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CVO-400
WTR-4.10

SEP 25 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 August 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 August 13, 2014 through August 27, 2014. The following actions were taken to avoid exceedences and bring temperatures back into compliance. On August 16, 2014, PRG #3 was closed. On August 18, 2014, PRG gate #2 was closed. The last action taken for the month of August was on August 26, 2014, when PRG #1 was closed.

During the month of August 2014, the average monthly water temperature was 56.1 °F at Clear Creek.

Enclosed is the monitoring report for August 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

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
 August 2014**

Req. Sampling Frequency - Daily Average (Reading indicates daily average)							Control Pt 8/1 to 8/31			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	51.8	54.4	57.0	55.8	52.6							
2	52.9	54.5	57.0	55.8	52.5							
3	52.2	54.6	57.0	56.0	52.3							
4	52.4	54.6	57.0	55.6	52.3							
5	52.3	54.5	57.0	55.2	51.9							
6	53.0	54.4	57.2	55.8	52.4							
7	53.0	54.9	57.1	56.2	52.1							
8	52.4	55.3	57.1	56.5	52.3							
9	51.4	55.1	57.1	56.8	52.8							
10	51.7	54.4	57.1	55.9	52.8							
11	52.7	54.5	57.1	55.7	52.8							
12	52.2	54.8	57.1	55.8	52.5							
13	52.0	54.7	57.1	56.1	52.8							
14	52.0	54.8	57.1	56.3	53.2							
15	52.5	54.8	57.1	56.3	53.2							
16	52.6	54.9	57.1	56.3	53.2							
17	52.5	55.3	57.1	56.7	53.4							
18	53.4	55.3	57.1	56.6	53.4							
19	52.4	55.1	57.1	56.7	53.1							
20	52.8	54.8	57.1	56.4	53.3			60.6				
21	52.6	55.0	57.1	56.5	53.4							
22	52.9	54.9	57.1	56.5	53.4							
23	53.0	55.2	57.1	56.6	52.6							
24	53.4	54.8	57.1	56.4	52.5							
25	53.7	55.0	57.2	56.3	52.3							
26	53.1	55.2	57.3	56.5	52.7		66.5					
27	52.6	54.8	57.3	56.6	52.6				65.3			
28	52.8	54.1	58.0	55.7	52.6							
29	53.1	54.1	57.3	55.4	53.1							
30	53.3	54.5	58.1	55.6	53.4							
31	53.5	54.5	57.9	55.9	53.6							

**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 08/31/2014.**

Cross Channel Gate Operation:
 August 1-31 Open

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

TEMPERATURE			
Sampling Frequency			
Every two weeks May 1 through November 30.			
	Sample 1	Sample 2	Sample 3
	8/13/2014	8/26/2014	
Lake Elev	Temperature	Temperature	Temperature
MSL	Degrees F	Degrees F	Degrees F
(400 Feet Upstream of Dam)			
	Time: 10:00	Time: 12:30	
625	45.6	45.8	
650	45.6	45.8	
675	45.7	46.0	
700	45.9	46.3	
725	46.2	46.8	
750	46.8	47.9	
775	47.7	49.5	
800	50.3	54.8	
825	56.5	63.3	
850	64.6	67.0	
875	68.0	69.2	
900	77.0	76.3	
925			
950			
975			
1000			
1025			
1050			
Lake Surface	923.51' 78.0	917.37' 78.2	

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
	8/13/2014	8/26/2014	
Lake Elev	Turbidity	Turbidity	Turbidity
MSL	ntu	ntu	ntu
(400 Feet Upstream of Dam)			
	Time: 10:00	Time: 12:30	
625	0.4	2.4	
650	0.8	2.0	
675	1.0	1.9	
700	0.8	1.8	
725	0.7	1.8	
750	0.8	1.6	
775	0.9	1.2	
800	0.1	1.1	
825	0.0	0.9	
850	-0.2	0.9	
875	-0.3	1.1	
900	0.7	1.6	
925			
950			
975			
1000			
1025			
1050			
Lake Surface	923.51' 0.5	917.37' 1.3	

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

**Summary of Turbidity and Dissolved Oxygen Water Sampling
August 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	8/1 to 8/31	River (DLT)	River	River	
19				1.7				
20	1.6	1.4				1.2		
26					1.7			
27							1.3	
28			0.7					

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		Control Point	Hour
	Discharge	Keswick	8/1 to 8/31	Time Sample
Day	at Bridge	Discharge	Clear Creek	Taken
19			13.1	12:25
20		12.7		10:30
20	11.0			13:25

