Jenkinson Lake at Pinecone Campsites 1-38 (ELD 001)

Location: Latitude 38.728, Longitude -120.560. 5 miles south of Pollock Pines on Sly Park Road; northern side of lake.

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	7.20	37	8.1	12.9					<1.0																												
01/15/02	5.34	37	8.0	12.5					<1.0																												
01/22/02	5.23	36	6.1	11.5																																	
01/29/02	5.34	34	7.8	10.6								0.85	0.09	<0.05	0.08	<0.01	<0.05	<0.03	NA																		
02/12/02	6.24	36	9.0	11.9																																	
02/19/02	5.77	34	7.9	11.5					11																												
02/26/02	7.15	41	7.9	10.5					1.1			0.67	0.07	<0.05	0.05	NA	<0.05	<0.03	NA																		
03/12/02	8.55	32	7.6	11.5	7.1	1	<1		5.6																												
03/26/02	10.2	33	7.4	11.5	13.9	<1	<1		11	80	NA	0.63	0.10	<0.05	NA	<0.01	<0.05	<0.03	NA																		
04/09/02	13.0	33	7.3	9.99	3.6	74	28		5.0																												
04/30/02	11.8	33	7.9	9.96	1.9	6	4		2.5			NA	NA	NA	NA	NA	<0.05	<0.03	NA																		
05/14/02	16.9	33	7.6	9.20	2.3	2	2	NA	1.0																												
05/21/02	15.5	33	7.7	11.5	2.5	NA	12	NA	1.2			0.95	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
06/11/02	21.2	34	7.7	8.06	6.2	59	2	<1.0	<10.0			<1.0		<1.0	<2.0		<1.0	<1.0	<2.0	12		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	23.0	81	7.5	6.46	5.8	272	22	1.5	10			1.20		<1.0	NA		<1.0	<1.0	<2.0	12		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/13/02	24.0	34	7.7	7.97	7.1	687	2														<0.400																
08/27/02	24.3	35	7.6	7.76	135	>2420	<1		37			0.76	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																		
09/03/02	23.8	36	7.7	9.38	97.4	1120	6		140	100	95																										
09/17/02	23.0	37	7.4	8.53	324	2420	3		140			1.09	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																		
10/09/02	19.6	36	7.8	8.98	2.9	548	<1		NA																												
10/22/02	16.6	35	7.4	9.55	1.6	142	<1			80	100	0.81	0.13	<0.05	0.12	<0.01	<0.05	<0.03	NA																		
11/05/02	14.1	36	7.6	9.32	4.0	66	<1	1.1	3.2																												
11/20/02	11.4	36	6.9	NA	NA	16	1																														
12/10/02	9.93	35	7.7	10.4		83	<1																														
12/23/02	8.99	35	7.9	10.3	2.5	59	<1																														
Count	25	25	25	24	16	17	18	3	13	3	2	9	1	9	4	5	10	10	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	5.2	32	6.1	6.46	1.6	1	<1	<1.0	<1.0	80	95	<1.0	0.13	<0.05	0.05	<0.01	<0.05	<.03	<2.0	12	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	81	9.0	12.9	324	>2420	63	1.5	140	100	100	1.20		<0.1	<2.0	<0.01	<1.0	<1.0	<2.0	12		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	14	37	7.6	10.1	38.6	469	8	1.0	23.4	87	98	0.83		0.03	0.31	<0.01	0.12	0.11		12																	
Geo Mean	12	36	7.6	9.94	7.8	76	2	0.9	5.2	86	97	0.80		0.03	0.15	<0.01	0.05	0.03		12																	
Median	12	35	7.7	10.1	4.9	74	2	1.1	5.0	80		0.81		0.03	0.10	<0.01	0.03	0.02		12																	

Jenkinson Lake Dam at Mormon Emigrant Trail (ELD 002)

Location: Latitude 38.721, Longitude -120.570. 5 miles south of Pollock Pines on Sly Park Road; southern side of lake, near dam.

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	7.23	36	8.3	13.3					1.4																									
01/15/02	6.29	36	7.9	13.5					1.5																									
01/22/02	5.46	30	6.1	12.3																														
01/29/02	5.24	34	7.8	10.8						0.84	0.1	<0.05	0.09	<0.01	<0.05	<0.03	NA																	
02/12/02	5.98	35	8.8	12.2																														
02/19/02	5.84	35	7.7	11.4					1.3																									
02/26/02	7.17	35	7.7	10.4					1.5	0.67	0.07	<0.05	0.06	NA	<0.05	<0.03	NA																	
03/12/02	7.25	34	7.6	11.8	2.5	16	10		1.7																									
03/26/02	8.35	34	7.7	12.2	2.7	4	<1		1.4	0.63	0.11	0.05	NA	<0.01	<0.05	<0.03	NA																	
04/09/02	13.1	33	7.1	9.72	23.3	NA	NA		2.0																									
04/30/02	12.1	33	7.9	9.95	4.4	16	6		<1.0	NA	NA	NA	NA	NA	<0.05	<0.03	NA																	
05/14/02	15.5	33	7.6	9.39	2.1	25	6	NA	<1.0																									
05/21/02	15.2	33	7.7	11.9	2.1	NA	19	NA	<1.0	0.92	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
06/11/02	20.5	34	7.9	8.59	3.2	397	7	1.0	<10.0	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	<1.0		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	19.5	51	7.5	7.97	9.9	416	<1	2.3	<10.0	2.80		<0.1	NA		<1.0	<1.0	<2.0	12		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/13/02	23.7	36	7.7	8.28	3.7	326	1																											
08/27/02	22.1	36	7.7	7.99	2.4	579	2		3.4	0.76	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																	
09/03/02	22.1	37	7.7	9.28	3.8	63	<1		1.8																									
09/17/02	20.0	36	7.7	9.43	1.9	159	1		1.5	1.13	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																	
10/09/02	18.1	36	7.9	8.93	1.6	101	1		NA																									
10/22/02	16.1	37	7.3	9.22	1.8	167	10			0.83	0.14	<0.05	0.13	<0.01	<0.05	<0.03	NA		<0.400															
11/05/02	14.0	36	7.5	9.60	1.2	61	4	1.1	1.6																									
11/20/02	11.4	36	6.9	NA	NA	7	<1																											
12/10/02	9.77	36	7.6	10.2		21	4																											
12/23/02	7.65	36	7.8	12.3	2.5	54	<1																											
Count	25	25	25	24	16	16	17	3	17	9	4	9	4	5	10	10	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	5.2	30	6.1	7.97	1.2	4	<1	1.0	<1	<1.0	0.07	<0.05	0.06	<0.01	<0.05	<0.03	<2.0	<1.0	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	51	8.8	13.5	23.3	579	19	2.3	<10	2.80	0.14	<0.1	<2.0	<0.01	<1.0	<1.0	<2.0	12		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	13	36	7.6	10.4	4.3	151	4	1.5	1.8	1.01	0.11	0.03	0.32	<0.01	0.12	0.11																		
Geo Mean	11	35	7.6	10.3	3.0	63	2	1.4	1.4	0.88	0.10	0.03	0.16	<0.01	0.05	0.03																		
Median	12	36	7.7	10.1	2.5	62	2	1.1	1.5	0.83	0.11	0.03	0.11	<0.01	0.03	0.02																		

Cosumnes River at Gold Beach Park (ELD 003) Location: Latitude 38.559, Longitude -120.846. 8 miles north of Plymouth

	Field Data					Bacteria				Nutrients									Trace Elements																
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	7.28	60	8.1	14.3																															
01/15/02	4.09	61	8.0	16.3																															
01/22/02	3.15	63	6.1	14.5																															
01/29/02	2.76	89	7.7	13.0																															
02/12/02	5.34	74	9.0	13.9																															
02/19/02	7.20	84	8.0	11.9																															
02/26/02	6.72	58	8.3	11.4																															
03/12/02	9.53	69	7.5	12.3	4.0	59	28																												
03/26/02	9.60	78	7.9	11.9	4.5	260	14																												
04/09/02	11.8	50	6.9	11.5	3.5	328	24																												
04/30/02	9.67	48	7.9	11.6	6.2	194	124																												
05/14/02	15.6	42	7.6	9.91	1.6	86	19	NA																											
05/21/02	11.2	55	7.5	14.0	9.3	NA	525	NA																											
06/11/02	20.0	58	7.8	8.84	0.2	1011	64	<1.0		<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	21		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	26.0	68	8.5	8.70	0.6	1011	178	2.1	<10.0	1.70		<0.1	NA		<1.0	<1.0	<2.0	23		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/13/02	23.9	76	7.6	6.87	0.7	>2420	10																												
08/27/02	21.9	78	7.7	8.50	0.9	>2420	6		<1.0																										
09/03/02	23.8	99	7.7	9.40	0.9	>2420	12																												
09/17/02	21.2	93	8.0	9.29	0.7	1553	10																												
10/09/02	16.9	83	7.8	9.63	0.8	1986	10																												
10/22/02	12.7	83	7.7	10.2	0.6	1300	18												<0.400																
11/05/02	7.30	81	7.7	12.3	1.4	579	17	1.5																											
11/19/02	10.1	75	7.5	13.1	2.4	488	4	2.1																											
12/10/02	7.27	71	7.6	12.4		517	9	1.1																											
12/23/02	5.12	90	7.8	12.4	6.3	1986	22		<1.0																										
Count	25	25	25	25	17	17	18	5	3	2		2	1		2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	2.8	42	6.1	6.87	0.2	59	4	<1.0	<1.0	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	21	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	26	99	9.0	16.3	9.3	>2420	525	2.1	<10	1.70		<0.1			<1.0	<1.0	<2.0	23		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	12	71	7.7	11.5	2.6	1095	61	1.5	2.0																										
Geo Mean	10	70	7.7	11.3	1.6	680	22	1.3	1.1																										
Median	9.7	74	7.7	11.9	1.4	1011	17	1.5	0.5																										

Cosumnes River at Highway 49 (ELD 004) **Location: Latitude 38.551, Longitude -120.850. 5 miles north of Plymouth on Highway 49.**

