Placer County Water Agency

Power System: 24625 Harrison St. • Mail: P.O. Box 667 • Foresthill, California 95631
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A Public Agency

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ORIGINAL

November 10, 2005

Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, Northeast
Washington D.C. 20426

RE: Project No. 2079-CA

Dear Secretary:

In accordance with directions received by letter dated October 21, 2005 from Mr. Takeshi Yamashita, Regional Engineer, seven copies of this letter are being mailed to you concerning anomalies that occurred at Duncan Diversion Dam on October 17 and 19, 2004. After eleven days in which the daily average flows recorded above and below the dam were less than 1 cfs, on October 17, 2004 the daily average flow above the dam was 8.2 cfs and the daily average flow below the dam was 4.2 cfs.

On the following day, October 18, 2004, the daily average flow above the dam was 6.0 cfs and the daily average flow below the dam was 6.4 cfs. The next day, October 19, 2004, the daily average flow above the dam was 8.2 cfs and the daily average flow below the dam was 6.4 cfs. Article 37 of the license requires that 8 cfs, or the natural inflow, whichever is less, be released during a normal water year, or 4 cfs. or the natural inflow, whichever is less, be released during a dry year. Normal water year release requirements have been in effect since June 1, 1995.

The gauging station above the dam is located 1,050 feet upstream from the dam, and the gauging station below the dam is located 1,000 feet downstream from the dam. The gauging station above the dam is called, "Duncan Creek Near French Meadows, CA", USGS #11427700. and/or "R1", and the gauging station below the dam is called, "Duncan Creek Below Diversion Dam, Near French Meadows, CA, USGS #11427750, and/or "R2". There is a small reservoir at the dam. The drainage area above the dam is 9.94 square miles, the elevation of the gauging station above the dam is 5,270 feet above sea level, and the elevation of the gauging station below the dam is 5,210 feet above sea level. The gauging station above the dam is located in a valley-like area, while the gauging station below the dam is located at the bottom of a canyon. The historic maximum recorded flow at the gauging station above the dam since the gauging station was installed in August, 1960, is 3,650 cfs which occurred during a flood on December 22, 1964. There have been many other high flow events since that time. The daily average flows referred to above from October 1, 2004 – February 22, 2005 over the 24 hour period from midnight to the following midnight at the gauging stations above and below the dam are listed on the two

attached sheets, respectively.

The flow variations that occurred at the upstream and the downstream gauging stations on October 17 and 19 are shown on the enclosed table that lists the flows upstream and downstream of the dam for both days from 6:00 a.m. to midnight at two hours intervals. As can be seen from the table, on October 17, 2004, the flow below the dam was above 10 cfs from 8 p.m. to midnight, and on October 19, 2004, the flow below the dam was above 11 cfs from 6 p.m. to midnight. The stage elevations shown in the table were obtained from the Stevens A-35 strip chart recorders at the gauging stations, copies of which from the upstream and the downstream gauging stations are included for the days in question. The stages were converted to flows using the attached stage-discharge rating tables, table 33 for the gauge above the reservoir and table 20 for the gauge below the dam.

What is happening can be seen more clearly on the enclosed plots of the flows on both days. Rainstorms that occurred during the day over the watershed area above the dam caused the flows into the small reservoir to rise. Flattening of the plots of the flows recorded at the gauging station below the dam beginning at about 8 p.m. on October 17 and at about 6 p.m. on October 19 indicates that diversion to French Meadows Reservoir of some of the inflow to the Duncan Diversion Dam reservoir begins to occur when flows at the downstream gage are above 8 cfs. When the inflows spike to relatively high values late in the day – over 33 cfs on October 17 and over 19 cfs on October 19 – these relatively high values have a large effect on raising the computed average flow for the day at the gauging station above the dam. The flow at the gauging station below the dam also rises until diversion begins.

The events that occurred on October 17 and 19, 2004 appear to be the same as the event that occurred on October 28, 2000 at the same dam, which was reported to the Office of the Secretary by letter dated April 2, 2001, and the event that occurred on November 21, 2001, which was reported to the Office of the Secretary by letter dated August 15, 2002. Each of those events occurred in the Fall, when the soil moisture content would be expected to be low after the normally dry Summer months, and when the months when precipitation is normally expected are just beginning. In follow-up correspondence from George H. Taylor, Chief, Biological Resources Branch, we were notified that the October 28, 2000 and November 21, 2001 events would not be considered violations of our license.