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 08/31/2014.**

SHASTA LAKE, DAM AND POWERPLANT

QG

GENERATION RELEASE, CFS

WATER YEAR OCTOBER 2013 TO SEPTEMBER2014

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	7,207	
2	5,514	5,264	3,424	3,230	3,261	2,497	1,854	5,187	7,819	5,733	6,374	
3	5,223	4,608	3,402	3,086	3,354	2,762	2,037	5,061	7,571	6,195	6,479	
4	5,533	4,848	3,346	2,944	3,331	2,262	1,013	5,197	7,012	6,856	7,530	
5	5,227	4,431	3,182	2,641	3,144	2,383	478	5,135	7,401	6,216	6,086	
6	5,255	4,615	3,634	2,837	3,312	1,844	1,066	5,939	7,105	6,296	7,684	
7	5,505	4,309	3,239	2,603	3,238	2,265	1,235	6,840	7,056	6,238	7,513	
8	5,572	4,122	3,032	2,759	3,774	2,582	660	6,761	6,764	6,200	6,211	
9	6,048	3,788	3,362	2,777	3,779	1,619	808	7,424	6,914	6,133	6,080	
10	5,630	4,109	3,027	3,117	4,079	1,853	1,398	7,237	5,646	7,072	5,768	
11	5,380	3,843	3,061	3,138	3,415	1,752	1,567	6,893	7,654	6,820	5,620	
12	5,869	3,813	3,083	3,048	3,496	1,112	1,379	6,928	7,160	6,887	5,277	
13	5,370	4,238	3,195	2,745	3,152	1,548	2,669	6,568	7,887	7,034	5,567	
14	5,483	4,196	3,117	2,729	2,864	1,785	2,150	7,189	7,325	7,315	5,259	
15	5,659	3,796	3,008	2,681	2,595	1,915	2,636	7,239	6,964	6,782	5,773	
16	5,747	3,741	3,190	2,893	2,466	2,550	2,618	7,367	7,473	7,056	5,331	
17	5,431	3,233	3,065	2,914	2,691	2,400	2,559	8,072	7,350	7,045	5,251	
18	5,611	3,139	3,033	2,820	2,492	2,983	3,454	7,401	7,557	6,717	5,064	
19	5,208	2,998	3,223	2,795	3,762	3,661	3,288	6,422	7,503	6,756	5,161	
20	4,947	3,185	3,469	2,671	2,322	2,413	3,657	6,884	8,526	6,709	5,440	
21	5,443	3,065	3,209	2,804	2,467	2,533	3,556	7,058	9,192	7,299	5,340	
22	5,172	3,016	3,170	2,894	2,569	2,565	3,773	7,499	9,190	6,997	5,415	
23	5,530	3,081	3,692	2,802	2,678	2,860	3,147	7,174	8,969	7,196	5,097	
24	5,207	3,233	3,393	3,078	2,714	2,988	3,056	7,300	9,665	6,674	6,171	
25	4,968	3,412	3,198	2,714	2,794	2,898	3,734	7,585	9,621	6,967	5,669	
26	4,879	3,381	3,271	2,506	3,061	3,020	3,157	7,862	9,080	7,132	6,452	
27	4,982	3,240	3,363	3,040	2,132	2,410	3,616	7,585	8,739	6,729	6,414	
28	4,855	3,264	3,325	3,332	2,336	3,061	3,397	7,761	8,447	7,558	7,041	
29	4,560	3,246	3,031	3,162		1,432	3,665	6,673	8,731	6,480	6,297	
30	4,961	3,288	3,187	2,999		1,675	3,828	8,139	8,558	6,391	6,530	
31	5,015		2,941	3,343		2,098		7,978		6,176	6,781	
TOTAL	165,433	114,700	100,187	90,189	84,628	72,458	72,582	212,872	236,646	208,804	187,882	
MEAN	5,337	3,823	3,232	2,909	3,022	2,337	2,419	6,867	7,888	6,736	6,061	
MAX	6,048	6,198	3,692	3,343	4,079	3,661	3,828	8,139	9,665	7,558	7,684	
MIN	4,560	2,998	2,941	2,506	2,132	1,112	478	4,514	5,646	5,733	5,064	