	Field Data					Bacteria				Water Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	7.29	62	8.0	14.5																																	
01/15/02	3.51	68	7.8	17.2																																	
01/22/02	2.85	65	6.2	15.0																																	
01/29/02	2.03	84	7.5	12.9																																	
02/12/02	4.91	69	8.9	14.0																																	
02/19/02	6.98	79	7.7	12.5																																	
02/26/02	6.48	56	8.3	11.7																																	
03/12/02	9.44	66	7.8	12.5	3.7	30	11																														
03/26/02	9.69	70	7.7	12.0	4.7	249	16			100	NA																										
04/09/02	11.4	46	8.1	11.3	1.9	43	12																														
04/30/02	9.35	48	7.9	11.6	1.9	249	102																														
05/14/02	14.8	45	7.6	9.98	1.6	115	20	NA																													
05/21/02	10.8	52	7.7	14.4	16.8	NA	416	NA																													
06/11/02	19.1	53	7.8	8.81	0.1	1011	166	<1.0				<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	20		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	23.1	59	8.0	8.68	1.9	1011	96	<1.0	<10.0			6.40		<0.1	NA		<1.0	<1.0	<2.0	22		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/13/02	22.5	68	7.8	8.46	0.4	>2420	10																														
08/27/02	20.1	78	8.0	9.46	0.2	2420	19		<1.0																												
09/03/02	21.3	89	8.0	11.4	0.4	2420	6			100	95																										
09/17/02	20.6	86	8.4	10.5	0.3	2420	12																														
10/09/02	16.5	83	8.1	10.7	0.5	980	10																														
10/22/02	12.5	82	7.5	10.8	0.6	575	12			90	95										<0.400																
11/05/02	7.88	79	7.8	12.7	0.0	81	11	1.3																													
11/19/02	8.86	71	7.6	13.4	0.6	411	3	2.1																													
12/10/02	6.93	76	7.7	12.8	0.4	313	17	<1.0																													
12/23/02	3.44	85	7.7	12.7	3.1	313	23		<1.0																												
Count	25	25	25	25	18	17	18	5	3	3	2	2		2	1		2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	2.0	45	6.2	8.46	0.0	30	3	<1.0	<1.0	90	95	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	20	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	23	89	8.9	17.2	16.8	>2420	416	2.1	<10	100	95	6.40		<0.1			<1.0	<1.0	<2.0	22		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	11	69	7.8	12.0	2.2	886	53	1.0	2.0	97	95																										
Geo Mean	9.3	67	7.8	11.8	0.6	429	21	0.8	1.1	97	95																										
Median	9.4	69	7.8	12.0	0.6	411	14	0.5	0.5	100	95																										

Cosumnes River at Michigan Bar Road (SAC003) **Location: Latitude 38.501, Longitude -121.045. 1.5 miles north of Highway 16 on Michigan Bar Road.**

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	8.56	76	7.9	14.2																														
01/15/02	4.92	89	7.7	14.8																														
01/22/02	3.90	95	6.5	15.2																														
01/29/02	3.95	102	7.0	12.8																														
02/12/02	6.65	103	8.8	13.8																														
02/19/02	8.46	112	7.7	12.5																														
02/26/02	8.43	79	8.1	11.8						0.68	0.20	<0.05	0.18	NA	<0.05	<0.03	NA																	
03/12/02	10.3	93	7.9	12.4	4.6	79	40																											
03/26/02	10.1	94	7.9	12.1	5.7	125	45																											
04/09/02	13.6	74	7.9	10.5	1.9	56	16																											
04/30/02	10.8	61	7.9	11.6	1.2	361	38																											
05/14/02	16.7	57	7.9	10.1	1.2	162	59	NA																										
05/21/02	13.5	47	7.7	14.1	2.5	NA	222	NA																										
06/11/02	21.8	62	8.0	8.92	0.0	659	48	<1.0		<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	24		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	23.8	61	8.1	8.81	0.8	914	104		<10.0	<1.0		<0.1	NA		<1.0	<1.0	<2.0	27		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/13/02	24.0	89	7.5	6.31	0.4	>2420	272																											
08/27/02	22.9	88	7.7	7.82	0.8	1986	9		<1.0																									
09/03/02	24.0	101	7.7	8.13	0.7	1300	16																											
09/17/02	22.3	101	8.1	9.41	0.4	1553	4																											
10/09/02	19.3	109	7.7	9.00	0.5	921	42																											
10/22/02	14.8	84	7.5	9.23	1.0	1046	69												<0.400															
11/05/02	10.2	98	7.7	11.4	0.7	435	25	<1.0																										
11/19/02	11.8	75	7.4	12.4	0.9	980	5																											
12/10/02	8.29	79	7.9	12.7		548	33																											
12/23/02	5.60	119	8.1	12.8	3.1	1120	44																											
Count	25	25	25	25	17	17	18	2	2	3	1	3	2		3	3	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	3.9	47	6.5	6.31	0.0	56	4	<1.0	<1.0	<1.0	0.20	<0.05	0.18		<0.05	<0.03	<2.0	24	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	119	8.8	15.2	5.7	>2420	272	<1.0	<10	0.68		<0.1	<2.0		<1.0	<1.0	<2.0	27		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	13	86	7.8	11.3	1.6	863	61			0.56		0.04	0.59		0.34	0.34																		
Geo Mean	11	84	7.8	11.1	0.2	556	35			0.55		0.04	0.42		0.18	0.16																		
Median	11	89	7.9	11.8	0.9	914	41			<1.0		<0.1	0.59		<1.0	<1.0																		

Cosumnes River at Twin Cities Road (SAC001) **Location: Latitude 38.291, Longitude -121.376. Between Interstate 5 and Highway 99 on Twin Cities Road.**

	Field Data					Bacteria				Water Column Toxicity		Nutrients									Trace Elements																
																						<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	9.84	120	7.7	13.9																																	
01/15/02	6.37	113	7.6	14.2																																	
01/22/02	4.62	114	6.8	14.6																																	
01/29/02	5.25	161	7.8	13.7						100	55											<1.0	1.5	<5.0	<5.0	2.9	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
02/12/02	7.80	131	8.6	12.5																																	
02/19/02	9.61	134	7.7	11.9																																	
02/26/02	10.4	89	8.1	14.1				NA																													
03/12/02	11.0	111	7.7	11.7	31.1	961	479																														
03/26/02	10.9	114	7.8	11.2	29.7	602	272	2.3														1.7	3.5	<5.0	<5.0	4.9	<0.2	<0.1	<4.0	<1.0	2.0	<5.0	<5.0	6.1	<0.2	<0.1	<4.0
04/09/02	15.3	71	7.9	9.87	10.9	272	38																														
04/23/02	15.9	74	7.8	9.83				NA		95	90											<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
04/30/02	12.4	63	7.9	10.6	6.6	197	57																														
05/14/02	17.5	62	7.8	9.50	5.8	961	72	NA																													
05/21/02	15.5	66	7.3	11.8	10.5	NA	549	NA																													
05/28/02	20.2	64	8.1	9.10				2.1		100	100											<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/11/02	21.0	67	7.6	8.02	3.4	914	99	<1.0				<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	26		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/18/02	22.0	73	7.5	7.89				<1.0		95	90											<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	24.4	32	7.6	7.81	10.4	1011	72	1.8	<10.0			3.10		<0.1	NA		<1.0	<1.0	<2.0	33		<1.0	1.3	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
07/31/02						dry	dry																														
08/13/02						dry	dry																														
08/27/02						dry	dry																														
09/03/02						dry	dry																														
09/17/02						dry	dry																														
10/09/02						dry	dry																														
10/22/02						dry	dry																														
10/29/02																																					
11/05/02						dry	dry																														
11/19/02						dry	dry																														
12/12/02	9.32	151	7.0	4.14		>2420	67																														
12/17/02	10.5	89	8.1	11.1	248			4.7		100	100																										
12/23/02	8.02	161	7.7	12.3		>2420	308																														
Count	21	21	21	21	9	9	10	6	1	5	5	2		2	1		2	2	2	2		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Min	4.6	32	6.8	4.14	3.4	197	38	<1.0	<10	95	55	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	26		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	161	8.6	14.6	248	>2420	549	4.7		100	100	3.10		<0.1			<1.0	<1.0	<2.0	33		1.7	3.5	<5.0	<5.0	4.9	<0.2	<0.1	<4.0	<1.0	2	<5.0	<5.0	6.1	<0.2	<0.1	<4.0
Mean	13	98	7.7	10.9	39.6	1084	201	2.0		98	87											0.67	1.2	<5.0	<5.0	1.8	<0.2	<0.1	<4.0	<1.0	0.77	<5.0	<5.0	1.7	<0.2	<0.1	<4.0
Geo Mean	12	91	8	11	15	816	132	3		97	95											0.60	0.83	<5.0	<5.0	1.5	<0.2	<0.1	<4.0	<1.0	0.62	<5.0	<5.0	1.3	<0.2	<0.1	<4.0
Median	11	89	8	11	11	961	85	2		98	95											<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0

North Fork Mokelumne River at Highway 26 (AMA001)

Location: Latitude 38.423, Longitude -120.541. Between Glencoe and Westpoint on Highway 26.

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	5.79	48	8.0	13.6					<1.0																									
01/16/02	2.74	39	8.0	12.9					<1.0																									
01/23/02	1.97	53	7.3	13.8					<1.0																									
01/30/02	1.31	43	8.4	16.5					<1.0	NA	0.15	<0.05	NA	NA	<0.05	<0.03	NA																	
02/13/02	4.10	52	7.7	13.5					<1.0																									
02/20/02	6.28	65	7.8	19.4					5.1																									
02/27/02	6.42	49	8.2	13.6					1.4	0.72	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
03/13/02	5.64	31	7.5	14.4	2.2	2	<1																											
03/27/02	6.55	42	7.6	12.6	3.5	5	1		1.2	0.53	0.08	<0.05	0.07	0.01	<0.05	<0.03	NA																	
04/10/02	8.05	28	7.8	11.5	4.6	1	1		1.2																									
04/24/02	9.36	29	7.5	11.3		29	1		1	0.62	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																	
05/15/02	12.4	26	7.5	10.4	2.0	63	3	<1.0	1.8																									
05/22/02	7.09	29	8.0	10.6	1.9	NA	5		1	0.63	NA	<0.05	NA	0.03	<0.05	<0.03	NA																	
05/24/02								1.5																										
06/13/02	12.3	22	7.6	10.6	0.8	222	5		<10.0	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	7.2		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/26/02	13.1	21	7.4	10.1	0.8	41	1	NA	<10.0	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	7.6		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	13.4	22	7.1	10.1	0.2	194	6																											
08/28/02	12.3	22	7.4	11.0	0.6	488	12		<1.0	0.42	<0.05	<0.05	<0.05	<0.01	<0.05	<0.03	NA																	
09/05/02	12.6	21	7.6	9.84	0.6	148	6		<1.0																									
09/19/02	12.3	21	7.5	10.6	0.8	387	6		<1.0	0.42	NA	<0.05	<0.05	<0.01	<0.05	<0.03	NA																	
10/10/02	13.1	23	7.4	10.5	0.9	548	3		<1.0																									
10/24/02	11.0	22	7.3	10.5	0.7	980	14		<1.0	0.44	0.06	<0.05	NA	NA	<0.05	<0.03	NA		<.400															
11/07/02	10.8	24	7.4	10.8	2.5	980	55	2.5	2.2																									
11/19/02	8.42	27	6.8	12.3	1.4	64	3	1.4	<1.0	0.52	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
12/10/02	7.46	28	7.4	12.0		11	<1	1.2	<1.0	0.49	0.15	<0.05	0.13	0.02	<0.05	<0.03	NA																	
12/23/02	3.55	38	8.3	12.9	1.3	260	3		<1.0																									
Count	25	25	25	25	16	17	18	5	23	9	5	12	2	3	12	12	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	1.3	21	6.8	9.84	0.2	1	<1	<1.0	<1.0	0.42	<0.05	<0.05	0.07	<0.01	<0.05	<0.03	<2.0	7.2	<.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	13	65	8.4	19.4	4.6	980	55	2.5	<10	0.72	0.15	<0.1	<2.0	0.03	<1.0	<1.0	<2.0	7.6		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	8.3	33	7.6	12.2	1.6	260	7	1.4	1.4	0.53	0.09	0.03		0.01	0.12	0.11																		
Geo Mean	7.2	31	7.6	12.0	1.2	76	3	1.3	0.9	0.52	0.08	0.03		0.01	0.05	0.03																		
Median	8.1	28	7.5	11.5	1.1	148	3	1.4	0.5	0.52	0.08	0.03		0.01	<0.05	<0.03																		

