Mokelumne River Project
(FERC Project No. 137)

2008 Water Quality Monitoring Program Report

Prepared for
Pacific Gas and Electric Company
Environmental Services
San Ramon, CA

Prepared by
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December 2008

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1 INTRODUCTION

1.1 Background

This report presents data collected during the 2008 water quality monitoring study at the Mokelumne River Hydroelectric Project, FERC Project No. 137 (Project). This 2008 data report presents the fourth year (Year 4) of water quality data collection for the 5 to 15-year monitoring period required by Condition No. 11 of the FERC Project license issued on October 11, 2001. The focus of the study is to document water quality conditions in Project-affected streams under new operating guidelines mandated by the FERC license.

As part of the FERC relicensing process for the Project, a Settlement Agreement (Settlement) was developed by Pacific Gas and Electric Company (PG&E) and nine other parties representing Federal and State agencies and non-government organizations, here referred to as the Parties, to resolve among the Parties all streamflow issues for ecological purposes and river-based recreational use in support of the U.S. Forest Service (FS) issuing its Final 4(e) Conditions and FERC issuing a new Project License. The Settlement was executed by the Parties effective July 21, 2000 (PG&E, 2000). Among other things, the Settlement included: 1) a new set of minimum streamflow requirements in Project-affected stream reaches for the protection of aquatic resources; 2) development of a Stream Ecology Monitoring Program (SEMP) in support of an adaptive management approach designed to protect stream ecology in the Project area; and 3) establishment of an Ecological Resources Committee (ERC) to assist PG&E in the performance of the SEMP and the adaptive management program (ERC membership was identified as the original signatory parties to the Settlement, except the FS, which would participate as a liaison to the ERC). On October 11, 2001, FERC issued an “Order Approving Settlement Agreement and Issuing New License” for the Project. The Settlement was incorporated into the license with minor modifications. Also incorporated into the license were the FS 4(e) Conditions.

Water quality data were collected in the Project area in 2000, 2001, 2002, 2003, 2004, 2005, 2006 and 2007 (PG&E, 2002a, 2002b, 2003, 2004a, 2004b, and 2005). A general water quality monitoring plan developed by PG&E and adopted by the ERC and FS in May 2001 stated that monitoring would be conducted prior to the initial streamflow modification (PG&E, 2001). Recognizing the need for water quality data under existing streamflow conditions, PG&E initiated data collection during the summer of 2000. Data collected between July 2000 and December 2001 represent “baseline” conditions under streamflow requirements in effect prior to the issuance of the new FERC license. General water quality monitoring was discontinued after May 2002, by decision of the ERC and FS, to allow for completion of construction activities implementing the required changes in streamflows. However, limited *in situ* monitoring continued in order to determine if dissolved oxygen levels for coldwater stream reaches, as designated in the Settlement Agreement, were being met. Data collected in 2002-2004, represent a

range of streamflow conditions from “baseline” to “new license”, depending on the stream reach and year. The new license allowed PG&E 3 years to complete necessary facility modifications to meet the new streamflow requirements, but also mandated that PG&E make a good faith effort to meet the new license conditions within the limitations of existing flow release structures. Additionally, PG&E requested and FERC granted a time extension of one year to finalize and perform the testing of the automatic equipment associated with the facility modifications. In most stream reaches, the 2002-2004 releases fully met the new minimum streamflow requirements in multiple years; thus, these data are representative of the “new license” condition. In cases where the releases did not fully meet the new license requirements, the data represent “interim” conditions. Facility modifications were sufficiently completed by early 2005 to meet the new streamflow requirements. Thus, water quality monitoring results from 2005 represent Year 1 conditions, as defined by the Settlement and the FERC license.

For more detailed information on temperature trends and streamflow conditions during the 2008 study period, please refer to the annual monitoring report for water temperature (PG&E, 2009). The 2008 water quality monitoring results will supplement existing data and will be used by the ERC and FS to evaluate water quality in Project-affected stream reaches relative to climatic conditions, changes in streamflow regime, and reservoir operations. The water quality monitoring data will be used in conjunction with the results of other resource investigations (fish, macroinvertebrates, water temperature, amphibian, riparian, geomorphology, etc.) to determine the overall effect of the Project flow regimes on the environmental resources of the Project area. Collectively, data from these monitoring programs will guide the ERC and FS in setting appropriate flow regimes as specified under the adaptive management program of the Settlement and FERC license.

1.2 Project Area

The Project is located on the Mokelumne River, North Fork Mokelumne River (NFMR), Bear River, and associated tributaries in Alpine, Amador, and Calaveras counties, California. Project features extend over a wide range of elevations in the Sierra Nevada Mountains, from over 8,600 feet to less than 800 feet. Portions of the project occupy lands within the Stanislaus National Forest and the El Dorado National Forest, as well as lands managed by the U.S. Department of the Interior's Bureau of Land Management (BLM). The existing Project consists of seven storage reservoirs, four powerhouses, and numerous diversions and conduits.

Farthest upstream are four natural lakes, which have been enlarged by the addition of dams to form small storage reservoirs: Upper Blue Lake, Lower Blue Lake, Twin Lake, and Meadow Lake (cover photo). Outflow from the Blue Lakes connects with the NFMR via Blue and Deer creeks, and outflow of Twin Lake and Meadow Lake drains into the NFMR via Meadow Creek (Figure 1). The Project has four power developments downstream of these lakes.

On the NFMR approximately 15 miles downstream from the four upper lakes is the Salt Springs Development. It includes three storage reservoirs: Salt Springs Reservoir on the NFMR, and Upper Bear River Reservoir and Lower Bear River Reservoir on Bear River. Water stored in Salt Springs Reservoir is diverted through Salt Springs Powerhouse Unit No.1, located immediately below Salt Springs Reservoir Dam. Upper and Lower Bear River reservoirs divert water from the Bear River drainage through a tunnel and penstock for use at Salt Springs Powerhouse Unit No. 2. Water is also diverted from upper Cole Creek into this tunnel, where the tunnel crosses under the creek.

The Tiger Creek Development is located below the Salt Springs Development on the NFMR. At Salt Springs Powerhouse tailrace, discharges from both units are made directly into the upper section of the Tiger Creek Canal and transported 17.8 miles to Tiger Creek Regulator Reservoir. Diversions on three small tributary streams–Cole Creek, Bear River, and Tiger Creek–feed additional water into Tiger Creek Canal along its course. From Tiger Creek Regulator, water is conveyed 2.5 miles in the lower section of Tiger Creek Canal to Tiger Creek Forebay and ultimately to Tiger Creek Powerhouse.

The West Point Development is located downstream from the Tiger Creek Development. The water discharged through Tiger Creek Powerhouse is returned to the NFMR and impounded in Tiger Creek Afterbay for diversion into the West Point Tunnel. Water diverted into this tunnel is conveyed 2.6 miles downstream to West Point Powerhouse.

The Electra Development receives flows from West Point Powerhouse Tailrace and water diverted by the Electra Diversion Dam. The Electra Diversion Dam is located on the NFMR immediately upstream of the West Point Powerhouse. The combined flows of the tailrace and diversion dam enter the Electra Tunnel for transport to the Electra Powerhouse Forebay (Lake Tabeaud). From Lake Tabeaud the water continues through the Electra Tunnel to Electra Powerhouse. Electra Powerhouse is located on the mainstem of the Mokelumne River 11.5 miles downstream of Electra Diversion Dam.

2 METHODS

2.1 Station Locations

Water quality was measured at twelve (12) locations throughout the Project area as outlined in the Plan (PG&E, 2001). Waters associated with the water quality monitoring program include Blue Creek, Meadow Creek, NFMR, Bear River, Tiger Creek, and the mainstem Mokelumne River. Sampling was conducted at the following locations.

- Blue Creek below Upper Blue Lake Dam (BC1)
- Blue Creek below Lower Blue Lake Dam (BC2)
- Meadow Creek below Twin Lake Dam (MC1)

- Meadow Creek below Meadow Lake Dam (MC2)
- North Fork below Salt Springs Reservoir Dam (NFMR2)
- Cole Creek below Bear River Tunnel Diversion (CC0)
- Bear River below Lower Bear River Reservoir Dam (BR1)
- Bear River above Salt Springs Road near Licensee Gage M-32 (BR2)
- Tiger Creek below Tiger Creek Regulator Dam (TC1)
- North Fork above Tiger Creek Afterbay at Licensee Gage M-38 (NFMR3)
- North Fork below Electra Diversion Dam (NFMR5)
- Mokelumne River above Electra Powerhouse (MR1)

Table 1 lists these sampling locations and provides the rationale for their selection. The spatial locations of the sampling sites are presented in Figure 1.

2.2 Monitoring Period

The Settlement and FERC license requires that monitoring will be conducted in the year prior to the initial streamflow change, and in years 1, 2, 4, 6, 9, 11, and 14. During the first three years (the year prior to initial stream flow change, and years 1 and 2), monitoring will be conducted eight times per year (March, May, June, July, August, September, first winter storm of the season, and December). Monitoring will be conducted on a quarterly basis in subsequent years (March, June, September, and December). During each sampling event all 12 stations will be sampled as weather and access permit. The first winter storm of the season will be defined as the first rain event that drops 3 inches of precipitation (as measured at the Tiger Creek and Salt Springs rain gages) within a 2-day period, with the stipulation that measured stream flows at stream gage M-38 (located on the North Fork above Tiger Creek Afterbay) must exceed a 200 cfs instantaneous flow.

2.3 Water Quality

In situ and analytical water quality monitoring was performed per the requirements at each of the stations from a representative portion of the stream channel with the exception of limited access to remote sites due to heavy precipitation or snow events.

Those sites only receiving In situ sampling occurred at Blue Creek below Upper Blue Lake (BC1), Meadow Creek below Twin Lake (MC1), Cole Creek below Bear River Tunnel Diversion (CC0), and Bear River above Salt Springs Road near Licensee Gage M-32 (BR2). These stations were monitored for turbidity, temperature, dissolved oxygen (DO), DO percent saturation, specific conductivity (SpC), and pH as part of the Settlement Agreement, Section 7 Water Quality monitoring requirements. The remaining 8 stations were sampled for both *in situ* and analytical parameters.

Turbidity, temperature, DO, DO percent saturation, SpC, and pH were measured in the field using a HydroLab Quanta® multi-parameter water analyzer. The HydroLab meter was calibrated in the laboratory per manufactures instructions (a calibration certificate for 2008 is included as Appendix B). Water samples were analyzed by the Department of Fish and Game's Water Pollution Control Laboratory (WPCL) and Marine Pollution Studies Laboratory (MPSL), and by Sierra Foothill Laboratory, Inc. (SFHL). Hardness, alkalinity, nitrate, and total suspended sediments (TSS) were analyzed by WPCL. Dissolved copper samples were analyzed by MPSL using "clean" lab techniques and U. S. Environmental Protection Agency (USEPA) Method 1638, Determination of Trace Elements in Ambient Waters by Inductively Coupled Plasma-Mass Spectrometry (USEPA 1996a). In addition, the dissolved copper samples were collected in the field using USEPA Method 1669, Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels (USEPA 1996b). Total and fecal coliform were analyzed by SFHL.

2.4 Streamflow

In addition to water quality, stream flow was measured continuously at twelve (12) Licensee maintained and two (2) East Bay Municipal Utility District (EBMUD) maintained locations during the monitoring program. A complete list of the stream flow monitoring stations is presented below.

- Blue Creek below Lower Blue Dam (M3)
- Meadow Creek below Meadow Lake Dam (M6)
- Blue Creek below Upper Blue Lake Dam (M66)
- Meadow Creek below Twin Lakes Dam (M68)
- Cole Creek below Bear River Tunnel Diversion (M10)
- NFMR below Salt Springs Dam (M11)
- Bear River below Lower Bear River Reservoir Dam (M49)
- Bear River above Salt Springs Road (M32)
- Bear River below Salt Springs Road near Tiger Creek Canal (M89)
- Tiger Creek below Regulator Dam (M76)
- NFMR above Tiger Creek Afterbay (M38)
- NFMR below Electra Diversion Dam (M46)
- Middle Fork Mokelumne River above the confluence with South Fork Mokelumne River (EBMUD operated, USGS 11317000)
- South Fork Mokelumne River below the confluence with the Middle Fork Mokelumne River (EBMUD operated, USGS 11318500)

All streamflow data are presented as plots of daily average flow data in cubic feet per second (cfs), (Appendix C).

Per the requirements of the Mokelumne License each February through May the Licensee shall make a monthly forecast of the water year type and operate for that month based on that forecast. The May forecast shall be used to establish the final water year type for the remaining months of the year until the next February, when forecasting shall begin again. The monthly forecast for February and March was Below Normal, and April and May was Dry; the forecast for the remainder of the year was set as Dry, based on reservoir storage and expected runoff.

3 WATER QUALITY MONITORING RESULTS

3.1 *In Situ* Water Quality

Table 2 presents a summary of the annual *in situ* concentration ranges (minimum and maximum) of the monitoring parameters presented for 2007 and 2008. The 2008 data are discussed in detail below and 2007 data are provided as a reference. Historical data (2000 – 2005) are provided in Appendix A, Table A1.

Turbidity and Specific Conductance

Water at the higher elevation stations (MC1, MC2, BC1, and BC2) tended to be clear with low specific conductance and turbidity measurements during periods of low runoff. Over the entire study area turbidity measurements were consistently low, while specific conductance measurements tended to increase in a downstream direction. Turbidity in the Project area ranged from 0.0 NTU (±5% of reading ±1 NTU) at various stations and months to 62.5 NTU at station NFMR1 in May; and averaged 17.8 NTU over the entire Project area during the monitoring program. Turbidity measurements tended to be slightly higher at all stations during periods of increased runoff and precipitation. Specific conductance ranged from 10 umhos/cm at station CC0 (May) to 84 umhos/cm at station NFMR3 in July, and averaged 40.0 umhos/cm in the Project area during the monitoring program.

pH

Measurements of pH ranged from 6.9 ±0.2 units at station NFMR2 (April) to 8.5 ±0.2 units at BR1 (April) during the 2008 monitoring program (Table 2). The Central Valley Regional Water Quality Control Board (CVRWQCB) Basin Plan objective for pH states that pH not be less than 6.5 units and not greater than 8.5 units (1998). The pH averaged 7.5 units in the entire Project area during the monitoring program.

Dissolved Oxygen

Dissolved oxygen concentrations ranged from a minimum of 6.89±0.2 mg/L at station CC1 (77 percent saturation) to a maximum of 13.5 ±0.2 mg/L (102 percent saturation) at station CC0. DO concentrations were less than 7.0 mg/L at stations CC1 (6.89±0.2 mg/L and 77 percent saturation in September), and NFMR2 (6.92±0.2 mg/L and 78 percent saturation in April) during the monitoring program (Figure 2). DO averaged 9.3 mg/L over the entire Project area during the monitoring program. DO percent saturation

ranged from 77 percent (DO was 6.89 mg/L) at station CC1 in September to 108 percent at station TC1 in April and averaged 96 percent over the entire Project area during the monitoring program. The Basin Plan states that the monthly median of the mean daily DO concentration shall not fall below 85 percent of saturation in the main water mass (CVRWQCB 1998). Dissolved Oxygen concentrations less than 7.0 mg/L are common at higher elevations because the solubility of oxygen in water inversely decreases with increases in elevation. Warmer water temperatures also may have played a factor in measured levels as elevated (i.e., warmer) water temperatures hold less oxygen than cooler water. While water temperature is generally cooler at higher altitudes, warm water temperatures that can occur during the summer months may also contribute to decreases in dissolved oxygen concentrations at the upper elevation stations.

3.2 Analytical Water Quality

Table 3 presents a summary of the analytical concentration of the monitoring parameters collected in 2008. These data are discussed in detail below. Historical analytical data is presented in Appendix A, Table A2.

Hardness

Hardness measurements ranged from 5.7 mg/L at station MC2 in September to 21.9 mg/L at station MR1 in March in the Project area during 2005 (Table A2). The average hardness value for the entire Project area was 12.1 mg/L during 2008.

TSS

TSS measurements ranged from a minimum of 0.3 mg/L at station NFMR2 in June and September to a maximum of 8.2 mg/L at station NFMR3 in June in the Project area during 2008 (Table A2). The average TSS value for the Project area was 1.6 mg/L during 2008.

Alkalinity

Total alkalinity measurements ranged from 4.7 mg/L at station MC2 in March to 21.1 mg/L at station NFMR3 in September in the Project area during 2008 (Table A2). Average total alkalinity for the Project area was 10.9 mg/L.

Nitrate

Total nitrate measured as nitrogen ranged from less than <0.005 mg/L at stations BC2 (September), MC2 (September), NFMR3 (June and September), NFMR5 (June and September), MR1 (June) and TC1 (June) to 0.087 mg/L at station MC2 in March during 2008 (Table A2). The average nitrate concentration for the Project area was 0.040 mg/L.

Coliform

Two measurement methods were used to detect coliform bacteria. Total coliform is a measure of all coliform bacteria regardless of origin. Fecal coliform is a measure of coliform bacteria originating from the waste products of warm-blooded animal species. The concentration of coliform bacteria is reported as the most probable number per 100 mL (MPN/100 mL). Total coliform measurements ranged from a minimum of less than 2 MPN/100 mL at BC2 in September, to a maximum of 300 MPN/100 mL at station MR1 in June. Fecal coliform measurements ranged from a minimum of less than 2 MPN/100 mL at most stations, to a maximum of 8 MPN/100 mL at station NFMR3 in September (Table A2).

Basin Plan objectives for coliform state that, in waters designated for contact recreation, the fecal coliform concentration based on a minimum of not less than five samples in any 30-day period shall not exceed a geometric mean of 200 MPN/100 mL, nor shall more than ten percent of the total number of the samples taken during any 30-day period exceed 400 MPN/100 mL (CVRWQCB 1998). A single sample was collected at each station during each sampling event of the monitoring program and none of the fecal coliform concentrations exceeded the Basin Plan criteria during the 2008 monitoring program.

Copper

Dissolved copper concentrations ranged from a minimum of 0.03 µg/L at station BC2 in June to a maximum of 4.46 µg/L at station BR1 in March (Table A2). The observed dissolved copper concentrations in 2008 were reduced compared to historical values directly below the Lower Bear River Reservoir. All of the 2005 dissolved copper concentrations at station BR1 were near the observed, natural background levels (9.9 µg/L maximum observed background measurement, PG&E 2004b).

3.3 Streamflow

Plots of daily average streamflow data are presented in Appendix C. The 2008 water year has been classified as an “Dry” water year type. For additional discussion regarding streamflow and water temperature, refer to the forthcoming Mokelumne Annual Water Temperature Monitoring Report, (PG&E *in process*).

4.0 SUMMARY

Overall, water quality in the Project area is good. Measurements for *in situ* parameters did not vary greatly between the eight monitoring program years (2000 through 2008). The laboratory-measured parameters varied greatly during the eight monitoring years. Observed dissolved copper levels at station BR1 were reduced during the 2008 monitoring program, compared to the historical sampling, due to completion of facility modification and implementation of the new FERC-required flow regime. One trend that occurs consistently during all years is increasing concentrations of selected parameters (turbidity and SpC) during periods of increased precipitation and runoff (spring and winter). Lower dissolved oxygen

measurements (<7.0 mg/L) were recorded in warmer months at higher elevation stations (BC1, BC2, MC1, and CC0). This is to be expected since warm water holds less oxygen and less oxygen is present at higher altitudes. However, the values percent saturation at these stations, when DO was less than 7.0 mg/L, was 77 and 78 percent, respectively.

5.0 REFERENCES

Central Valley Regional Water Quality Control Board (CVRWQCB) 1998. The Water Quality Control Plan (Basin Plan). The Sacramento River Basin and the San Joaquin River Basin. Fourth Edition.

Pacific Gas and Electric Company (PG&E). 2000. Mokelumne River Project, FERC Project No. 137, Mokelumne Relicensing Settlement Agreement. July 21, 2000. San Ramon, CA: Technical and Ecological Services.

PG&E 2001. Mokelumne River Project, FERC Project No. 137, Water Quality Monitoring Study Plan, May 14, 2001, Technical and Ecological Services, San Ramon, CA.

PG&E 2002a. Mokelumne River Project, FERC Project No. 137, 2000 Water Quality Monitoring Program Report, July 2000–January 2001. Report No. 026.11.02.13. Technical and Ecological Services, San Ramon, CA.

PG&E 2002b. Mokelumne River Project, FERC Project No. 137, 2001 Water Quality Monitoring Program Report, March 2001-December 2001. TES Report No. 026.11.02.14. Technical and Ecological Services, San Ramon, CA.

PG&E 2003. Mokelumne River Project, FERC Project No. 137, Water Quality Monitoring Program, March 2002-May 2002 and Supplemental Copper Monitoring Data, March 2002-December 2002. TES Report No. 026.11.03.1. Technical and Ecological Services, San Ramon, CA.

PG&E 2004a. Mokelumne River Project, FERC Project No. 137, Water Quality Monitoring Program, March 2003-September 2003 and Supplemental Copper Monitoring Preliminary Data, January 2003-September 2003. TES Report No. 026.11.04.2. Technical and Ecological Services, San Ramon, CA

PG&E 2004b. Mokelumne River Project, FERC Project No. 137, Supplemental Water Quality Monitoring Program, March 2002-September 2003. TES Report No. 026.11.04.7. Technical and Ecological Services, San Ramon, CA.

PG&E 2005. Mokelumne River Project, FERC Project No. 137, Water Quality Monitoring Program, April 2004-September 2004. TES Report No. 026.11.05.1. Technical and Ecological Services, San Ramon, CA.

PG&E 2006. Mokelumne River Project, FERC Project No. 137, 2005 Water Temperature Monitoring Program Report. TES Report No. 026.11.06.5. Technical and Ecological Services, San Ramon, CA.

U. S. Environmental Protection Agency (USEPA) 1996a. Determination of Trace Elements in Ambient Waters by Inductively Coupled Plasma-Mass Spectrometry, Method 1638, July 1996.

USEPA 1996b. Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, Method 1669, July 1996.

Tables

Table 1. Mokelumne River Project, Water Quality Monitoring Station Locations and rationale, 2008.

Station No.	Station Location	Rationale
BC1	Blue Creek below Upper Blue Lake Dam	Temperature monitoring station. Dissolved oxygen compliance site.
BC2	Blue Creek below Lower Blue Lake Dam	Defines water quality in Blue Creek below Lower Blue Lake, and is representative of water quality in upper Blue Creek.
MC1	Meadow Creek below Twin Lake Dam	Temperature monitoring station. Dissolved oxygen compliance site.
MC2	Meadow Creek below Meadow Lake Dam	Defines water quality in Meadow Creek below Meadow Lake, and is representative of water quality in upper Meadow Creek
NFMR2	NFMR below Salt Springs Reservoir Dam	Defines water quality in the NFMR at the head of the reach between Salt Springs Reservoir and Tiger Creek Afterbay.
CC0	Cole Creek below Diversion Dam	Temperature monitoring station. Dissolved oxygen compliance site.
CC1	Cole Creek above confluence of NFMR	Temperature monitoring station. Dissolved oxygen compliance site.
BR1	Bear River below Dam	Defines water quality in Bear River below Lower Bear River Reservoir.
BR2	Bear River at Salt Springs Road	Temperature monitoring station. Serves as back up for BR1, should it be inaccessible.
NFMR3	NFMR above Tiger Creek Afterbay at Licensee Gage M-38	Defines water quality in the NFMR at the end of the reach between Salt Springs Reservoir and Tiger Creek Afterbay.
TC1	Tiger Creek below Tiger Creek Regulator Dam	Defines water quality in Tiger Creek below Tiger Creek Regulator Dam.
NFMR5	NFMR in diversion canal at Electra Diversion Dam	Defines water quality in the NFMR at the head of the reach between Electra Diversion Dam and Electra Powerhouse, and is representative of water quality in the reach between Tiger Creek Afterbay Dam and Electra Diversion Dam.
MR1	Mokelumne River above Electra Powerhouse	Defines water quality in the Mokelumne River at the end of the reach between Electra Diversion Dam and Electra Powerhouse.

Table 2. Mokelumne River Project, 2007 and 2008 Summary of Concentration Ranges for *In Situ* Water Quality Monitoring Parameters.

		Flow (cfs)		Temp (°C)		DO (mg/L)		DO % Sat		SpC		pH		Turbidity (NTU)	
Station	Year	min	max	min	max	min	max	min	max	min	max	min	max	min	max
BC1	2007	7.2	40.0	9	19.9	7.3	9.3	96	106	33	37	2.1	7.8	3.6	54
BC1	2008	1.1	24.3	1.5	19.1	7.1	9.1	82	91	30	40	7.3	7.7	1.4	41.1
BC2	2007	12.4	43.6	6.3	18.3	7.3	10.1	91	107	23	30	7.4	7.8	2.4	65
BC2	2008	5.3	29.5	2.8	18.3	7.4	10.1	75	101	22	33	7.2	7.6	2.1	35.5
BR1	2007	10.0	25.8	7.1	10.2	7.4	9.3	81	95	14	17	7.5	8.5	6.3	48.3
BR1	2008	4.4	27.6	3.5	9.2	8.6	10.2	91	101	14	22	7	8.5	4.4	54.6
BR2	2007	10.0	25.9	11.2	19.2	8	9.2	91	100	25	27	6.8	7.5	1	37.4
BR2	2008	5.4	73.3	5	17.8	8.3	13.4	91	105	20	38	7.2	7.7	1.7	49.1
CC0	2007	0.1	55.9	8.3	18.7	6	8.6	76	88	11	37	7.4	8.9	1.3	36.9
CC0	2008	0.1	202.6	2.5	19	6.9	13.5	80	103	10	38	6.9	8.3	4.7	41.4
CC1	2007	0.0	20.6	14.1	19	7.7	9.1	84	99	13	49	6.7	7.6	1.9	6
CC1	2008	0.0	16.2	2.7	18.4	6.9	12.5	77	106	14	47	7.4	8	1	30.2
MC1	2007	1.6	3.6	9.6	19	7.2	9.1	93	103	11	16	7.3	7.7	1.4	9.1
MC1	2008	1.7	2.0	0.1	18.7	6.5	7.8	58	96	12	35	7.1	7.5	3.9	16.2
MC2	2007	11.8	44.0	6.3	17.3	7.2	9.7	92	104	13	18	7.3	8.2	3.8	55
MC2	2008	16.9	24.9	0.6	15.5	7.9	10.7	90	106	10	16	7.1	7.6	5.3	11.8
MR1	2007	25.6	136.7	17.1	23.9	6.7	9.3	84	101	40	64	7.2	7.5	0	8.4
MR1	2008	25.7	393.3	8.8	26.2	7.7	11.7	88	101	40	59	7.3	8.1	0.1	27.9
NFMR2	2007	23.9	96.4	9.9	13.1	7.6	10.5	98	108	23	27	7.4	8.3	2.5	54.5
NFMR2	2008	24.0	88.3	6	12.1	10.7	11.6	78	104	20	47	6.9	9.3	3	52.2
NFMR3	2007	57.3	218.4	12.1	20.9	7.6	9.3	91	101	38	61	6.9	7.2	0	4
NFMR3	2008	44.6	324.4	5.3	22.4	7.9	11.7	90	102	34	55	7.3	8.1	0.1	34
NFMR5	2007	25.6	136.7	12.4	14.6	8.7	9.3	87	99	25	34	7.2	7.7	2	16.8
NFMR5	2008	25.7	393.3	5.3	14.5	8.5	10.9	87	99	22	49	7	7.8	1.5	50.6
TC1	2007	3.5	7.6	9.2	11.4	9	10	88	97	19	25	7.1	8	4.4	15.2
TC1	2008	3.4	10.8	6.5	13.6	8.8	12	92	109	15	39	7	8.2	2.1	55.1

Table 3. Mokelumne River Project, 2008 Concentration for Analytical Water Quality Monitoring Parameters.