If you have any questions, please call me at (530) 885-6917, or you may send me an email at sjones@pcwa.net.

Sincerely,

PLACER COUNTY WATER AGENCY

Stephen J. Jones

Stephen J. Jones
Power System Manager

PROVISIONAL DATA
Subject to revision

SURFACE WATER DATA, INC.
R1 DUNCAN CREEK NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39 08'09", long 120 28'39", in NE 1/4 NW 1/4 sec.24, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe NF.
USGS #: 11427700

DAILY DISCHARGE IN CUBIC FEET PER SECOND WATER YEAR OCT 2004 TO SEP 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	A
1	.98	6.7	5.8	11	24		
2	1.3	7.5	5.7	11	23		
3	1.2	9.0	5.6	11	24		
4	.99	8.1	5.7	11	25		
5	.94	7.8	5.5	11	24		
6	.91	8.7	5.4	11	24		
7	.85	9.7	6.0	10	23		
8	.85	11	12	10	21		
9	.85	11	98	10	20		
10	.85	11	34	10	20		
11	.84	14	27	10	21		
12	.85	11	28	10	22		
13	.81	11	28	10	25		
14	.78	9.9	25	10	40		
15	.78	9.1	23	10	34		
16	.80	8.6	21	11	37		
17	8.2	8.6	20	11	39		
18	6.0	8.7	20	11	36		
19	8.2	8.3	20	13	34		
20	9.0	7.5	20	16	33		
21	5.6	6.8	19	17	31		
22	6.1	6.6	17	18	31		
23	13	6.2	16	20			
24	17	5.9	15	21			
25	9.9	6.1	14	28			
26	10	6.0	13	51			
27	8.0	6.0	13	39			
28	7.1	6.0	13	33			
29	7.2	6.0	13	29	------		
30	8.4	6.0	12	26	------		
31	7.8	------	12	25	------		----
TOTAL	146.08·	248.8·	572.7·	525·	611		
MEAN	4.71	8.29	18.5	16.9	27.8		
MAX	17	14	98	51	40		
MIN	.78	5.9	5.4	10	20		
AC-FT	290	493	1,140	1,040	1,210		

					*	*	
CAL YEAR 2004	TOTAL	11,269.15·	MEAN	30.8	MAX	212	
WTR YEAR 2005	TOTAL*	2,103.58	MEAN	14.5	MAX	98	

* Incomplete Record

PROVISIONAL DATA
Subject to revision

SURFACE WATER DATA, INC.
R2 DUNCAN CREEK BLW DIVERSION DAM, NEAR FRENCH MEADOWS, CA

LOCATION.--Lat 39 07'59", long 120 28'58", in NE 1/4 SE 1/4 sec.23, T.15 N., R.13 E., Placer County, Hydrologic Unit 18020128, Tahoe NF.
USGS #: 11427750

DAILY DISCHARGE IN CUBIC FEET PER SECOND WATER YEAR OCT 2004 TO SEP 2005

Day	OCT	NOV	DEC	JAN	FEB	MAR	A
1	1.1	7.2	6.4	12	16		
2	1.3	7.7	6.3	12	16		
3	1.3	9.3	6.1	12	16		
4	1.1	8.6	6.2	12	17		
5	1.0	8.2	6.0	12	17		
6	.95	9.2	6.0	12	17		
7	.95	10	6.7	11	16		
8	.90	11	9.9	11	16		
9	.88	11	18	11	15		
10	.90	11	16	10	15		
11	.88	12	16	10	16		
12	.88	12	17	10	16		
13	.88	12	16	11	17		
14	.88	11	16	11	18		
15	.83	9.8	15	11	17		
16	.83	9.2	15	12	18		
17	4.2	9.0	14	12	18		
18	6.4	9.1	14	13	18		
19	6.4	8.8	14	14	17		
20	9.8	8.2	14	15	17		
21	5.9	7.4	14	15	16		
22	6.3	7.2	13	16	16		
23	8.9	7.0	13	17			
24	12	6.6	13	17			
25	10	6.7	13	19			
26	10	6.7	13	23			
27	8.2	6.6	13	19			
28	7.5	6.6	13	18			
29	7.2	6.6	13	17	------		
30	8.6	6.6	12	16	------		
31	8.3	------	12	16	------		----
TOTAL	135.26	262.3	380.6	427	365		
MEAN	4.36	8.74	12.3	13.8	16.6		
MAX	12	12	18	23	18		
MIN	.83	6.6	6.0	10	15		
AC-FT	268	520	755	847	724		