Sutter Creek at Highway 49 (AMA002) **Location: Latitude 38.393, Longitude -120.801. Off of Highway 49 in Sutter Creek, in Minnie Provis Park.**

	Field Data					Bacteria				Water Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	9.06	176	7.8	12.5					<1.0																												
01/16/02	5.00	188	7.9	12.7					<1.0																												
01/23/02	3.05	191	7.6	14.9					<1.0																												
01/30/02	3.40	169	7.1	16.4					<1.0			NA	0.11	<0.05	NA	NA	<0.05	<0.03	NA																		
02/13/02	7.19	176	7.8	13.8					<1.0																												
02/20/02	9.56	120	7.7	18.3					8.3																												
02/27/02	10.4	171	7.9	11.2					<1.0			0.63	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
03/13/02	10.0	158	7.7	13.6	1.6	91	17																														
03/27/02	12.4	146	8.0	11.5	3.8	101	18		<1.0			0.62	0.08	<0.05	0.070	0.01	<0.05	<0.03	NA																		
04/10/02	15.2	183	8.0	11.6	1.2	93	23		<1.0																												
04/24/02	14.5	186	8.0	10.5		135	46		1.0			0.66	NA	<0.05	NA	0.01	<0.05	<0.03	NA																		
05/15/02	19.7	184	8.1	9.08	1.2	178	72	<1.0	<1.0																												
05/22/02	14.2	168	8.0	10.3	3.4	NA	80		1.8			0.84	NA	<0.05	NA	0.02	<0.05	<0.03	NA																		
05/24/02								1.4																													
06/13/02	24.2	214	8.0	8.71	1.2	1011	219		<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	95		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/26/02	26.6	220	8.2	8.22	0.4	1011	206	NA	<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	100		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	23.2	154	6.9	7.85	2.5	>2420	28																														
08/28/02	NA	NA	NA	NA	NA	Stagnant	Stagnant					0.61	0.07	<0.05	0.06	<0.01	<0.05	<0.03	NA																		
09/05/02	NA	NA	NA	NA	NA	Stagnant	Stagnant																														
09/19/02	NA	NA	NA	NA	NA	Stagnant	Stagnant					0.42	NA	<0.05	<0.05	<0.01	<0.05	<0.03	NA																		
10/10/02	NA	NA	NA	NA	NA	dry	dry																														
10/24/02	14.8	189	7.4	10.7	3.0	>2420	1733		2.4	100	90	0.44	0.06	<0.05	NA	NA	<0.05	<0.03	NA		<.400																
11/07/02	13.7	314	6.9	5.70	17.2	>2420	>2420	38	10																												
11/19/02	10.4	237	7.1	12.3	2.0	>2420	84	1.5	<1.0			0.53	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
12/10/02	8.38	233	7.7	11.5		>2420	613	1.3	<1.0			0.51	0.14	<0.05	0.12	0.02	<0.05	<0.03	NA																		
12/23/02	4.32	173	7.7	12.3	1.1	272	42		<1.0																												
Count	21	21	21	21	12	13	14	5	19	1	1	11	5	12	6	6	12	12	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	3.1	120	6.9	5.70	0.4	91	17	<1.0	<1.0	100	90	0.42	0.06	<0.05	<0.05	<0.01	<0.05	<0.03	<2.0	95	<.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	27	314	8.2	18.3	17.2	>2420	>2420	38	10			<1.0	0.14	<0.1	<2.0	0.02	<1.0	<1.0	<2.0	100		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	12	188	7.7	11.6	3.2	1154	400	8.5	2.0			0.57	0.09	0.03	0.38	0.01	0.12	0.11																			
Geo Mean	11	184	7.7	11.2	2.0	555	105	2.2	1.0			0.56	0.09	0.03	0.15	0.01	0.05	0.03																			
Median	10	183	7.8	11.5	1.8	1011	76	1.4	1.0			0.53	0.08	0.03	0.10	0.01	<0.05	<0.03																			

Mokelumne River at Highway 49 (CAL004) **Location: Latitude 38.313, Longitude -120.721. One mile north of Mokelumne Hill on Highway 49.**

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements															
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	6.47	51	8.2	14.5					5.0																											
01/16/02	2.79	30	7.8	14.5					<1.0																											
01/23/02	3.70	52	7.9	14.7					<1.0																											
01/30/02	2.59	45	8.2	16.8					1.2			NA	0.11	<0.05	NA	NA	<0.05	<0.03	NA																	
02/13/02	5.07	54	8.1	14.6					<1.0																											
02/20/02	7.33	62	8.0	20.7					6.8																											
02/27/02	7.66	49	8.2	12.9					1.8			0.63	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
03/13/02	7.31	40	7.5	15.2	2.5	4	<1																													
03/27/02	8.19	46	8.0	15.7	4.0	13	1		1.6			0.62	0.08	<0.05	0.070	0.01	<0.05	<0.03	NA																	
04/10/02	10.3	33	8.2	12.6	3.0	17	<1		2.2																											
04/24/02	11.3	33	8.0	11.9		88	49		1.3			0.66	NA	<0.05	NA	0.01	<0.05	<0.03	NA																	
05/15/02	14.0	33	8.0	11.2	2.1	167	44	1.8	2.3																											
05/22/02	11.0	36	8.0	10.7	5.7	NA	13		3.1			0.84	NA	<0.05	NA	0.02	<0.05	<0.03	NA																	
05/24/02								1.7																												
06/13/02	16.7	23	7.8	10.2	1.6	190	6		<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	8.0		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/26/02	18.8	29	8.0	9.69	0.8	378	19	NA	<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	10		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	23.6	55	7.9	8.65	0.0	2420	5																													
08/28/02	18.9	37	7.7	9.98	0.8	1414	8		<1.0			0.61	0.07	<0.05	0.06	<0.01	<0.05	<0.03	NA																	
09/05/02	19.1	39	7.9	9.82	0.3	727	4		<1.0	100	100																									
09/19/02	15.1	21	7.9	10.8	1.9	2420	11		<1.0			0.42	NA	<0.05	<0.05	<0.01	<0.05	<0.03	NA																	
10/10/02	14.1	23	7.7	10.9	1.8	397	12		1.2																											
10/24/02	13.0	22	7.7	10.6	1.0	1553	36		<1.0	100	90	0.44	0.06	<0.05	NA	NA	<0.05	<0.03	NA		0.477															
11/07/02	11.8	25	7.7	11.1	0.7	548	12	1.5	<1.0																											
11/19/02	10.5	28	7.6	13.1	1.7	132	11	1.5	4.8			0.53	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
12/10/02	8.17	28	7.4	12.5		38	2	1.3	1.0			0.51	0.14	<0.05	0.12	0.02	<0.05	<0.03	NA																	
12/23/02	4.46	39	7.9	13.1	2.4	110	18		<1.0																											
Count	25	25	25	25	16	17	18	5	23	2	2	11	5	12	6	6	12	12	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	2.6	21	7.4	8.65	0.0	4	<1	1.3	<1.0	100	90	0.42	0.06	<0.05	<0.05	<0.01	<0.05	<0.03	<2.0	8.0	0.477	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	62	8.2	20.7	5.7	2420	49	1.8	<10	100	100	<1.0	0.14	<0.1	<2.0	0.02	<1.0	<1.0	<2.0	10		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	11	37	7.9	12.7	1.9	625	14	1.6	1.5			0.57	0.09	0.03	0.38	0.01	0.12	0.11																		
Geo Mean	9.3	36	7.9	12.4	0.9	1	1	0.9	0.9			0.56	0.09	0.03	0.15	0.01	0.05	0.03																		
Median	11	36	7.9	12.5	1.8	190	11	1.5	0.5			0.53	0.08	0.03	0.10	0.01	<0.05	<0.03																		

Lake Amador at Lake Amador Boat Launch (AMA003)

Location: Latitude 38.302, Longitude -120.887. From Highway 88, turn south on Jackson Valley Road and follow the signs to the boat ramp.

	Field Data					Bacteria				Water Column Toxicity		Nutrients									Trace Elements															
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	12.0	169	7.6	8.66					2.6																											
01/14/02	11.4	170	7.8	7.95																																
01/22/02	10.8	174	7.9	9.82					2.1																											
01/28/02	10.3	176	8.2	9.34																																
02/11/02	10.4	181	8.1	16.9					2.0																											
02/19/02	11.3	172	8.5	13.9					3.8																											
02/25/02	12.6	174	8.9	17.0					3.6			NA	NA	<0.05	NA	0.24	<0.05	<0.03	NA																	
03/11/02	12.5	180	8.4	12.4	NA	72	35																													
03/25/02	13.4	181	8.1	11.0	4.3	281	33		2.6			1.31	0.78	<0.05	0.42	0.36	<0.05	<0.03	NA																	
04/08/02	17.9	186	8.9	NA	2.7	158	8		2.7																											
04/22/02	18.2	196	8.9	11.0	2.2	104	<1		2.4			1.91	0.45	NA	0.34	0.11	<0.05	<0.03	NA																	
05/13/02	20.6	202	9.1	10.6	3.4	344	8		1.2																											
05/20/02	20.2	204	8.9	9.68	3.7	NA	27	8.5	2.8			1.97	NA	0.07	NA	NA	<0.05	<0.03	NA																	
06/10/02	24.2	168	9.0	10.3	3.7	479	9	3.7	<10.0			1.30		<0.1	<2.0		<1.0	<1.0	<2.0	68		<1.0	1.7	<5.0	<5.0	<2.0	<0.2	0.11	<4.0	<1.0	3.8	<5.0	<5.0	2.0	<0.2	<0.1	<4.0
06/24/02	25.2	167	9.3	10.6	2.5	602	2	4.6	<10.0			1.40		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.5	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	26.7	137	8.8	8.95	3.5	>2420	7																													
08/26/02	25.2	138	7.9	5.83	5.8	>2420	6					1.27	NA	NA	NA	0.01	<0.05	<0.03	NA																	
09/03/02	25.9	146	8.5	NA	2.6	1986	8		<1.0	100	100																									
09/17/02	23.6	152	7.7	8.36	1.8	>2420	3		<1.0			1.35	0.19	<0.05	0.18	<0.01	<0.05	<0.03	NA																	
10/08/02	22.4	156	8.2	8.95	2.0	328	1		1.0																											
10/22/02	20.4	159	7.8	8.28	1.8	249	1		1.2												<0.400															
11/05/02	17.8	164	7.6	7.82	3.1	>2420	6	2.2	1.4																											
11/20/02	16.1	168	7.5	8.00	8.2	1986	23																													
12/12/02	14.0	170	7.5	7.77		479	5																													
12/23/02	12.3	187	7.8	9.10		>2420	118																													
Count	25	25	25	23	15	17	18	4	17	1	1	7	3	6	5	5	8	8	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	10.3	137	7.5	5.83	1.8	72	<1	2.2	<1.0	100	100	1.27	0.19	<0.05	0.18	<0.01	<0.05	<0.03	<2.0	68	<0.400	<1.0	1.5	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	26.7	204	9.3	17.0	8.2	>2420	118	8.5	<10			1.97	0.78	<0.1	<2.0	0.36	<1.0	<1.0	<2.0			<1.0	1.7	<5.0	<5.0	<2.0	<0.2	0.11	<4.0	<1.0	3.8	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	17.4	171	8.3	10.1	3.4	1094	17	4.8	2.8			1.50	0.47	0.04	0.59	0.15	0.14	0.14																		
Geo Mean	16.5	170	8.3	9.78	3.1	626	7	4.2	1.6			1.48	0.41	0.04	0.48	0.05	0.05	0.04																		
Median	17.8	170	8.2	9.34	3.1	502	8	4.2	2.8			1.35	0.45	0.04	0.42	0.11	<0.05	<0.03																		