Station	Sampling Date	Year Classification	Gage ID	Flow (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Dissolved Copper (ug/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
BC2	3/18/08	Year 4	M3	--	13.3	ND	0.11	9.1	0.061	4	<2
BC2	6/26/08	Year 4	M3	5.3	12.9	1.1	0.03	11.2	0.0719	2	<2
BC2	9/25/08	Year 4	M3	19.5	13.2	0.5	0.81	9.8	ND	<2	<2
BR1	3/18/08	Year 4	M49	--	9.0	2.3	4.46	9.2	0.0262	2	<2
BR1	6/24/08	Year 4	M49	9.2	6.9	0.4	4.24	8.3	0.0803	4	<2
BR1	9/24/08	Year 4	M49	4.4	6.2	0.6	1.63	6.3	0.0333	170	<2
MC2	3/18/08	Year 4	M68	--	9.8	0.3	0.06	4.7	0.0872	4	<2
MC2	6/26/08	Year 4	M68	1.9	8.9	4.3	0.04	7.0	0.0123	2	<2
MC2	9/25/08	Year 4	M68	2.0	5.7	0.7	0.34	5.8	ND	2	<2
MR1	3/18/08	Year 4			21.9	0.6	0.28	18.8	0.0137	110	<2
MR1	6/25/08	Year 4			16.3	0.9	0.73	17.0	ND	300	4
MR1	9/24/08	Year 4			18.1	0.8	0.88	20.3	0.0131	170	<2
NFMR2	3/17/08	Year 4	M11	--	11.1	4.9	0.24	5.3	0.0288	17	<2
NFMR2	6/25/08	Year 4	M11	49.4	9.3	0.3	0.27	7.6	0.0056	22	<2
NFMR2	9/23/08	Year 4	M11	24	7.8	0.3	0.22	5.0	0.0229	30	<2
NFMR3	3/17/08	Year 4	M38	--	18.7	2.0	0.69	16.7	0.0792	30	<2
NFMR3	6/24/08	Year 4	M38	103.3	17.2	8.2	0.34	19.4	ND	110	23
NFMR3	9/24/08	Year 4	M38	44.6	21.1	ND	0.85	21.1	ND	240	8
NFMR5	3/18/08	Year 4	M46	--	15.4	0.8	0.38	11.1	0.0555	27	4
NFMR5	6/25/08	Year 4	M46	65.3	11.4	0.3	0.22	13.1	ND	11	2
NFMR5	9/24/08	Year 4	M46	25.9	8.0	0.4	0.57	9.7	ND	23	2
TC1	3/17/08	Year 4	M76	--	10.8	3.0	0.25	6.3	0.0335	110	<2
TC1	6/24/08	Year 4	M76	6	7.3	1.2	0.18	7.0	ND	17	2
TC1	9/23/08	Year 4	M76	9.4	10.5	0.7	0.11	10.6	0.021	17	<2
Blank	3/17/08	Year 4	---	---	ND	---	<.03	---	0.0069	---	---
Blank	6/25/08	Year 4	---	---	5.0	---	<.03	---	0.0317	---	---
Blank	9/24/08	Year 4	---	---	ND	---	<.03	ND	0.0071	---	---

Figures

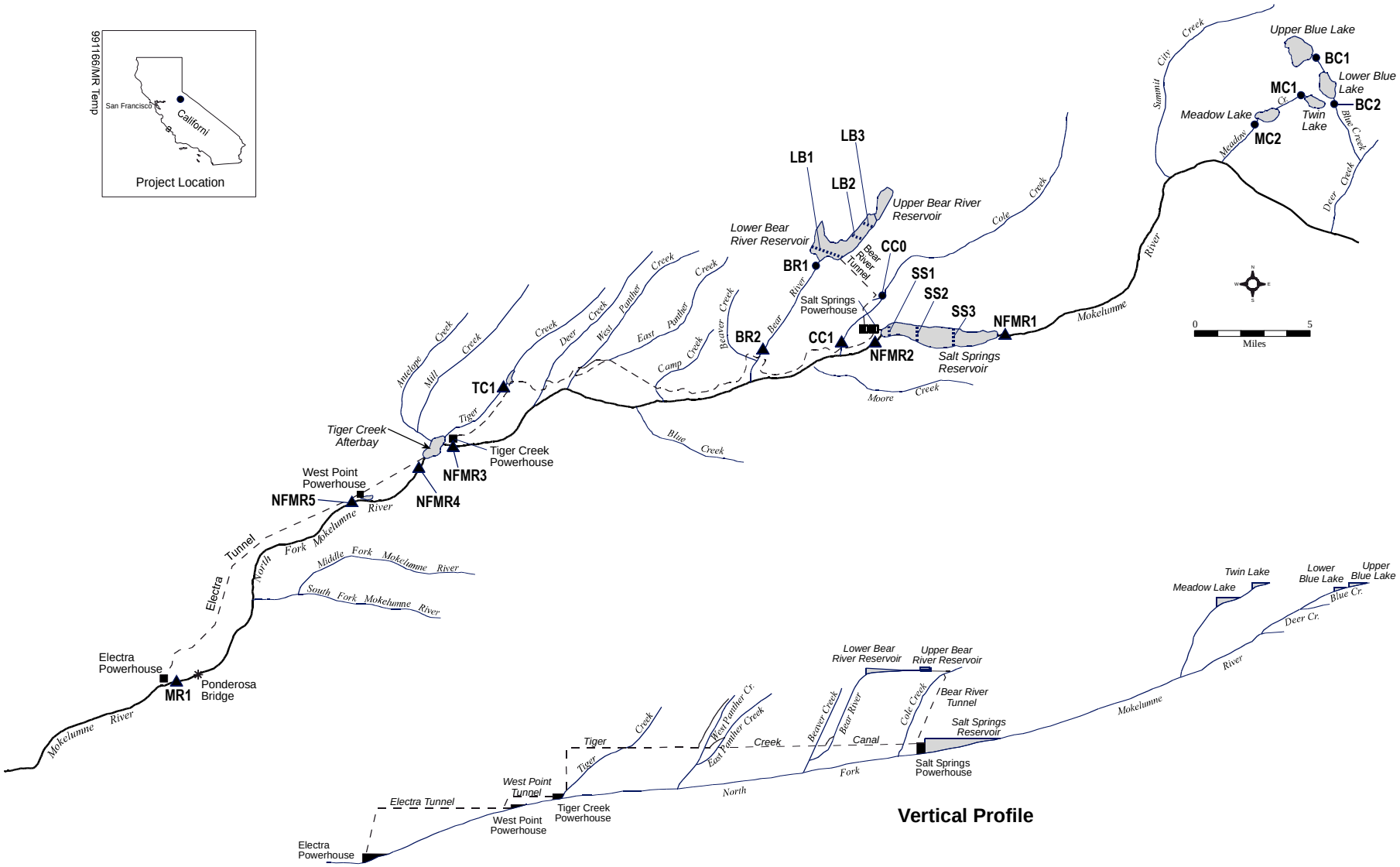


Figure 1. Mokelumne River Project, Water Quality Monitoring Stations, 2008.

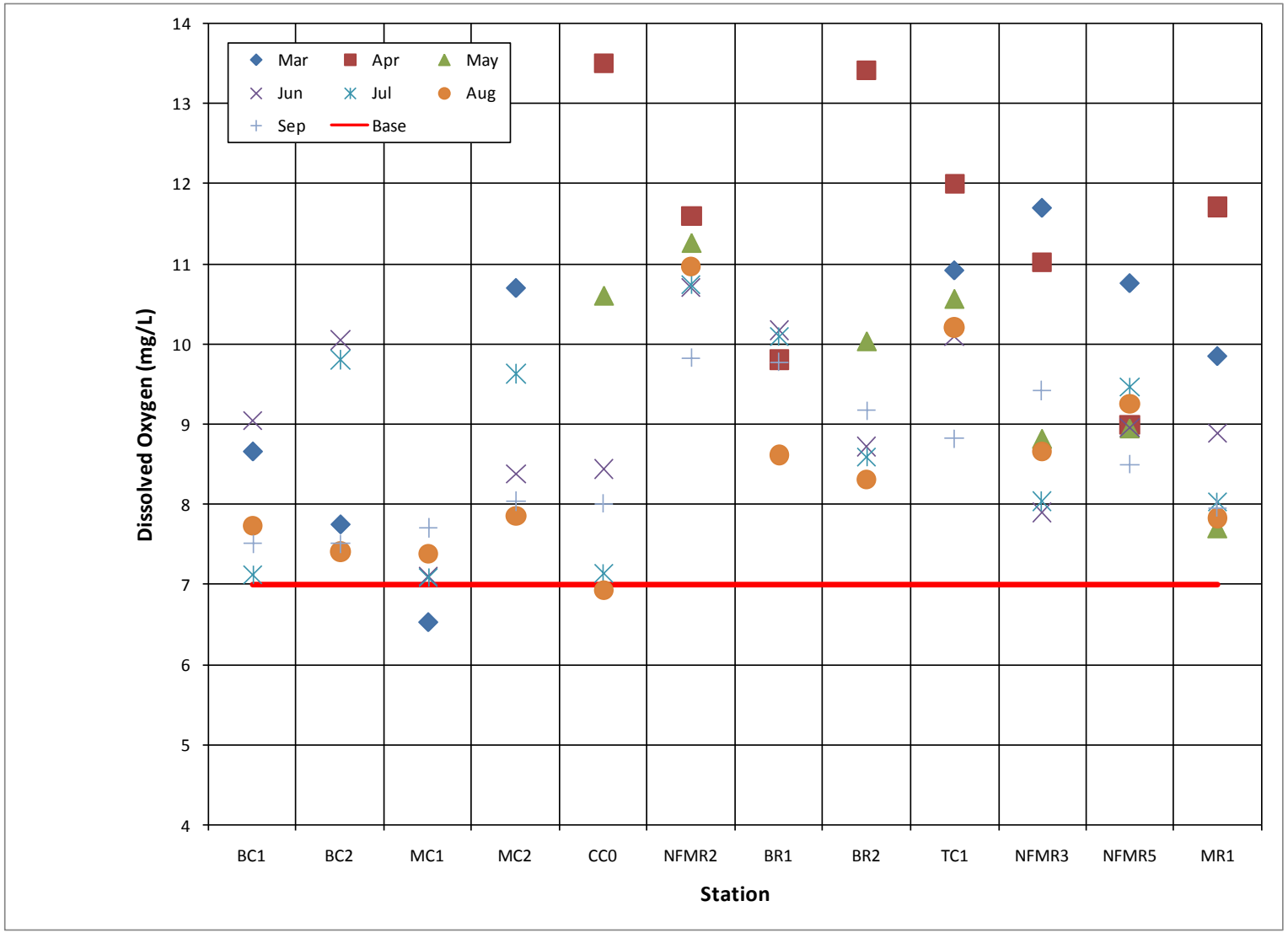


Figure 2. Mokelumne River Project, Dissolved Oxygen Concentrations at each station during the 2008 monitoring period.

Appendix A

Mokelumne River Project (FERC Project No. 137)

Historical Field and Laboratory Data

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
BC1	3/15/01	Baseline	14:44	2477	M66	3.3	0.5	1.2	10.1	95	30.2	6.6	4.2
BC1	5/30/01	Baseline	11:50	2477	M66	19.5	0.5	10.8	8.2	82	25.0	7.4	0.5
BC1	6/18/01	Baseline	11:38	2477	M66	21.5	0.5	16.0	7.3	98	26.3	6.9	1.2
BC1	7/24/01	Baseline	8:38	2477	M66	8.0	0.5	15.8	7.2	72	30.6	7.1	0.1
BC1	8/14/01	Baseline	---	2477	---	---	---	---	---	---	---	---	---
BC1	9/27/01	Baseline	---	2477	---	---	---	---	---	---	---	---	---
BC1	11/26/01 (1)	Baseline	---	2477	---	---	---	---	---	---	---	---	---
BC1	12/19/01	Baseline	---	2477	---	---	---	---	---	---	---	---	---
BC1	3/27/02	Interim	11:15	2477	M66	3.9	0.5	1.2	9.3	95	34.7	7.0	<1
BC1	5/15/02	Interim	10:17	2477	M66	13.2	0.5	1.3	9.3	85	23.0	6.5	2.2
BC1	7/16/02	Interim	13:09	2477	M66	7.5	0.5	20.4	6.4	71	---	---	---
BC1	9/25/02	Interim	9:04	2477	M66	7.1	0.5	13.5	8.0	74	---	---	---
BC1	5/6/03	Interim	9:40	2477	M66	11.6	0.5	0.8	7.3	69	40.0	7.6	0.1
BC1	7/8/03	Interim	9:17	2477	M66	5.5	0.5	13.7	7.8	98	30.0	7.1	0.2
BC1	8/20/03	Interim	9:15	2477	M66	11.7	0.5	18.3	6.8	95	30.0	7.1	0.0
BC1	9/10/03	Interim	11:39	2477	M66	10.8	0.5	15.1	6.7	87	30.0	7.0	2.8
BC1	6/3/04	Interim	9:35	2477	M66	7.7	0.5	10.6	8.0	95	28.0	8.0	2.1
BC1	7/15/04	Interim	9:30	2477	M66	15.06	0.5	16.3	7.1	95	34.0	7.2	1.7
BC1	8/26/04	Interim	9:10	2477	M66	1.21	0.5	14.9	7.6	98	36.0	7.5	0.4
BC1	9/22/04	Interim	8:53	2477	M66	0.9	0.1	9.4	7.4	84	38.0	7.1	0.0
BC1	**3/22/05**	**Year 1**	**---**	**2476**	**M66**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**
BC1	**5/25/05**	**Year 1**	**12:15**	**2477**	**M66**	**11.7**	**0.5**	**0.4**	**---**	**---**	**---**	**---**	**---**
BC1	**6/22/05**	**Year 1**	**11:45**	**2477**	**M66**	**14.1**	**0.5**	**2.2**	**8.3**	**80**	**22.0**	**6.1**	**0.5**
BC1	**7/20/05**	**Year 1**	**13:10**	**2477**	**M66**	**6.6**	**0.5**	**22.0**	**5.7**	**84**	**30.0**	**7.2**	**3.3**
BC1	**8/11/05**	**Year 1**	**10:30**	**2477**	**M66**	**6.3**	**0.5**	**12.1**	**8.9**	**94**	**31.0**	**7.6**	**11.1**
BC1	**9/27/05**	**Year 1**	**11:40**	**2477**	**M66**	**6.2**	**0.5**	**11.6**	**7.9**	**95**	**33.0**	**7.5**	**0.7**
BC1	**12/8/05 [1]**	**Year 1**	**13:20**	**2477**	**M66**	**6.7**	**0.5**	**2.7**	**9.4**	**89**	**35.0**	**7.1**	**<1**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
BC2	7/26/00	Baseline	13:52	2446	M3	22.1	0.5	18.7	7.0	95	22.3	7.5	0.9
BC2	8/8/00	Baseline	12:30	2446	M3	22.1	0.5	19.2	7.0	97	24.0	7.4	2.8
BC2	9/20/00	Baseline	11:30	2446	M3	28.0	0.5	15.0	7.7	85	26.6	7.2	0 [(2)] (0.4)
BC2	12/27/00	Baseline	11:51	2446	M3	5.4	0.5	2.0	9.8	97	30.9	6.7	0.8
BC2	1/11/01 [(1)]	Baseline	---	2446	M3	5.4	---	---	---	---	---	---	---
BC2	3/15/01	Baseline	14:25	2446	M3	5.4	0.5	1.0	9.9	93	29.4	6.5	7.6
BC2	5/30/01	Baseline	12:55	2446	M3	24.0	0.5	13.5	7.4	94	16.2	7.4	2.9
BC2	6/18/01	Baseline	12:31	2446	M3	8.0	0.5	16.9	7.1	98	21.0	7.0	0.8
BC2	7/23/01	Baseline	9:58	2446	M3	8.5	0.5	17.3	7.0	95	27.1	7.3	7.3
BC2	8/14/01	Baseline	10:53	2446	M3	8.5	1.0	18.7	6.8	92	26.3	7.5	6.0
BC2	9/27/01	Baseline	9:11	2446	M3	8.2	1.0	14.2	7.8	100	29.0	7.3	1.9
BC2	11/26/01 [(1)]	Baseline	---	2446	M3	2.0	---	---	---	---	---	---	---
BC2	12/19/01	Baseline	9:55	2446	M3	2.0	0.5	1.2	8.0	85	30.4	7.0	1.7
BC2	3/27/02	Interim	10:36	2446	M3	2.0	0.5	0.9	9.2	83	30.4	6.8	<1
BC2	5/15/02	Interim	9:46	2446	M3	6.9	0.5	1.7	9.7	89	27.0	7.3	1.5
BC2	7/16/02	Interim	12:50	2446	M3	14.4	0.5	11.3	8.4	100	---	---	---
BC2	9/25/02	Interim	9:21	2446	M3	14.7	0.5	14.1	7.3	93	---	---	---
BC2	5/6/03	Interim	10:58	2446	M3	8.9	1.0	1.6	9.0	83	30.0	7.9	0.5
BC2	7/8/03	Interim	9:02	2446	M3	44.5	1.0	8.6	9.1	102	30.0	6.9	0.2
BC2	8/20/03	Interim	9:05	2446	M3	28.3	1.0	17.7	6.8	93	20.0	7.0	0.0
BC2	9/10/03	Interim	11:24	2446	M3	5.9	1.0	14.4	7.0	89	30.0	7.0	3.6
BC2	6/3/04	Interim	10:03	2446	M3	7.28	1.0	5.9	9.4	99	22.0	8.7	5.9
BC2	7/15/04	Interim	9:55	2446	M3	11.89	1.0	17.1	7.1	97	31.0	7.3	1.6
BC2	8/26/04	Interim	9:32	2446	M3	7.18	0.5	9.9	8.8	100	27.0	7.6	3.2
BC2	9/22/04	Interim	9:25	2446	M3	7.27	0.5	12.7	7.2	88	32.0	7.1	0.0
BC2	**3/22/05**	**Year 1**	**---**	**2446**	**M3**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**
BC2	**5/25/05**	**Year 1**	**12:50**	**2446**	**M3**	**10.1**	**---**	**0.8**	**---**	**---**	**---**	**---**	**---**
BC2	**6/22/05**	**Year 1**	**12:10**	**2446**	**M3**	**28.7**	**1.0**	**3.2**	**8.2**	**82**	**18.0**	**6.6**	**1.2**
BC2	**7/20/05**	**Year 1**	**13:40**	**2446**	**M3**	**53.1**	**0.5**	**8.2**	**9.0**	**99**	**22.0**	**6.9**	**---**
BC2	**8/11/05**	**Year 1**	**11:00**	**2446**	**M3**	**54.6**	**1.0**	**18.5**	**6.4**	**90**	**23.0**	**7.5**	**0.0**
BC2	**9/27/05**	**Year 1**	**12:03**	**2446**	**M3**	**5.9**	**0.5**	**10.9**	**8.0**	**95**	**27.0**	**7.3**	**3.0**
BC2	**12/8/05 [1]**	**Year 1**	**13:45**	**2446**	**M3**	**6.1**	**0.5**	**1.8**	**10.1**	**93**	**34.0**	**7.1**	**4.5**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
MC1	3/15/01	Baseline	13:30	2474	M68	3.4	0.5	0.3	7.0	64	17.2	6.6	---
MC1	5/30/01	Baseline	13:40	2474	M68	2.2	0.5	14.0	7.1	91	8.6	7.1	0.6
MC1	6/18/01	Baseline	13:15	2474	M68	2.2	0.5	16.4	7.4	100	8.6	6.7	1.6
MC1	7/24/01	Baseline	11:13	2474	M68	2.0	0.5	17.5	7.2	96	---	---	---
MC1	8/14/01	Baseline	---	2474	---	2.0	---	---	---	---	---	---	---
MC1	9/27/01	Baseline	9:38	2474	---	2.0	0.5	12.2	7.3	91	---	---	---
MC1	11/26/01 [(1)]	Baseline	---	2474	---	---	---	---	---	---	---	---	---
MC1	12/19/01	Baseline	---	2474	---	---	---	---	---	---	---	---	---
MC1	3/27/02	Interim	9:55	2474	M68	1.6	0.5	0.5	9.4	88	21.1	6.7	<1
MC1	5/15/02	Interim	9:17	2474	M68	2.0	0.5	1.0	9.1	82	18.0	7.3	2.2
MC1	7/16/02	Interim	12:22	2474	M68	2.0	0.5	20.3	6.4	93	---	---	---
MC1	9/25/02	Interim	9:38	2474	M68	2.5	0.5	13.7	7.5	95	---	---	---
MC1	5/6/03	Interim	9:15	2474	M68	2.0	0.3	0.1	8.3	77	40.0	7.6	10.6
MC1	7/8/03	Interim	9:34	2474	M68	1.5	0.3	16.0	6.7	88	10.0	6.9	1.8
MC1	8/19/03	Interim	8:52	2474	M68	1.5	0.3	18.1	6.4	90	10.0	7.0	0.0
MC1	9/10/03	Interim	11:13	2474	M68	1.5	0.3	14.4	6.8	88	10.0	6.8	1.5
MC1	6/3/04	Interim	11:07	2474	M68	6.0	0.5	10.9	7.8	94	8.0	8.0	2.0
MC1	7/15/04	Interim	10:23	2474	M68	3.7	0.5	17.4	7.1	96	12.0	7.0	0.9
MC1	8/26/04	Interim	9:55	2474	M68	3.0	0.5	15.5	7.6	99	13.0	7.1	0.1
MC1	9/22/04	Interim	10:00	2474	M68	1.6	0.1	9.9	7.7	89	13.0	6.8	0.2
MC1	**3/22/05**	**Year 1**	**---**	**2474**	**M68**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**
MC1	**5/25/05**	**Year 1**	**13:25**	**2474**	**M68**	**1.7**	**---**	**0.9**	**---**	**---**	**---**	**---**	**---**
MC1	**6/22/05**	**Year 1**	**12:45**	**2474**	**M68**	**1.8**	**0.5**	**3.7**	**8.3**	**83**	**13.0**	**6.1**	**0.2**
MC1	**7/20/05**	**Year 1**	**14:07**	**2474**	**M68**	**2.1**	**0.3**	**15.3**	**7.1**	**92**	**12.0**	**6.9**	**<1**
MC1	**8/11/05**	**Year 1**	**11:20**	**2474**	**M68**	**1.8**	**0.3**	**19.5**	**6.2**	**89**	**12.0**	**7.1**	**0.5**
MC1	**9/27/05**	**Year 1**	**12:40**	**2474**	**M68**	**2.1**	**0.3**	**11.4**	**7.7**	**90**	**13.0**	**7.1**	**2.9**
MC1	**12/8/05 [1]**	**Year 1**	**14:20**	**2474**	**M68**	**2.0**	**0.5**	**3.2**	**10.2**	**99**	**14.0**	**7.1**	**4.5**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
MC2	7/26/00	Baseline	15:00	2377	M6	31.2	0.5	8.4	8.6	99	8.6	6.9	1.2
MC2	8/8/00	Baseline	14:10	2377	M6	33.6	0.5	10.5	8.7	99	8.5	7.3	8.0
MC2	9/20/00	Baseline	14:05	2377	M6	31.5	0.5	14.4	6.7	101	9.8	7.0	0 [(2)] (0.4)
MC2	12/27/00	Baseline	11:25	2377	M6	12.0	0.5	1.2	10.5	94	18.0	6.7	0.5
MC2	1/11/01 [(1)]	Baseline	---	2377	M6	6.7	---	---	---	---	---	---	---
MC2	3/15/01	Baseline	13:30	2377	M6	6.7	0.5	0.6	9.4	88	19.6	7.3	12.4
MC2	5/30/01	Baseline	14:40	2377	M6	20.7	0.5	7.4	8.3	90	8.4	7.0	0.5
MC2	6/18/01	Baseline	14:35	2377	M6	20.3	0.5	9.2	8.6	99	8.8	7.0	0.4
MC2	7/23/01	Baseline	12:27	2377	M6	17.0	0.3	16.6	7.3	95	10.1	6.9	7.7
MC2	8/14/01	Baseline	9:21	2377	M6	19.1	0.5	17.9	7.5	94	9.8	7.2	0.5
MC2	9/27/01	Baseline	10:45	2377	M6	9.5	1.0	13.5	8.0	100	12.3	7.3	4.6
MC2	11/26/01 [(1)]	Baseline	---	2377	M6	11.6	1.0	---	---	---	---	---	---
MC2	12/19/01	Baseline	9:20	2377	M6	11.6	0.5	0.7	10.1	91	21.7	7.0	2.0
MC2	3/27/02	Interim	9:00	2377	M6	12.0	0.5	1.4	7.4	93	24.6	7.1	1.9
MC2	5/15/02	Interim	8:31	2377	M6	9.5	0.5	2.0	9.7	90	13.0	7.9	3.0
MC2	7/16/02	Interim	11:15	2377	M6	30.7	0.5	7.9	9.1	99	---	---	---
MC2	9/25/02	Interim	9:58	2377	M6	20.0	0.5	13.3	8.1	100	---	---	---
MC2	5/6/03	Interim	9:00	2377	M6	28.0	0.5	0.8	11.4	103	20.0	7.8	0.1
MC2	7/9/03	Interim	8:32	2377	M6	51.9	1.0	7.8	8.7	95	10.0	7.8	0.1
MC2	8/20/03	Interim	8:43	2377	M6	55.2	1.0	17.7	7.1	98	9.7	6.8	<1.0
MC2	9/10/03	Interim	11:04	2377	M6	40.0	1.0	13.1	7.2	88	15.0	6.7	122 [(7)]
MC2	7/15/04	Interim	11:30	2377	M6	12.7	1.5	15.0	7.5	98	13.0	7.2	0.6
MC2	8/26/04	Interim	11:00	2377	M6	3.3	0.5	16.6	7.1	94	14.0	7.2	1.4
MC2	9/22/04	Interim	11:29	2377	M6	3.5	0.5	12.6	7.0	87	15.0	7.1	2.5
MC2	**3/22/05**	**Year 1**	**---**	**2377**	**M6**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**
MC2	**5/25/05**	**Year 1**	**13:50**	**2377**	**M6**	**24.5**	**0.5**	**1.1**	**---**	**---**	**---**	**---**	**---**
MC2	**6/22/05**	**Year 1**	**13:06**	**2377**	**M6**	**150.2**	**0.5**	**4.0**	**8.5**	**85**	**10.0**	**6.7**	**0.4**
MC2	**7/20/05**	**Year 1**	**14:25**	**2377**	**M6**	**28.8**	**0.5**	**6.4**	**9.0**	**95**	**12.0**	**7.1**	**<1**
MC2	**8/11/05**	**Year 1**	**11:38**	**2377**	**M6**	**28.6**	**0.5**	**8.3**	**8.3**	**94**	**11.0**	**7.4**	**1.4**
MC2	**9/27/05**	**Year 1**	**14:05**	**2377**	**M6**	**28.1**	**0.5**	**11.9**	**7.8**	**94**	**13.0**	**7.1**	**3.0**
MC2	**12/8/05 [1]**	**Year 1**	**14:45**	**2377**	**M6**	**5.9**	**Clouds and fog, unable to land helicopter, no samples collected**					**---**	**---**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
NFMR2	7/26/00	Baseline	12:15	1119	M11	36.1	0.5	10.5	9.0	93	17.1	6.9	0.8
NFMR2	8/8/00	Baseline	13:36	1119	M11	36.6	0.5	11.3	9.9	103	17.4	7.3	3.4
NFMR2	9/20/00	Baseline	12:46	1119	M11	36.7	0.5	13.1	8.5	92	19.3	6.9	0 [(2)] (0.3)
NFMR2	12/27/00	Baseline	13:40	1119	M11	26.2	0.5	7.0	11.0	104	28.0	6.8	0.2
NFMR2	1/11/01 [(1)]	Baseline	11:45	1119	M11	21.4	0.5	5.2	10.2	92	36.0	6.7	3.4
NFMR2	3/14/01	Baseline	11:40	1119	M11	21.8	0.5	5.8	10.3	94	56.9	6.6	0.0
NFMR2	5/31/01	Baseline	10:45	1119	M11	33.0	0.5	9.3	9.0	88	17.6	7.1	0.6
NFMR2	6/19/01	Baseline	13:15	1119	M11	32.6	0.5	10.5	9.1	93	16.9	7.1	1.2
NFMR2	7/23/01	Baseline	16:15	1119	M11	32.3	0.5	11.7	8.9	100	19.0	7.0	7.1
NFMR2	8/13/01	Baseline	9:57	1119	M11	32.9	0.4	11.6	8.6	88	18.0	6.9	0.3
NFMR2	9/26/01	Baseline	9:57	1119	M11	32.3	0.5	15.1	8.5	96	22.4	6.7	0.3
NFMR2	11/26/01 [(1)]	Baseline	---	1119	M11	21.2	0.5	---	---	---	---	---	---
NFMR2	12/19/01	Baseline	11:00	1119	M11	21.0	0.5	5.3	10.8	97	37.4	7.4	2.0
NFMR2	3/27/02	Interim	12:00	1119	M11	75.0	0.5	7.3	11.2	102	41.8	7.0	3.4
NFMR2	5/14/02	Interim	9:22	1119	M11	227.8	0.5	3.4	11.3	95	11.0	7.3	0.8
NFMR2	7/12/02	Interim	9:55	1119	M11	33.6	0.5	11.3	8.7	87	---	6.6	---
NFMR2	9/25/02	Interim	10:57	1119	M11	22.7	0.5	15.1	7.8	87	---	---	---
NFMR2	3/11/03	Interim	16:11	1119	M11	60.5	0.5	7.3	9.9	92	40.0	7.9	0.8
NFMR2	5/6/03	Interim	11:47	1119	M11	369.8	0.8	7.0	10.7	98	30.0	6.9	0.0
NFMR2	6/3/03	Interim	8:20	1119	M11	2287.0	0.5	6.9	9.9	93	20.0	6.8	0.6
NFMR2	7/9/03	Interim	14:14	1119	M11	35.8	1.0	10.1	9.8	97	20.0	7.5	3.0
NFMR2	8/21/03	Interim	10:50	1119	M11	23.2	1.0	11.2	8.3	81	20.0	7.2	0.0
NFMR2	9/10/03	Interim	12:22	1119	M11	33.9	1.0	11.2	8.3	85	20.0	6.8	6.6
NFMR2	4/12/04	Interim	10:42	1119	M11	110.0	1.0	7.8	9.2	90	19.0	8.2	4.6
NFMR2	5/18/04	Interim	12:55	1119	M11	39.4	0.5	8.6	8.6	83	15.0	8.0	4.7
NFMR2	6/2/04	Interim	12:15	1119	M11	117.2	1.0	9.3	9.7	95	17.0	8.3	4.7
NFMR2	7/13/04	Interim	12:20	1119	M11	24.4	1.0	12.9	8.8	92	22.0	7.2	3.5
NFMR2	8/24/04	Interim	12:05	1119	M11	37.4	1.0	12.1	8.4	87	22.0	7.3	0.8
NFMR2	9/21/04	Interim	12:41	1119	M11	22.7	0.5	14.9	8.0	89	21.0	7.3	0.0
NFMR2	**3/22/05**	**Year 1**	**9:15**	**1119**	**M11**	**315.6**	**1.0**	**5.4**	**11.0**	**101**	**37.0**	**7.1**	**7.4**
NFMR2	**4/12/05**	**Year 1**	**9:17**	**1119**	**M11**	**190.8**	**1.0**	**7.0**	**10.6**	**98**	**36.0**	**7.0**	**10.5**
NFMR2	**5/23/05**	**Year 1**	**11:30**	**1119**	**M11**	**724.2**	**1.0**	**6.4**	**10.5**	**96**	**18.0**	**8.3**	**46.2**
NFMR2	**6/21/05**	**Year 1**	**8:22**	**1119**	**M11**	**1692.7**	**1.0**	**9.0**	**9.9**	**97**	**15.0**	**6.9**	**21.0**
NFMR2	**7/19/05**	**Year 1**	**9:00**	**1119**	**M11**	**443.1**	**0.5**	**8.2**	**10.2**	**97**	**18.0**	**7.2**	**4.0**
NFMR2	**8/10/05**	**Year 1**	**12:00**	**1119**	**M11**	**322.7**	**0.5**	**8.8**	**9.4**	**91**	**18.0**	**7.9**	**0.0**
NFMR2	**9/29/05**	**Year 1**	**14:05**	**1119**	**M11**	**28.3**	**0.5**	**11.9**	**8.0**	**83**	**20.0**	**7.4**	**1.1**
NFMR2	**12/7/05 [1]**	**Year 1**	**11:55**	**1119**	**M11**	**36.6**	**0.5**	**8.9**	**11.2**	**107**	**27.0**	**6.9**	**2.5**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
CC1	3/14/01	Baseline	12:25	1041	M10	8.0	0.5	5.2	10.9	98	15.9	6.8	---
CC1	5/31/01	Baseline	11:20	1041	M10	53.0	0.5	15.1	7.7	84	17.6	7.2	0.6
CC1	6/18/01	Baseline	---	1041	M10	10.0	---	---	---	---	---	---	---
CC1	7/24/01	Baseline	16:51	1041	M10	0.5	0.5	19.5	7.3	87	---	---	---
CC1	8/14/01	Baseline	---	1041	---	---	---	---	---	---	---	---	---
CC1	9/26/01	Baseline	10:25	1041	---	---	---	14.4	7.4	83	---	---	---
CC1	11/26/01 (1)	Baseline	---	1041	---	---	---	---	---	---	---	---	---
CC1	12/19/01	Baseline	---	1041	---	---	---	---	---	---	---	---	---
CC1	3/26/02	Interim	11:55	1041	M10	33.2	0.5	5.9	10.7	88	20.3	7.6	2.0
CC1	5/14/02	Interim	9:58	1041	M10	161.0	0.5	8.0	10.0	95	14.0	7.3	1.2
CC1	7/12/02	Interim	10:18	1041	M10	6.4	0.5	18.1	8.4	88	99.1	6.6	---
CC1	9/25/02	Interim	11:18	1041	M10	0.5	0.5	16.0	8.7	87	---	---	---
CC1	**3/22/2005**	**Year 1**	**9:47**	**1041**	**M10**	**54.9**	**1.0**	**3.5**	**11.9**	**101**	**22.0**	**7.3**	**8.8**
CC1	**4/12/2005**	**Year 1**	**9:20**	**1041**	**M10**	**111.5**	**1.0**	**3.6**	**11.5**	**98**	**15.0**	**7.0**	**3.1**
CC1	**5/23/2005**	**Year 1**	**12:50**	**1041**	**M10**	**602.7**	**1.0**	**7.2**	**11.3**	**102**	**12.0**	**8.3**	**4.0**
CC1	**6/21/2005**	**Year 1**	**8:48**	**1041**	**M10**	**296.3**	**0.5**	**8.7**	**9.9**	**95**	**12.0**	**7.0**	**1.0**
CC1	**7/19/2005**	**Year 1**	**9:46**	**1041**	**M10**	**13.6**	**0.5**	**18.8**	**7.7**	**93**	**21.0**	**7.6**	**3.2**
CC1	**8/8/2005**	**Year 1**	**15:35**	**1041**	**M10**	**0.7**	**0.5**	**19.5**	**7.6**	**100**	**37.0**	**8.2**	**0.0**
CC1	**9/29/05**	**Year 1**	**14:20**	**1041**	**M10**	**0.2**	**0.5**	**14.9**	**7.8**	**88**	**46.0**	**7.7**	**4.9**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
CC0	5/6/03	Baseline	11:25	1771	M10	105.1	1.0	3.0	11.1	101	12.0	7.9	1.2
CC0	6/2/03	Baseline	9:27	1771	M10	383.8	1.0	4.3	10.1	96	64.0	6.8	0.0
CC0	7/9/03	Baseline	14:30	1771	M10	260.2	0.5	17.0	7.3	91	20.0	7.9	0.0
CC0	8/19/03	Baseline	13:30	1771	M10	1.5	0.5	17.6	7.1	90	27.8	6.8	3.3
CC0	9/11/03	Baseline	9:02	1771	M10	1.1	0.5	12.4	8.1	92	30.0	7.2	2.0
CC0	5/18/04	Baseline	11:11	1771	M10	98.2	1.0	6.0	9.8	95	7.0	8.1	7.0
CC0	6/3/04	Baseline	14:30	1771	M10	72.0	1.0	13.8	8.2	96	6.0	7.4	2.7
CC0	7/14/04	Baseline	13:25	1771	M10	11.6	0.5	16.6	7.6	95	26.0	6.9	0.5
CC0	8/25/04	Baseline	12:25	1771	M10	0.5	0.5	16.4	8.1	100	32.0	7.1	0.2
CC0	9/22/04	Baseline	14:11	1771	M10	0.5	0.1	11.1	7.4	82	33.0	7.0	0.4
CC0	**3/22/2005**	**Year 1**	**---**	**1771**	**M10**	**54.9**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**
CC0	**5/23/2005**	**Year 1**	**---**	**1771**	**M10**	**602.7**	**No access, road closed due to snow**			**---**	**---**	**---**	**---**
CC0	**6/23/2005**	**Year 1**	**10:50**	**1771**	**M10**	**265.9**	**0.5**	**5.2**	**10.1**	**96**	**10.0**	**6.7**	**0.0**
CC0	**7/21/2005**	**Year 1**	**9:20**	**1771**	**M10**	**9.2**	**1.0**	**17.6**	**8.0**	**101**	**19.0**	**7.1**	**2.5**
CC0	**8/8/2005**	**Year 1**	**14:35**	**1771**	**M10**	**0.7**	**0.5**	**20.1**	**6.3**	**82**	**28.0**	**8.3**	**0.0**
CC0	**9/28/05**	**Year 1**	**10:50**	**1771**	**M10**	**0.2**	**0.5**	**9.0**	**8.5**	**89**	**27.0**	**7.3**	**5.4**
BR1	7/26/00	Baseline	10:43	1699	M49	4.9	0.5	8.8	9.3	98	13.6	7.1	1.4
BR1	8/8/00	Baseline	17:18	1699	M49	4.7	0.5	8.8	10.1	106	14.5	7.2	6.9
BR1	9/20/00	Baseline	17:07	1699	M49	5.1	0.5	8.2	9.9	102	14.8	6.6	0 [(2)] (0.4)
BR1	12/27/00	Baseline	12:51	1699	M49	2.4	0.5	3.8	10.9	102	16.3	6.5	1.8
BR1	1/11/01 [(1, 6)]	Baseline	11:05	1699	M49	2.5	0.5	1.6	11.2	99	26.9	6.7	4.2
BR1	3/15/01	Baseline	15:00	1699	M49	3.0	0.5	3.7	12.0	110	28.8	6.5	13.6
BR1	5/30/01	Baseline	9:25	1699	M49	5.0	0.5	6.6	9.0	83	14.3	7.7	1.2
BR1	6/18/01	Baseline	17:35	1699	M49	4.7	0.5	8.2	9.0	99	13.0	6.9	1.3
BR1	7/23/01	Baseline	15:05	1699	M49	4.5	0.5	9.5	9.1	98	13.4	6.6	6.1
BR1	8/14/01	Baseline	8:44	1699	M49	5.1	0.5	6.6	9.8	97	12.2	6.8	0.5
BR1	9/27/01	Baseline	13:25	1699	M49	4.7	0.5	8.5	9.2	97	12.4	7.1	2.5
BR1	11/26/01 [(1, 6)]	Baseline	10:40	1699	M49	3.1	1.0	1.9	12.1	99	24.7	6.5	1.8
BR1	12/19/01	Baseline	10:40	1699	M49	3.3	0.5	3.0	11.2	100	15.4	7.4	1.9