					*	*	
CAL YEAR 2004	TOTAL	3,553.44	MEAN	9.71	MAX	47	
WTR YEAR 2005	TOTAL*	1,570.16	MEAN	10.8	MAX	23	

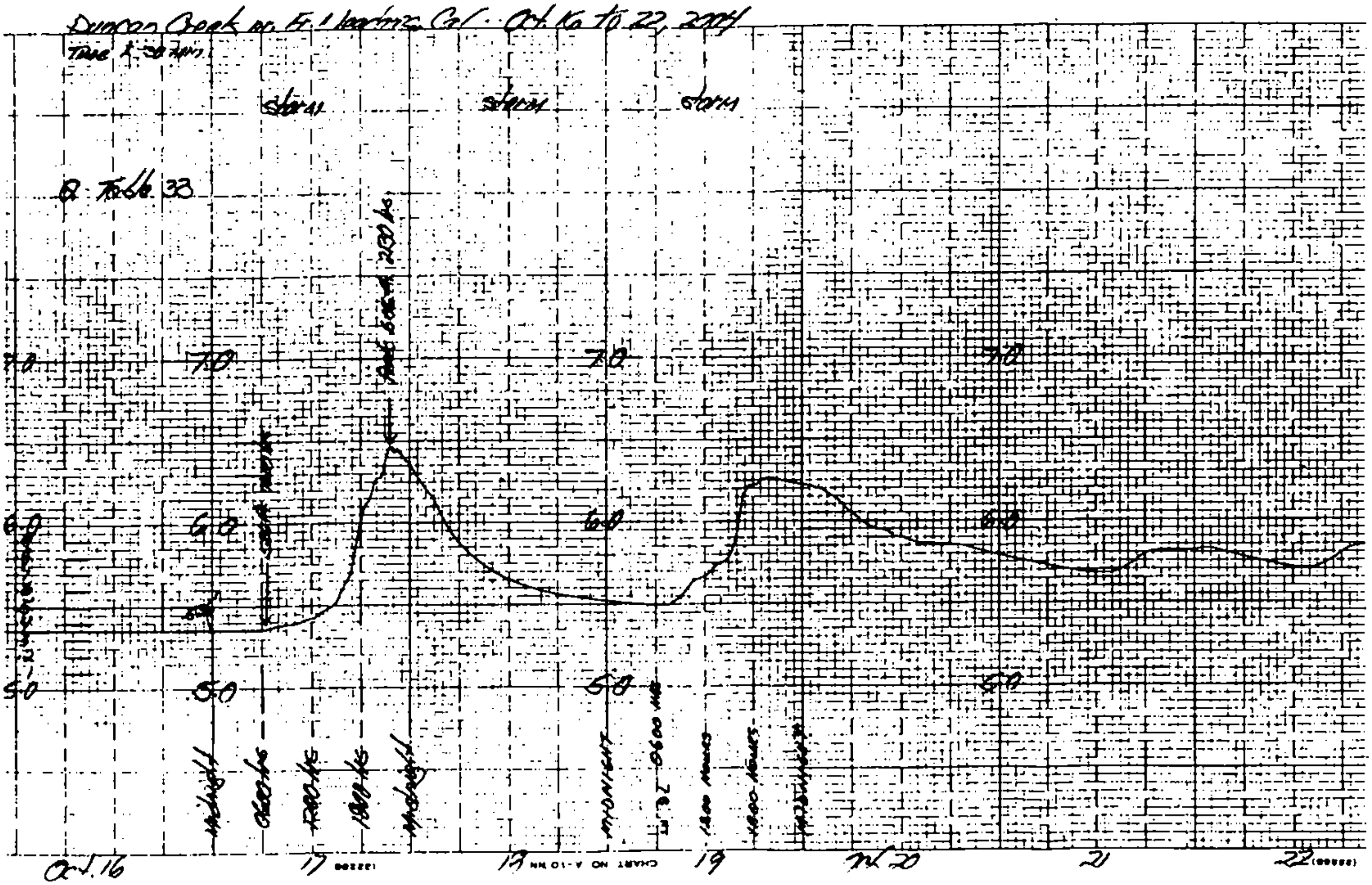
* Incomplete Record

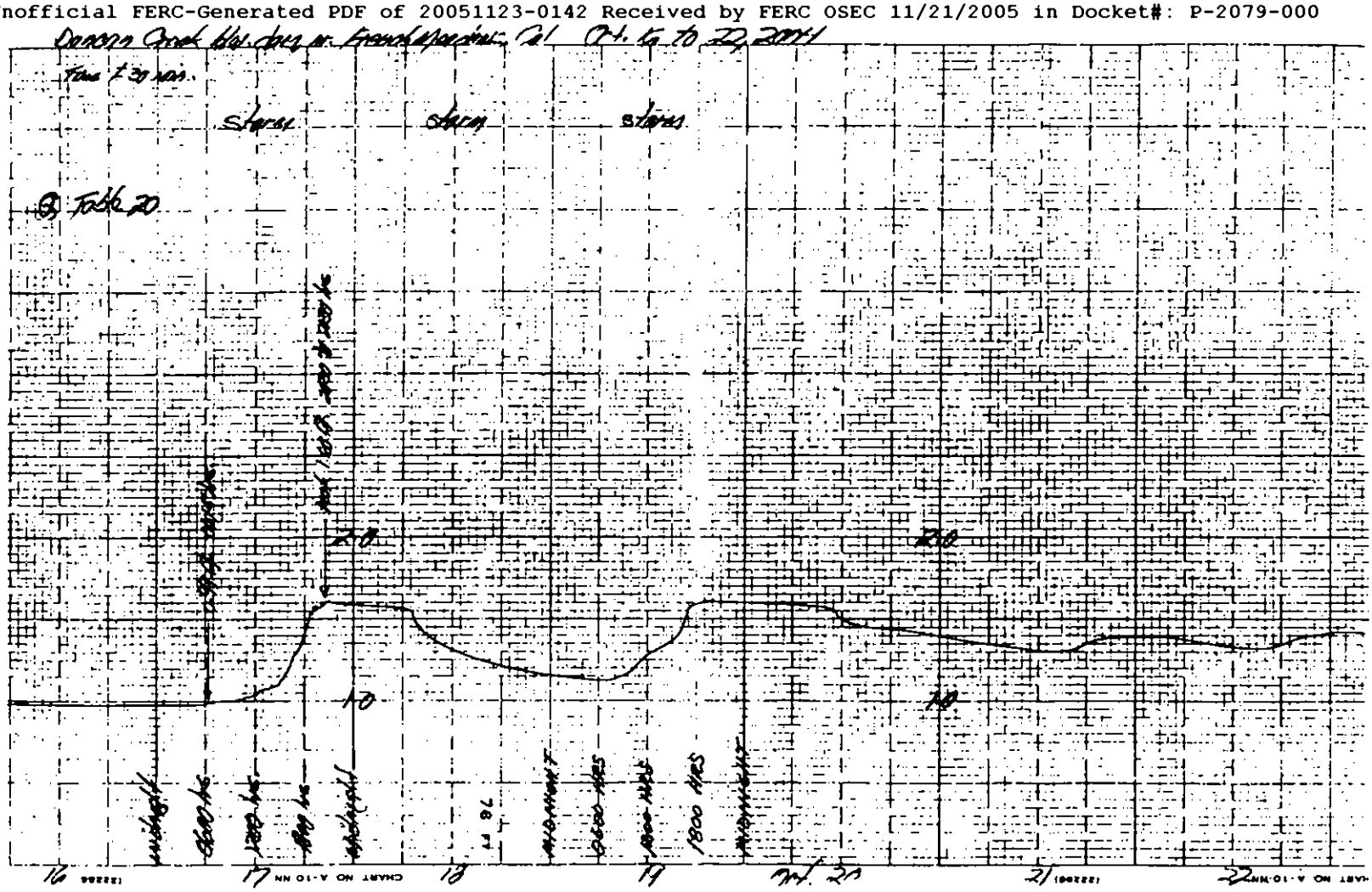
PLACER COUNTY WATER AGENCY
FERC PROJECT NO. 2079

Analysis of Flow Anomaly at Duncan Diversion Dam
October 17 and 19, 2004

	October 17, 2004				October 19, 2004			
TIME	Gaging Station Above DD Dam		Gaging Station Below DD Dam		Gaging Station Above DD Dam		Gaging Station Below DD Dam	