Camanche Reservoir at Camanche South Shore (CAL005)

Location: Latitude 38.220, Longitude -120.938. Reservoir located between Highway 12 and Highway 88, at San Joaquin/Amador/Calaveras County line intersection. Take Camanche Parkway South to fee booth; follow road to the day use area.

	Field Data					Bacteria				Column Toxicity		Nutrients										Trace Elements																
																						<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	11.2	34	6.7	11.1					9.8																												
01/14/02	10.7	50	8.0	10.8																																	
01/22/02	10.1	50	7.6	12.1					3.9																												
01/28/02	9.59	48	8.6	11.3																																	
02/11/02	9.78	51	8.2	17.8					2.0																												
02/19/02	10.4	53	8.2	11.9					3.3																												
02/25/02	12.7	52	8.2	13.9					1.3			NA	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																		
03/11/02	12.9	50	7.8	11.4	NA	20	3																														
03/25/02	13.7	47	7.7	11.6	2.0	14	<1		1.8			0.70	0.17	<0.05	0.16	0.01	<0.05	<0.03	NA																		
04/08/02	18.0	36	7.9	10.2	2.6	299	9		1.9																												
04/22/02	18.1	50	7.8	9.66	8.1	756	1		2.4			0.98	0.12	NA	0.11	<0.01	<0.05	<0.03	NA																		
05/13/02	20.9	45	7.8	9.24	5.3	479	1		5.6																												
05/20/02	19.5	51	7.8	9.85	6.9	NA	11	4.5	2.7			1.21	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
06/10/02	24.1	51	7.7	8.49	23.0	1011	25	1.2	19			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	19		<1.0	<1.0	<5.0	<5.0	3.1	<0.2	0.13	<4.0	<1.0	<1.0	<5.0	<5.0	2.0	<0.2	<0.1	<4.0
06/24/02	25.1	53	7.7	8.24	15.6	361	30	2.0	14			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.1	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.1	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	27.4	54	7.9	8.30	31.0	1203	3																														
08/26/02	25.2	52	8.1	8.80	2.5	260	<1					0.87	NA	NA	NA	<0.01	<0.05	<0.03	NA																		
09/03/02	27.2	56	8.5	NA	59.5	1986	10		11	70	95																										
09/17/02	24.6	55	8.0	8.82	3.9	488	<1		4.0			1.03	0.15	<0.05	0.14	<0.01	<0.05	<0.03	NA																		
10/08/02	24.3	56	7.9	9.24	1.7	649	3		2.2																												
10/22/02	20.5	55	7.7	9.23	1.9	179	2		1.6												<0.400																
11/05/02	17.8	54	7.2	9.49	3.7	>2420	3	1.5	1.4																												
11/20/02	16.2	52	7.2	10.1	5.9	461	6																														
12/12/02	14.6	50	7.9	11.1		83	3																														
12/23/02	13.2	53	8.1	11.6		649	1																														
Count	25	25	25	24	15	17	18	4	17	1	1	7	3	6	5	5	8	8	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	9.6	34	6.7	8.24	1.7	14	<1	1.2	1.3	70	95	<1.0	0.12	<0.05	0.11	<0.01	<0.05	<0.03	<2.0	19	<0.4	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	27.4	56	8.6	17.8	59.5	>2420	30	4.5	19			1.21	0.17	<0.1	<2.0	0.01	<1.0	<1.0	<2.0		<0.4	<1.0	1.1	<5.0	<5.0	3.1	<0.2	0.13	<4.0	<1.0	1.1	<5.0	<5.0	2.0	<0.2	<0.1	<4.0
Mean	17.5	50	7.8	10.6	11.6	685	6	2.3	5.2			0.83	0.15	0.03	0.48	0.01	0.14	0.14																			
Geo Mean	16.5	50	7.8	10.4	6.2	377	3	2.0	3.6			0.79	0.15	0.03	0.30	0.01	0.05	0.04																			
Median	17.8	51	7.9	10.2	5.3	484	3	1.8	2.7			0.87	0.15	0.03	0.16	0.01	<0.05	<0.03																			

Mokelumne River at Van Assen County Park (SJC512)

Location: Latitude 38.223, Longitude -120.035. From Highway 12 just west of Camanche Reservoir, turn north onto McIntire Road.

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	11.2	52	6.4	10.3					7.4																												
01/14/02	10.8	51	8.1	10.2																																	
01/22/02	9.87	50	7.3	11.8					5.3																												
01/28/02	9.64	46	8.6	10.9																																	
02/11/02	9.26	53	8.2	17.8					3.4																												
02/19/02	9.55	51	8.2	11.4					2.2																												
02/25/02	10.0	38	8.1	13.1					1.7			NA	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																		
03/11/02	10.6	51	7.8	12.4	NA	102	37																														
03/25/02	10.5	33	7.6	11.4	3.6	231	68		1.6			0.67	0.16	<0.05	0.12	0.04	<0.05	<0.03	NA																		
04/08/02	10.8	51	7.5	10.1	3.0	48	20		2.0																												
04/22/02	11.1	52	7.8	9.97	2.8	185	26		1.8			0.92	0.13	NA	0.07	0.06	<0.05	<0.03	NA																		
05/13/02	11.8	43	7.3	8.93	1.9	50	17		2.4																												
05/20/02	10.7	48	7.5	8.15	2.8	NA	58	4.6	1.6			1.22	NA	0.06	NA	NA	<0.05	<0.03	NA																		
06/10/02	11.4	52	7.4	7.79	1.7	81	10	<1.0	<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	18		<1.0	<1.0	<5.0	<5.0	2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/24/02	11.8	51	7.7	7.53	2.9	101	8	1.7	<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.1	<5.0	<5.0	5.4	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	4.2	<0.2	<0.1	<4.0
08/12/02	13.8	51	7.0	8.90	3.9	549	3																														
08/26/02	13.6	50	6.9	8.80	4.8	152	12					0.70	NA	NA	NA	0.03	<0.05	<0.03	NA																		
09/03/02	14.2	52	8.7	NA	2.5	365	8		2.2	70	100																										
09/17/02	14.5	53	7.5	9.38	3.5	1733	15		1.1			0.80	0.11	<0.05	0.08	0.03	<0.05	<0.03	NA																		
10/08/02	15.1	53	7.0	9.59	3.6	>2420	21		2.0																												
10/22/02	14.7	53	6.8	9.10	3.0	1553	24		1.6												<0.400																
11/05/02	14.5	53	6.4	9.02	3.9	866	98	1.3	1.8																												
11/20/02	15.3	53	6.9	11.7	2.3	435	84	NA				0.80	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
12/12/02	14.0	52	7.7	10.7		1414	141	1.3	3.8			0.80	0.27	<0.05	0.26	<0.01	<0.05	<0.03	NA																		
12/23/02	12.4	56	8.1	11.6		1733	51																														
Count	25	25	25	24	15	17	18	5	18	1	1	9	4	8	6	6	10	10	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	9.26	33	6.4	7.53	1.7	48	3	<1.0	1.1	70	100	<1.0	0.11	<0.05	0.07	<0.01	<0.05	<0.03	<2.0	18	<0.400	<1.0	<1.0	<5.0	<5.0	2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	15.3	56	8.7	17.8	4.8	>2420	141	4.6	<10			1.22	0.27	0.06	<2.0	0.06	<1.0	<1.0	<2.0			<1.0	1.1	<5.0	<5.0	5.4	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	4.2	<0.2	<0.1	<4.0
Mean	12.0	50	7.5	10.4	3.1	724	39	1.9	2.9			0.77	0.17	0.04	0.42	0.03	0.12	0.11																			
Geo Mean	11.9	50	7.5	10.3	3.0	368	25	1.5	2.5			0.74	0.16	0.03	0.24	0.02	0.05	0.03																			
Median	11.4	51	7.5	10.1	3.0	400	23	1.3	2.1			0.80	0.15	<0.05	0.19	0.03	<0.05	<0.03																			

Mokelumne River at New Hope Road (SAC002)

Location: Latitude 38.236, Longitude -121.419. On New Hope Road between Thornton (on Interstate 5) and Galt (on Highway 99).