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
BR1	3/27/02	Interim	12:35	1699	M49	8.0	1.0	5.4	8.7	85	21.2	7.0	1.4
BR1	5/15/02	Interim	11:55	1699	M49	7.6	0.5	7.0	8.7	86	19.0	7.1	2.4
BR1	7/16/02	Interim	14:40	1699	M49	5.7	0.5	6.6	11.0	90	---	---	---
BR1	8/29/02	Interim	8:35	1699	M49	6.6	0.5	5.8	10.0	96	---	---	---
BR1	5/6/03	Interim	11:43	1699	M49	6.9	1.0	5.9	9.9	90	30.0	6.7	0.2
BR1	6/2/03	Interim	11:05	1699	M49	365.0	0.1	14.9	7.5	99	---	6.8	---
BR1	7/1/03	Interim	11:08	1699	M49	8.3	1.0	8.6	9.7	100	---	7.1	0.9
BR1	8/19/03	Interim	12:15	1699	M49	6.1	1.0	8.9	8.7	92	10.0	6.7	0.0
BR1	9/9/03	Interim	11:30	1699	M49	5.2	1.0	7.3	9.2	92	20.0	6.9	2.0
BR1	4/22/04	Interim	11:44	1699	M49	6.8	0.2	5.6	7.5	73	21.0	7.0	2.8
BR1	5/18/04	Interim	10:08	1699	M49	14.3	0.5	8.6	9.6	99	13.0	7.0	7.2
BR1	6/3/04	Interim	15:00	1699	M49	29.5	0.5	13.7	8.7	100	11.0	7.8	2.1
BR1	7/14/04	Interim	12:50	1699	M49	6.5	0.5	8.2	9.4	97	17.0	6.8	2.9
BR1	8/25/04	Interim	12:55	1699	M49	7.0	0.5	8.4	9.3	96	17.0	7.4	0.0
BR1	9/22/04	Interim	14:43	1699	M49	5.6	0.5	8.0	7.6	81	18.0	6.6	0.9
BR1	**3/23/2005**	**Year 1**	**9:15**	**1699**	**M49**	**181.9**	**0.5**	**2.8**	**10.5**	**79 [5]**	**20.0**	**7.1**	**3.1**
BR1	**4/13/2005**	**Year 1**	**9:35**	**1699**	**M49**	**10.8**	**0.5**	**2.1**	**10.7**	**93**	**26.0**	**6.7**	**2.5**
BR1	**5/24/2005**	**Year 1**	**8:40**	**1699**	**M49**	**149.1**	**0.5**	**4.7**	**10.7**	**100**	**18.0**	**5.1**	**8.5**
BR1	**6/22/05 [8]**	**Year 1**	**15:20**	**1699**	**M49**	**368.5**	**0.5**	**12.7**	**8.1**	**92**	**13.0**	**7.0**	**0.1**
BR1	**7/21/2005**	**Year 1**	**8:25**	**1699**	**M49**	**5.4**	**0.7**	**7.1**	**10.7**	**100**	**19.0**	**6.8**	**2.4**
BR1	**8/10/2005**	**Year 1**	**14:40**	**1699**	**M49**	**5.7**	**0.5**	**8.9**	**8.8**	**91**	**18.0**	**7.9**	**0.0**
BR1	**9/28/05**	**Year 1**	**11:35**	**1699**	**M49**	**6.1**	**0.5**	**7.7**	**9.3**	**94**	**18.0**	**7.0**	**1.8**
BR1	**12/7/05 [1]**	**Year 1**	**10:40**	**1699**	**M49**	**17.0**	**0.5**	**6.4**	**12.0**	**114**	**17.0**	**6.9**	**2.1**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
BR2	3/14/01	Baseline	13:00	1188	M49	3.0	0.5	4.8	10.7	95	28.2	6.8	---
BR2	5/31/01	Baseline	11:55	1188	M49	5.0	0.5	14.9	7.4	85	26.9	7.5	0.4
BR2	6/18/01	Baseline	---	1188	M49	4.7	---	---	---	---	---	---	---
BR2	7/24/01	Baseline	---	1188	M49	4.6	---	---	---	---	---	---	---
BR2	8/14/01	Baseline	---	1188	---	---	---	---	---	---	---	---	---
BR2	9/26/01	Baseline	10:47	1188	M49	5.0	0.5	12.7	8.6	92	---	---	---
BR2	11/26/01 [(1)]	Baseline	---	1188	---	---	---	---	---	---	---	---	---
BR2	12/19/01	Baseline	---	1188	---	---	---	---	---	---	---	---	---
BR2	3/26/02	Baseline	11:30	1188	M49	8.0	0.5	4.1	11.6	88	27.6	7.5	1.0
BR2	5/14/02	Baseline	10:25	1188	M49	7.6	1.5	8.6	10.0	96	32.0	7.6	1.2
BR2	7/12/02	Baseline	10:38	1188	M49	6.3	1.0	18.2	8.1	96	---	6.8	---
BR2	8/28/02	Baseline	11:48	1188	M49	6.6	1.0	15.2	8.4	92	---	7.8	---
BR2	3/11/03	Interim	16:52	1188	M49	6.4	0.5	6.3	9.8	89	30.0	7.8	2.5
BR2	5/6/03	Interim	12:30	1188	M49	6.9	1.0	6.1	10.6	95	30.0	7.2	0.4
BR2	6/3/03	Interim	12:00	1188	M49	376.9	0.2	16.4	8.0	92	---	6.6	---
BR2	7/1/03	Interim	13:54	1188	M49	8.3	0.5	15.5	8.2	92	---	7.2	0.1
BR2	8/19/03	Interim	14:09	1188	M49	6.1	1.0	18.4	7.9	94	20.0	7.1	1.3
BR2	9/9/03	Interim	14:26	1188	M49	5.2	1.0	14.1	8.7	94	20.0	7.0	0.7
BR2	4/12/04	Interim	11:49	1188	M49	6.6	1.0	7.6	9.0	85	29.0	8.1	3.7
BR2	5/18/04	Interim	13:30	1188	M49	14.3	1.0	11.6	9.1	94	22.0	8.2	5.8
BR2	6/2/04	Interim	12:55	1188	M49	32.5	0.5	14.0	8.5	92	15.0	7.7	3.7
BR2	7/13/04	Interim	13:00	1188	M49	6.8	0.5	16.7	8.0	92	23.0	7.4	0.9
BR2	8/24/04	Interim	13:00	1188	M49	7.0	0.5	15.7	7.5	83	20.0	7.4	0.0
BR2	9/21/04	Interim	13:16	1188	M49	5.5	0.5	9.2	9.5	93	23.0	7.8	0.0
BR2	**3/22/2005**	**Year 1**	**10:14**	**1188**	**M89**	**64.2**	**1.5**	**4.5**	**11.7**	**104**	**34.0**	**7.8**	**48.9**
BR2	**4/12/2005**	**Year 1**	**9:45**	**1188**	**M89**	**51.7**	**1.0**	**4.3**	**10.9**	**95**	**33.0**	**7.3**	**6.7**
BR2	**5/23/2005**	**Year 1**	**13:15**	**1188**	**M89**	**295.1**	**1.0**	**9.3**	**9.8**	**96**	**24.0**	**7.7**	**22.0**
BR2	**6/21/2005**	**Year 1**	**9:25**	**1188**	**M89**	**156.2**	**2.0**	**10.2**	**9.2**	**92**	**17.0**	**7.1**	**8.6**
BR2	**7/19/2005**	**Year 1**	**10:12**	**1188**	**M89**	**13.8**	**1.0**	**18.4**	**7.4**	**89**	**38.0**	**7.8**	**0.7**
BR2	**8//8/05**	**Year 1**	**16:05**	**1188**	**M89**	**11.1**	**1.0**	**19.9**	**7.3**	**90**	**37.0**	**8.2**	**0.0**
BR2	**9/29/05**	**Year 1**	**14:45**	**1188**	**M89**	**7.7**	**1.0**	**13.4**	**7.7**	**96**	**33.0**	**7.7**	**1.8**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
TC1	7/26/00	Baseline	14:56	1061	M76	10.7	0.5	10.1	10.0	101	14.4	7.1	1.0
TC1	8/8/00	Baseline	12:15	1061	M76	10.7	0.5	11.1	10.0	104	14.5	7.3	1.1
TC1	9/20/00	Baseline	11:30	1061	M76	10.7	0.5	12.4	9.0	96	18.0	7.0	0 [(2)] (0.5)
TC1	12/27/00	Baseline	14:20	1061	M76	5.5	0.5	7.1	10.3	97	29.0	6.7	1.7
TC1	1/11/01 [(1)]	Baseline	9:50	1061	M76	5.5	0.5	4.8	10.6	95	38.5	6.6	3.7
TC1	3/14/01	Baseline	14:10	1061	M76	5.5	0.5	5.9	9.8	89	54.0	6.8	17.4
TC1	5/31/01	Baseline	13:00	1061	M76	10.5	0.5	10.6	9.0	91	11.2	7.2	0.9
TC1	6/19/01	Baseline	12:00	1061	M76	10.5	0.5	9.6	8.9	88	13.5	7.2	1.2
TC1	7/24/01	Baseline	9:50	1061	M76	10.7	0.1	9.6	10.9	109	14.7	6.9	8.2
TC1	8/13/01	Baseline	11:10	1061	M76	10.8	1.0	10.8	8.4	83	16.8	7.0	0.4
TC1	9/26/01	Baseline	11:40	1061	M76	10.8	1.0	16.1	7.7	89	16.0	7.1	0.5
TC1	11/26/01 [(1)]	Baseline	11:55	1061	M76	5.5	1.0	9.7	8.7	85	29.9	7.0	4.0
TC1	12/19/01	Baseline	11:55	1061	M76	5.4	1.0	4.2	10.4	92	28.0	7.5	1.7
TC1	3/26/02	Interim	8:15	1061	M76	10.4	0.5	4.3	10.2	90	28.1	6.8	2.3
TC1	5/14/02	Interim	11:25	1061	M76	7.6	0.5	7.9	9.6	90	18.0	7.2	1.5
TC1	7/12/02	Interim	11:28	1061	M76	5.7	0.5	9.9	9.9	89	---	7.3	---
TC1	8/28/02	Interim	14:55	1061	M76	3.4	0.5	12.2	9.6	100	---	---	---
TC1	3/10/03	Interim	14:20	1061	M76	10.7	0.5	5.9	10.1	90	30.0	7.9	3.1
TC1	7/9/03	Interim	15:32	1061	M76	6.6	1.0	10.2	8.2	82	20.0	7.5	0.9
TC1	8/19/03	Interim	15:04	1061	M76	4.1	1.0	11.1	7.6	79	14.4	7.0	1.9
TC1	9/10/03	Interim	14:39	1061	M76	4.1	1.0	11.8	7.2	75	15.0	7.0	0.4
TC1	4/12/04	Interim	13:24	1061	M76	11.1	1.0	6.9	9.3	84	14.0	8.5	3.7
TC1	5.18/04	Interim	14:23	1061	M76	8.2	0.5	10.8	9.2	92	12.0	7.6	4.8
TC1	6/3/04	Interim	16:15	1061	M76	7.9	0.5	10.0	9.2	91	14.0	7.5	3.0
TC1	7/13/04	Interim	14:15	1061	M76	5.7	1.0	11.6	9.0	92	20.0	7.0	3.4
TC1	8/24/04	Interim	14:03	1061	M76	3.5	1.0	12.1	8.3	87	19.0	7.3	0.2
TC1	9/21/04	Interim	14:05	1061	M76	3.5	0.5	12.8	8.1	86	21.0	7.5	0.0

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
TC1	**3/22/2005**	**Year 1**	**11:15**	**1061**	**M76**	**23.4**	**0.5**	**4.3**	**11.3**	**89 [5]**	**27.0**	**7.4**	**10.2**
TC1	**4/12/2005**	**Year 1**	**11:57**	**1061**	**M76**	**11.0**	**1.0**	**4.9**	**11.3**	**98**	**27.0**	**7.6**	**4.3**
TC1	**5/23/2005**	**Year 1**	**14:25**	**1061**	**M76**	**8.6**	**0.5**	**8.6**	**9.7**	**96**	**19.0**	**7.7**	**8.2**
TC1	**6/21/2005**	**Year 1**	**10:30**	**1061**	**M76**	**5.5**	**0.5**	**8.8**	**9.2**	**89**	**17.0**	**6.8**	**4.1**
TC1	**7/19/2005**	**Year 1**	**11:25**	**1061**	**M76**	**5.5**	**0.5**	**9.7**	**9.3**	**93**	**18.0**	**7.2**	**4.4**
TC1	**8/9/2005**	**Year 1**	**10:50**	**1061**	**M76**	**3.5**	**1.0**	**9.9**	**8.7**	**86**	**20.0**	**8.1**	**0.0**
TC1	**9/28/2005**	**Year 1**	**13:20**	**1061**	**M76**	**3.2**	**0.5**	**13.6**	**8.3**	**96**	**19.0**	**7.1**	**0.0**
TC1	**12/7/05 [1]**	**Year 1**	**13:30**	**1061**	**M76**	**5.5**	**0.5**	**8.1**	**11.5**	**105**	**24.0**	**6.8**	**2.7**
NFMR3	7/26/00	Baseline	14:15	716	M38	63.4	0.5	21.6	8.0	98	47.2	7.3	1.6
NFMR3	8/8/00	Baseline	8:25	716	M38	62.9	0.5	19.7	8.2	97	43.9	7.5	1.6
NFMR3	9/20/00	Baseline	10:50	716	M38	58.4	0.5	16.6	6.8 [5]	76	46.7	7.4	0 [(2)] (0.5)
NFMR3	12/27/00	Baseline	10:57	716	M38	64.8	0.5	2.5	12.9	104	55.9	7.2	0.4
NFMR3	1/11/01 [(1)]	Baseline	9:11	716	M38	105.6	0.5	3.3	12.2	98	56.4	7.0	3.2
NFMR3	3/14/01	Baseline	11:00	716	M38	106.2	0.5	6.1	10.0	87	62.2	7.1	2.6
NFMR3	5/30/01	Baseline	10:00	716	M38	77.6	0.5	17.6	8.3	97	45.2	7.8	0.1
NFMR3	6/19/01	Baseline	10:50	716	M38	50.7	1.0	19.7	8.0	95	47.0	7.5	2.4
NFMR3	7/25/01	Baseline	10:30	716	M38	62.7	1.5	21.0	7.4	98	47.2	7.4	7.2
NFMR3	8/13/01	Baseline	11:51	716	M38	60.5	0.5	20.7	8.0	96	41.8	7.5	1.2
NFMR3	9/26/01	Baseline	12:24	716	M38	52.8	1.0	15.8	9.3	101	42.0	7.6	1.0
NFMR3	11/26/01 [(1)]	Baseline	12:25	716	M38	85.6	1.0	4.1	12.3	102	47.6	7.1	0.5
NFMR3	12/19/01	Baseline	8:10	716	M38	77.7	0.5	2.9	11.1	98	53.3	7.5	1.4
NFMR3	3/26/02	Interim	9:10	716	M38	289.0	1.0	5.9	7.7	67	51.4	7.2	1.1
NFMR3	5/14/02	Interim	12:19	716	M38	495.2	0.5	10.2	10.2	98	25.0	7.5	3.7
NFMR3	7/12/02	Interim	11:56	716	M38	63.7	0.5	23.6	7.6	97	---	7.6	---
NFMR3	8/22/02	Interim	15:30	716	M38	47.0	0.5	21.5	8.1	99	---	---	---

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
NFMR3	9/25/02	Interim	14:28	716	M38	38.8	0.5	16.6	9.1	101	---	---	---
NFMR3	3/10/03	Interim	13:38	716	M38	193.7	0.5	6.8	11.0	97	51.0	7.7	3.0
NFMR3	5/6/03	Interim	13:16	716	M38	917.9	2.0	8.1	10.9	99	34.0	7.5	0.4
NFMR3	6/4/03	Interim	11:10	716	M38	3479.3	1.0	13.6	9.7	101	18.0	7.1	1.3
NFMR3	7/9/03	Interim	11:00	716	M38	89.7	1.0	14.6	9.5	101	---	7.3	0.2
NFMR3	8/20/03	Interim	10:58	716	M38	78.3	1.0	20.5	7.6	92	49.2	7.3	0.0
NFMR3	9/10/03	Interim	14:01	716	M38	59.7	0.5	16.0	8.9	97	38.0	7.4	0.0
NFMR3	4/12/04	Interim	14:03	716	M38	346.9	1.0	11.1	7.8	76	33.0	8.4	2.9
NFMR3	5/18/04	Interim	15:05	716	M38	131.2	2.0	15.8	8.5	91	34.0	7.4	3.7
NFMR3	6/1/04	Interim	13:32	716	M38	194.3	1.5	16.8	8.1	89	29.0	8.4	4.1
NFMR3	7/13/04	Interim	14:42	716	M38	51.0	1.5	23.5	7.0	90	49.0	7.7	0.0
NFMR3	8/24/04	Interim	14:31	716	M38	54.8	2.0	20.5	7.8	93	39.0	7.5	0.0
NFMR3	9/21/04	Interim	14:39	716	M38	39.2	0.5	13.0	9.7	99	50.0	7.5	0.0
NFMR3	**3/22/2005**	**Year 1**	**11:58**	**716**	**M38**	**1024.2**	**1.5**	**6.3**	**11.2**	**90 [5]**	**46.0**	**7.4**	**13.4**
NFMR3	**4/12/2005**	**Year 1**	**11:30**	**716**	**M38**	**755.7**	**1.5**	**6.8**	**10.9**	**96**	**42.0**	**7.5**	**5.2**
NFMR3	**5/23/2005**	**Year 1**	**15:15**	**716**	**M38**	**2104.3**	**2.0**	**10.5**	**10.4**	**101**	**24.0**	**7.1**	**12.3**
NFMR3	**6/21/2005**	**Year 1**	**11:15**	**716**	**M38**	**1835.8**	**1.0**	**10.7**	**9.9**	**96**	**19.0**	**7.0**	**3.2**
NFMR3	**7/19/2005**	**Year 1**	**12:15**	**716**	**M38**	**474.7**	**1.5**	**13.7**	**11.9**	**114**	**27.0**	**7.5**	**3.6**
NFMR3	**8/9/2005**	**Year 1**	**13:07**	**716**	**M38**	**309.1**	**1.5**	**14.4**	**8.3**	**86**	**28.0**	**8.1**	**0.0**
NFMR3	**9/28/05**	**Year 1**	**13:12**	**716**	**M38**	**70.7**	**1.5**	**14.3**	**8.3**	**86**	**21.0**	**8.1**	**1.0**
NFMR3	**12/7/05 [1]**	**Year 1**	**14:10**	**716**	**M38**	**127.6**	**0.5**	**3.5**	**13.5**	**114**	**50.0**	**7.4**	**3.5**
NFMR5	7/26/00	Baseline	8:30	637	M46	17.5	0.5	15.0	10.1	108	33.7	7.3	0.9
NFMR5	8/8/00	Baseline	8:25	637	M46	17.5	0.5	14.2	10.5	110	25.1	7.2	0.6
NFMR5	9/20/00	Baseline	8:30	637	M46	17.2	0.5	15.0	10.2	109	23.7	6.9	0 [(2)] (0.5)
NFMR5	12/27/00	Baseline	15:18	637	M46	13.1	0.5	5.3	11.7	99	35.7	6.9	0.3
NFMR5	1/11/01 [(1)]	Baseline	8:20	637	M46	12.7	0.5	5.4	11.0	93	50.1	6.7	7.8
NFMR5	3/14/01	Baseline	15:00	637	M46	12.1	0.5	7.1	11.2	98	62.4	7.3	11.8
NFMR5	5/30/01	Baseline	17:15	637	M46	17.7	0.5	19.0	7.9	93	33.9	7.6	0.0