WATER YEAR TOTALS

TOTAL	1,546,381
DAILY MEAN	4,616
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: September 4, 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	8,563	
2	6,244	5,536	3,996	3,630	3,350	2,687	2,626	5,068	8,467	9,251	8,630	
3	6,251	5,146	4,068	3,562	3,340	2,544	2,663	5,068	8,217	9,248	8,638	
4	6,252	5,195	4,066	3,280	3,307	2,602	2,692	5,066	8,245	9,252	8,581	
5	6,247	4,924	4,064	3,107	3,275	2,608	2,664	5,094	8,244	9,243	8,640	
6	6,239	4,786	4,067	3,102	3,258	2,595	2,736	5,854	8,254	9,242	8,424	
7	6,239	4,628	4,057	3,098	3,411	2,648	2,730	6,438	8,200	9,263	8,407	
8	6,219	4,583	3,967	3,047	3,709	2,633	2,693	6,421	8,188	9,253	8,149	
9	6,149	4,722	3,974	2,955	3,453	2,639	2,697	6,970	8,184	9,217	7,979	
10	6,169	4,665	3,986	3,042	3,469	2,644	2,688	6,998	8,186	9,077	7,987	
11	6,154	4,618	4,047	3,002	3,312	2,641	2,672	6,997	8,162	9,204	8,047	
12	6,088	4,478	3,990	2,975	3,174	2,619	2,575	7,008	8,582	9,285	7,767	
13	6,168	4,420	3,993	2,979	3,075	2,631	2,500	6,986	8,563	9,238	7,570	
14	6,140	4,158	3,995	2,952	2,994	2,629	2,489	6,989	8,589	9,359	7,570	
15	6,111	3,920	3,991	2,895	2,890	2,670	2,512	6,965	8,624	9,221	7,351	
16	6,111	3,848	3,992	2,887	2,890	2,684	2,952	6,944	8,628	9,193	7,381	
17	6,135	3,792	3,990	2,888	2,889	2,692	3,018	6,996	8,656	9,230	7,380	
18	6,112	3,962	3,993	2,892	2,894	2,637	3,737	7,001	9,165	9,207	7,382	
19	6,117	3,998	3,925	2,898	2,932	2,713	3,741	6,993	9,150	9,277	7,126	
20	6,104	3,985	3,834	2,893	2,897	3,321	3,748	7,009	10,256	9,275	7,117	
21	6,004	4,006	3,844	2,895	2,751	3,166	3,747	7,081	9,933	9,300	7,143	
22	5,950	4,006	3,843	2,894	2,773	3,072	3,684	7,559	9,839	9,039	7,177	
23	5,943	3,965	3,838	2,898	2,731	3,095	3,488	7,564	9,873	9,250	7,205	
24	5,950	3,909	3,858	2,882	2,708	3,095	3,356	7,562	9,925	9,297	7,216	
25	5,957	3,913	3,885	2,846	2,712	3,077	3,372	7,559	9,942	9,307	7,201	
26	5,904	3,960	3,821	2,842	2,710	3,068	3,369	7,558	10,143	9,285	7,414	
27	5,877	4,039	3,787	3,082	2,618	2,935	3,530	7,566	9,696	9,277	7,363	
28	5,879	4,033	3,794	3,352	2,688	2,863	3,755	7,634	9,671	9,246	7,089	
29	5,894	4,047	3,651	3,349		2,702	3,797	7,490	9,650	8,758	7,249	
30	5,878	3,983	3,628	3,343		2,699	4,142	8,555	9,441	8,902	6,970	
31	5,883		3,794	3,348		2,546		8,498		8,838	6,903	
TOTAL	188,618	130,883	121,629	95,594	85,559	85,839	92,875	212,024	269,167	285,278	237,619	
MEAN	6,084	4,363	3,924	3,084	3,056	2,769	3,096	6,839	8,972	9,203	7,665	
MAX	6,252	5,658	4,068	3,779	3,709	3,321	4,142	8,555	10,256	9,359	8,640	
MIN	5,877	3,792	3,628	2,842	2,618	2,544	2,489	4,533	8,162	8,758	6,903	

WATER YEAR TOTALS

TOTAL	1,805,085
DAILY MEAN	5,388
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

