,270		
22	954	121	77	14	14	293	14	235	980	2,238		
23	946	189	77	14	14	381	14	234	961	2,256		
24	953	167	77	14	14	529	14	453	988	2,610		
25	1,320	120	77	14	14	542	14	316	641	2,411		
26	1,283	100	77	14	14	608	14	14	982	2,419		
27	1,280	118	77	14	14	276	136	14	1,068	2,405		
28	1,595	101	77	14	14	343	14	14	1,240	2,160		
29	1,726	89	77	14		1,044	14	622	1,171	2,419		
30	1,150	175	77	14		373	14	717	1,361	2,079		
31	1,304		77	14		381		931		2,276		
TOTAL	28,202	7,670	2,459	1,313	392	9,960	15,734	6,116	35,757	78,650		
MEAN	910	256	79	42	14	321	524	197	1,192	2,537		
MAX	1,726	740	109	76	14	1,373	2,013	931	1,589	3,185		
MIN	380	83	77	14	14	0	14	14	641	2,079		

WATER YEAR TOTALS

TOTAL	186,253
DAILY MEAN	613
DAILY MAX	3,185 07/05/2014
DAILY MIN	0 03/06/2014