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
NFMR5	6/19/01	Baseline	9:24	637	M46	17.8	1.0	14.7	8.7	92	23.4	7.1	1.3
NFMR5	7/25/01	Baseline	11:38	637	M46	17.7	0.8	15.5	9.3	100	21.3	7.2	5.1
NFMR5	8/13/01	Baseline	12:33	637	M46	17.9	1.0	15.7	7.3	79	19.6	7.1	0.2
NFMR5	9/26/01	Baseline	13:37	637	M46	17.3	1.5	15.2	8.9	96	23.0	7.2	1.1
NFMR5	11/26/01 [(1)]	Baseline	13:05	637	M46	12.0	1.5	7.6	9.3	83	39.7	7.1	0.5
NFMR5	12/19/01	Baseline	12:30	637	M46	12.0	1.0	4.2	11.5	99	47.6	7.2	2.0
NFMR5	3/26/02	Interim	10:00	637	M46	98.0	1.5	5.8	10.2	88	39.0	7.2	2.3
NFMR5	5/14/02	Interim	13:50	637	M46	272.2	0.5	13.3	9.6	99	28.0	7.5	2.5
NFMR5	3/10/03	Interim	12:10	637	M46	92.8	1.5	6.3	11.0	96	38.0	7.9	2.9
NFMR5	5/6/03	Interim	14:16	637	M46	267.2	1.0	9.4	11.0	105	36.0	7.5	0.1
NFMR5	6/3/03	Interim	14:11	637	M46	2982.6	1.0	13.5	12.0	123	20.0	7.3	3.6
NFMR5	7/9/03	Interim	16:20	637	M46	39.5	1.0	16.2	7.8	89	23.0	7.3	0.2
NFMR5	8/20/03	Interim	12:05	637	M46	30.0	0.5	15.0	9.8	103	19.8	7.0	0.0
NFMR5	9/10/03	Interim	16:10	637	M46	NA	0.5	13.9	7.1	73	19.0	7.0	1.2
NFMR5	4/12/04	Interim	14:47	637	M46	145.21	1.0	10.4	8.2	77	23.0	7.8	5.9
NFMR5	5/18/04	Interim	16:05	637	M46	309.78	1.5	16.4	8.7	96	30.0	8.0	6.8
NFMR5	6/1/04	Interim	1:12	637	M46	92.08	1.0	15.2	8.2	85	19.0	8.1	4.6
NFMR5	7/13/04	Interim	15:30	637	M46	23.48	2.0	17.3	8.7	95	25.0	7.3	1.6
NFMR5	8/24/04	Interim	15:15	637	M46	24.58	1.0	---	7.9	87	---	7.3	0.0
NFMR5	9/21/04	Interim	15:33	637	M46	28.46	1.0	12.2	10.0	95	26.0	7.0	0.0
NFMR5	**3/22/2005**	**Year 1**	**13:20**	**637**	**M46**	**836.9**	**1.0**	**6.3**	**11.8**	**96 [5]**	**42.0**	**7.4**	**6.8**
NFMR5	**4/12/2005**	**Year 1**	**12:20**	**637**	**M46**	**742.4**	**2.0**	**7.8**	**10.9**	**99**	**41.0**	**7.5**	**6.8**
NFMR5	**5/24/2005**	**Year 1**	**14:30**	**637**	**M46**	**1813.5**	**1.0**	**8.5**	**10.4**	**95**	**27.0**	**7.1**	**18.3**
NFMR5	**6/21/2005**	**Year 1**	**12:40**	**637**	**M46**	**1170.3**	**1.0**	**11.1**	**9.9**	**96**	**20.0**	**7.0**	**8.6**
NFMR5	**7/19/2005**	**Year 1**	**14:00**	**637**	**M46**	**176.3**	**2.0**	**14.9**	**8.7**	**93**	**23.0**	**7.5**	**2.1**
NFMR5	**8/9/2005**	**Year 1**	**13:55**	**637**	**M46**	**26.1**	**2.0**	**13.7**	**8.8**	**91**	**22.0**	**8.0**	**0.0**
NFMR5	**9/30/05**	**Year 1**	**7:45**	**637**	**M46**	**25.4**	**1.0**	**14.8**	**7.9**	**83**	**25.0**	**7.3**	**0.0**
NFMR5	**12/7/05 [1]**	**Year 1**	**15:00**	**637**	**M46**	**52.0**	**0.5**	**5.9**	**10.3**	**91**	**32.0**	**7.0**	**4.3**

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
MR1	7/26/00	Baseline	7:59	206	(4)	44	0.5	21.0	7.8	89	70.2	7.5	1.3
MR1	8/8/00	Baseline	7:58	206	(4)	38	0.5	21.7	8.2	95	73.8	7.6	1.8
MR1	9/20/00	Baseline	7:45	206	(4)	35	0.5	19.7	8.2	92	74.5	7.4	0 [(2)] (0.7)
MR1	12/27/00	Baseline	7:45	206	(4)	61	0.5	3.3	13.7	104	81.7	7.2	1.3
MR1	1/11/01 [(1)]	Baseline	7:45	206	(4)	166	0.5	6.1	11.7	96	73.7	7.0	10.8
MR1	3/14/01	Baseline	7:40	206	(4)	136	0.5	8.0	12.5	106	67.5	7.0	8.4
MR1	5/30/01	Baseline	18:35	206	(4)	54	1.0	24.2	7.6	99	63.3	8.6	0.7
MR1	6/19/01	Baseline	7:22	206	(4)	42	0.3	21.3	8.1	95	63.7	7.3	1.5
MR1	7/23/01	Baseline	16:15	206	(4)	35	0.5	26.5	8.1	107	68.2	8.6	7.6
MR1	8/13/01	Baseline	13:34	206	(4)	34	1.0	25.7	8.6	106	59.1	8.4	1.5
MR1	9/26/01	Baseline	14:42	206	(4)	34	0.5	22.4	8.9	100	59.2	8.3	3.4
MR1	11/26/01 [(1)]	Baseline	14:00	206	(4)	88	0.5	8.2	11.5	98	69.2	7.4	0.4
MR1	12/19/01	Baseline	6:55	206	(4)	119	0.5	5.5	11.4	99	75.7	7.2	3.7
MR1	3/26/02	Interim	11:10	206	(4)	397	0.5	8.6	10.0	87	54.3	7.7	2.8
MR1	5/14/02	Interim	14:50	206	(4)	360	0.5	15.4	9.5	99	37.0	7.7	1.6
MR1	7/12/02	Interim	13:55	206	(4)	58	0.5	27.8	7.0	94	---	7.9	---
MR1	8/28/02	Interim	17:05	206	(4)	31	0.5	24.8	9.8	118	---	---	---
MR1	9/25/02	Interim	16:19	206	(4)	30	0.5	22.1	8.1	95	---	---	---
MR1	3/10/03	Interim	11:10	206	(4)	178	0.5	8.3	11.0	97	50.0	7.7	5.2
MR1	5/5/03	Interim	14:50	206	(4)	935	0.5	11.0	10.3	96	39.0	7.8	3.8
MR1	6/2/03	Interim	15:27	206	(4)	2,366	0.5	15.1	10.0	104	19.8	6.8	9.6
MR1	7/8/03	Interim	15:00	206	(4)	68	0.5	23.4	8.2	97	49.0	7.0	0.0
MR1	8/20/03	Interim	13:08	206	(4)	40	0.5	25.5	7.2	94	50.6	7.9	0.0
MR1	9/11/03	Interim	7:16	206	(4)	8.7	0.5	18.9	8.1	90	45.0	7.1	5.7

Table A1. Year 2005 and Historical Water Quality Results for *In Situ* Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Elevation (m)	Gage ID	Flow [3] (cfs)	Depth (m)	Water Temperature (°C)	DO (mg/L)	Saturation %	Specific Conductance (µmhos/cm)	pH (units)	Turbidity (NTU)
MR1	4/12/04	Interim	15:57	206	(4)	145.2	1.0	14.6	9.0	90	35.0	8.3	4.1
MR1	5/18/04	Interim	17:00	206	(4)	309.8	2.0	18.2	8.9	96	35.0	7.5	5.0
MR1	6/1/04	Interim	16:00	206	(4)	92.1	1.0	20.2	8.2	92	31.0	7.6	4.6
MR1	7/13/04	Interim	16:30	206	(4)	23.5	1.0	27.2	8.2	106	49.0	8.7	0.2
MR1	8/24/04	Interim	9:49	206	(4)	24.6	1.0	21.5	7.7	90	46.0	7.5	0.0
MR1	9/21/04	Interim	10:27	206	(4)	28.5	1.0	15.1	8.5	87	52.0	7.4	0.0
MR1	**3/22/2005**	**Year 1**	**14:31**	**206**	**(4a)**	**1,951.9**	**1.0**	**8.6**	**9.7**	**85 [5]**	**49.0**	**7.5**	**21.5**
MR1	**4/12/2005**	**Year 1**	**13:47**	**206**	**(4a)**	**1,257.4**	**1.0**	**10.0**	**9.7**	**88**	**36.0**	**7.6**	**6.4**
MR1	**5/24/2005**	**Year 1**	**15:40**	**206**	**(4a)**	**2,201.5**	**2.0**	**12.6**	**8.9**	**87**	**28.0**	**7.2**	**18.2**
MR1	**6/21/2005**	**Year 1**	**14:10**	**206**	**(4a)**	**1,297.3**	**1.0**	**14.7**	**8.6**	**87**	**25.0**	**7.1**	**22.5**
MR1	**7/19/2005**	**Year 1**	**15:10**	**206**	**(4a)**	**227.3**	**2.0**	**21.7**	**7.5**	**87**	**37.0**	**7.7**	**0.5**
MR1	**8/9/2005**	**Year 1**	**14:50**	**206**	**(4a)**	**57.1**	**2.0**	**25.9**	**7.9**	**100**	**57.0**	**8.6**	**0.0**
MR1	**9/30/05**	**Year 1**	**8:50**	**206**	**(4a)**	**46.2**	**2.0**	**16.9**	**7.5**	**83**	**60.0**	**7.6**	**1.2**
MR1	**12/8/05 [1]**	**Year 1**	**---**	**206**	**(4a)**	**NA**	**0.5**	**5.7**	**12.3**	**101**	**58.0**	**7.2**	**3.5**

--- = Data not recorded or site not accesable due to snowfall or road closures

NA = Unable to determine flow, data insufficient or unavailable at time of report review.

Quanta field instrument accuracy is ±0.2 units (pH), ±0.2 mg/L (DO), ±1 NTU (Turbidity), ±1 umhos/cm (SpC), and ±0.2°C (Temperature)

1 = First significant winter storm of the season

2 = Data suspect, second value is from laboratory turbidity screening for metals

3 = Daily flow estimated from data collected at Pacific Gas and Electric maintained gaging stations, 2005 data is Provisional Flow Data

4 = Flow equals combined flow at gage M46 plus flow at EBMUD gaging station 11317000 (middle fork Mokelumne)

plus flow at EBMUD gaging station 11318500 (south fork Mokelumne)

4a = All EBMUD flow data for 2005 is Preliminary and subject to revision.

5= ysi = hand held DO meter used to determine dissolved oxygen measurement

6= BR1 was inaccessible during this event, sample was collected downstream on the Bear River near gaging station M-32 above Salt Springs Road.

7= The outlet valve at MC2 was being replaced during site visit. Sample was from leak around old valve casement.

8= Lower Bear River Reservoir was spilling during this sampling event.

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
BC2	7/26/00	Baseline	13:52	M3	22	9	1	<0.53	NS	12	<0.05	16	<2
BC2	8/8/00	Baseline	12:30	M3	22	10	<1.0	<0.53	NS	10	<0.05	4	2
BC2	9/20/00	Baseline	11:30	M3	28	11	<1.0	1.5 [J]	NS	12	<0.05	4	<2
BC2	12/27/00	Baseline	11:51	M3	5	14	2.6	<0.53	NS	14	<0.05	<2	<2
BC2	1/11/01 [1]	Baseline	---	M3	5	---	---	---	NS	---	---	---	---
BC2	3/15/01	Baseline	14:25	M3	5	10	1.2	<1.0	<1.0	14	0.06	2	<2
BC2	5/30/01	Baseline	12:55	M3	24	9	3.2	1.6 [J]	2.7 [J]	9	<0.05	<2	<2
BC2	6/18/01	Baseline	12:31	M3	8	12	2.4	<1.0	<1.0	11	<0.05	4	<2
BC2	7/23/01	Baseline	9:58	M3	9	15	1	1.7 [J]	<1.0	9	<0.05	11	<2
BC2	8/14/01	Baseline	10:53	M3	9	13	1.8	<1.0	<1.0	13	<0.05	13	<2
BC2	9/27/01	Baseline	9:11	M3	8	18	1.4	2.6 [J]	<1.0	13	<0.05	6	<2
BC2	11/26/01 [1]	Baseline	---	M3	2	---	---	---	---	---	---	---	---
BC2	12/19/01	Baseline	9:55	M3	2	12	<1.0	3.3 [J]	3.7 [J]	8	<0.05	17	13
BC2	3/27/02	Interim	10:36	M3	2	14	<1.0	1.6 [J]	<0.3	14	0.11	<2	<2
BC2	5/15/02	Interim	9:46	M3	7	9	9	<0.3	<0.3	10	<0.10	8	<2
BC2	**3/22/05**	**Year 1**	**---**	**M3**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**	**---**
BC2	**5/25/05**	**Year 1**	**12:50**	**M3**	**10.1**	**9**	**1.2**	**---**	**0.17**	**9.7 [H]**	**0.065**	**22**	**<2**
BC2	**6/22/05**	**Year 1**	**12:11**	**M3**	**28.7**	**8.5**	**0.9 [DNQ]**	**---**	**0.16**	**8.0**	**0.036**	**5.5**	**<2**
BC2	**7/20/05**	**Year 1**	**13:40**	**M3**	**53.1**	**9.8**	**0.5 [DNQ]**	**---**	**0.16**	**7.0 [DNQ]**	**<0.005**	**4**	**<2**
BC2	**8/11/05**	**Year 1**	**11:00**	**M3**	**54.6**	**9**	**<0.5**	**---**	**0.18**	**7.8 [DNQ]**	**<0.005**	**4**	**<2**
BC2	**9/27/05**	**Year 1**	**12:15**	**M3**	**5.9**	**10.1**	**1.0**	**---**	**0.17**	**8.6 [DNQ]**	**0.0055 [DNQ]**	**13**	**2**
BC2	**12/8/05 [1]**	**Year 1**	**13:45**	**M3**	**6.1**	**13.4**	**0.77 [DNQ]**	**---**	**0.31**	**12.2**	**0.0095 [DNQ]**	**2**	**<2**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
MC2	7/26/00	Baseline	15:00	M6	31	4	<1.0	<0.53	NS	6	<0.05	<2	<2
MC2	8/8/00	Baseline	14:10	M6	34	3	<1.0	<0.53	NS	8	<0.05	<2	<2
MC2	9/20/00	Baseline	14:05	M6	32	4	<1.0	1.8 [J]	NS	6	<0.05	<2	<2
MC2	12/27/00	Baseline	11:25	M6	7	7	1	<0.53	NS	10	<0.05	<2	<2
MC2	1/11/01 [1]	Baseline	---	M6	7	---	---	---	NS	---	---	---	---
MC2	3/15/01	Baseline	13:30	M6	7	6	3.1	0.6 [J]	<1.0	14	<0.05	4	<2
MC2	5/30/01	Baseline	14:40	M6	21	4	1.4	2.7 [J]	<1.0	7	<0.05	50	4
MC2	6/18/01	Baseline	14:35	M6	20	11	<1.0	<1.0	<1.0	9	<0.05	<2	<2
MC2	7/23/01	Baseline	12:27	M6	17	6	1.2	<1.0	<1.0	9	<0.05	<2	<2
MC2	8/14/01	Baseline	9:21	M6	19	7	<1.0	<1.0	<1.0	9	<0.05	<2	<2
MC2	9/27/01	Baseline	10:45	M6	10	4	<1.0	0.8 [J]	<1.0	9	<0.05	13	<2
MC2	11/26/01 [1]	Baseline	---	M6	12	---	---	---	---	---	---	---	---
MC2	12/19/01	Baseline	9:20	M6	12	<10	5.7	1.1 [J]	<0.3	8	<0.05	<2	<2
MC2	3/27/02	Interim	9:00	M6	12	10	3	5	<0.3	15	0.12	<2	<2
MC2	5/15/02	Interim	8:31	M6	10	4	1	<0.3	<0.3	<5	<0.10	2	<2
MC2	**3/22/05**	**Year 1**	**---**	**M6**	**NA**	**Heavy snowstorm, no access**			**---**	**---**	**---**	**---**	**---**
MC2	**5/25/05**	**Year 1**	**13:50**	**M6**	**24.5**	**5.5**	**1.4**	**---**	**0.1**	**<3.0 [H]**	**0.045**	**17**	**<2**
MC2	**6/22/05**	**Year 1**	**13:06**	**M6**	**150.2**	**4.0**	**0.4 [DNQ]**	**---**	**0.07**	**5.3 [DNQ]**	**0.022**	**2**	**<2**
MC2	**7/20/05**	**Year 1**	**14:25**	**M6**	**28.8**	**4.9**	**0.5 [DNQ]**	**---**	**0.08**	**3.8 [DNQ]**	**<0.005**	**<2**	**<2**
MC2	**8/11/05**	**Year 1**	**11:38**	**M6**	**28.6**	**3.0**	**<0.5**	**---**	**0.09**	**4.4 [DNQ]**	**<0.005**	**<2**	**<2**
MC2	**9/27/05**	**Year 1**		**M6**	**28.1**	**4.0**	**1.4**	**---**	**0.11**	**4.9 [DNQ]**	**<0.005**	**4**	**<2**
MC2	**12/8/05 [1]**	**Year 1**	**14:45**	**M6**	**5.9**	**Clouds and fog, unable to land helicopter, no samples**					**---**	**---**	**---**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
NFMR2	7/26/00	Baseline	12:15	M11	36	6	NR	<0.53	NS	8	<0.05	<2	<2
NFMR2	8/8/00	Baseline	13:36	M11	37	6	<1.0	<0.53	NS	12	<0.05	<2	<2
NFMR2	9/20/00	Baseline	12:46	M11	37	7	<1.0	<0.53	NS	8	<0.05	7	<2
NFMR2	12/27/00	Baseline	13:40	M11	26	9	1.6	<0.53	NS	10	<0.05	<2	<2
NFMR2	1/11/01 [1]	Baseline	11:45	M11	21	11	1.4	<0.53	NS	12	<0.05	30	<2
NFMR2	3/14/01	Baseline	11:40	M11	22	10	5.2	1 [J]	<1.0	10	<0.05	14	<2
NFMR2	5/31/01	Baseline	10:45	M11	33	6	1.2	1.4 [J]	2.5 [J]	11	<0.05	14	<2
NFMR2	6/19/01	Baseline	13:15	M11	33	12	<1.0	<1.0	<1.0	7	<0.05	7	2
NFMR2	7/23/01	Baseline	16:15	M11	32	16	1	<1.0	<1.0	9	0.17	<2	<2
NFMR2	8/13/01	Baseline	9:57	M11	33	12	<1.0	<1.0	<1.0	9	<0.05	<2	<2
NFMR2	9/26/01	Baseline	9:57	M11	32	12	<1.0	2.7 [J]	<1.0	9	<0.05	23	2
NFMR2	11/26/01 [1]	Baseline	---	M11	22	---	---	---	--	---	---	---	---
NFMR2	12/19/01	Baseline	11:00	M11	22	<10	1.4	0.99 [J]	8.7	8	<0.05	30	23
NFMR2	3/27/02	Interim	12:00	M11	76	10	2	1.9 [J]	<0.3	11	0.18	30	<2
NFMR2	5/14/02	Interim	9:22	M11	229	3	8	1.2 [J]	<0.3	<5	<0.10	22	4
NFMR2	**3/22/05**	**Year 1**	**9:15**	**M11**	**315.6**	**9.4**	**3.2**	**---**	**0.30**	**11.3**	**0.017* [DNQ]**	**14**	**<2**
NFMR2	**5/23/05**	**Year 1**	**11:30**	**M11**	**724.2**	**6.0**	**8.0**	**---**	**0.28**	**7.5 [H, DNQ]**	**0.029**	**110**	**4**
NFMR2	**6/21/05**	**Year 1**	**8:22**	**M11**	**1,692.7**	**6.0**	**1.5**	**---**	**0.21**	**7.4 [DNQ]**	**<0.01**	**13**	**4**
NFMR2	**7/19/05**	**Year 1**	**9:00**	**M11**	**443.1**	**7.9**	**0.6 [DNQ]**	**---**	**0.22**	**6.2 [DNQ]**	**0.016**	**8**	**<2**
NFMR2	**8/10/05**	**Year 1**	**12:00**	**M11**	**322.7**	**6.0**	**<0.5**	**---**	**0.20**	**6.8 [DNQ]**	**0.006 [DNQ]**	**<2**	**<2**
NFMR2	**9/29/05**	**Year 1**	**14:00**	**M11**	**28.3**	**6.1**	**0.1 [DNQ]**	**---**	**0.24**	**6.0 [DNQ]**	**0.024**	**9**	**<2**
NFMR2	**12/7/05 [1]**	**Year 1**	**11:55**	**M11**	**36.6**	**8.9**	**1.5 [DNQ]**	**---**	**0.43**	**7.8 [DNQ]**	**0.02**	**140**	**13**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
BR1	7/26/00	Baseline	10:43	M49	5	6	NR	6.9	NS	6	<0.05	<2	<2
BR1	8/8/00	Baseline	17:18	M49	5	5	<1.0	7.1	NS	6	<0.05	2	<2
BR1	9/20/00	Baseline	17:07	M49	5	6	<1.0	5.7	NS	6	0.07	4	<2
BR1	12/27/00	Baseline	12:51	M49	2	6	1.4	1.1 [J]	NS	8	<0.05	<2	<2
BR1	1/11/01 [1,4]	Baseline	11:05	M49	3	12	<1.0	1.1 [J]	NS	14	<0.05	170	<2
BR1	3/15/01	Baseline	15:00	M49	3	9	5	40	23	8	<0.05	2	<2
BR1	5/30/01	Baseline	9:25	M49	5	10	1.6	20	20 (18)	<5.0	0.07	2	<2
BR1	6/18/01	Baseline	17:35	M49	5	9	1.4	12	5.2 (6.4)	5	<0.05	<2	<2
BR1	7/23/01	Baseline	15:05	M49	5	10	1	4.8 [J]	3.8 [J] (4.8) [J]	9	<0.05	2	<2
BR1	8/14/01	Baseline	8:44	M49	5	9	<1.0	5.9	4.0 [J] (2.8) [J]	4	0.06	<2	<2
BR1	9/27/01	Baseline	13:25	M49	5	8	<1.0	2.1 [J]	0.8 [J] (2.1) [J]	7	0.08	4	<2
BR1	11/26/01 [1,4]	Baseline	10:40	M49	3	13	1	6.4	4.2 [J] (5.0)	10	<0.05	300	7
BR1	12/19/01	Baseline	10:40	M49	3	<10	1.6	14	<0.3	5	<0.05	23	23
BR1	3/27/02	Interim	12:35	M49	8	7	1	27	19	6	0.09	<2	<2
BR1 (dup)	3/27/02	Interim	12:35	M49	---	---	---	---	22.4	---	---	---	---
BR1	5/15/02	Interim	11:55	M49	8	5	12	14	12	<5	<0.10	<2	<2
BR1 (dup)	5/15/02	Interim	11:55	M49	---	---	---	---	12.2	---	---	---	---
BR1	**3/23/2005**	**Year 1**	**9:15**	**M49**	**181.9**	**6.2**	**1.7 [DNQ]**	**---**	**2.4**	**7.4 [DNQ]**	**0.054***	**4**	**<2**
BR1	**5/24/2005**	**Year 1**	**8:40**	**M49**	**149.1**	**9.0**	**0.6 [DNQ]**	**---**	**1.2**	**6.0 [H, DNQ]**	**0.023**	**4**	**<2**
BR1	**6/22/05 [5]**	**Year 1**	**15:20**	**M49**	**368.5**	**4.5**	**0.3 [DNQ]**	**---**	**0.49**	**6.9 [DNQ]**	**<0.01**	**8**	**<2**
BR1	**7/21/2005**	**Year 1**	**8:25**	**M49**	**5.4**	**8.9**	**<0.5**	**---**	**7.39 [F]**	**5.1 [DNQ]**	**0.021**	**4**	**<2**
BR1	**8/10/2005**	**Year 1**	**14:40**	**M49**	**5.7**	**5.0**	**0.6 [DNQ]**	**---**	**5.8 [F]**	**4.7 [DNQ]**	**0.022**	**4**	**<2**
BR1	**9/28/05**	**Year 1**	**11:25**	**M49**	**6.1**	**10.1**	**0.5 [DNQ]**	**---**	**1.9**	**4.6 [DNQ]**	**0.029**	**1,600**	**<2**
BR1	**12/7/05 [1]**	**Year 1**	**10:40**	**M49**	**17.0**	**5.9**	**0.59 [DNQ]**	**---**	**3.25**	**4.8 [DNQ]**	**0.0054 [DNQ]**	**170**	**<2**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [(2)] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
TC1	7/26/00	Baseline	14:56	M76	11	6	NR	<0.53	NS	8	<0.05	2	<2
TC1	8/8/00	Baseline	12:15	M76	11	6	<1.0	<0.53	NS	6	<0.05	2	2
TC1	9/20/00	Baseline	11:30	M76	11	6	<1.0	1.9 [J]	NS	9	<0.05	8	4
TC1	12/27/00	Baseline	14:20	M76	6	8	1.4	<0.53	NS	28	<0.05	2	<2
TC1	1/11/01 [1]	Baseline	9:50	M76	6	16	2.8	<0.53	NS	10	<0.05	23	<2
TC1	3/14/01	Baseline	14:10	M76	5	9	4.8	0.8 [J]	<1.0	10	<0.05	50	2
TC1	5/31/01	Baseline	13:00	M76	10	8	1.1	1.7 J	3.2 [J]	6	<0.05	17	4
TC1	6/19/01	Baseline	12:00	M76	11	9	4.8	0.8 [J]	<1.0	7	<0.05	90	13
TC1	7/24/01	Baseline	9:50	M76	11	11	<1.0	<1.0	<1.0	7	<0.05	17	<2
TC1	8/13/01	Baseline	11:10	M76	11	9	2.2	<1.0	<1.0	9	<0.05	22	2
TC1	9/26/01	Baseline	11:40	M76	11	10	1	3.8 [J]	<1.0	9	<0.05	13	<2
TC1	11/26/01 [1]	Baseline	11:55	M76	6	10	3	2.5 [J]	1.1 [J]	10	<0.05	220	4
TC1	12/19/01	Baseline	11:55	M76	5	<10	<1.0	3.2 [J]	<0.3	8	<0.05	50	<2
TC1	3/26/02	Interim	8:15	M76	10	8	4	<0.5	<0.3	10	0.13	12	<2
TC1	5/14/02	Interim	11:25	M76	8	5	10	<0.3	<0.3	<5	<0.10	70	<2
TC1	**3/22/2005**	**Year 1**	**11:15**	**M76**	**23.4**	**9.4**	**9.8**	**---**	**0.17**	**9.9**	**0.019* [DNQ]**	**80**	**2**
TC1	**5/23/2005**	**Year 1**	**14:25**	**M76**	**8.6**	**7.5**	**3.9**	**---**	**Not received**	**6.4 [H, DNQ]**	**0.107**	**110**	**2**
TC1	**6/21/2005**	**Year 1**	**10:30**	**M76**	**5.5**	**7.0**	**1.5**	**---**	**0.23**	**7.3 [DNQ]**	**<0.01**	**28**	**<2**
TC1	**7/19/2005**	**Year 1**	**11:25**	**M76**	**5.5**	**7.9**	**0.7 [DNQ]**	**---**	**0.39**	**6.0 [DNQ]**	**0.010 [DNQ]**	**26**	**8**
TC1	**8/9/2005**	**Year 1**	**10:50**	**M76**	**3.5**	**6.0**	**<0.5**	**---**	**0.23**	**7.6 [DNQ]**	**0.006 [DNQ]**	**50**	**13**
TC1	**9/28/2005**	**Year 1**	**13:15**	**M76**	**3.2**	**6.1**	**0.7 [DNQ]**	**---**	**0.21**	**6.6 [DNQ]**	**0.012**	**70**	**23**
TC1	**12/7/05 [1]**	**Year 1**	**13:30**	**M76**	**5.5**	**5.9**	**1.5 [DNQ]**	**---**	**0.30**	**8.0 [DNQ]**	**0.0166**	**170**	**13**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements
Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [(2)] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
NFMR3	7/26/00	Baseline	14:15	M38	63	18	NR	<0.53	NS	22	<0.05	17	<2
NFMR3	8/8/00	Baseline	8:25	M38	63	17	1.8	2.8 [J]	NS	20	<0.05	110	2
NFMR3	9/20/00	Baseline	10:50	M38	58	19	<1.0	1.7 [J]	NS	21	<0.05	22	<2
NFMR3	12/27/00	Baseline	10:57	M38	65	23	1.1	<0.53	NS	28	<0.05	13	4
NFMR3	1/11/01 [1]	Baseline	9:11	M38	106	24	2.4	0.8 [J]	NS	26	<0.05	300	22
NFMR3	3/14/01	Baseline	11:00	M38	106	22	<1.0	<1.0	<1.0	31	<0.05	33	<2
NFMR3	5/30/01	Baseline	10:00	M38	78	18	<1.0	3.6 [J]	<1.0	24	<0.05	130	17
NFMR3	6/19/01	Baseline	10:50	M38	51	21	<1.0	0.8 [J]	<1.0	24	<0.05	300	80
NFMR3	7/25/01	Baseline	10:30	M38	63	20	<1.0	1.5 [J]	<1.0	20	<0.05	220	13
NFMR3	8/13/01	Baseline	11:51	M38	61	19	<1.0	<1.0	<1.0	17	<0.05	32	<2
NFMR3	9/26/01	Baseline	12:24	M38	53	20	<1.0	1.4 [J]	0.8 [J]	22	<0.05	80	13
NFMR3	11/26/01 [1]	Baseline	12:25	M38	86	20	1.8	4.9 [J]	0.7 [J]	25	<0.05	300	17
NFMR3	12/19/01	Baseline	8:10	M38	78	24	<1.0	1.2	0.7 [J]	23	<0.05	300	<2
NFMR3	3/26/02	Interim	9:10	M38	289	19	2	2 [J]	<0.3	23	0.14	14	<2
NFMR3	5/14/02	Interim	12:19	M38	495	8	6	<0.3	<0.3	<5	<0.10	50	7
NFMR3	**3/22/2005**	**Year 1**	**11:58**	**M38**	**1024.2**	**17.2**	**16.4**	**---**	**0.36**	**18.1**	**0.031***	**170**	**13**
NFMR3	**5/23/2005**	**Year 1**	**15:15**	**M38**	**2,104.3**	**9.5**	**5.4**	**---**	**0.40**	**9.6 [H]**	**0.016 [DNQ]**	**14**	**2**
NFMR3	**6/21/2005**	**Year 1**	**11:15**	**M38**	**1,835.8**	**8.0**	**4.6**	**---**	**0.30**	**9.5**	**<0.01**	**33**	**4**
NFMR3	**7/19/2005**	**Year 1**	**12:15**	**M38**	**474.7**	**11.8**	**0.6 [DNQ]**	**---**	**0.26**	**10.6**	**<0.005**	**14**	**7**
NFMR3	**8/9/2005**	**Year 1**	**13:07**	**M38**	**309.1**	**9.5**	**<0.5**	**---**	**0.24**	**11.4**	**<0.005**	**14**	**4**
NFMR3	**9/28/05**	**Year 1**	**14:00**	**M38**	**70.7**	**22.2**	**14.4**	**---**	**0.37**	**22.2**	**0.006 [DNQ]**	**280**	**23**
NFMR3	**12/7/05 [1]**	**Year 1**	**14:10**	**M38**	**127.6**	**14.8**	**0.80 [DNQ]**	**---**	**0.61**	**18.1**	**0.0977**	**300**	**8**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [(2)] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
NFMR5	7/26/00	Baseline	8:30	M46	18	14	NR	<0.53	NS	18	<0.05	220	4
NFMR5	8/8/00	Baseline	8:25	M46	18	10	15	3.2 [J]	NS	14	<0.05	50	17
NFMR5	9/20/00	Baseline	8:30	M46	17	8	<1.0	2.6 [J]	NS	11	<0.05	30	17
NFMR5	12/27/00	Baseline	15:18	M46	13	12	<1.0	<0.53	NS	14	<0.05	<2	<2
NFMR5	1/11/01 [1]	Baseline	8:20	M46	13	18	6.4	0.8 [J]	NS	20	<0.05	500	11
NFMR5	3/14/01	Baseline	15:00	M46	12	17	2.4	0.7 [J]	<1.0	22	<0.05	8	2
NFMR5	5/30/01	Baseline	17:15	M46	18	14	<1.0	3.8 [J]	1.3 [J]	17	<0.05	<2	<2
NFMR5	6/19/01	Baseline	9:24	M46	18	12	<1.0	0.6 [J]	<1.0	9	<0.05	50	8
NFMR5	7/25/01	Baseline	11:38	M46	18	13	<1.0	<1.0	<1.0	11	<0.05	11	2
NFMR5	8/13/01	Baseline	12:33	M46	18	11	<1.0	<1.0	<1.0	9	<0.05	50	4
NFMR5	9/26/01	Baseline	13:37	M46	17	12	<1.0	5.4	1.2 [J]	13	<0.05	50	8
NFMR5	11/26/01 [1]	Baseline	13:05	M46	12	16	1.6	1.7 [J]	1.1 [J]	17	<0.05	300	14
NFMR5	12/19/01	Baseline	12:30	M46	12	16	<1.0	1.6 [J]	<0.3	8	<0.05	280	9
NFMR5	3/26/02	Interim	10:00	M46	98	13	3	3 [J]	<0.3	16	0.16	900	<2
NFMR5	5/14/02	Interim	13:50	M46	272	9	6	<0.3	10	7	<0.10	140	4
NFMR5	**3/22/2005**	**Year 1**	**13:20**	**M46**	**836.9**	**14.6**	**4.0**	**---**	**0.38**	**18.4**	**0.030***	**140**	**13**
NFMR5	**5/24/2005**	**Year 1**	**14:30**	**M46**	**1,813.5**	**11.0**	**4.6**	**---**	**0.37**	**11.4 [H]**	**0.022**	**110**	**4**
NFMR5	**6/21/2005**	**Year 1**	**12:40**	**M46**	**1,170.3**	**8.0**	**3.4**	**---**	**0.33**	**10.1**	**0.074**	**90**	**<2**
NFMR5	**7/19/2005**	**Year 1**	**14:00**	**M46**	**176.3**	**9.8**	**0.7 [DNQ]**	**---**	**0.28**	**8.4 [DNQ]**	**<0.005**	**40**	**8**
NFMR5	**8/9/2005**	**Year 1**	**13:55**	**M46**	**26.1**	**7.5**	**0.5 [DNQ]**	**---**	**0.25**	**8.4 [DNQ]**	**<0.005**	**170**	**4**
NFMR5	**9/30/05**	**Year 1**	**7:45**	**M46**	**25.4**	**13.1**	**0.2 [DNQ]**	**---**	**0.36**	**9.4 [DNQ]**	**0.017**	**21**	**<2**
NFMR5	**12/7/05 [1]**	**Year 1**	**15:00**	**M46**	**52.0**	**10.9**	**0.96 [DNQ]**	**---**	**1.20**	**10.8**	**0.0443**	**220**	**8**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)
MR1	7/26/00	Baseline	7:59	(3)	44	28	NR	<0.53	NS	31	<0.05	500	23
MR1	8/8/00	Baseline	7:58	(3)	38	9	1.4	1.2 [J]	NS	33	<0.05	300	80
MR1	9/20/00	Baseline	7:45	(3)	35	30	1	1.3 [J]	NS	34	<0.05	1,600	17
MR1	12/27/00	Baseline	7:45	(3)	61	33	<1.0	<0.53	NS	37	<0.05	23	23
MR1	1/11/01 [1]	Baseline	7:45	(3)	166	30	9.7	<0.53	NS	33	<0.05	2,400	80
MR1	3/14/01	Baseline	7:40	(3)	136	25	<1.0	<1.0	<1.0	32	<0.05	14	11
MR1	5/30/01	Baseline	18:35	(3)	54	26	1.3	38	<1.0	33	<0.05	240	11
MR1	6/19/01	Baseline	7:22	(3)	42	29	1	0.6 [J]	<1.0	29	<0.05	280	70
MR1	7/23/01	Baseline	16:15	(3)	35	35	1.6	0.61 [J]	<1.0	31	<0.05	1,600	17
MR1	8/13/01	Baseline	13:34	(3)	34	28	2.4	<1.0	<1.0	27	<0.05	220	4
MR1	9/26/01	Baseline	14:42	(3)	34	29	<1.0	0.8 [J]	<1.0	26	<0.05	90	2
MR1	11/26/01 [1]	Baseline	14:00	(3)	88	32	2.4	1.5 [J]	0.8 [J]	31	<0.05	500	30
MR1	12/19/01	Baseline	6:55	(3)	119	31	1.2	1.1 [J]	1.5 [J]	20	<0.05	900	23
MR1	3/26/02	Interim	11:10	(3)	397	22	2	1.8 [J]	<0.3	26	0.10	12	<2
MR1	5/14/02	Interim	14:50	(3)	360	13	21	<0.3	0.81 [J]	7	<0.10	131	8
MR1	**3/22/2005**	**Year 1**	**14:31**	**(3)**	**1,951.9**	**19.8**	**14.5**	**---**	**0.33**	**21.3**	**0.024***	**240**	**50**
MR1	**5/24/2005**	**Year 1**	**15:40**	**(3)**	**2,201.5**	**10.0**	**5.0**	**---**	**0.32**	**11.5 [H]**	**0.019 [DNQ]**	**>2,400**	**4**
MR1	**6/21/2005**	**Year 1**	**14:10**	**(3)**	**1,297.3**	**10.5**	**7.0**	**---**	**0.29**	**12.2**	**<0.01**	**21**	**2**
MR1	**7/19/2005**	**Year 1**	**15:10**	**(3)**	**227.3**	**14.8**	**0.6 [DNQ]**	**---**	**0.33**	**15.0**	**<0.005**	**500**	**8**
MR1	**8/9/2005**	**Year 1**	**14:50**	**(3)**	**57.1**	**21.5**	**<0.5**	**---**	**0.35**	**23.7**	**<0.005**	**280**	**14**
MR1	**9/30/05**	**Year 1**	**8:45**	**(3)**	**46.2**	**24.2**	**1.8**	**---**	**0.41**	**22.8**	**0.038**	**1,600**	**50**
MR1	**12/8/05 [1]**	**Year 1**	**---**	**(3)**	**NA**	**20.8**	**0.53 [DNQ]**	**---**	**0.54**	**21.7**	**0.0283**	**170**	**17**
Blank	**3/22/2005**	**Year 1**	**16:00**	**---**	**---**	**<1.0**	**---**	**---**	**<0.01**	**---**	**0.015* [DNQ]**	**---**	**---**
Blank	**5/24/2005**	**Year 1**	**16:20**	**---**	**---**	**<1.0**	**---**	**---**	**<0.01**	**---**	**<0.01**	**---**	**---**
Blank	**6/21/2005**	**Year 1**	**16:45**	**---**	**---**	**<1.0**	**---**	**---**	**<0.01**	**---**	**<0.01**	**---**	**---**
Blank	**7/19/2005**	**Year 1**	**16:20**	**---**	**---**	**<1.0**	**---**	**---**	**0.24**	**---**	**<0.005**	**---**	**---**
Blank	**8/9/2005**	**Year 1**	**16:15**	**---**	**---**	**<1.0**	**---**	**---**	**0.18**	**---**	**---**	**---**	**---**
Blank	**9/30/05**	**Year 1**	**16:00**	**---**	**---**	**<1.0**	**---**	**---**	**<0.01**	**---**	**0.010 [DNQ]**	**---**	**---**
Blank	**12/7/05 [1]**	**Year 1**	**9:15**	**---**	**---**	**<1.0**	**---**	**---**	**0.05**	**---**	**0.0062 [DNQ]**	**---**	**---**