	Stage(ft)	Flow(cfs)	Stage(ft)	Flow(cfs)	Stage(ft)	Flow(cfs)	Stage(ft)	Flow(cfs)
0600	5.36	0.85	0.98	0.69	5.49	2.12	1.13	1.86
0800	5.37	0.94	1.00	0.81	5.51	2.35	1.14	1.96
1000	5.39	1.10	1.01	0.88	5.60	3.46	1.18	2.40
1200	5.44	1.60	1.03	1.02	5.67	4.41	1.28	3.79
1400	5.48	2.01	1.08	1.40	5.75	5.59	1.34	4.83
1600	5.63	3.87	1.18	2.40	5.92	8.45	1.42	6.48
1800	6.00	9.95	1.40	6.04	6.22	15.90	1.59	11.10
2000	6.27	19.40	1.57	10.50	6.27	19.40	1.61	11.80
2200	6.43	33.40	1.59	11.10	6.24	17.40	1.60	11.40
2400	6.36	26.30	1.58	10.80	6.23	16.60	1.60	11.40
Average		9.94		4.56		9.57		6.70

Note: DD Dam is Duncan Diversion Dam





07/24/02 08:51
SURFACE WATER DATA, INC.
USGS 11-427760
#R1 DUNCAN CREEK NEAR FRENCH MEADOWS, CA 2002 WY

RECEIVED
AUG 2 - 2002
PLACER COUNTY WATER AGENCY
POWER SYSTEM

Rating Table 33 from 10/10/01 00:00 Scale Offset = 5.00

REVISION OF RT. 32 BASED ON MEASUREMENT NO'S. 481-482.