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/08/02	11.5	56	8.0	13.2																														
01/15/02	7.80	54	7.9	14.0																														
01/22/02	7.18	53	7.1	13.2																														
01/29/02	7.04	53	7.9	12.4																<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
02/12/02	9.16	34	8.6	11.3																														
02/19/02	11.1	52	7.8	10.9																														
02/26/02	11.8	52	8.6	13.4				NA																										
03/12/02	12.8	51	7.8	10.6	2.2	158	23																											
03/26/02	12.8	52	8.6	9.50	4.9	602	36	1.6												<1.0	2.5	<5.0	<5.0	6.4	<0.2	<0.1	<4.0	<1.0	1.5	<5.0	<5.0	5.4	<0.2	<0.1	<4.0
04/09/02	15.7	52	7.8	9.07	2.8	119	26																											
04/23/02	16.3	52	7.6	8.67				NA												2.4	1.6	<5.0	<5.0	3.0	<0.2	<0.1	<4.0	<1.0	1.2	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
04/30/02	12.9	52	7.8	9.72	2.9	270	24																											
05/14/02	16.4	48	7.6	8.57	3.4	436	50	NA																										
05/21/02	13.9	51	7.2	11.4	5.8	NA	131	NA																										
05/28/02	18.4	71	7.9	10.4				5.5												<1.0	1.8	<5.0	<5.0	2.7	<0.2	<0.1	<4.0	<1.0	2.2	<5.0	<5.0	2.5	<0.2	<0.1	<4.0
06/11/02	18.4	52	7.4	7.91	3.1	722	49	1.0		<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	17		<1.0	1.2	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/18/02	19.0	50	7.6	8.07				1.0												<1.0	1.2	<5.0	<5.0	2.6	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/25/02	22.9	34	8.0	8.43	2.7	1011	260	1.7	31	<1.0		<0.1	NA		<1.0	<1.0	<2.0	18		<1.0	2.6	<5.0	<5.0	4.7	<0.2	<0.1	<4.0	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
07/31/02	23.2	63	7.7	7.37	2.6	>2420	53																											
08/13/02	24.7	53	7.5	7.29	5.4	>2420	77																											
08/27/02	22.2	60	7.2	7.0	6.5	>2420	48	2.2	8.4																									
09/03/02	24.0	70	7.2	7.70	3.8	>2420	72																											
09/17/02	21.0	60	7.7	7.50	3.9	>2420	101																											
09/24/02	22.0	62	6.9	6.60				2.9												<1.0	2.2	<5.0	<5.0	4.3	<0.2	<0.1	<4.0	<1.0	4.8	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
10/09/02	17.6	54	7.4	8.87	6.4	>2420	152																											
10/15/02	15.3	54	8.5	10.8	4.6	1203	61																											
10/22/02	14.8	54	7.8	9.30	5.0	>2420	58												<0.400															
10/29/02	13.0	53	7.8	9.64	3.3			1.2										21	<0.400	<1.0	2.8	<5.0	<5.0	3.4	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
11/05/02	12.0	54	7.5	10.3	3.6	>2420	249	1.7																										
11/19/02	12.3	53	8.4	10.0				1.5										20		<1.0	1.1	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	2.3	<0.2	<0.1	<4.0
11/20/02	12.1	54	6.6	9.87	3.1	1986	43																											
12/12/02	11.9	53	7.7	10.9		980	43																											
12/17/02	11.4	56	8.3	10.4	16.0			2.8																										
12/23/02	9.42	62	8.2	11.4		1553	59																											
Count	34	34	34	34	20	19	20	11	2	2		2	1		2	2	2	4	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Min	7.0	34	6.6	6.60	2.2	119	23	1.0	8.4	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	17	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	25	71	8.6	14.0	16.0	>2420	260	5.5	31	<1.0		<0.1			<1.0	<1.0	<2.0	21	<0.400	2.4	2.8	<5.0	<5.0	6.4	<0.2	<0.1	<4.0	<1.0	4.8	<5.0	<5.0	5.4	<0.2	<0.1	<4.0
Mean	15	54	7.7	9.87	4.6	1495	81	2.1										19		0.7	1.8	<5.0	<5.0	3.0	<0.2	<0.1	<4.0	<1.0	1.4	<5.0	<5.0	1.7	<0.2	<0.1	<4.0
Geo Mean	14	53	7.7	9.69	4.1	1078	63	1.8										19		0.6	1.6	<5.0	<5.0	2.5	<0.2	<0.1	<4.0	<1.0	1.0	<5.0	<5.0	1.4	<0.2	<0.1	<4.0
Median	13	53	7.8	9.80	3.7	1553	56	1.7										19		0.5	1.7	<5.0	<5.0	2.9	<0.2	<0.1	<4.0	<1.0	0.9	<5.0	<5.0	1.0	<0.2	<0.1	<4.0

San Antonio Creek at Sheep Ranch Road (CAL001)

Location: Latitude 38.205, Longitude -120.453. Four miles north of Highway 4 and six miles east of Highway 49, on Sheep Ranch Road.

	Field Data					Bacteria				Water Column		Nutrients									Trace Elements															
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	5.84	54	7.5	13.5					<1.0																											
01/16/02	2.47	52	8.2	13.1					1.4																											
01/23/02	1.18	57	7.7	14.2					<1.0																											
01/30/02	0.41	74	8.3	16.4					1.1	90	100	NA	0.08	<0.05	NA	NA	<0.05	<0.03	NA																	
02/13/02	5.21	56	7.6	13.0					<1.0																											
02/20/02	7.15	53	7.7	19.0					3.1																											
02/27/02	6.98	49	7.8	13.0					1.4			0.83	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
03/13/02	6.49	54	8.0	14.1	6.4	25	4																													
03/27/02	8.18	54	7.8	12.5	5.8	45	8		2.0			0.73	0.09	<0.05	0.08	0.01	<0.05	<0.03	NA																	
04/10/02	10.4	52	7.8	11.1	2.7	44	11		2.0																											
04/24/02	10.7	56	7.8	10.8		173	6		1.3			0.99	NA	<0.05	NA	0.02	<0.05	<0.03	NA																	
05/15/02	13.0	59	7.8	10.2	3.4	106	9	<1.0	<1.0																											
05/22/02	9.40	56	8.1	10.3	2.7	NA	30		1.4			1.84	NA	<0.05	NA	0.03	<0.05	<0.03	NA																	
05/24/02								1.3																												
06/13/02	16.1	66	7.6	9.31	1.1	830	46		<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	22		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	2.2	<0.2	<0.1	<4.0
06/26/02	17.2	66	7.8	9.19	1.0	961	7	NA	<10.0			<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	19		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	18.6	72	7.7	8.84	0.2	1986	30																													
08/28/02	17.0	72	7.7	9.56	4.2	1986	41		<1.0			1.06	<0.05	<0.05	<0.05	<0.01	<0.05	<0.03	NA																	
09/05/02	15.6	73	7.8	9.93	0.4	1046	39		<1.0	100	100																									
09/19/02	15.6	77	7.8	9.88	0.5	2420	16		<1.0			1.15	NA	<0.05	0.07	<0.01	<0.05	<0.03	NA																	
10/10/02	12.9	78	7.8	10.2	0.5	1300	23		<1.0																											
10/24/02	8.64	83	7.3	11.0	0.7	1414	10		<1.0	100	80	1.04	<0.05	<0.05	NA	NA	<0.05	<0.03	NA		<0.400															
11/07/02	8.61	86	7.5	11.0	1.2	>2420	71	12	1.7																											
11/19/02	5.58	87	6.7	13.7	1.4	525	3	1.6	<1.0			1.19	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
12/12/02	3.76	75	7.5	12.3		195	10	1.2				1.07	0.18	<0.05	0.17	<0.01	<0.05	<0.03	NA																	
12/23/02	2.89	59	7.9	12.5		>2420	238																													
Count	25	25	25	25	15	17	18	5	21	3	3	10	5	10	6	6	10	10	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	0.41	49	6.7	8.84	0.2	25	3	<1.0	<1.0	90	80	<1.0	<0.05	<0.05	<0.05	<0.01	<0.05	<0.03	<2.0	19	<0.400	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	19	87	8.3	19.0	6.4	>2420	238	12.0	<10	100	100	1.84	0.18	<0.1	<2.0	0.03	<1.0	<1.0	<2.0	22		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	2.2	<0.2	<0.1	<4.0
Mean	9.2	65	7.7	11.9	2.1	1007	33	3.3	1.4	97	93	1.01	0.08	0.03	0.39	0.01	0.12	0.11																		
Geo Mean	7.1	64	7.7	11.7	1.4	472	17	1.7	1.0	97	93	0.94	0.06	0.03	0.17	0.01	0.05	0.03																		
Median	8.6	59	7.8	11.1	1.2	895	13	1.3	1.1	100	100	1.05	0.06	<0.05	0.13	0.01	<0.05	<0.03																		

Calaveritas Creek at Highway 49 (CAL002) Location: Latitude 38.162, Longitude -120.649.

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	9.43	195	7.5	12.4					<1.0																									
01/16/02	6.17	231	8.0	12.1					1.8																									
01/23/02	4.64	246	7.3	14.0					<1.0																									
01/30/02	4.29	204	8.1	15.7					<1.0	NA	0.25	<0.05	NA	NA	<0.05	<0.03	NA																	
02/13/02	7.17	202	7.6	13.8					<1.0																									
02/20/02	9.40	162	7.9	18.6					5.1																									
02/27/02	9.84	193	8.0	13.1					<1.0	1.12	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
03/13/02	10.1	163	8.1	14.1	1.2	71	45																											
03/27/02	12.0	145	8.2	12.3	2.9	344	39		<1.0	1.13	0.18	<0.05	0.12	0.05	<0.05	<0.03	NA																	
04/10/02	13.6	227	8.0	11.7	0.9	249	194		<1.0																									
04/24/02	14.0	249	7.9	10.4		914	50		<1.0	2.09	NA	0.07	NA	0.02	<0.05	<0.03	NA																	
05/15/02	17.0	277	7.9	9.90	0.9	250	47	<1.0	<1.0																									
05/22/02	14.5	250	8.0	9.77	1.0	NA	93		<1.0	2.24	NA	<0.05	NA	0.04	<0.05	<0.03	NA																	
05/24/02								1.3																										
06/13/02	21.4	313	7.8	8.61	1.0	756	122		<10.0	2.20		<0.1	<2.0		<1.0	<1.0	<2.0	140		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/26/02	22.6	324	7.7	7.84	2.3	1011	65	NA	<10.0	2.20		<0.1	<2.0		<1.0	<1.0	<2.0	160		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	NA	NA	NA	NA	NA	NA	NA																											
08/28/02	NA	NA	NA	NA	NA	NA	NA																											
09/05/02	NA	NA	NA	NA	NA	NA	NA																											
09/19/02	NA	NA	NA	NA	NA	NA	NA																											
10/10/02	NA	NA	NA	NA	NA	NA	NA																											
10/24/02	13.6	504	7.1	5.10	1.1	>2420	261		1.2	2.19	0.24	<0.05	NA	NA	0.05	<0.03	NA		1.02															
11/07/02	13.0	430	7.3	6.46	0.4	>2420	228	2.8	<1.0																									
11/19/02	10.8	455	6.7	10.3	0.9	770	33	1.5	1.0	1.73	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
12/12/02	7.43	420	7.5	10.6		548	39	<1.0		2.16	0.14	<0.05	0.13	0.01	<0.05	<0.03	NA																	
12/23/02	7.02	200	7.8	11.3		>2420	105																											
Count	20	20	20	20	10	12	13	5	17	9	4	10	4	4	10	10	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	4.3	145	6.7	5.10	0.4	71	33	<1.0	<1.0	1.12	0.14	<0.05	0.12	0.01	<0.05	<0.03	<2.0	140	1.02	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	23	504	8.2	18.6	2.9	>2420	261	2.8	<10	2.24	0.25	0.07	<2.0	0.05	<1.0	<1.0	<2.0	160		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	11	270	7.7	11.4	1.3	1015	102	1.3	1.4	1.90	0.20	0.04	0.56	0.03	0.12	0.11																		
Geo Mean	10	252	7.7	10.9	1.1	656	79	1.1	0.9	1.83	0.20	0.03	0.35	0.03	0.05	0.03																		
Median	10	239	7.9	11.5	1.0	763	65	1.3	0.5	2.16	0.21	<0.05	0.57	0.03	<0.05	<0.03																		