Table A2. 2005 and Historical Water Quality Results for Analytical Laboratory Measurements

Pacific Gas and Electric Company's Mokelumne River Project (FERC 137)

Station	Sampling Date	Year Classification	Time	Gage ID	Flow [2] (cfs)	Total Hardness (mg/L)	TSS (mg/L)	Total Copper (µg/L)	Dissolved Copper * (µg/L)	Total Alkalinity (mg/L)	Total Nitrate as N (mg/L)	Total Coliform (MPN/100 mL)	Fecal Coliform (MPN/100 mL)

--- = Data not collected

NS = Year 2000 Copper measurements are reported as total copper only

NA = Data unavailable at time of report production

Second value in parantheses for dissolved copper measurements represents field filtered sample

DNQ = Detected but not quantified --detected above the method detection limit, not quantified by analytical laboratory

J = Estimated value below the reporting limit and above method detection limit

* Samples were overacidified in the field creating a pH effect, values are estimations by laboratory

F = New FERC flows were not achieved during these two sampling events at station BR1 (July and August of 2005).

H = samples were analyzed by the analytical laboratory out of holding time, they were received on time, but run late by lab inadvertently

dup = duplicate sample collected from this station and analyzed by Department of Fish and Game, Water Pollution Laboratory (Standard Methods 3113)

1 = First significant winter storm of the season

2= Daily flow estimated from data collected at Pacific Gas and Electric maintained gaging stations

3 = Flow equals combined flow at gage M46 plus flow at EBMUD gaging station 11317000 (middle fork Mokelumne) plus flow at EBMUD gaging station 11318500

4= BR1 was inaccessible during this event, sample was collected downstream on the Bear River near Licensee maintained gaging station M-32 above Salt Springs Road.

5= Lower Bear River Reservoir was spilling during this sampling event

Appendix B

Mokelumne River Project (FERC Project No. 137)

Water Quality Meter Calibration

Memorandum

Date: November 6, 2008 **File #:**

To: ENVIRONMENTAL SERVICES

From: APPLIED TECHNOLOGY SERVICES

Subject: Hyddrolab Instrument 2008 Calibration Report

Pacific Gas and Electric Company

MATTHEW FRANSZ
CRAIG GELDARD

I certify that between March and December, 2008 the Hydrolab® multi-parameter water quality analyzers listed below were calibrated prior to each field deployment or monthly at PG&E's Applied Technology Services Department (ATS) or at the Hach/Hydrolab Loveland, Colorado repair department using manufacturer's calibration procedures. In the event that any specific sensor probe was found to be out of tolerance, a calibrated backup meter was deployed.

These are field instruments for in-situ readings and although a log documenting monthly calibrations is maintained in the Chemistry Laboratory (Room 155) at ATS, most of the instruments were calibrated by qualified PG&E personnel in the field more often than that depending on deployment schedules.

Instrument Identification:

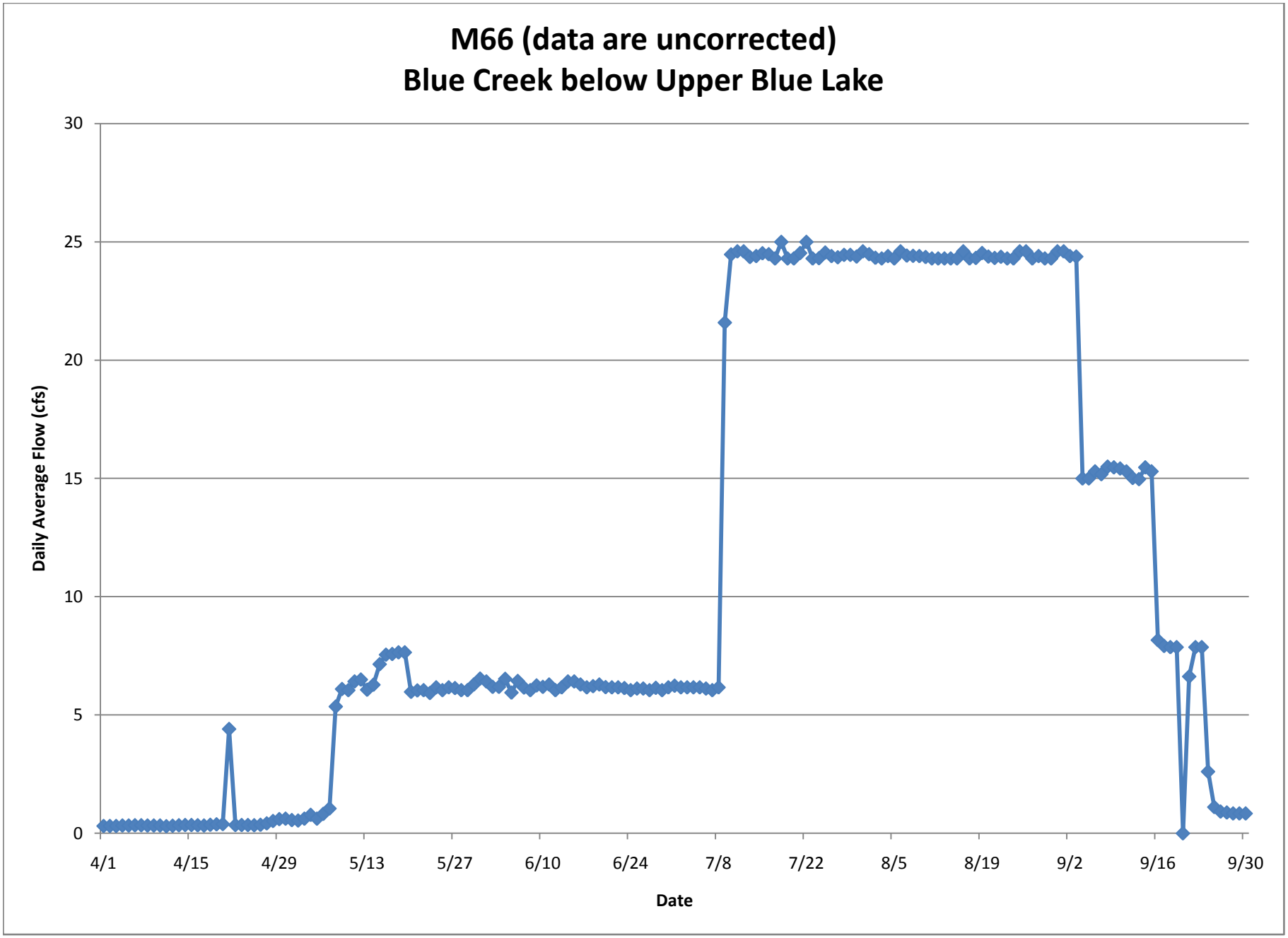
Hydrolab Quanta®. #1 S/N 01310/01277
Hydrolab Quanta® #3 S/N 01602/02089
Hydrolab Quanta® #4 S/N 03684/03592
Hydrolab Data Sonde 4a® S/N 37743 Note: This unit was not returned from the field after October 7, 2008.
Hydrolab Data Sonde 5® S/N 42706

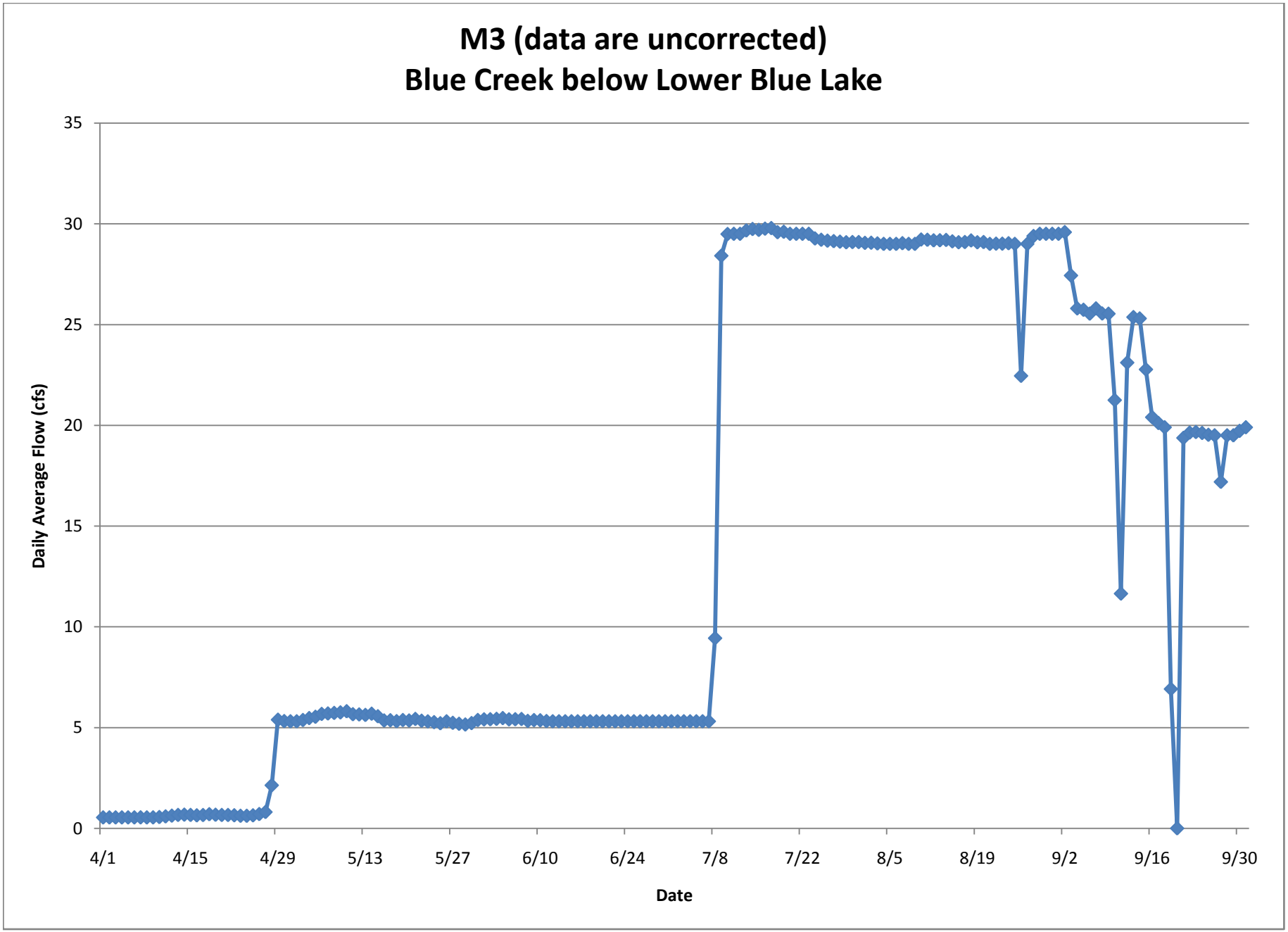
ERIC KENZLER
Technologist
Pacific Gas and Electric Company
Applied Technology Services

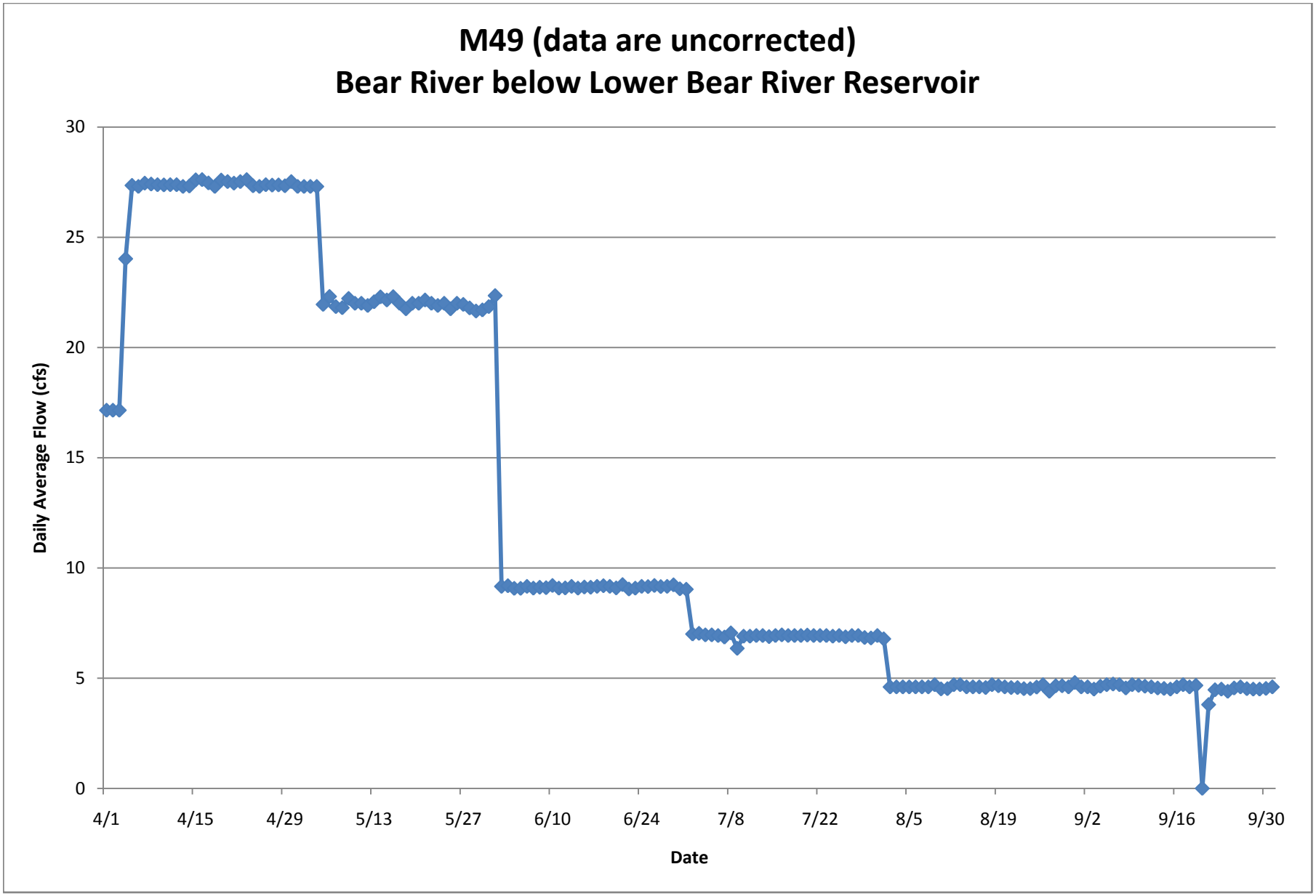
Appendix C

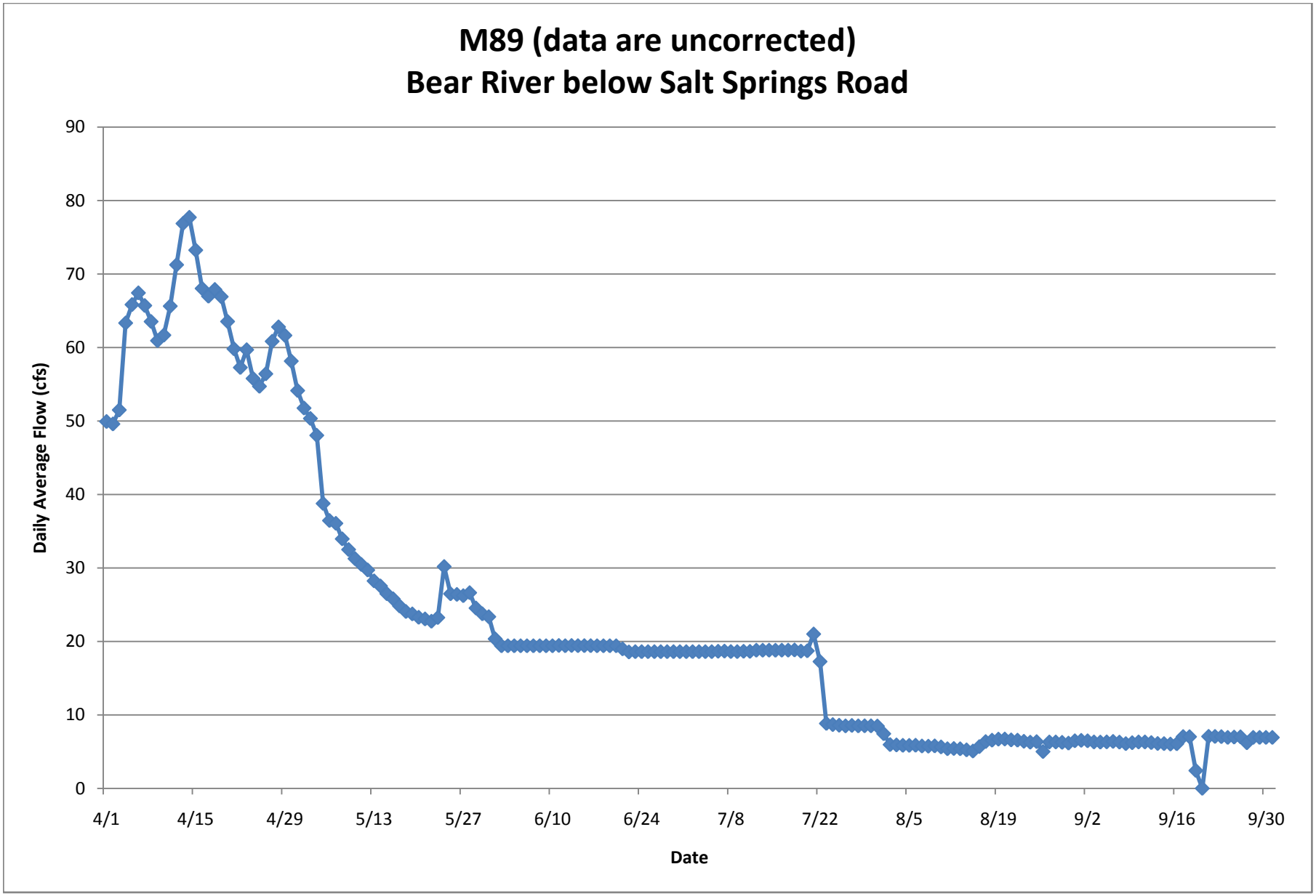
Mokelumne River Project (FERC Project No. 137)