DISCHARGE IN CUBIC FEET PER SECOND

ght	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	1st diff	2nd diff
5.2							.210*	.256	.310*	.366		
5.3	.411	.470*	.534	.603	.680*	.760	.846	.940*	1.00*	1.10*	.789	
5.4	1.20*	1.30	1.40*	1.50	1.60	1.70*	1.80	1.90	2.01	2.12	1.04	.251
5.5	2.24*	2.35	2.46	2.57	2.68	2.80*	2.92	3.05	3.18	3.32	1.22	.178
5.6	3.46	3.60	3.74*	3.87	4.00	4.13	4.27	4.41	4.55	4.69	1.38	.170
5.7	4.84*	4.99	5.13	5.28	5.44	5.59	5.75	5.91	6.07	6.23	1.56	.178
5.8	6.40*	6.56	6.72	6.88	7.05	7.22	7.39	7.56	7.74	7.91	1.69	.131
5.9	8.09	8.27	8.45	8.64	8.82	9.01	9.20*	9.39	9.57	9.76	1.86	.168
6.0	9.95*	10.1	10.2	10.3	10.5	10.6*	10.7	10.8	11.0	11.1	1.25	-.608
6.1	11.2*	11.3	11.4	11.5	11.5	11.6	11.7*	12.4	13.0	13.8	3.30	2.05
6.2	14.5*	15.2	15.9	16.6	17.4	18.2*	18.8	19.4	20.0	20.6	6.70	3.40
6.3	21.2*	22.0	22.8	23.6	24.5	25.4	26.3	27.2	28.2	29.2	8.97	2.27
6.4	30.2	31.2	32.3	33.4	34.5	35.7	36.9	38.1	39.3	40.6	11.7	2.77
6.5	41.9	43.3	44.6	46.1	47.5	49.0	50.5	52.1	53.7	55.3	15.1	3.35
6.6	57.0	58.7	60.5	62.3	64.1	66.0	67.9	69.9	71.9	74.0	19.1	4.00
6.7	76.1	78.2	80.4	82.7	85.0	87.3	89.8	92.2	94.7	97.3	23.8	4.73
6.8	99.9	102.6	105.3	108.1	110.9	113.8	116.8	119.8	122.9	126.0	29.3	5.53
6.9	129.2	132.6	135.9	139.2	142.7	146.3	149.9	153.5	157.3	161.1	35.8	6.42
7.0	165.0*	168.6	172.2	175.9	179.6	183.4	187.3	191.2	195.2	199.3	38.4	2.64
7.1	203.4	207.6	211.8	216.2	220.5	225.0*	229.2	233.4	237.7	242.0	43.0	4.64
7.2	246.4	250.9	255.4	260.0	264.7	269.4	274.2	279.0	283.9	288.9	47.4	4.39
7.3	293.9	299.0	304.1	309.4	314.6	320.0*	325.2	330.5	335.8	341.2	52.8	5.40
7.4	346.7	352.2	357.8	363.5	369.2	375.0	380.9	386.8	392.8	398.9	58.3	5.47
7.5	405.0*	410.4	415.9	421.4	426.9	432.5	438.2	443.9	449.6	455.5	56.3	-1.97
7.6	461.3	467.2	473.2	479.2	485.3	491.4	497.6	503.9	510.1	516.5	61.6	5.26
7.7	522.9	529.4	535.9	542.4	549.1	555.7	562.5	569.3	576.1	583.0	67.1	5.52
7.8	590.0*	596.1	602.2	608.4	614.7	620.9	627.2	633.6	640.0	646.4	62.9	-4.21
7.9	652.9	659.4	666.0	672.6	679.2	685.9	692.6	699.4	706.2	713.1	67.1	4.23
8.0	720.0*	726.9	733.3	740.0	746.7	753.6	760.3	767.2	774.1	781.0	68.0	.908
8.1	788.0	795.0	802.1	809.2	816.3	823.5	830.7	838.0	845.3	852.6	72.0	3.98
8.2	860.0*	867.4	874.8	882.3	889.8	897.4	905.0	912.7	920.4	928.1	75.8	3.87
8.3	935.8	943.7	951.5	959.4	967.3	975.3	983.3	991.4	999.5	1,008	80.0	4.12
8.4	1,016	1,024	1,032	1,041	1,049	1,057	1,066	1,074	1,083	1,091	84.2	4.22
8.5	1,100*											

* skeletal rating point

09/29/99 11:01
SURFACE WATER DATA, INC.
USGS 11-4277.60
#R2 DUNCAN CREEK BLW DIVERSION DAM, NEAR FRENCH MEADOWS, CA 1999 WY