North Fork Calaveras River at Gold Strike Road (CAL003) **Location: Latitude 38.226, Longitude -120.700.**

	Field Data					Bacteria				Nutrients									Trace Elements															
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
Date	Temp	EC	pH	DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
	°C	µS		mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/09/02	9.44	174	7.9	13.3					<1.0																									
01/16/02	4.92	201	7.8	13.2					<1.0																									
01/23/02	3.81	220	7.6	14.8					<1.0																									
01/30/02	2.93	159	8.0	16.7					<1.0	NA	0.17	<0.05	NA	NA	<0.05	<0.03	NA																	
02/13/02	7.36	176	7.8	13.9					<1.0																									
02/20/02	9.76	102	7.7	18.6					7.6																									
02/27/02	10.7	179	8.1	14.0					<1.0	1.19	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
03/13/02	10.7	128	8.0	14.1	1.6	96	55																											
03/27/02	12.0	139	8.0	12.4	2.6	204	17		<1.0	1.29	0.17	<0.05	0.13	0.04	<0.05	<0.03	NA																	
04/10/02	15.0	211	8.1	12.2	1.3	299	115		<1.0																									
04/24/02	15.7	228	8.1	10.6		128	33		<1.0	2.02	NA	<0.05	NA	<0.01	<0.05	<0.03	NA																	
05/15/02	18.8	252	8.1	9.59	2.3	313	45	1.0	<1.0																									
05/22/02	15.6	231	8.1	9.85	2.2	NA	145		1.6	2.15	NA	<0.05	NA	0.02	<0.05	<0.03	NA																	
05/24/02								1.8																										
06/13/02	21.4	287	7.9	8.47	1.6	549	30		<10.0	2.20		<0.1	<2.0		<1.0	<1.0	<2.0	120	N/A	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/26/02	24.0	298	7.9	7.75	3.4	870	52	NA	<10.0	<1.0		<0.1	<2.0		<1.0	<1.0	<2.0	130	N/A	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/14/02	NA	NA	NA	NA	NA	NA	NA																											
08/28/02	NA	NA	NA	NA	NA	NA	NA																											
09/05/02	NA	NA	NA	NA	NA	NA	NA																											
09/19/02	NA	NA	NA	NA	NA	NA	NA																											
10/10/02	NA	NA	NA	NA	NA	NA	NA																											
10/24/02	NA	NA	NA	NA	NA	NA	NA																											
11/07/02	NA	NA	NA	NA	NA	NA	NA																											
11/19/02	NA	NA	NA	NA	NA	NA	NA																											
12/12/02	6.38	395	7.7	11.8		866	74	<1.0		1.68	0.17	<0.05	0.16	0.01	<0.05	<0.03	NA																	
12/23/02	4.78	156	7.9	12.6		1300	40																											
Count	17	17	17	17	7	9	10	3	14	7	3	8	4	3	8	8	2	2	N/A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	2.9	102	7.6	7.75	1.3	96	17	<1.0	<1.0	<1.0	0.17	<0.05	0.13	<0.01	<0.05	<0.03	<2.0	120	N/A	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	24	395	8.1	18.6	3.4	1300	145	1.8	<10	2.20	0.17	<0.1	<2.0	0.040	<1.0	<1.0	<2.0	130	N/A	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	11	208	7.9	12.6	2.1	514	61	1.1	1.7	1.58	0.17	0.031	0.57	0.019	0.14	0.14			N/A															
Geo Mean	9.7	197	7.9	12.3	2.0	369	50	1.0	0.9	1.43	0.17	0.030	0.38	0.014	0.05	0.04			N/A															
Median	11	201	7.9	12.6	2.2	313	48	1.0	0.5	1.68	0.17	<0.05	0.58	0.015	<0.05	<0.03			N/A															

New Hogan Reservoir at Acorn East Campground (CAL006) Location: Latitude 38.174, Longitude -120.796.

	Field Data					Bacteria				Nutrients									Trace Elements																
																			<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	11.0	169	6.8	11.0					4.7																										
01/14/02	10.1	188	7.8	10.3																															
01/22/02	10.0	192	7.9	NA					2.4																										
01/28/02	9.08	159	8.3	10.9																															
02/11/02	10.0	187	8.2	17.4					1.4																										
02/19/02	10.4	181	8.0	12.0					95																										
02/25/02	11.4	187	8.1	15.2					1.2	NA	NA	<0.05	NA	0.14	<0.05	<0.03	NA																		
03/11/02	11.5	181	8.1	11.9	NA	31	4																												
03/25/02	12.7	185	8.2	10.9	1.7	74	10		1.4	1.40	0.33	<0.05	0.17	0.16	<0.05	<0.03	NA																		
04/08/02	16.7	185	8.3	NA	2.0	41	15		<1.0																										
04/22/02	17.2	188	8.3	10.3	1.3	150	1		2.4	1.98	0.30	NA	0.22	0.08	<0.05	<0.03	NA																		
05/13/02	19.8	190	8.5	10.9	1.5	110	1		<1.0																										
05/20/02	19.5	190	8.5	9.80	3.0	NA	2	6.6	2.1	1.97	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
06/10/02	23.4	191	8.5	9.47	1.7	792	9	3.8	<10.0	1.70		<0.1	<2.0		<1.0	<1.0	<2.0	82		<1.0	1.4	<5.0	<5.0	<2.0	<0.2	0.13	<4.0	<1.0	1.2	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/24/02	24.3	198	8.2	8.53	1.2	575	2	3.6	<10.0	1.80		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	2.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	2.1	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	28.5	203	8.4	8.92	30.9	>2420	11																												
08/26/02	26.2	194	8.7	10.8	15.3	1300	<1			1.68	NA	NA	NA	<0.01	<0.05	<0.03	NA																		
09/03/02	27.7	207	8.2	NA	35.8	1733	16		14																										
09/17/02	22.8	210	7.8	8.68	4.2	1046	2		2.1	1.99	0.20	<0.05	0.19	<0.01	<0.05	<0.03	NA																		
10/08/02	23.1	188	8.5	10.5	4.8	1300	6		3.0																										
10/22/02	21.5	203	8.7	12.0	14.3	727	<1		2.0										0.436																
11/05/02	17.9	205	7.5	10.3	2.5	1733	5	2.7	<1.0																										
11/20/02	16.4	205	7.7	10.4	2.8	727	15																												
12/12/02	13.3	201	8.0	10.4		31	<1																												
12/23/02	11.3	220	8.1	11.5		548	30																												
Count	25	25	25	22	15	17	18	4	17	7	3	6	5	3	8	8	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	9.1	159	6.8	8.53	1.2	31	<1	2.7	<1.0	1.40	0.20	<0.05	0.17	<0.01	<0.05	<0.03	<2.0	82	0.436	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.2	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	29	220	8.7	17.4	35.8	>2420	30	6.6	95	1.99	0.33	<0.1	<2.0	0.16	<1.0	<1.0	<2.0			<1.0	2.0	<5.0	<5.0	<2.0	<0.2	0.13	<4.0	<1.0	2.1	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	17	192	8.1	11.0	8.2	759	7	4.2	8.4	1.79	0.28	0.03	0.52	0.08	0.14	0.14																			
Geo Mean	16	192	8.1	10.9	4.1	379	4	4.0	2.5	1.78	0.27	0.03	0.37	0.03	0.05	0.04																			
Median	17	190	8.2	10.7	2.8	651	5	3.7	2.1	1.80	0.30	0.03	0.22	0.08	<0.05	<0.03																			

New Hogan Reservoir at Wrinkle Cove (CAL007) **Location: Latitude 38.171, Longitude -120.807**

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	11.2	186	7.3	10.7					2.4																												
01/14/02	10.0	185	7.9	10.5																																	
01/22/02	10.3	182	7.7	11.9					3.0																												
01/28/02	9.20	186	8.1	10.7																																	
02/11/02	9.93	192	8.3	17.9					3.0																												
02/19/02	10.7	182	8.1	12.2					12																												
02/25/02	11.5	186	8.2	15.1					1.2			NA	NA	<0.05	NA	0.13	<0.05	<0.03	NA																		
03/11/02	13.0	186	8.1	11.9	NA	64	4																														
03/25/02	13.1	121	8.4	11.4	1.2	31	2		2.8			1.42	0.21	<0.05	0.06	0.15	<0.05	<0.03	NA																		
04/08/02	17.0	177	8.4	NA	0.8	72	2		<1.0																												
04/22/02	17.6	188	8.2	11.5	1.9	101	1		1.2			1.99	0.2	NA	0.10	0.10	<0.05	<0.03	NA																		
05/13/02	19.3	189	8.5	10.9	1.4	249	<1		1.2																												
05/20/02	19.3	172	8.6	10.3	3.1	NA	48	5.5	1.7			2.04	NA	<0.05	NA	NA	<0.05	<0.03	NA																		
06/10/02	23.0	192	8.6	9.51	1.2	119	<1	2.0	<10.0			1.70		<0.1	<2.0		<1.0	<1.0	<2.0	81		<1.0	1.3	<5.0	<5.0	<2.0	<0.2	0.64	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/24/02	24.3	190	8.4	8.74	5.9	1011	8	3.2	<10.0			1.80		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.7	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	27.6	198	8.5	9.12	42.2	2420	11																														
08/26/02	26.0	197	8.5	9.05	28.5	2420	8					1.77	NA	NA	NA	0.01	<0.05	<0.03	NA																		
09/03/02	27.8	209	8.3	NA	9.3	>2420	<1		8.6	100	100																										
09/17/02	22.5	211	7.6	7.94	8.4	1203	<1		4.7			1.94	0.25	<0.05	0.24	<0.01	<0.05	<0.03	NA																		
10/08/02	22.5	208	8.6	10.5	2.6	687	2		1.4																												
10/22/02	21.1	205	8.7	11.6	5.8	1553	<1		8.4												<0.400																
11/05/02	17.6	208	7.8	10.2	3.2	>2420	2	2.4	3.6																												
11/20/02	16.6	206	7.5	10.8	25.1	>2420	15																														
12/12/02	13.5	202	8.2	11.7		649	2																														
12/23/02	11.5	221	8.0	10.6		579	21																														
Count	25	25	25	23	15	17	18	4	17	1	1	7	3	6	5	5	8	8	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	9.2	121	7.3	7.94	0.8	31	<1	2.0	<1.0	100	100	1.42	0.20	<0.05	0.06	<0.01	<0.05	<0.03	<2.0	81	<0.400	<1.0	1.3	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	28	221	8.7	17.9	42.2	>2420	48	5.5	12			2.04	0.25	<0.1	<2.0	0.15	<1.0	<1.0	<2.0			<1.0	1.7	<5.0	<5.0	<2.0	<0.2	0.64	<4.0	<1.0	1.4	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	17	191	8.2	11.1	9.4	1058	7	3.3	4.0			1.81	0.22	0.03	0.48	0.08	0.14	0.14																			
eo Mean	16	190	8.2	10.9	4.5	530	3	3.0	3.0			1.80	0.22	0.03	0.27	0.04	0.05	0.04																			
Median	17	190	8.2	10.7	3.2	668	2	2.8	3.0			1.80	0.21	0.03	0.24	0.10	<0.05	<0.03																			