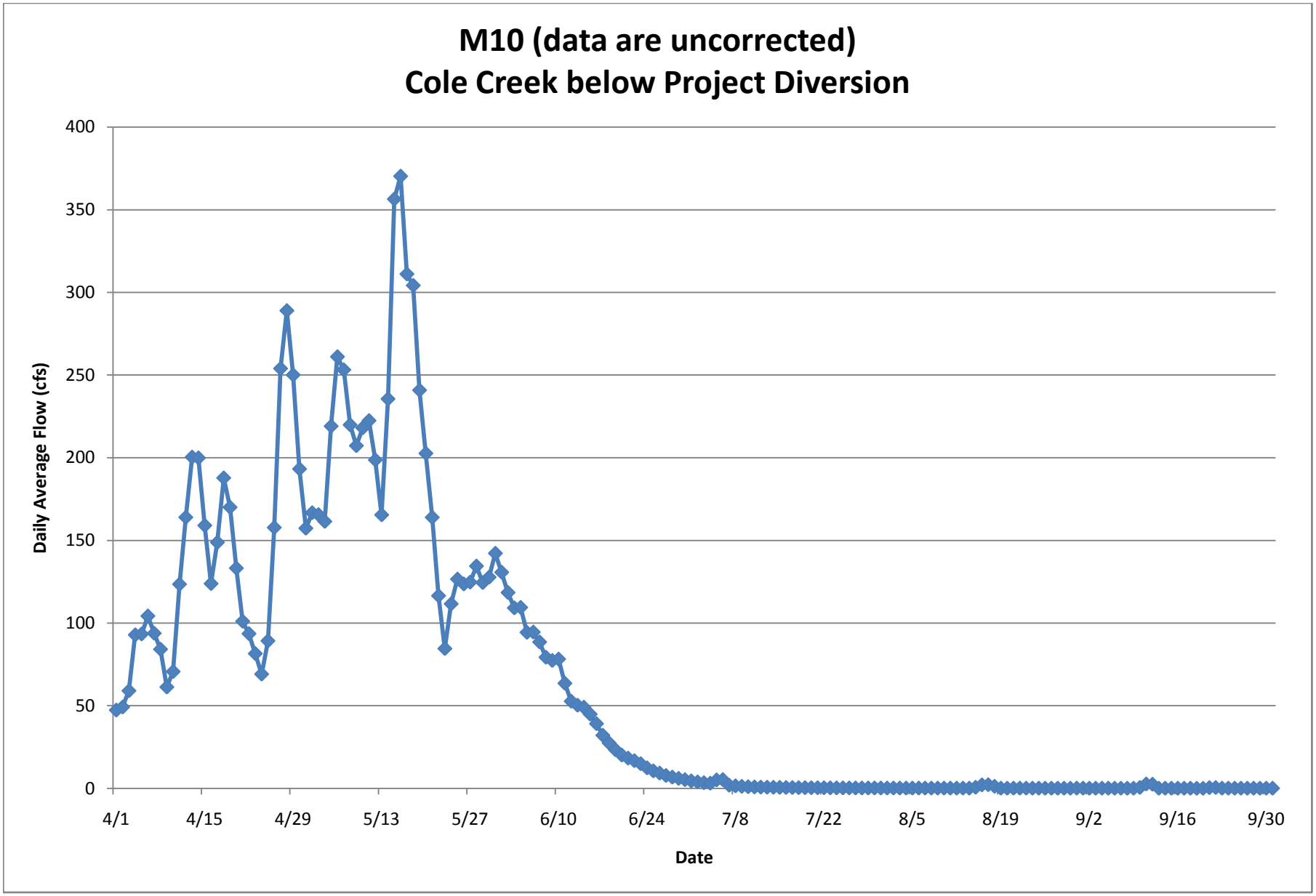
2008 Daily Average Stream Flow Plots

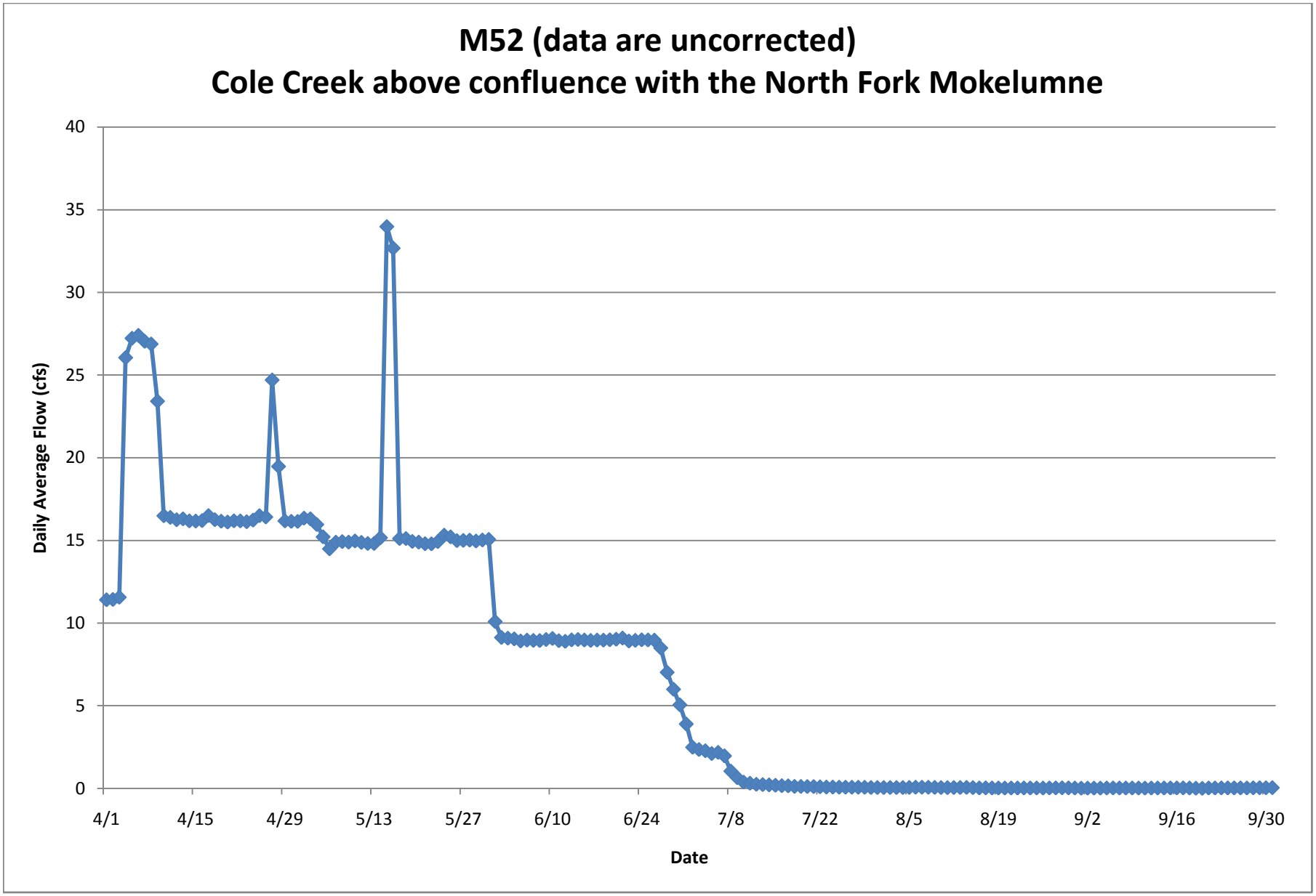

M66 (data are uncorrected)
Blue Creek below Upper Blue Lake
Daily Average Flow (cfs)
30
25
20
15
10
5
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

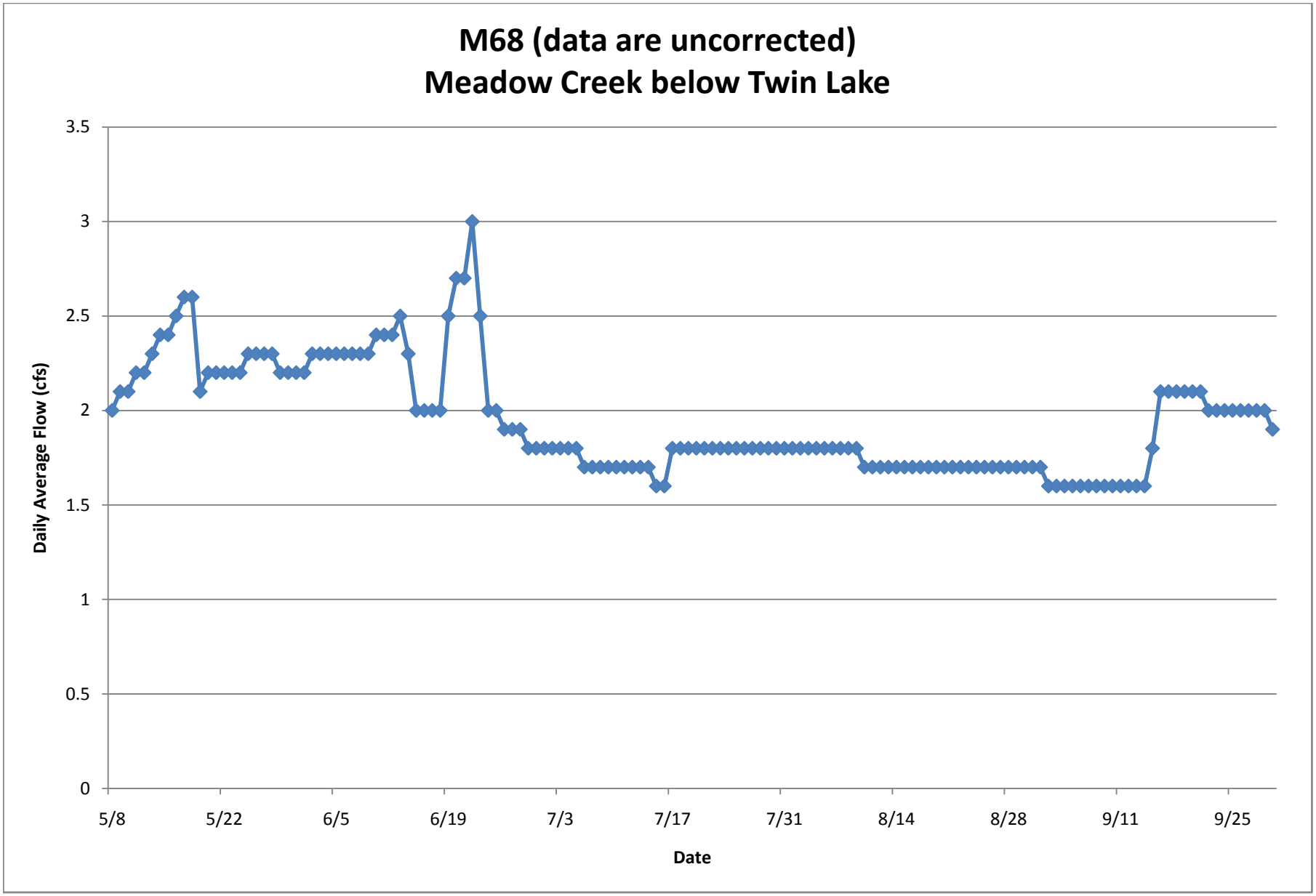

M3 (data are uncorrected)
Blue Creek below Lower Blue Lake
Daily Average Flow (cfs)
35
30
25
20
15
10
5
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

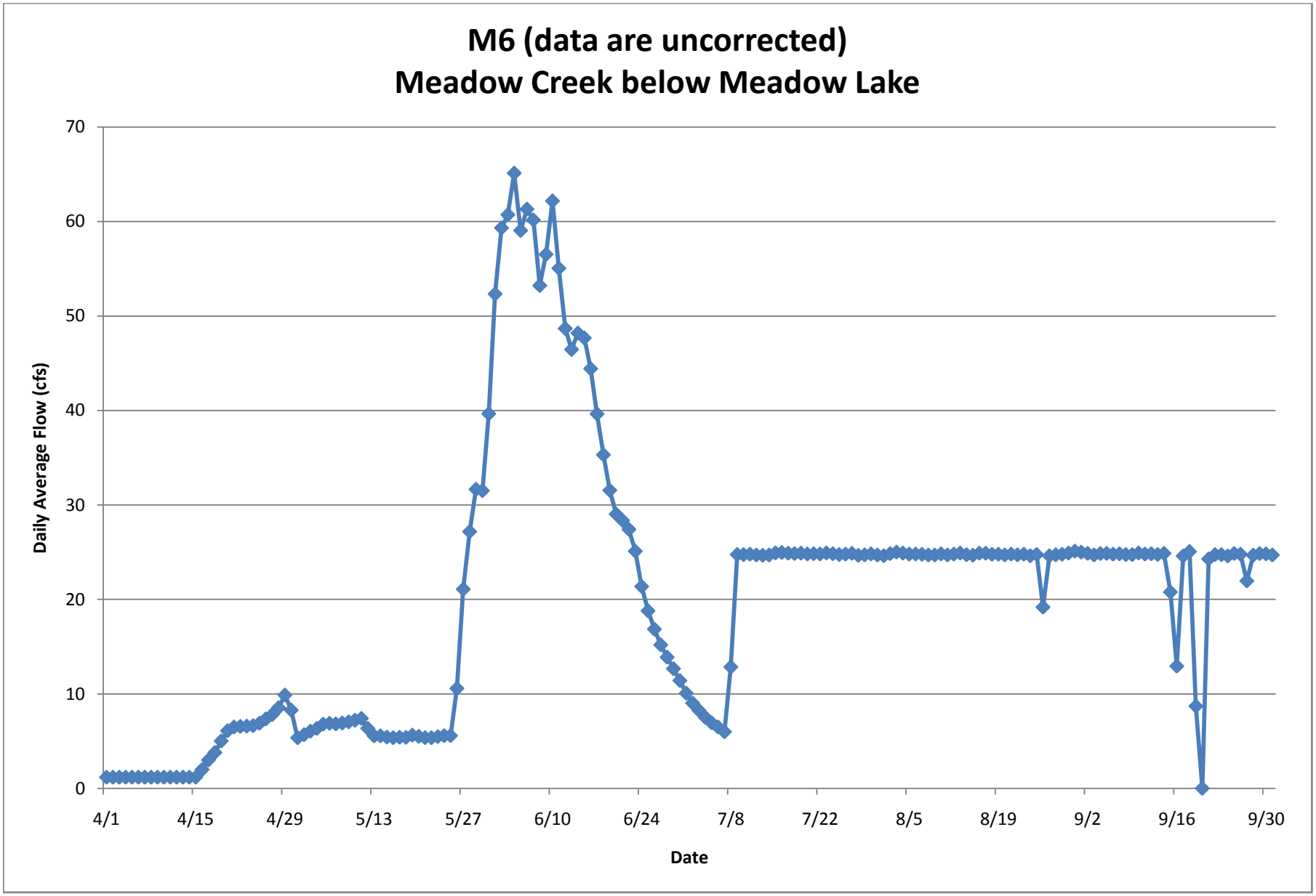

M49 (data are uncorrected)
Bear River below Lower Bear River Reservoir
Daily Average Flow (cfs)
30
25
20
15
10
5
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

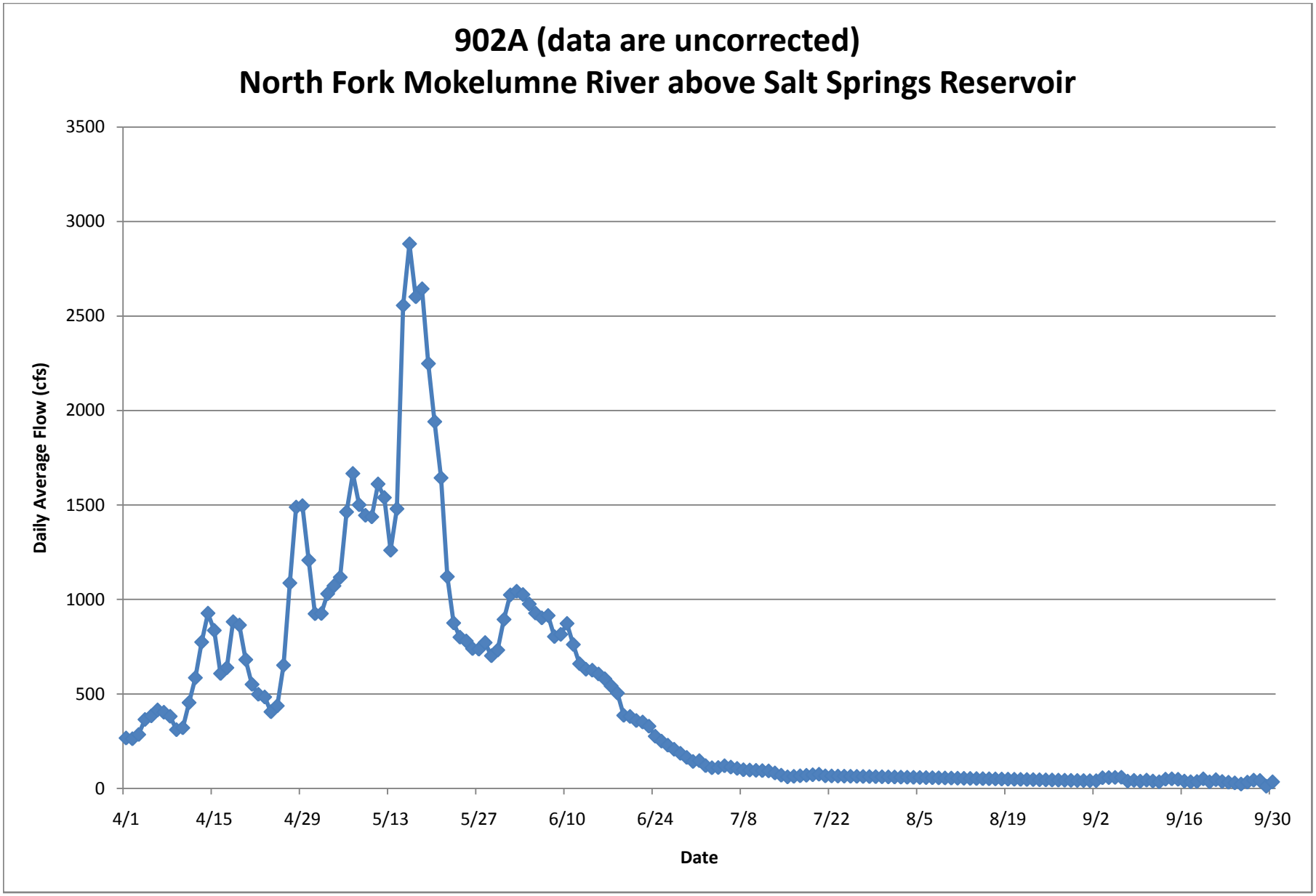

M89 (data are uncorrected)
Bear River below Salt Springs Road
Daily Average Flow (cfs)
90
80
70
60
50
40
30
20
10
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

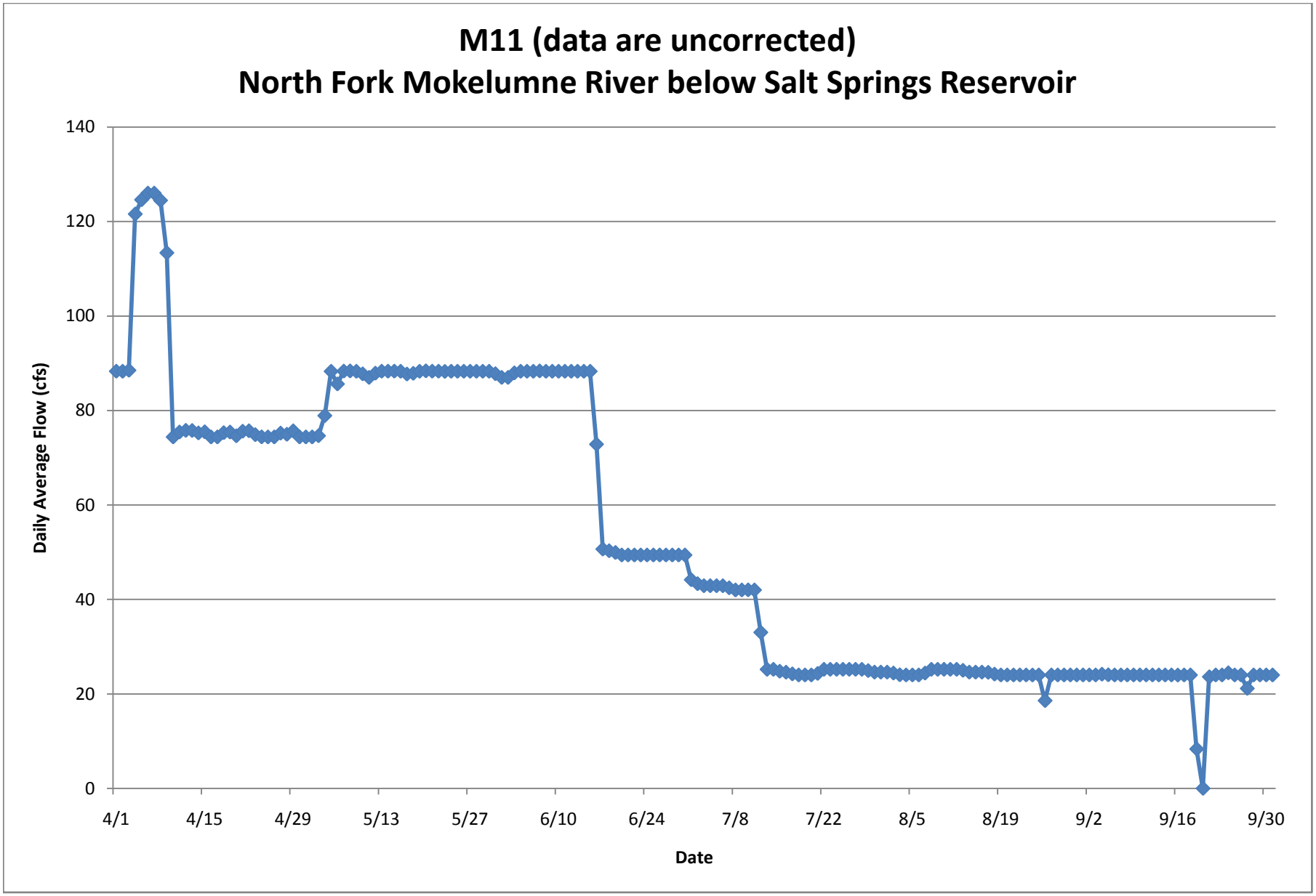

M10 (data are uncorrected)
Cole Creek below Project Diversion
Daily Average Flow (cfs)
400
350
300
250
200
150
100
50
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

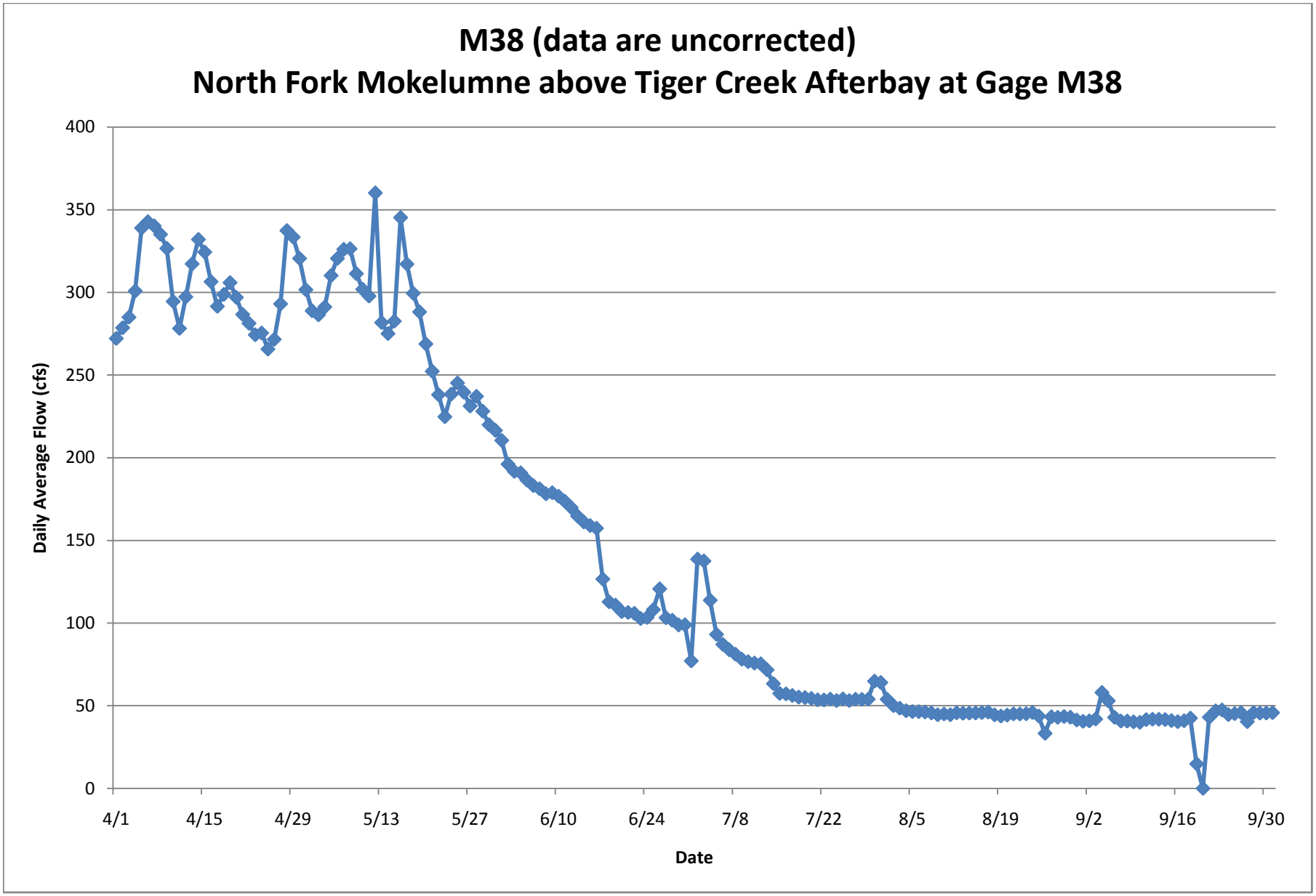

M52 (data are uncorrected)
Cole Creek above confluence with the North Fork Mokelumne
Daily Average Flow (cfs)
40
35
30
25
20
15
10
5
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