Rating Table 20 from 10/09/98 00:00 Scale Offset = 0.60

AVERAGE CURVE. ALL SPILL COMPS AB. 3.8 FT. USED SINCE 10/9/98

DISCHARGE IN CUBIC FEET PER SECOND

ght	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09	1st diff	2nd diff
0.8							.200*	.230*	.260*	.290*		
0.9	.324	.381	.400*	.443	.490	.540*	.587	.637	.690*	.748	.486	
1.0	.810*	.878	.946	1.02*	1.09	1.16	1.24	1.32	1.40	1.48	.761	.275
1.1	1.57	1.66	1.76	1.86	1.96	2.06	2.17	2.29	2.40	2.52	1.08	.317
1.2	2.65	2.78	2.91	3.05	3.19	3.33	3.48	3.63	3.79	3.95	1.47	.393
1.3	4.12	4.29	4.47	4.65	4.83	5.02	5.21	5.41	5.62	5.83	1.92	.449
1.4	6.04	6.26	6.48	6.71	6.95	7.19	7.43	7.68	7.94	8.20	2.42	.504
1.5	8.46	8.74	9.01	9.30	9.59	9.88	10.2	10.5	10.8	11.1	2.98	.558
1.6	11.4	11.8	12.1	12.5	12.8	13.2	13.5	13.9	14.3	14.7	3.59	.612
1.7	15.0	15.4	15.8	16.2	16.7	17.1	17.5	17.9	18.4	18.8	4.26	.664
1.8	19.3*	19.8	20.3	20.7	21.2	21.6	22.3	22.8	23.3	23.9	5.10	.846
1.9	24.4	25.0	25.5	26.1	26.7	27.3	27.9	28.5	29.1	29.7	5.92	.816
2.0	30.3	31.0	31.6	32.3	32.9	33.6	34.3	35.0	35.7	36.4	6.80	.878
2.1	37.1	37.9	38.6	39.3	40.1	40.9	41.6	42.4	43.2	44.0	7.73	.934
2.2	44.9	45.7	46.5	47.4	48.2	49.1	50.0	50.9	51.8	52.7	8.73	.992
2.3	53.6	54.5	55.5	56.4	57.4	58.3	59.3	60.3	61.3	62.3	9.78	1.05
2.4	63.4	64.4	65.4	66.5	67.6	68.7	69.8	70.9	72.0	73.1	10.9	1.11
2.5	74.2	75.4	76.6	77.7	78.9	80.1	81.3	82.6	83.8	85.0	12.0	1.16
2.6	86.3	87.6	88.9	90.1	91.4	92.8	94.1	95.4	96.8	98.2	13.3	1.22
2.7	99.6	101.0	102.4	103.8	105.2	106.7	108.1	109.6	111.1	112.6	14.5	1.28
2.8	114.1	115.6	117.2	118.7	120.3	121.9	123.5	125.1	126.7	128.3	15.9	1.34
2.9	130.0	131.7	133.3	135.0	136.7	138.5	140.2	141.9	143.7	145.5	17.3	1.39
3.0	147.3	149.1	150.9	152.7	154.6	156.4	158.3	160.2	162.1	164.1	18.7	1.45
3.1	166.0	167.9	169.9	171.9	173.9	175.9	177.9	180.0	182.0	184.1	20.2	1.50
3.2	186.2	188.3	190.4	192.6	194.7	196.9	199.1	201.3	203.5	205.8	21.8	1.56
3.3	208.0	210.3	212.6	214.9	217.2	219.5	221.8	224.2	226.6	229.0	23.4	1.62
3.4	231.4	233.8	236.3	238.8	241.2	243.7	246.2	248.8	251.3	253.9	25.1	1.67
3.5	256.5	259.1	261.7	264.3	267.0	269.7	272.4	275.1	277.8	280.5	26.8	1.73
3.6	283.3	286.1	288.9	291.7	294.5	297.4	300.2	303.1	306.0	308.9	28.6	1.78
3.7	311.9	314.8	317.8	320.8	323.8	326.8	329.9	333.0	336.1	339.2	30.4	1.84
3.8	342.3	345.4	348.6	351.8	355.0	358.2	361.5	364.7	368.0	371.3	32.3	1.89
3.9	374.6	377.9	381.3	384.7	388.1	391.5	394.9	398.4	401.9	405.4	34.3	1.95
4.0	408.9	412.4	416.0	419.5	423.1	426.8	430.4	434.0	437.7	441.4	36.3	2.00
4.1	445.1	448.9	452.6	456.4	460.2	464.0	467.9	471.7	475.6	479.5	38.3	2.06
4.2	483.5	487.4	491.4	495.4	499.4	503.4	507.5	511.5	515.6	519.8	40.4	2.11
4.3	523.9	528.1	532.2	536.5	540.7	544.9	549.2	553.5	557.8	562.1	42.6	2.17
4.4	566.5	570.9	575.3	579.7	584.2	588.6	593.1	597.7	602.2	606.8	44.8	2.22
4.5	611.3	615.9	620.6	625.2	629.9	634.6	639.3	644.1	648.8	653.6	47.1	2.28
4.6	658.4	663.3	668.1	673.0	677.9	682.9	687.8	692.8	697.8	702.8	49.4	2.33
4.7	707.9	712.9	718.0	723.2	728.3	733.5	738.7	743.9	749.1	754.4	51.8	2.38