Calaveras River at Monte Vista Trailhead (CAL008) **Location: Latitude 38.148, Longitude -120.826**

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements															
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+ NO_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	10.8	192	7.7	11.7					1.0																											
01/14/02	10.3	191	7.9	10.9																																
01/22/02	9.25	191	8.0	11.9					1.0																											
01/28/02	9.00	191	8.1	11.8																																
02/11/02	8.83	190	7.9	17.8					<1.0																											
02/19/02	9.09	194	8.0	12.8					<1.0																											
02/25/02	9.33	194	7.8	15.3					1.2			NA	NA	<0.05	NA	0.16	<0.05	<0.03	NA																	
03/11/02	8.85	207	7.8	13.1	NA	36	14																													
03/25/02	9.67	203	8.0	13.2	1.5	156	17		<1.0			1.40	0.32	<0.05	0.10	0.21	<0.05	<0.03	NA																	
04/08/02	10.0	157	8.0	13.0	1.7	129	15		<1.0																											
04/22/02	10.8	187	7.8	11.1	1.8	18	<1		<1.0			1.99	0.29	NA	0.06	0.23	<0.05	<0.03	NA																	
05/13/02	10.8	185	7.7	11.3	1.2	21	10		<1.0																											
05/20/02	10.3	185	7.7	11.3	1.2	NA	29	5.3	<1.0			2.04	NA	0.05	NA	NA	<0.05	<0.03	NA																	
06/10/02	11.3	184	7.8	10.4	0.4	20	6	2.1	<10.0			1.70		<0.1	<2.0		<1.0	<1.0	<2.0	79		<1.0	1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/24/02	11.3	187	8.0	9.54	0.8	549	1	3.5	<10.0			1.70		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.3	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	11.9	183	7.4	8.10	1.5	71	14																													
08/26/02	12.1	178	7.4	8.00	1.7	56	6					1.61	NA	NA	NA	0.26	<0.05	<0.03	NA																	
09/03/02	12.1	189	7.9	NA	0.3	119	4		1.0	90	95																									
09/17/02	11.8	192	7.3	7.13	1.9	115	61		<1.0			1.77	0.42	<0.05	0.15	0.28	<0.05	<0.03	NA																	
10/08/02	12.5	191	7.4	6.90	0.6	517	29		<1.0																											
10/22/02	12.9	192	7.8	12.6	0.3	411	2		<1.0												<0.400															
11/05/02	12.5	193	7.4	10.1	2.0	770	29	2.4	<1.0																											
11/20/02	12.7	197	7.3	9.09	0.7	1300	8	NA				1.50	NA	<0.05	NA	NA	<0.05	<0.03	NA																	
12/12/02	12.6	204	7.8	10.6		770	11	2.0				1.56	0.42	<0.05	0.33	0.09	<0.05	<0.03	NA																	
12/23/02	11.1	221	8.1	12.0		>2420	32																													
Count	25	25	25	24	15	18	18	5	17	1	1	9	4	8	6	6	10	10	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	8.8	157	7.3	6.90	0.3	18	<1	2.0	<1.0	90	95	1.40	0.29	<0.05	0.06	0.09	<0.05	<0.03	<2.0	79	<0.400	<1.0	1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	13	221	8.1	17.8	2.0	>2420	61	5.3	<10			2.04	0.42	<0.1	<2.0	0.28	<1.0	<1.0	<2.0			<1.0	1.3	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	11	191	7.8	11.2	1.2	424	16	3.1	1.2			1.70	0.36	0.03	0.44	0.21	0.12	0.11																		
Geo Mean	11	191	7.7	11.0	1.0	167	9	2.8	0.8			1.69	0.36	0.03	0.26	0.19	0.05	0.03																		
Median	11	191	7.8	11.3	1.2	142	12	2.4	0.5			1.70	0.37	0.03	0.24	0.22	<0.05	<0.03																		

Calaveras River at Highway 88 (SJC513) Location: Latitude 38.052, Longitude -121.188.

	Field Data					Bacteria				Column Toxicity		Nutrients									Trace Elements																
																					<----------TOTAL---------->									<----------DISSOLVED---------->							
	Temp	EC		DO	Turb	Total coli	E. coli	TOC	TSS	48 hr tox	96 hr tox	K	Total N (TKN, NH_3N, NO_3)	P	TKN	NO_2+N O_3	NH_3N	H_3PO_4	NO_3	Hard	Se	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As	Cr	Cu	Ni	Pb	Zn	Hg	Cd	As
Date	°C	µS	pH	mg/L	ntu	MPN	MPN	mg/L	mg/L	% surv	% surv	<----------mg/L---------->								mg/L	<----------µg/L ---------->									<----------µg/L ---------->							
01/07/02	NA	NA	NA	NA																																	
01/14/02	NA	NA	NA	NA																																	
01/22/02	NA	NA	NA	NA																																	
01/28/02	NA	NA	NA	NA																																	
02/11/02	NA	NA	NA	NA																																	
02/19/02	10.2	257	7.7	11.6					1.4																												
02/25/02	NA	NA	NA	NA																																	
03/11/02	11.8	79	7.8	10.7	NA	>2420	>2420																														
03/25/02	10.3	259	8.1	12.6	3.4	416	61		1.0			3.51	0.38	<0.05	0.37	<0.01	<0.05	<0.03	NA																		
04/08/02	NA	NA	NA	NA	NA	NA	NA																														
04/22/02	15.4	204	7.7	8.96	1.7	189	19		1.0			2.28	0.23	NA	0.22	0.01	<0.05	<0.03	NA																		
05/13/02	18.3	205	7.4	6.32	2.3	1011	70		1.6																												
05/20/02	17.4	196	7.7	8.21	3.2	NA	260	6.6	1.8			2.36	NA	0.07	NA	NA	<0.05	<0.03	NA																		
06/10/02	20.3	187	8.1	9.74	0.5	914	7	1.6	<10.0			1.60		<0.1	<2.0		<1.0	<1.0	<2.0	81		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	0.12	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
06/24/02	20.8	189	7.4	9.35	17.4	914	39	3.1	<10.0			1.60		<0.1	<2.0		<1.0	<1.0	<2.0			<1.0	1.7	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	1.7	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
08/12/02	22.3	187	7.9	7.76	2.0	>2420	308																														
08/26/02	19.2	178	7.8	8.08	5.0	>2420	210					1.71	NA	NA	NA	<0.01	<0.05	<0.03	NA																		
09/03/02	21.4	84	8.8	NA	8.4	>2420	138		2.6	90	100																										
09/17/02	18.7	196	7.3	7.88	5.1	>2420	130		3.6			2.45	0.23	<0.05	0.22	<0.01	<0.05	<0.03	NA																		
10/08/02	17.4	194	7.6	8.52	5.1	>2420	99		2.6																												
10/22/02	NA	NA	NA	NA	NA	dry	dry																														
11/05/02	NA	NA	NA	NA	NA	dry	dry																														
11/20/02	NA	NA	NA	NA	NA	dry	dry																														
12/12/02	NA	NA	NA	NA		dry	dry																														
12/23/02	NA	NA	NA	NA		dry	dry																														
Count	13	13	13	12	11	11	12	3	10	1	1	7	3	5	5	4	7	7	2	1	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Min	10	79	7.3	6.32	0.5	189	7	1.6	<10	90	100	1.60	0.23	<0.05	0.22	<0.01	<0.05	<0.03	<2.0	81		<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0	<1.0	<1.0	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Max	22	259	8.8	12.6	17.4	>2420	>2420	6.6	<10			3.51	0.38	0.07	<2.0	0.01	<1.0	<1.0	<2.0			<1.0	1.7	<5.0	<5.0	<2.0	<0.2	0.12	<4.0	<1.0	1.7	<5.0	<5.0	<2.0	<0.2	<0.1	<4.0
Mean	17	186	7.8	9.14	4.9	1582	313	3.8	2.6			2.22	0.28	0.04	0.56	0.01	0.16	0.15																			
Geo Mean	17	177	7.8	8.98	3.4	1242	104	3.2	2.2			2.14	0.27	0.04	0.45	0.01	0.06	0.04																			
Median	18	194	7.7	8.74	3.4	1716	114	3.1	2.2			2.28	0.23	<0.1	0.37	0.01	<0.05	<0.03																			

APPENDIX C: BENEFICIAL USES

Site Description	Site ID	Applicable Basin Plan Objective Surface Water Body Designation	MUN	AGRI-CULTURE		INDUSTRY			RECREATION			FRESHWATER HABITAT		MIGRATION		SPAWNING		WILD	Designated (D) or Tributary (T)
				AGR					REC-1		REC-2	WARM	COLD	MIGR		SPWN			
			Municipal and Domestic Supply	Irrigation	Stock Watering	Process	Service Supply	Power	Contact	Canoeing and Rafting	Other Noncontact	Warm	Cold	Warm	Cold	War	Cold	Wildlife Habitat	
Cosumnes Watershed River Sites																			
Cosumnes R. @ Gold Beach Park	ELD003	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	D
Cosumnes R. @ Hwy 49	ELD004	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	D
Cosumnes R. @ Michigan Bar Road	SAC003	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	D
Cosumnes River @ Twin Cities Road	SAC001	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	D
Cosumnes Watershed Lake Sites																			
Jenkinson Lake @ Pincone CG	ELD001	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	T
Jenkinson Lake Dam @ Mormon Emigrant	ELD002	59	E	E	E			P	E	E	E	E	E	E	E	E	E	E	T
Mokelumne Watershed River Sites																			
N. Fork Mokelumne R. @ Hwy 26	AMA001	60	E					E	E	E	E	E	E	E		E	E	E	D
Sutter Creek @ Hwy 49	AMA002	63	E	E	E				E	E	E	E	E	E	E	E	E	E	T
Mokelumne R. @ Hwy 49	CAL004	60	E					E	E	E	E	E	E	E		E	E	E	D
Mokelumne R. @ Van Assen	SJC512	63	E	E	E				E	E	E	E	E	E	E	E	E	E	D
Mokelumne River @New Hope Road	SAC002	63	E	E	E				E	E	E	E	E	E	E	E	E	E	D