RUN DATE: September 4, 2014

LEWISTON DAM, LAKE, AND JUDGE FRANCIS CARR POWERPLANT

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	459	
2	466	305	312	315	306	310	303	1,514	1,210	484	458	
3	463	293	313	316	307	311	321	1,520	1,204	453	456	
4	462	302	315	316	307	310	319	1,525	1,208	456	455	
5	461	304	312	317	306	316	316	1,528	1,207	456	450	
6	463	303	314	317	306	316	316	1,536	1,183	457	454	
7	459	303	312	315	306	316	314	1,526	1,136	460	460	
8	461	308	313	318	308	316	317	1,527	1,098	462	453	
9	463	309	317	317	308	319	313	1,527	1,059	461	453	
10	464	308	318	318	302	320	318	1,529	1,011	461	454	
11	461	309	313	318	305	317	315	1,530	922	460	452	
12	458	310	312	320	306	301	315	1,535	833	463	453	
13	461	311	315	321	306	293	315	1,534	783	463	452	
14	447	312	315	320	305	288	314	1,527	738	465	450	
15	402	311	314	312	306	290	317	1,532	700	462	453	
16	347	311	312	312	306	292	317	1,538	697	458	453	
17	312	312	310	310	309	298	318	1,536	709	456	448	
18	308	313	312	313	305	296	317	1,532	709	454	446	
19	306	316	315	315	298	294	315	1,547	664	460	447	
20	307	313	318	313	296	293	313	1,538	605	459	452	
21	306	310	315	312	304	293	313	1,539	613	458	451	
22	307	310	316	312	316	293	314	1,528	601	463	454	
23	308	311	312	313	314	291	749	1,541	515	455	788	
24	303	315	314	313	313	289	1,349	1,536	497	456	998	
25	300	314	312	315	313	289	1,497	1,541	478	459	1,650	
26	299	314	313	312	313	295	1,526	1,537	466	459	2,501	
27	298	314	314	323	308	299	1,517	1,539	469	460	1,944	
28	301	314	314	298	308	300	1,532	1,539	469	458	1,415	
29	299	315	312	304		303	1,562	1,532	470	460	981	
30	302	312	312	305		301	1,541	1,443	468	456	953	
31	305		312	305		304		1,256		455	958	
TOTAL	11,765	9,287	9,722	9,729	8,591	9,361	18,196	47,128	23,933	14,256	22,151	
MEAN	380	310	314	314	307	302	607	1,520	798	460	715	
MAX	466	316	318	323	316	320	1,562	1,547	1,211	484	2,501	
MIN	298	293	310	298	296	288	303	1,256	466	453	446	

WATER YEAR TOTALS

TOTAL	184,119
DAILY MEAN	550
DAILY MAX	2,501 08/26/2014
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: September 4, 2014

QG **GENERATION RELEASE, CFS**

WATER YEAR OCTOBER 2013 TO SEPTEMBER2014

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	1,982	
2	794	586	85	74	14	14	501	14	793	3,109	2,609	
3	798	565	81	74	14	14	646	14	698	3,174	2,378	
4	728	606	80	74	14	14	1,710	14	890	2,906	1,830	
5	722	622	80	75	14	8	1,438	14	1,245	3,185	2,357	
6	665	447	80	73	14	0	997	18	1,423	3,096	1,467	
7	641	724	80	73	14	118	2,013	14	1,543	3,172	1,082	
8	799	740	80	73	14	146	1,586	197	1,293	2,961	2,242	
9	380	575	80	73	14	382	1,797	148	1,299	2,970	2,419	
10	738	111	80	73	14	72	888	14	1,451	2,329	2,282	
11	721	107	80	73	14	1,301	894	314	950	2,523	2,432	
12	750	125	78	73	14	1,373	873	14	1,530	2,303	2,562	
13	768	88	78	74	14	1,056	18	169	1,543	2,308	2,265	
14	750	115	78	74	14	7	146	305	1,567	2,266	2,034	
15	660	128	78	57	14	7	146	144	1,589	2,285	2,224	
16	725	202	77	14	14	7	145	144	1,476	2,355	2,301	
17	692	90	77	14	14	7	145	98	1,394	2,382	2,207	
18	736	115	77	14	14	88	14	14	1,375	2,460	2,557	
19	939	214	77	14	14	7	42	679	1,374	2,420	2,119	
20	1,017	119	77	14	14	56	14	170	1,256	2,402	1,933	
21	1,030	128	77	14	14	499	14	14	977	2,270	2,264	
22	954	121	77	14	14	293	14	235	980	2,238	1,813	
23	946	189	77	14	14	381	14	234	961	2,256	2,116	
24	953	167	77	14	14	529	14	453	988	2,610	1,424	
25	1,320	120	77	14	14	542	14	316	641	2,411	1,318	
26	1,283	100	77	14	14	608	14	14	982	2,419	853	
27	1,280	118	77	14	14	276	136	14	1,068	2,405	533	
28	1,595	101	77	14	14	343	14	14	1,240	2,160	18	
29	1,726	89	77	14	14	1,044	14	622	1,171	2,419	328	
30	1,150	175	77	14	14	373	14	717	1,361	2,079	36	
31	1,304		77	14	14	381		931		2,276	14	
TOTAL	28,202	7,670	2,459	1,313	392	9,960	15,734	6,116	35,757	78,650	53,999	
MEAN	910	256	79	42	14	321	524	197	1,192	2,537	1,742	
MAX	1,726	740	109	76	14	1,373	2,013	931	1,589	3,185	2,609	
MIN	380	83	77	14	14	0	14	14	641	2,079	14	

WATER YEAR TOTALS

TOTAL	240,252
DAILY MEAN	717
DAILY MAX	3,185 07/05/2014
DAILY MIN	0 03/06/2014