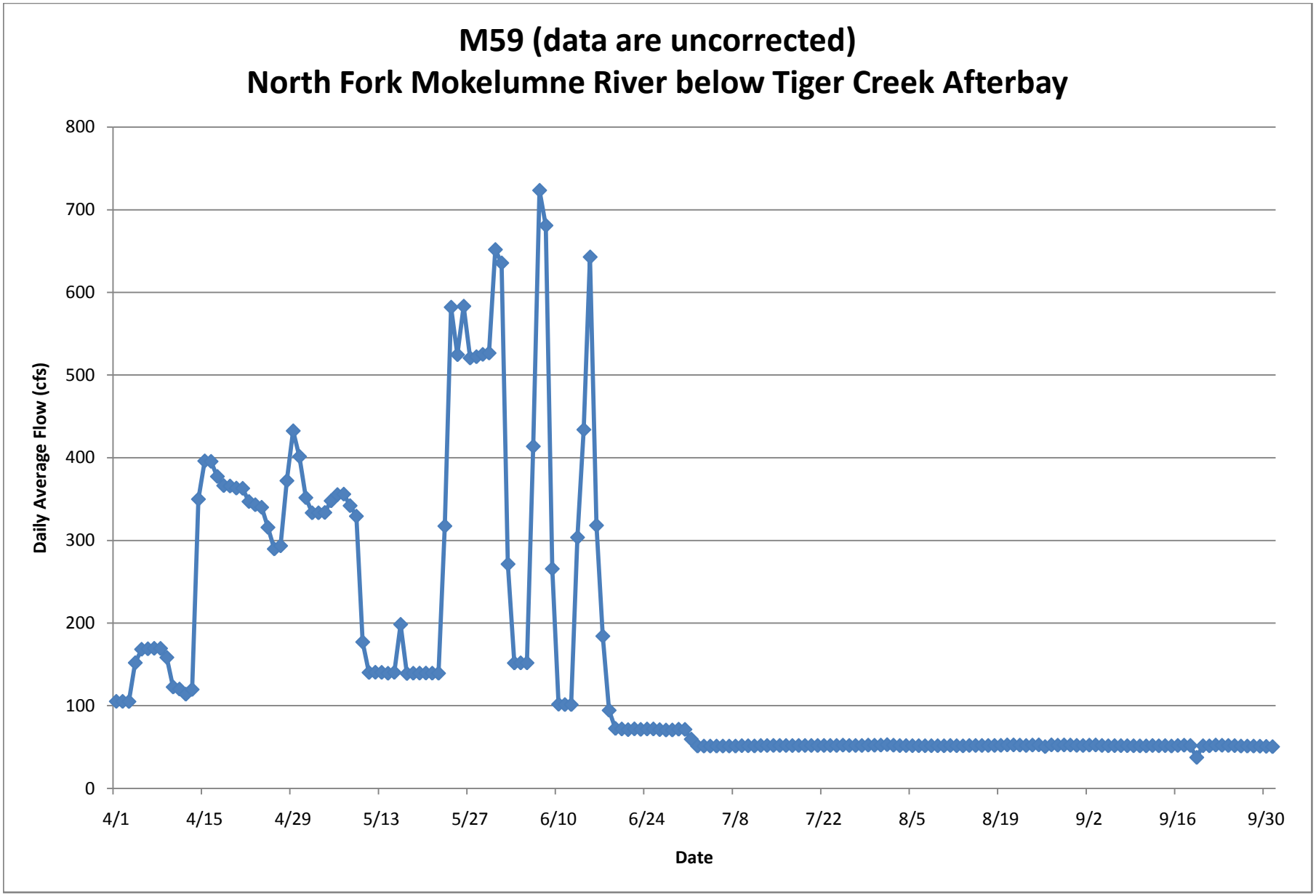

M68 (data are uncorrected)
Meadow Creek below Twin Lake
Daily Average Flow (cfs)
3.5
3
2.5
2
1.5
1
0.5
0
5/8
5/22
6/5
6/19
7/3
7/17
7/31
8/14
8/28
9/11
9/25
Date

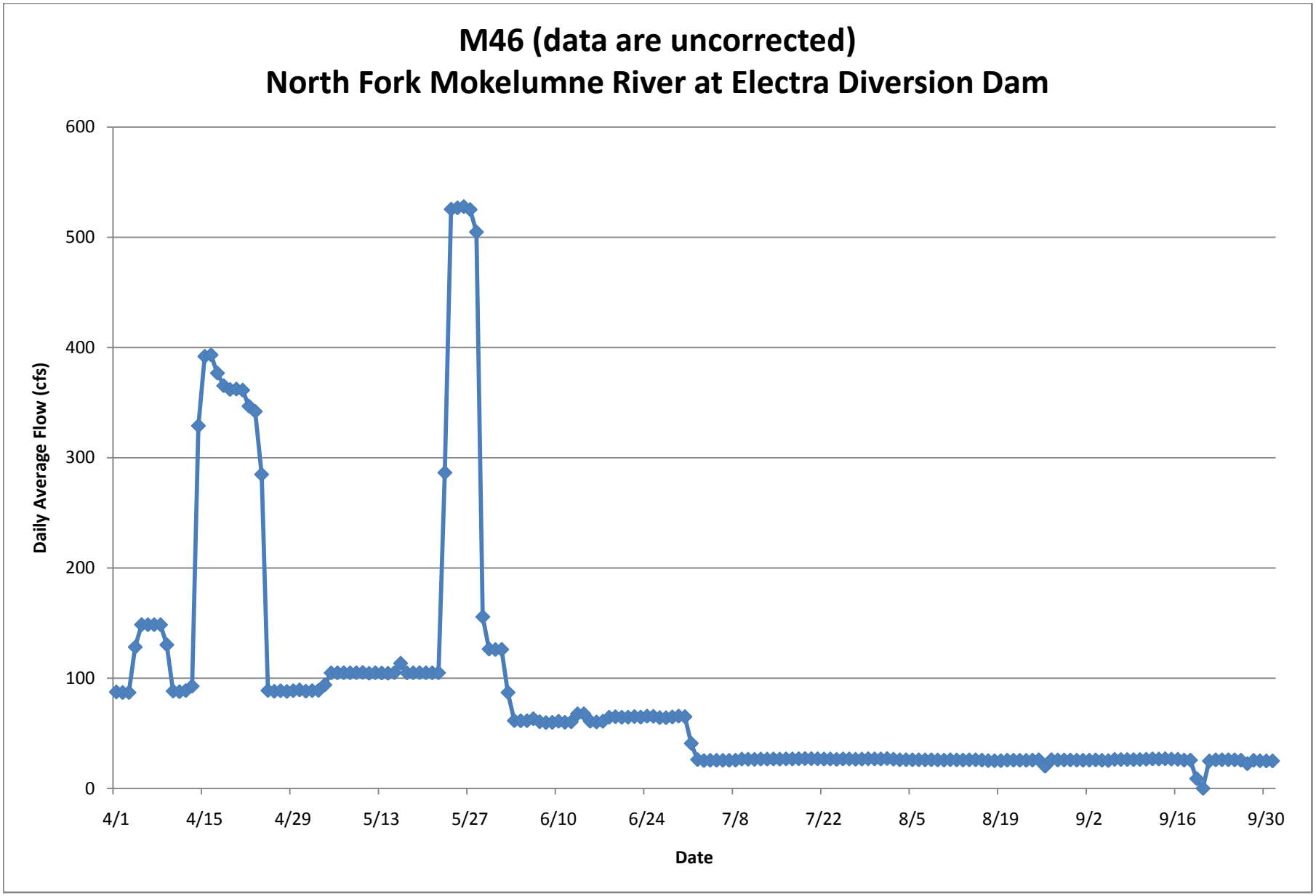

M6 (data are uncorrected)
Meadow Creek below Meadow Lake
Daily Average Flow (cfs)
70
60
50
40
30
20
10
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

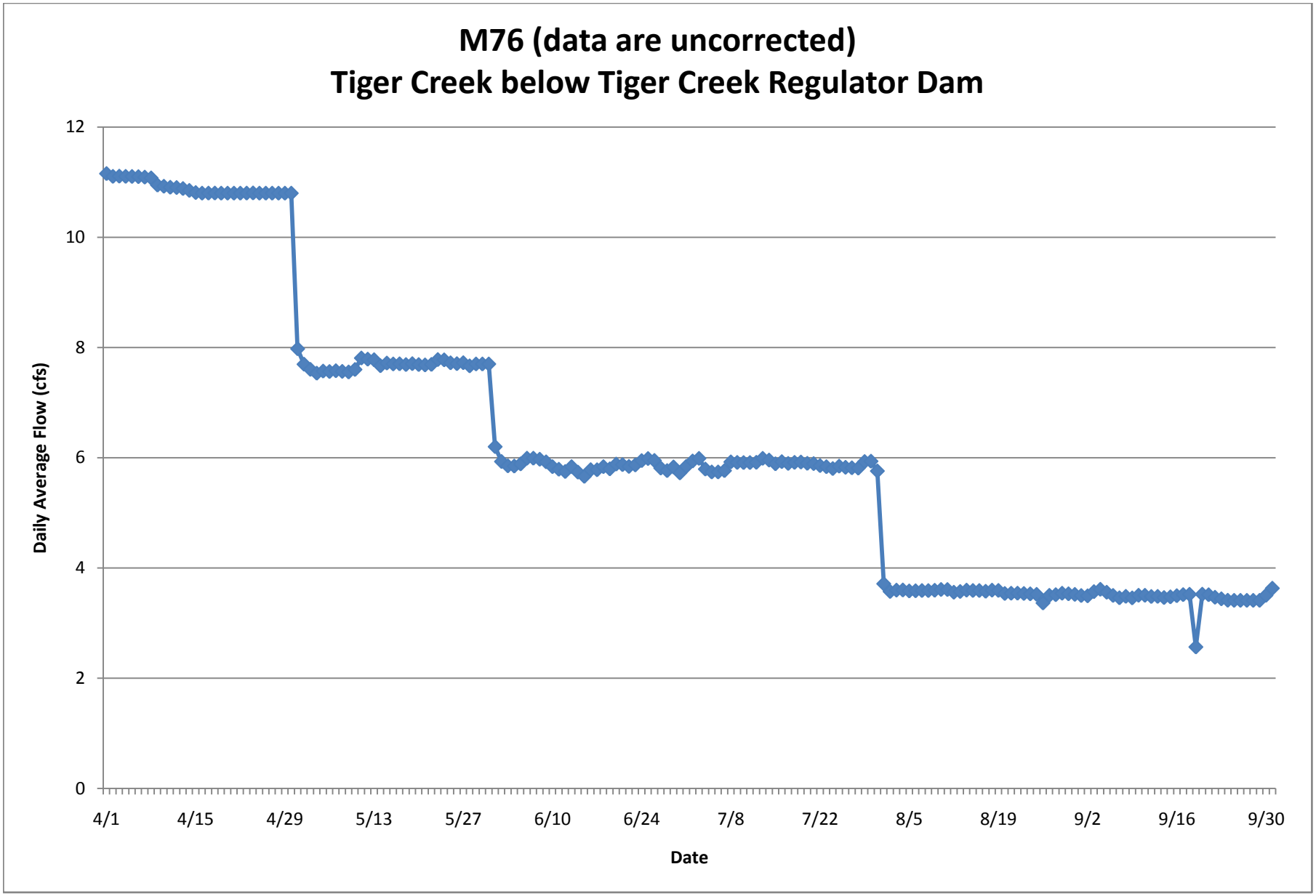

902A (data are uncorrected)
North Fork Mokelumne River above Salt Springs Reservoir
Daily Average Flow (cfs)
3500
3000
2500
2000
1500
1000
500
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date


M11 (data are uncorrected)
North Fork Mokelumne River below Salt Springs Reservoir
Daily Average Flow (cfs)
140
120
100
80
60
40
20
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date


M38 (data are uncorrected)
North Fork Mokelumne above Tiger Creek Afterbay at Gage M38
Daily Average Flow (cfs)
400
350
300
250
200
150
100
50
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date


M59 (data are uncorrected)
North Fork Mokelumne River below Tiger Creek Afterbay
Daily Average Flow (cfs)
800
700
600
500
400
300
200
100
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date


M46 (data are uncorrected)
North Fork Mokelumne River at Electra Diversion Dam
Daily Average Flow (cfs)
600
500
400
300
200
100
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date


M76 (data are uncorrected)
Tiger Creek below Tiger Creek Regulator Dam
Daily Average Flow (cfs)
12
10
8
6
4
2
0
4/1
4/15
4/29
5/13
5/27
6/10
6/24
7/8
7/22
8/5
8/19
9/2
9/16
9/30
Date

Appendix D

Mokelumne River Project (FERC Project No. 137)

2008 Laboratory Analytical Reports and Chain of Custody Records

Marine Pollution Studies Laboratories
Department of Fish and Game
Moss Landing Marine Laboratories
7544 Sandholdt Road
Moss Landing, CA 95039

Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlml.calstate.edu

Trace Metal Results

Project Name: Devine Tarbell
Project Number: 245
Analyst: Jon Goetzl

Report #: TM08-10

Report Date: 8/25/2008

Lab Number	Station Name	Sample Type	Date Collected	Time Collected	Date Received	Batch Number	Cu ng/mL
08_1066	NFMR5	river water	3/18/2008	13:20	3/20/2008	ICP070708	0.38
08_1060	NFMR2	river water	3/17/2008	11:50	3/19/2008	ICP070708	0.24
08_1061	TC1	river water	3/17/2008	13:50	3/19/2008	ICP070708	0.25
08_1062	NFMR3	river water	3/17/2008	14:35	3/19/2008	ICP070708	0.69
08_1063	BC2	river water	3/18/2008	9:20	3/20/2008	ICP070708	0.11
08_1064	MC2	river water	3/18/2008	10:20	3/20/2008	ICP070708	0.06
08_1065	BR1	river water	3/18/2008	11:20	3/20/2008	ICP070708	4.46
08_1067	MR1	river water	3/18/2008	14:30	3/20/2008	ICP070708	0.28
08_1068	MOKEL FIELD BL	river water	3/17/2008	14:55	3/20/2008	ICP070708	<.03
						MDL	0.03
						RL	0.10

Method: modified EPA 1638 M

Values below the MDL are reported as negative the MDL (ie <0.03 for Cu)

tion Studies Laboratories
nent of Fish and Game
ding Marine Laboratories
544 Sandholdt Road
ss Landing, CA 95039

Project Manager: **utumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: ma@mlml.calstate.edu

ace Metal Results

Project Name: Divine Tarbell
Project Number: 245
Analyst: Jon Goetzl

Report #: **TM07-03**
Report Date: 11/14/2007

Lab Number	Station Name	Sample Type	Date Collected	Time Collected	Date Received	Batch Number	Cu ng/mL
08_2287	BR1	river water	6/24/2008	1100	6/27/2008	ICP101008	4.24
08_2288	NFMR3	river water	6/24/2008	1303	6/27/2008	ICP101008	0.34
08_2289	NFMR5	river water	6/25/2008	1320	6/27/2008	ICP101008	0.22
08_2290	NFMR2	river water	6/25/2008	1120	6/27/2008	ICP101008	0.27
08_2291	TC1	river water	6/24/2008	1400	6/27/2008	ICP101008	0.18
08_2292	MR1	river water	6/25/2008	1421	6/27/2008	ICP101008	0.73
08_2293	MC2	river water	6/26/2008	930	6/27/2008	ICP101008	0.04
08_2294	BC2	river water	6/26/2008	850	6/27/2008	ICP101008	0.03
08_2295	FIELD BL	river water	6/25/2008	1510	6/27/2008	ICP101008	<.03
						MDL	0.03
						RL	0.10

Method: modified EPA 1638 M

Values below the MDL are reported as <MDL (ie<0.03 for Cu)

Marine Pollution Studies Laboratories
Department of Fish and Game
Moss Landing Marine Laboratories
7544 Sandholdt Road
Moss Landing, CA 95039

Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlml.calstate.edu

Trace Metal Results

Project Name: Divine Tarbell
Project Number: 245
Analyst: Jon Goetzl

Report #: **TM08-09**
Report Date: 11/19/2008

Lab Number	Station Name	Sample Type	Date Collected	Time Collected	Date Received	Batch Number	Cu ng/mL
08_2997	NFMR2	river water	9/23/2008	1145	9/30/2008	ICP111808	0.22
08_2998	TC1	river water	9/23/2008	1400	9/30/2008	ICP111808	0.11
08_2999	BR1	river water	9/24/2008	1010	9/30/2008	ICP111808	1.63
08_3000	MR1	river water	9/24/2008	1415	9/30/2008	ICP111808	0.88
08_3001	NFMR3	river water	9/24/2008	1200	9/30/2008	ICP111808	0.85
08_3002	NFMR5	river water	9/24/2008	1305	9/30/2008	ICP111808	0.57
08_3003	MC2	river water	9/25/2008	1205	9/30/2008	ICP111808	0.34
08_3004	BC2	river water	9/25/2008	1130	9/30/2008	ICP111808	0.81
08_3005	FIELD BL	river water	9/24/2008	1500	9/30/2008	ICP111808	<.03
						MDL	0.03
						RL	0.10

Method: modified EPA 1638 M

Values below the MDL are reported as <MDL (ie<0.03 for Cu)

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Report Date: 09/30/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **163504**

Results for Project 163504

653297 BC2 0222558 Liquid Taken: 09/25/2008 1130 By: JT Rec:09/25/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221B	09/25/2008 1630	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/25/2008 1630	DS	

653298 MC2 0222560 Liquid Taken: 09/25/2008 1205 By: JT Rec:09/25/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	2	#/100ml		2	SM9221B	09/25/2008 1630	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/25/2008 1630	DS	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Report Date: 09/28/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **163467**

Results for Project 163467

653239 **MR1 0222557** Liquid Taken: 09/24/2008 1415 By: JT Rec:09/24/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	170	#/100ml		2	SM9221B	09/24/2008 1645	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/24/2008 1645	DS	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Report Date: 09/29/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **163466**

Results for Project 163466

653236 NMFR5 0222556 Liquid Taken: 09/24/2008 1305 By: JT Rec:09/24/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	23	#/100ml		2	SM9221B	09/24/2008 1650	DS	
Fecal Coliform Bacteria, 15 t	2	#/100ml		2	SM9221E	09/24/2008 1650	DS	

653237 NFMR3 0222562 Liquid Taken: 09/24/2008 1200 By: JT Rec:09/24/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	240	#/100ml		2	SM9221B	09/24/2008 1650	DS	
Fecal Coliform Bacteria, 15 t	8	#/100ml		2	SM9221E	09/24/2008 1650	DS	

653238 BR1 0222548 Liquid Taken: 09/24/2008 1010 By: JT Rec:09/24/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	170	#/100ml		2	SM9221B	09/24/2008 1645	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/24/2008 1645	DS	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Report Date: 09/28/2008

Client: **DTAA**

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2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **163421**

Results for Project 163421

653172 NMFR2 0222555 Liquid Taken: 09/23/2008 1145 By: JT Rec:09/23/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	30	#/100ml		2	SM9221B	09/23/2008 1645	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/23/2008 1645	DS	

653173 TC1 0222561 Liquid Taken: 09/23/2008 1400 By: JT Rec:09/23/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	17	#/100ml		2	SM9221B	09/23/2008 1645	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	09/23/2008 1645	DS	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Report Date: 03/24/2008

Client: **PG&E**

Project Report: **156342**

PG&E
Matt Fransz
3400 Crow Canyon Rd
San Ramon, CA 94583-

Results for Project 156342

641420 Mokelumne R Project: BC2 G W 0222552

Liquid Taken: 03/18/2008 0920 By: JT/EK Rec:03/18/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	4	#/100ml		2	SM9221B	03/18/2008 1605	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/18/2008 1605	MG	

641421 Mokelumne R Project: MC2 G W 0222551

Liquid Taken: 03/18/2008 1020 By: JT/EK Rec:03/18/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	4	#/100ml		2	SM9221B	03/18/2008 1605	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/18/2008 1605	MG	

641422 Mokelumne R Project: BR1 G W 0222553

Liquid Taken: 03/18/2008 1120 By: JT/EK Rec:03/18/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	2	#/100ml		2	SM9221B	03/18/2008 1630	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/18/2008 1630	MG	

641423 Mokelumne R Project: MR1 G W 0222559

Liquid Taken: 03/18/2008 1430 By: JT/EK Rec:03/18/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	110	#/100ml		2	SM9221B	03/18/2008 1635	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/18/2008 1635	MG	

641424 Mokelumne R Project: NFMR1 G W 0222550

Liquid Taken: 03/18/2008 1520 By: JT/EK Rec:03/18/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	27	#/100ml		2	SM9221B	03/18/2008 1630	MG	
Fecal Coliform Bacteria, 15 t	4	#/100ml		2	SM9221E	03/18/2008 1630	MG	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Report Date: 03/21/2008

Client: **PG&E**

PG&E
Matt Fransz
3400 Crow Canyon Rd
San Ramon, CA 94583-

Project Report: **156289**

Results for Project 156289

641310 Mokelumne R Project: NFMR2 G W 0222554 Liquid Taken: 03/17/2008 1150 By: JT/EK Rec:03/17/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	17	#/100ml		2	SM9221B	03/17/2008 1620	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/17/2008 1620	DS	

641311 Mokelumne R Project: TC1 G W 0222549 Liquid Taken: 03/17/2008 1350 By: JT/EK Rec:03/17/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	110	#/100ml		2	SM9221B	03/17/2008 1620	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/17/2008 1620	DS	

641312 Mokelumne R Project: NFMR3 G W 0222547 Liquid Taken: 03/17/2008 1435 By: JT/EK Rec:03/17/2008

Parameter	Result	Unit	Flag	RL	Method	Analyzed	By	CAS
Total Coliform Bacteria, 15 t	30	#/100ml		2	SM9221B	03/17/2008 1620	DS	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	03/17/2008 1620	DS	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

Sierra Foothill Laboratory certifies that test results meet all applicable NELAC requirements unless stated otherwise.
Results are specific to the sample(s) as submitted and only to the parameter(s) reported.
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Sierra Foothill Laboratory, Inc.

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Phone 209/223-2800
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Email info@sierralab.com

Report Date: 06/30/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **159811**

Results for Project 159811

647413 MC2 824209 Liquid Taken: 06/26/2008 0930 By: CV/EK Rec:06/26/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	2	#/100ml		2	SM9221B	06/26/2008 1140	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	06/26/2008 1140	MG	

647414 BC2 824224 Liquid Taken: 06/26/2008 0850 By: CV/EK Rec:06/26/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	2	#/100ml		2	SM9221B	06/26/2008 1140	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	06/26/2008 1140	MG	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Jackson, CA 95642

Phone 209/223-2800
Fax 209/223-2747
Email info@sierralab.com

Report Date: 06/30/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **159780**

Results for Project 159780

647362 MR1 824210 Liquid Taken: 06/25/2008 1421 By: CV/EK Rec:06/25/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	300	#/100ml		2	SM9221B	06/25/2008 1520	MG	
Fecal Coliform Bacteria, 15 t	4	#/100ml		2	SM9221E	06/25/2008 1520	MG	

647363 NFMR2 824211 Liquid Taken: 06/25/2008 1120 By: CV/EK Rec:06/25/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	22	#/100ml		2	SM9221B	06/25/2008 1530	MG	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	06/25/2008 1530	MG	

647364 NFMR5 824213 Liquid Taken: 06/25/2008 1320 By: CV/EK Rec:06/25/2008

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	11	#/100ml		2	SM9221B	06/25/2008 1530	MG	
Fecal Coliform Bacteria, 15 t	2	#/100ml		2	SM9221E	06/25/2008 1530	MG	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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Sierra Foothill Laboratory, Inc.

255 Scottsville Blvd
PO Box 1268
Jackson, CA 95642

Phone 209/223-2800
Fax 209/223-2747
Email info@sierralab.com

Report Date: 06/29/2008

Client: **DTAA**

Devine Tarbell & Associates
attn: Charles Vertucci
2720 Gateway Oaks Dr Suite 300
Sacramento, CA 95833-

Project Report: **159702**

Results for Project 159702

647235 **Mokelumne R Project:TC1 824222** Liquid Taken: 06/24/2008 1400 By: CV/EK Rec:06/24/2008

Client pays with credit card at time of sample submission. If samples collected over 2 days, it is OK to chg credit card when final samples submitted.

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	17	#/100ml		2	SM9221B	06/24/2008 1550	AL	
Fecal Coliform Bacteria, 15 t	2	#/100ml		2	SM9221E	06/24/2008 1550	AL	

647236 **Mokelumne R Project:BR1 50150** Liquid Taken: 06/24/2008 1100 By: CV/EK Rec:06/24/2008

Client pays with credit card at time of sample submission. If samples collected over 2 days, it is OK to chg credit card when final samples submitted.

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	4	#/100ml		2	SM9221B	06/24/2008 1525	AL	
Fecal Coliform Bacteria, 15 t	<2	#/100ml		2	SM9221E	06/24/2008 1525	AL	

647237 **Mokelumne R Project:NFMR3 824217** Liquid Taken: 06/24/2008 1303 By: CV/EK Rec:06/24/2008

Client pays with credit card at time of sample submission. If samples collected over 2 days, it is OK to chg credit card when final samples submitted.

Parameter	*Result*	*Unit*	*Flag*	*RL*	*Method*	*Analyzed*	*By*	*CAS*
Total Coliform Bacteria, 15 t	110	#/100ml		2	SM9221B	06/24/2008 1610	MG	
Fecal Coliform Bacteria, 15 t	23	#/100ml		2	SM9221E	06/24/2008 1610	MG	

ELAP #1113 NELAP #06245CA

Sandy Nurse

Sandy Nurse, Lab Director

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DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name:	Charles Vertucci	**Lab Number:**	L-149-08 & L-155-08
Agency:	Devine Tarbell & Associates, Inc.	**Other Number:**	
Address:	2720 Gateway Oaks Dr., Suite 300	**Date Sampled:**	03/17/08 & 03/18/08
City:	Sacramento, Ca 95833	**Date Received:**	03/18/08 & 03/19/08
		Date Completed:	4/08/08
		Index-PCA Code:	

RE: Mokelumne River Water Quality Monitoring Report

RESULTS OF CHEMICAL ANALYSIS: See attached spreadsheets.