Site Description	Site ID	Applicable Basin Plan Objective Surface Water Body Designation	MUN	AGRI-CULTURE		INDUSTRY			RECREATION			FRESHWATER HABITAT		MIGRATION		SPAWNING		WILD	Designated (D) or Tributary (T)
				AGR					REC-1		REC-2	WARM	COLD	MIGR		SPWN			
			Municipal and Domestic Supply	Irrigation	Stock Watering	Process	Service Supply	Power	Contact	Canoeing and Rafting	Other Noncontact	Warm	Cold	Warm	Cold	War	Cold	Wildlife Habitat	
Mokelumne Watershed Lake Sites																			
Lake Amador @ Boat Launch	AMA003	93	E					E	E		E	E	E				E	E	D
Camanche Reservoir @ South Shore	CAL005	62	E	E	E				E		E	E	E	E		E	E	E	D
Calaveras Watershed River Sites																			
San Antonio Creek @ Sheep Ranch Rd	CAL001	64	E						E	E	E	E	E	E		E	E	E	T
Calaveritas Creek @ Hwy 49	CAL002	64	E						E	E	E	E	E	E		E	E	E	T
N. Fork Calaveras R. @ Gold Strike Road.	CAL003	64	E						E	E	E	E	E	E		E	E	E	D
Calaveras R. @ Monte Vista	CAL008	66	E	E	E	P	P		E	E	E	E	E	E	E	E	E	E	D
Calaveras R. @ Hwy 88	SJC513	66	E	E	E	P	P		E	E	E	E	E	E	E	E	E	E	D
Calaveras Watershed Lake Sites																			
New Hogan Res. @ Acorn East CG	CAL006	65	E						E		E	E	E	E		E	E	E	D
New Hogan Res. @ Wrinkle Cove	CAL007	65	E						E		E	E	E	E		E	E	E	D

P=Potential E= Existing

APPENDIX D: MULTI-AGENCY MONITORING TABLE

Site Location	Project/ funding	SITE CODE			Latitude	Longitude	Basin #	Flow	Water Column Analyses									Pesticides				TSS	DOC	TOC	BOD	Chlorophyll A	Bacti			
															TEST	Nutrient		Scans			SCH 2001										
Agency		CVRWQCB	USGS	CCWD					EC	pH	Temp	DO	Turb	Minerals		A	B	POP	Oab	CCO								BS	Acute 96/ 48-hr	Assessment
Cosumnes River Watershed																															
Jenkinson Lake @ Pinecone CS 1-38		**ELD001**			**38° 43' 40"**	**120° 33' 36"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM		Q	
Jenkinson Lake @ Mormon Emigrant Trail		**ELD002**			**38 43' 15"**	**120 34' 11"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM			
Cosumnes River @ Gold Beach Park		**ELD003**			**38 33' 33"**	**120 50' 47"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM														BM			
Cosumnes River @ Hwy 49		**ELD004**			**38 33' 03"**	**120 50' 60"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM														BM		Q	
Cosumnes River @ Twin Cities Rd.		**SAC001**			**38 17' 27"**	**121 22' 33"**	**32**																								
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM														BM			
UC DAVIS	CalFED								BM	BM	BM	BM	BM													BM	BM			
USFWS	Nutrient Project								BM	BM	BM			*BM			BM					BM				BM				
CVRWQCB	SWAMP								M	M	M	M		M	M			M+	M+	Q				M	M		A		M	
Cosumnes River @ Michigan Bar Rd.		**SAC003**	**113 350 00**		**38° 30' 01"**	**121° 02' 39"**	**32**																								
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM														BM			
CVRWQCB/UCD	OP TMDL																														B
UC DAVIS	CalFED								BM	BM	BM	BM	BM													BM	BM			
USGS	NAQWA								M	M	M	M		**M		M					M	M	M					M		B
Mokelumne River Watershed																															
Sutter Creek @ Hwy 49		**AMA002**			**38° 23' 33"**	**120 48' 04"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM		M			BM		Q	
Mokelumne River @ Camanche SS Rec.		**CAL005**			**38 13' 11"**	**120 56' 16"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM		Q	
EBMUD	Camanche Dam Power House									M	M	M	M																	
Lake Amador @ Lake Amador Boat Launch		**AMA003**			**38 18' 06"**	**120 53' 14"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM		Q	
Lake Amador Owners													D																		
Mokelumne River @New Hope Rd.		**SAC002**			**38 14' 10"**	**121 25' 07"**	**32**																								
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM														BM			
UCD/USFWS	Nutrient Project								BM	BM	BM			*BM			BM									BM				
CVRWQCB	SWAMP								M	M	M	M			M	M								M	M					
Mokelumne River @ Van Assen Park		**SJC512**			**38 13' 22"**	**121 02' 05"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM		Q	
Mokelumne River @ Hwy 49		**CAL004**			**38 18' 45"**	**120 43' 15"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M						BM					BM		Q	
Mokelumne Inn Owners																											Q			

Site Location	Project/ funding	SITE CODE			Latitude	Longitude	Basin #	Flow	Water Column Analyses									Pesticides													
															TE	Nutrient		Scans				SCH									
Agency		CVRWQCB	USGS	CCWD					EC	pH	Temp	DO	Turb	Minerals	Sed	A	B	P	Obs	Cl	Obs	2001	TSS	DOC	TOC	BOD	Chlorophyll A	Bacti	SS/SB	Acute 96/ 48-hr	Assessment
N. Fork Mokelumne @ Hwy 26		**AMA001**			**38° 25' 23"**	**120° 32' 28"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM			
Calaveras River Watershed																															
San Antonio Creek @ Sheep Ranch Rd.		**CAL001**			**38 12' 17"**	**120 27' 12"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM		Q	
CCWD Proposed	Prop 204			**U-CVTS-1**																											
N. Fork Calaveras River @ Gold Strike Rd.		**CAL003**			**38 13' 34"**	**121 41' 59"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM			
CCWD Proposed	Prop 204			**M-NCAL-2**																											
Calaveritas Creek @ Hwy 49		**CAL002**			**38 09' 42"**	**120 38' 55"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM			
CCWD Proposed	Prop 204			**M-CVTS-2**																											
New Hogan Reservoir @ Acorn East CG		**CAL006**			**38 10' 27"**	**120 47' 47"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM			
CCWD Proposed	Prop 204			**M-NHR-1**																											
New Hogan Reservoir @ Wrinkle Cove		**CAL007**			**38 10' 14"**	**120 48' 27"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM			
CCWD Proposed	Prop 204			**M-NHR-1**																											
Calaveras River @ Monte Vista Trailhead		**CAL008**			**38 08' 54"**	**120 49' 32"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM		Q	
CCWD Proposed	Prop 204			**M-CAL-3**																											
Calaveras River @ Hwy 88		**SJC513**			**38° 14' 10"**	**121° 25' 07"**																									
CVRWQCB	Intensive Basin								BM	BM	BM	BM	BM			M							BM					BM		Q	
CCWD Proposed	Prop 204			**L-OCAL-1**																											

W = Weekly
BM= Bimonthly 2x/month
M = Monthly

Q = Quarterly (October, January, April, July)
A = Annual
B = Biannual 2x/year

M+ = Monthly (2x/month Feb thru August)
1=Gauged Site
2= Gauge/telemetered site
X=Storm sampling (2 storms, every 6 hours = 5 samples each storm per site)
B$= Proposed biannual 2x/year OP synoptic sampling
G= Monthly (Aug - Dec) Weekly (Jan - July)

Parameter frequencies in shaded cells indicate desired monitoring for this program

Minerals =B, Cl, SO4, CO3, HCO3, Na, K, Alkilinity, TDS, Ca, Mg, Total Hardness, pH, Conductivity,
Minerals =*UCD/USFWS tests for: CL, SO4, HCO3, Na, K, TDS, Ca, Mg, Hardness, Conductivity
Minerals = **USGS SANJ HIP tests for: Alkilinity, Cl, and SO4

TE=Trace Elements (total and dissolved): Cu, Cr, Pb, Ni, Zn, Hg, Arsenic,Cd
Nutrient A= NO3, NH3-N, TKN, P, PO4, K *UCD/USFWS does not test for NH3-n and TKN
Nutrient B= Si, TN, TDN, DON, NH4, TDP, DOP, POM, DOC, Charge Balance, Turbidity, Pheophytin
Nutrient SCH 2702 = NH4, Organic N, NO2-, NO3-, P, PO4 *** also includes SCH 2711
HG= Water, Sediment, Clam, and Fish tissue

SS/SB = Suspended sediment with sand break (62-um fraction)

SWAMP Ongoing Chilcott, J.
SWAMP Storm Events 2X per year Chilcott, J.
OP TMDL 2X per Year, Chilcott, J.

OP Synoptic 2X Per Year Azimi-Gaylon, S.
Nutrient Project Ongoing Foe, C.
HG project/CAL FED Foe, C.
SANJ HIP 9/01-10/02 Kratzer, C.
SWAMP Intensive Basin Ongoing Graham, C.
EBMUD Ongoing

APPENDIX E: OUTREACH EFFORT

Public Notification at Commencement of San Joaquin River Basin Rotational Sub-basin Monitoring: Outreach Letter……..
Public Notification at Commencement of San Joaquin River Basin Rotational Sub-basin Monitoring: Mailing List……..
Central Valley Regional Water Quality Control Board Staff Notified at Commencement of San Joaquin River Basin Rotational Sub-basin Monitoring……

Public Notification at Commencement of San Joaquin River Basin Rotational Sub-basin Monitoring: Outreach Letter

28 November 2001

To: Interested Parties

WATER QUALITY STUDY ON THE COSUMNES, MOKELUMNE, AND CALAVERAS WATERSHEDS

Staff from the Central Valley Regional Water Quality Control Board (CVRWQCB) will be conducting a water quality survey in the Cosumnes, Mokelumne, and Calaveras Watersheds for a twelve-month period beginning 1 January 2002. Levels of dissolved oxygen, pH, electrical conductivity, temperature, total suspended solids, total coliforms and E. Coli will be monitored at selected sites weekly while additional constituents will be monitored less frequently. A copy of the preliminary monitoring program is attached. The purpose of this project is to create a profile of these watersheds in order to evaluate current water quality and compare current data with historic information. The study will also help us direct future water quality improvement efforts.

In order to develop a comprehensive program, we are currently attempting to identify and coordinate with existing programs, with the possibility of forming cooperative relationships to share data. If you know of any existing programs or have any concerns regarding this watershed or the CVRWCB's efforts in this area, please feel free to contact me. You may reach me by phone at (916) 255-6314 or by email at grahamc@rb5s.swrcb.ca.gov. If you know of any other agencies or organizations with an interest in this watershed, please forward them a copy of this letter.

CATHERINE GRAHAM
Environmental Scientist
San Joaquin Watershed Unit

Attachment
cc: List Attached

Public Notification at Commencement of San Joaquin River Basin Rotational Sub-basin Monitoring: Mailing List

Amador County Environmental Health Dept.
Michael Israel
500 Argonaut Ln.,
Jackson, CA 95642

Amador Resource Conservation District
Clifford Walker
42A Summit St.
Jackson, CA 95642

Army Corps of Engineers
US Army Corps of Engineers, New Hogan Lake, 2713 Hogan Dam Rd.
Valley Springs, CA 95252-9510

Army Corpse of Engineers, Sacramento District
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