Cost of Analyses: $1222.00

Analysts: JR, KEP, KP, DR

Patty Buckner — 4/14/08
Inorganic Section Leader — **Date**

C.R. Todd for D.B. Crane — 4/15/08
Laboratory Director — **Date**

Devine Tarbell Associates, Inc.
2720 Gateway Oaks Dr., Ste. 300
Sacramento, CA 95833
Attn: Charles Vertucci

Mokelumne River Project

Ca Dept. of Fish and Game
Water Pollution Control Lab
2005 Nimbus Rd.
Rancho Cordova, CA 95670

LabSampleID	Lab ID#	Location	SampleDate	SampleTime	AgencyCode	Lab Submittal Date	Analysis Date	Method	Analyte Name	Unit	Lab Result	Qualifier	MDL	RL
L-149-08-01	AA26751	NFMR2	17/Mar/2008	11:50	Mokelumne River Project	18/Mar/2008	18/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	4.9		0.2	1.0
L-149-08-02	AA26752	TC1	17/Mar/2008	13:50	Mokelumne River Project	18/Mar/2008	18/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	3.0		0.2	1.0
L-149-08-03	AA26753	NFMR3	17/Mar/2008	14:35	Mokelumne River Project	18/Mar/2008	18/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	2.0		0.2	1.0
L-149-08-04	AA26754	NFMR2	17/Mar/2008	11:50	Mokelumne River Project	18/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0288		0.0050	0.0100
L-149-08-05	AA26755	TC1	17/Mar/2008	13:50	Mokelumne River Project	18/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0335		0.0050	0.0100
L-149-08-06	AA26756	NFMR3	17/Mar/2008	14:35	Mokelumne River Project	18/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0792		0.0050	0.0100
L-149-08-07	AA26757	Field Blank	17/Mar/2008	14:55	Mokelumne River Project	18/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0069	DNQ	0.0050	0.0100
L-149-08-08	AA26758	NFMR2	17/Mar/2008	11:50	Mokelumne River Project	18/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	11.1		5.0	10.0
L-149-08-09	AA26759	TC1	17/Mar/2008	13:50	Mokelumne River Project	18/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	10.8		5.0	10.0
L-149-08-10	AA26760	NFMR3	17/Mar/2008	14:35	Mokelumne River Project	18/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	18.7		5.0	10.0
L-149-08-11	AA26761	Field Blank	17/Mar/2008	14:55	Mokelumne River Project	18/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	ND		5.0	10.0
L-149-08-12	AA26762	NFMR2	17/Mar/2008	11:50	Mokelumne River Project	18/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	5.3	DNQ	3.0	10.0
L-149-08-13	AA26763	TC1	17/Mar/2008	13:50	Mokelumne River Project	18/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	6.3	DNQ	3.0	10.0
L-149-08-14	AA26764	NFMR3	17/Mar/2008	14:35	Mokelumne River Project	18/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	16.7		3.0	10.0
L-155-08-01	AA26780	BC2	18/Mar/2008	9:20	Mokelumne River Project	19/Mar/2008	24/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	ND		0.2	1.0
L-155-08-02	AA26781	MC2	18/Mar/2008	10:20	Mokelumne River Project	19/Mar/2008	24/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	0.3	DNQ	0.2	1.0
L-155-08-03	AA26782	BR1	18/Mar/2008	11:20	Mokelumne River Project	19/Mar/2008	24/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	2.3		0.2	1.0
L-155-08-04	AA26783	NFMR5	18/Mar/2008	13:20	Mokelumne River Project	19/Mar/2008	24/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	0.8	DNQ	0.2	1.0
L-155-08-05	AA26784	MR1	18/Mar/2008	14:30	Mokelumne River Project	19/Mar/2008	24/Mar/2008	SM 2540 D	Total Suspended Solids	mg/L	0.6	DNQ	0.2	1.0
L-155-08-06	AA26785	BC2	18/Mar/2008	9:20	Mokelumne River Project	19/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0610		0.0050	0.0100
L-155-08-07	AA26786	MC2	18/Mar/2008	10:20	Mokelumne River Project	19/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0872		0.0050	0.0100
L-155-08-08	AA26787	BR1	18/Mar/2008	11:20	Mokelumne River Project	19/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0262		0.0050	0.0100
L-155-08-09	AA26788	NFMR5	18/Mar/2008	13:20	Mokelumne River Project	19/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0555		0.0050	0.0100
L-155-08-10	AA26789	MR1	18/Mar/2008	14:30	Mokelumne River Project	19/Mar/2008	21/Mar/2008	QC 10107041B	Nitrate as N	mg/L	0.0137		0.0050	0.0100
L-155-08-11	AA26790	BC2	18/Mar/2008	9:20	Mokelumne River Project	19/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	13.3		5.0	10.0
L-155-08-12	AA26791	MC2	18/Mar/2008	10:20	Mokelumne River Project	19/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	9.8	DNQ	5.0	10.0
L-155-08-13	AA26792	BR1	18/Mar/2008	11:20	Mokelumne River Project	19/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	9.0	DNQ	5.0	10.0
L-155-08-14	AA26793	NFMR5	18/Mar/2008	13:20	Mokelumne River Project	19/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	15.4		5.0	10.0
L-155-08-15	AA26794	MR1	18/Mar/2008	14:30	Mokelumne River Project	19/Mar/2008	08/Apr/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	21.9		5.0	10.0
L-155-08-16	AA26795	BC2	18/Mar/2008	9:20	Mokelumne River Project	19/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	9.1	DNQ	3.0	10.0
L-155-08-17	AA26796	MC2	18/Mar/2008	10:20	Mokelumne River Project	19/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	4.7	DNQ	3.0	10.0
L-155-08-18	AA26797	BR1	18/Mar/2008	11:20	Mokelumne River Project	19/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	9.2	DNQ	3.0	10.0
L-155-08-19	AA26798	NFMR5	18/Mar/2008	13:20	Mokelumne River Project	19/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	11.1		3.0	10.0
L-155-08-20	AA26799	MR1	18/Mar/2008	14:30	Mokelumne River Project	19/Mar/2008	20/Mar/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	18.8		3.0	10.0

MDL = Method Detection Limit
RL = Reporting Limit
ND=Not Detected
DNQ = Detected, Not Quantified

DEPARTMENT OF FISH AND GAME
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Name: Charles Vertucci
Agency: Devine Tarbell & Associates, Inc.
Address: 2720 Gateway Oaks Dr., Suite 300
City: Sacramento. CA 95833

WPCL LABORATORY QUALITY CONTROL REPORT

LABORATORY NUMBER: L-149-08

Batch Name	QA Parameter	Result	Units
ALK_FIA-3212	Recovery of Spike Dup 9/1/06	108	%
	Recovery Ref Std	97.4	
	Precision	3.82	
	Recovery of Spike 9/1/06	112	
	Precision of Sample Duplicate	0.00	
	Alkalinity as CaCO3	5.3	mg/L
	Blank	-3.0	
	Spike Duplicate	53.9	
	Expected Spike	50.0	
	Reference Standard	48.2	
	Spike Result	56.0	
	Sample Duplicate	5.3	
	True Value Ref Std	49.5	
	Spike Amount	50.0	mg/L as CaCO3
	Value of Sample Spiked	5.3	

Labworks ID AA26762
Samples: AA26762 AA26763 AA26764 AA26795 AA26796 AA26797 AA26798 AA26799

Analysis Code: ALK_FIA
AnalysisEndDate: 3/20/2008

Batch Name	QA Parameter	Result	Units
HARD_FIA-3270	Value of Sample Spiked	11.1	
	Recovery of Spike Dup 9/1/06	102	%
	Recovery Ref Std	99.5	
	Precision	0.89	
	Recovery of Spike 9/1/06	101	
	Precision of Sample Duplicate	1.78	
	Spike Amount	100	mg/L
	Blank	ND	
	Spike Duplicate	113	
	Expected Spike	111.1	
	Hardness as CaCO3	11.1	
	Reference Standard	198	
	Spike Result	112	
	Sample Duplicate	11.3	
	True Value Ref Std	199	

Labworks ID AA26758
Samples: AA26758 AA26759 AA26760 AA26761 AA26790 AA26791 AA26792 AA26793 AA26794

Analysis Code: HARD_FIA
AnalysisEndDate: 4/8/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Monday, April 14, 2008 10:26

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-149-08

Batch Name	QA Parameter	Result	Units
NO3_FIA-3247	Recovery of Spike Dup 9/1/06	97.2	%
	Recovery Ref Std	102	
	Precision	0.000	
	Recovery of Spike 9/1/06	97.2	
	Precision of Sample Duplicate	1.04	
	Spike Amount	0.100	mg/L
	Blank	ND	
	Spike Duplicate	0.126	
	Expected Spike	0.129	
	Reference Standard	0.0460	
	Nitrate as N	0.0288	
	Spike Result	0.126	
	Sample Duplicate	0.0291	
	True Value Ref Std	0.0450	
	Value of Sample Spiked	0.0288	

Labworks ID AA26754
Samples: AA26757 AA26754 AA26755 AA26756 AA26785 AA26786 AA26787 AA26788 AA26789

Analysis Code: NO3_FIA
AnalysisEndDate: 3/21/2008

Batch Name	QA Parameter	Result	Units
TSSHATCH_1-3203	Recovery Ref Std	82.9	%
	Recovery Ref Std Duplicate		
	Precision Ref Std	0.00	
	Precision of Sample Duplicate	0.0	
	Blank	ND	mg/L
	Reference Standard	25.2	
	Ref Std Duplicate		
	Sample Duplicate	2.0	
	True Value Ref Std	30.4	
	Total Suspended Solids 1L	2.0	

Labworks ID AA26753
Samples: AA26751 AA26752 AA26753

Analysis Code: SSHATCH_1L
AnalysisEndDate: 3/18/2008

Batch Name	QA Parameter	Result	Units
TSSHATCH_1-3226	Recovery Ref Std	81.6	%
	Recovery Ref Std Duplicate	82.9	
	Precision Ref Std	1.60	
	Blank	ND	mg/L
	Reference Standard	24.8	
	Ref Std Duplicate	25.2	
	True Value Ref Std	30.4	
	Total Suspended Solids 1L	ND	

Labworks ID AA26780
Samples: AA26780 AA26781 AA26782 AA26783 AA26784

Analysis Code: SSHATCH_1L
AnalysisEndDate: 3/24/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Monday, April 14, 2008 10:26

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-149-08

Patty Bucksell 4/14/08
Reviewed By: **Date:**

C.R. Todd for 4/15/08
Laboratory Director: **Date**
D.B. Crane

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name:	Charles Vertucci	**Lab Number:**	L-720-08
Agency:	Devine Tarbell & Associates, Inc.	**Other Number:**	
Address:	2720 Gateway Oaks Dr., Suite 300	**Date Sampled:**	09/23-25/08
City:	Sacramento, Ca 95833	**Date Received:**	09/26/08
		Date Completed:	10/14/08

RE: Mokelumne River Water Quality Monitoring Report

RESULTS OF CHEMICAL ANALYSIS: See attached spreadsheets.

Note: The holding time for the analysis of nitrite was exceeded due to sample receipt beyond the 48 holding time. Samples may have slight degradation.

Cost of Analyses: $1257.00

Analysts: JR, KEP, KP, DR

Patty Buckner — 10/28/08
Inorganic Section Leader — **Date**

D S Crumpton — 10/29/08
Laboratory Director — **Date**

Devine Tarbell Associates, Inc.
2720 Gateway Oaks Dr., Ste. 300
Sacramento, CA 95833
Attn: Charles Vertucci

Mokelumne River Project

Ca Dept. of Fish and Game
Water Pollution Control Lab
2005 Nimbus Rd.
Rancho Cordova, CA 95670

LabSampleID	Lab ID#	SampleDate	SampleTime	AgencyCode	Lab Submittal Date	Analysis Date	Method	Analyte Name	Unit	Lab Result	Qualifier	MDL	RL
L-720-08-01	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.3	DNQ	0.2	1.0
L-720-08-02	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.7	DNQ	0.2	1.0
L-720-08-03	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.6	DNQ	0.2	1.0
L-720-08-04	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.8	DNQ	0.2	1.0
L-720-08-05	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	ND		0.2	1.0
L-720-08-06	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.4	DNQ	0.2	1.0
L-720-08-07	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.7	DNQ	0.2	1.0
L-720-08-08	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	SM 2540 D	Total Suspended Solids	mg/L	0.5	DNQ	0.2	1.0
L-720-08-09	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	0.0229		0.0050	0.0100
L-720-08-10	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	0.0210		0.0050	0.0100
L-720-08-11	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	0.0333		0.0050	0.0100
L-720-08-12	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	0.0131		0.0050	0.0100
L-720-08-13	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	ND		0.0050	0.0100
L-720-08-14	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	ND		0.0050	0.0100
L-720-08-15	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	ND		0.0050	0.0100
L-720-08-16	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	ND		0.0050	0.0100
L-720-08-17	Mokelumne Field Blank	24/Sep/2008	10:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate + Nitrite as N	mg/L	0.0071	DNQ	0.0050	0.0100
L-720-08-09	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	0.0229	H	0.0050	0.0100
L-720-08-10	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	0.0210	H	0.0050	0.0100
L-720-08-11	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	0.0333	H	0.0050	0.0100
L-720-08-12	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	0.0131	H	0.0050	0.0100
L-720-08-13	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	ND	H	0.0050	0.0100
L-720-08-14	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	ND	H	0.0050	0.0100
L-720-08-15	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	ND		0.0050	0.0100
L-720-08-16	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	ND		0.0050	0.0100
L-720-08-17	Mokelumne Field Blank	24/Sep/2008	10:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	29/Sep/2008	QC 10107041B	Nitrate as N	mg/L	0.0071	DNQ, H	0.0050	0.0100

Devine Tarbell Associates, Inc.
2720 Gateway Oaks Dr., Ste. 300
Sacramento, CA 95833
Attn: Charles Vertucci

Mokelumne River Project

Ca Dept. of Fish and Game
Water Pollution Control Lab
2005 Nimbus Rd.
Rancho Cordova, CA 95670

LabSampleID	Lab ID#	SampleDate	SampleTime	AgencyCode	Lab Submittal Date	Analysis Date	Method	Analyte Name	Unit	Lab Result	Qualifier	MDL	RL
L-720-08-18	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	7.8	DNQ	5.0	10.0
L-720-08-19	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	10.5		5.0	10.0
L-720-08-20	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	6.2	DNQ	5.0	10.0
L-720-08-21	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	18.1		5.0	10.0
L-720-08-22	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	21.1		5.0	10.0
L-720-08-23	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	8.0	DNQ	5.0	10.0
L-720-08-24	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	5.7	DNQ	5.0	10.0
L-720-08-25	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	13.2		5.0	10.0
L-720-08-26	Mokelumne Field Blank	24/Sep/2008	10:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	14/Oct/2008	QC 10301311B	Hardness as $CaCO_3$	mg/L	ND		5.0	10.0
L-720-08-27	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	5.0	DNQ	3.0	10.0
L-720-08-28	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	10.6		3.0	10.0
L-720-08-29	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	6.3	DNQ	3.0	10.0
L-720-08-30	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	20.3		3.0	10.0
L-720-08-31	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	21.1		3.0	10.0
L-720-08-32	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	9.7	DNQ	3.0	10.0
L-720-08-33	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	5.8	DNQ	3.0	10.0
L-720-08-34	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	9.8	DNQ	3.0	10.0
L-720-08-35	Mokelumne Field Blank	24/Sep/2008	10:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	30/Sep/2008	QC 10303311A	Alkalinity as $CaCO_3$	mg/L	ND		3.0	10.0
L-720-08-27	NFMR2	23/Sep/2008	11:45	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-28	TC1	23/Sep/2008	14:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-29	BR1	24/Sep/2008	10:10	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-30	MR1	24/Sep/2008	14:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-31	NFMR3	24/Sep/2008	12:00	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-32	NFMR5	24/Sep/2008	13:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050
L-720-08-33	MC2	25/Sep/2008	12:05	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND		0.0020	0.0050
L-720-08-34	BC2	25/Sep/2008	11:30	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND		0.0020	0.0050
L-720-08-35	Mokelumne Field Blank	24/Sep/2008	10:15	MOKELUMNE RIVER PROJECT	26/Sep/2008	26/Sep/2008	QC 10107041B	Nitrite as N	mg/L	ND	H	0.0020	0.0050

MDL = Method Detection Limit
RL = Reporting Limit
ND = Not Detected
DNQ = Detected, Not Quantified
H = Holding Time exceeded. Samples were received beyond the 48 hour holding time for nitrite analysis. Samples may have slight degradation.
Note:Nitrate as N is calculated by subtraction of nitrite as N from the total nitrite + nitrite N.

DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY
2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

Name: Charles Vertucci
Agency: Devine Tarbell & Associates, Inc.
Address: 2720 Gateway Oaks Dr., Suite 300
City: Sacramento. CA 95833

WPCL LABORATORY QUALITY CONTROL REPORT

LABORATORY NUMBER: L-720-08

Batch Name	QA Parameter	Result	Units
ALK_FIA-4156	Recovery of Spike Dup 9/1/06	101	%
	Recovery Ref Std		
	Precision	5.19	
	Recovery of Spike 9/1/06	95.2	
	Precision of Sample Duplicate	1.90	
	Spike Amount	50.0	mg/L
	Alkalinity as CaCO3	10.6	
	Blank	ND	
	Spike Duplicate	61.3	
	Expected Spike	60.6	
	Reference Standard	66.0	
	Spike Result	58.2	
	Sample Duplicate	10.4	
	True Value Ref Std	65.4	
	Value of Sample Spiked	10.6	

Labworks ID AA34806
Samples: AA34805 AA34806 AA34807 AA34808 AA34809 AA34810 AA34811 AA34812 AA34813

Analysis Code: ALK_FIA
AnalysisEndDate: 9/30/2008

Batch Name	QA Parameter	Result	Units
HARD_FIA-4232	Value of Sample Spiked	0.00	
	Recovery of Spike Dup 9/1/06	113	%
	Recovery Ref Std	105	
	Precision	0.00	
	Recovery of Spike 9/1/06	113	
	Precision of Sample Duplicate	0.00	
	Spike Amount	100	mg/L
	Blank	ND	
	Spike Duplicate	113	
	Expected Spike	100	
	Hardness as CaCO3	7.8	
	Reference Standard	379	
	Spike Result	113	
	Sample Duplicate	8.0	
	True Value Ref Std	361	

Labworks ID AA34796
Samples: AA34796 AA34797 AA34798 AA34799 AA34800 AA34801 AA34802 AA34803 AA34804

Analysis Code: HARD_FIA
AnalysisEndDate: 10/14/2008

Quality Control Acceptance Criteria Solids
Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water
Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, October 28, 2008 15:43

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-720-08

Batch Name	QA Parameter	Result	Units
NO2_FIA-4152	Recovery of Spike Dup 9/1/06	102	%
	Recovery Ref Std	93.6	
	Precision	0.49	
	Recovery of Spike 9/1/06	101	
	Precision of Sample Duplicate	0.00	
	Spike Amount	0.0200	mg/L
	Blank	ND	
	Spike Duplicate	0.0203	
	Expected Spike	0.0200	
	Reference Standard	0.0570	
	Nitrite as N	ND	
	Spike Result	0.0202	
	Sample Duplicate	ND	
	True Value Ref Std	0.0609	
	Value of Sample Spiked	0.00	

Labworks ID AA34811
Samples: AA34805 AA34806 AA34807 AA34808 AA34809 AA34810 AA34811 AA34812 AA34813

Analysis Code: NO2_FIA
AnalysisEndDate: 9/26/2008

Batch Name	QA Parameter	Result	Units
NO2_NO3_FI-4155	Recovery of Spike Dup 9/1/06	85.8	%
	Recovery Ref Std	97.2	
	Precision	0.00	
	Recovery of Spike 9/1/06	85.8	
	Precision of Sample Duplicate	0.88	
	Spike Amount	0.0500	mg/L
	Blank	-0.0050	
	Spike Duplicate	0.0658	
	Expected Spike	0.0729	
	Reference Standard	0.103	
	Nitrate + Nitrite as N	0.0229	
	Spike Result	0.0658	
	Sample Duplicate	0.0227	
	True Value Ref Std	0.106	
	Value of Sample Spiked	0.0229	

Labworks ID AA34787
Samples: AA34787 AA34788 AA34789 AA34790 AA34791 AA34792 AA34793 AA34794 AA34795

Analysis Code: IO2_NO3_FIA
AnalysisEndDate: 9/29/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, October 28, 2008 15:43

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-720-08

Batch Name	QA Parameter	Result	Units
NO3_FIA-4154	Recovery of Spike Dup 9/1/06	85.8	%
	Recovery Ref Std	93.3	
	Precision	0.00	
	Recovery of Spike 9/1/06	85.8	
	Precision of Sample Duplicate	0.88	
	Spike Amount	0.0500	mg/L
	Blank	-0.0050	
	Spike Duplicate	0.0658	
	Expected Spike	0.0729	
	Reference Standard	0.0420	
	Nitrate as N	0.0229	
	Spike Result	0.0658	
	Sample Duplicate	0.0227	
	True Value Ref Std	0.0450	
	Value of Sample Spiked	0.0229	

Labworks ID AA34787 Analysis Code: NO3_FIA
Samples: AA34787 AA34788 AA34789 AA34790 AA34791 AA34792 AA34793 AA34794 AA34795 AnalysisEndDate: 9/29/2008

Batch Name	QA Parameter	Result	Units
TSSHATCH_1-4157	Recovery Ref Std	87.1	%
	Recovery Ref Std Duplicate	84.4	
	Precision Ref Std	3.11	
	Blank	ND	mg/L
	Reference Standard	78.4	
	Ref Std Duplicate	76.0	
	True Value Ref Std	90.0	
	Total Suspended Solids 1L	0.3	

Labworks ID AA34779 Analysis Code: SSHATCH_1L
Samples: AA34779 AA34780 AA34781 AA34782 AA34783 AA34784 AA34785 AA34786 AnalysisEndDate: 9/30/2008

Patty Buckner 10/28/08 **Reviewed By:** **Date:**

10/29/08 **Laboratory Director:** **Date**

Quality Control Acceptance Criteria Solids
Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water
Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, October 28, 2008 15:43

DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name:	Charles Vertucci	**Lab Number:**	L-408-08 & L-416-08
Agency:	Devine Tarbell & Associates, Inc.	**Other Number:**	
Address:	2720 Gateway Oaks Dr., Suite 300	**Date Sampled:**	06/24/08 & 06/26/08
City:	Sacramento, Ca 95833	**Date Received:**	06/25/08 & 06/26/08
		Date Completed:	07/22/08
		Index-PCA Code:	

RE: Mokelumne River Water Quality Monitoring Report

RESULTS OF CHEMICAL ANALYSIS: See attached spreadsheets.

Note: The field blank for L-416-08-11 was detected at 0.0317 mg/L for nitrate and L-416-08-17 was detected at 5.0 mg/L (DNQ) for hardness. The result for nitrate was confirmed by a second analysis.

Cost of Analyses: $1222.00

Analysts: JR, KEP, KP, DR
DNQ = Detected Not Quantified

Patty Buckwell — Inorganic Section Leader — Date 8/5/08

Laboratory Director — Date 8/13/08

Devine Tarbell Associates, Inc.
2720 Gateway Oaks Dr., Ste. 300
Sacramento, CA 95833
Attn: Charles Vertucci

Mokelumne River Project

Ca Dept. of Fish and Game
Water Pollution Control Lab
2005 Nimbus Rd.
Rancho Cordova, CA 95670

LabSampleID	Lab ID#	Location	SampleDate	SampleTime	AgencyCode	Lab Submittal Date	Analysis Date	Method	Analyte Name	Unit	Lab Result	Qualifier	MDL	RL
L-408-08-01	AA30425	BR1	24/Jun/2008	11:00	Mokelumne River Project	25/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	0.4	DNQ	0.2	1.0
L-408-08-02	AA30426	NFMR3	24/Jun/2008	13:03	Mokelumne River Project	25/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	8.2		0.2	1.0
L-408-08-03	AA30427	TC1	24/Jun/2008	14:00	Mokelumne River Project	25/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	1.2		0.2	1.0
L-408-08-06	AA30430	TC1	24/Jun/2008	14:00	Mokelumne River Project	25/Jun/2008	01/Jul/2008	QC 10107041B	Nitrate as N	mg/L	ND	ND	0.0050	0.0100
L-408-08-07	AA30431	BR1	24/Jun/2008	11:00	Mokelumne River Project	25/Jun/2008	01/Jul/2008	QC 10107041B	Nitrate as N	mg/L	0.0803		0.0050	0.0100
L-408-08-08	AA30432	NFMR3	24/Jun/2008	13:03	Mokelumne River Project	25/Jun/2008	01/Jul/2008	QC 10107041B	Nitrate as N	mg/L	ND	ND	0.0050	0.0100
L-408-08-09	AA30433	TC1	24/Jun/2008	14:00	Mokelumne River Project	25/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	7.3	DNQ	5.0	10.0
L-408-08-10	AA30434	BR1	24/Jun/2008	11:00	Mokelumne River Project	25/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	6.9	DNQ	5.0	10.0
L-408-08-11	AA30435	NFMR3	24/Jun/2008	13:03	Mokelumne River Project	25/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	17.2		5.0	10.0
L-408-08-12	AA30436	TC1	24/Jun/2008	14:00	Mokelumne River Project	25/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	7.0	DNQ	3.0	10.0
L-408-08-13	AA30437	BR1	24/Jun/2008	11:00	Mokelumne River Project	25/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	8.3	DNQ	3.0	10.0
L-408-08-14	AA30438	NFMR3	24/Jun/2008	13:03	Mokelumne River Project	25/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	19.4		3.0	10.0
L-416-08-01	AA30489	MC2	26/Jun/2008	9:30	Mokelumne River Project	26/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	4.3		0.2	1.0
L-416-08-02	AA30490	BC2	26/Jun/2008	8:50	Mokelumne River Project	26/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	1.1		0.2	1.0
L-416-08-03	AA30491	NFMR5	25/Jun/2008	13:20	Mokelumne River Project	26/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	0.3	DNQ	0.2	1.0
L-416-08-04	AA30492	NFMR2	25/Jun/2008	11:20	Mokelumne River Project	26/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	0.3	DNQ	0.2	1.0
L-416-08-05	AA30493	MR1	25/Jun/2008	14:21	Mokelumne River Project	26/Jun/2008	27/Jun/2008	SM 2540 D	Total Suspended Solids	mg/L	0.9	DNQ	0.2	1.0
L-416-08-06	AA30494	MC2	26/Jun/2008	9:30	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	0.0123		0.0050	0.0100
L-416-08-07	AA30495	BC2	26/Jun/2008	8:50	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	0.0719		0.0050	0.0100
L-416-08-08	AA30496	NFMR5	25/Jun/2008	13:20	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	ND		0.0050	0.0100
L-416-08-09	AA30497	NFMR2	25/Jun/2008	11:20	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	0.0056	DNQ	0.0050	0.0100
L-416-08-10	AA30498	MR1	25/Jun/2008	14:21	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	ND		0.0050	0.0100
L-416-08-11	AA30499	Field Blank	25/Jun/2008	15:10	Mokelumne River Project	26/Jun/2008	22/Jul/2008	QC 10107041B	Nitrate as N	mg/L	0.0317		0.0050	0.0100
L-416-08-12	AA30500	MC2	26/Jun/2008	9:30	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	8.9	DNQ	5.0	10.0
L-416-08-13	AA30501	BC2	26/Jun/2008	8:50	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	12.9		5.0	10.0
L-416-08-14	AA30502	NFMR5	25/Jun/2008	13:20	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	11.4		5.0	10.0
L-416-08-15	AA30503	NFMR2	25/Jun/2008	11:20	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	9.3	DNQ	5.0	10.0
L-416-08-16	AA30504	MR1	25/Jun/2008	14:21	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	16.3		5.0	10.0
L-416-08-17	AA30505	Field Blank	25/Jun/2008	15:10	Mokelumne River Project	26/Jun/2008	02/Jul/2008	QC 10301311B	Hardness as CaCO3	mg/L	5.0	DNQ	5.0	10.0
L-416-08-18	AA30506	MC2	26/Jun/2008	9:30	Mokelumne River Project	26/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	7.0	DNQ	3.0	10.0
L-416-08-19	AA30507	BC2	26/Jun/2008	8:50	Mokelumne River Project	26/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	11.2		3.0	10.0
L-416-08-20	AA30508	NFMR5	25/Jun/2008	13:20	Mokelumne River Project	26/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	13.1		3.0	10.0
L-416-08-21	AA30509	NFMR2	25/Jun/2008	11:20	Mokelumne River Project	26/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	7.6	DNQ	3.0	10.0
L-416-08-22	AA30510	MR1	25/Jun/2008	14:21	Mokelumne River Project	26/Jun/2008	07/Jul/2008	QC 10303311A	Total Alkalinity as $CaCO_3$	mg/L	17.0		3.0	10.0

MDL = Method Detection Limit
RL = Reporting Limit
ND=Not Detected
DNQ = Detected, Not Quantified

DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY
2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

Name: Charles Vertucci
Agency: Devine Tarbell & Associates, Inc.
Address: 2720 Gateway Oaks Dr., Suite 300
City: Sacramento. CA 95833

WPCL LABORATORY QUALITY CONTROL REPORT

LABORATORY NUMBER: L-408-08

Batch Name	QA Parameter	Result	Units
ALK_FIA-3701	Recovery of Spike Dup 9/1/06	116	%
	Recovery Ref Std	96.5	
	Precision	1.99	
	Recovery of Spike 9/1/06	118	
	Precision of Sample Duplicate	0.00	
	Alkalinity as CaCO3	7.0	mg/L
	Blank	ND	
	Spike Duplicate	34.8	
	Expected Spike	30.0	
	Reference Standard	63.1	
	Spike Result	35.5	
	Sample Duplicate	8.8	
	True Value Ref Std	65.4	
	Value of Sample Spiked	0.00	
	Spike Amount	30.0	mg/L as CaCO3

Labworks ID AA30436
Samples: AA30436 AA30437 AA30438

Analysis Code: ALK_FIA
AnalysisEndDate: 7/7/2008

Batch Name	QA Parameter	Result	Units
HARD_FIA-3674	Value of Sample Spiked	17.2	
	Recovery of Spike Dup 9/1/06	105	%
	Recovery Ref Std	102	
	Precision	0.00	
	Recovery of Spike 9/1/06	105	
	Precision of Sample Duplicate	0.58	
	Spike Amount	100	mg/L
	Blank	ND	
	Spike Duplicate	122	
	Expected Spike	117	
	Hardness as CaCO3	17.2	
	Reference Standard	188	
	Spike Result	122	
	Sample Duplicate	17.1	
	True Value Ref Std	185	

Labworks ID AA30435
Samples: AA30433 AA30434 AA30435

Analysis Code: HARD_FIA
AnalysisEndDate: 7/2/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, August 05, 2008 07:57

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-408-08

Batch Name	QA Parameter	Result	Units
NO2_FIA-3669	Recovery of Spike Dup 9/1/06	98.0	%
	Recovery Ref Std	89.0	
	Precision	5.76	
	Recovery of Spike 9/1/06	92.5	
	Precision of Sample Duplicate	0.00	
	Spike Amount	0.0200	mg/L
	Blank	ND	
	Spike Duplicate	0.0196	
	Expected Spike	0.0200	
	Reference Standard	0.0542	
	Nitrite as N	ND	
	Spike Result	0.0185	
	Sample Duplicate	ND	
	True Value Ref Std	0.0609	
	Value of Sample Spiked	0.00	

Labworks ID AA30436
Samples: AA30436 AA30437 AA30438

Analysis Code: NO2_FIA
AnalysisEndDate: 6/26/2008

Batch Name	QA Parameter	Result	Units
NO3_FIA-3714	Recovery of Spike Dup 9/1/06	94.0	%
	Recovery Ref Std	104	
	Precision	4.79	
	Recovery of Spike 9/1/06	89.6	
	Precision of Sample Duplicate	0.00	
	Spike Amount	0.0500	mg/L
	Blank	-0.0050	
	Spike Duplicate	0.0470	
	Expected Spike	0.0500	
	Reference Standard	0.0470	
	Nitrate as N	-0.0050	
	Spike Result	0.0448	
	Sample Duplicate	-0.0050	
	True Value Ref Std	0.0450	
	Value of Sample Spiked	0.00	

Labworks ID AA30430
Samples: AA30430 AA30431 AA30432

Analysis Code: NO3_FIA
AnalysisEndDate: 7/1/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-408-08

Batch Name	QA Parameter	Result	Units
TSSHATCH_1-3624	Recovery Ref Std	111	%
	Recovery Ref Std Duplicate	108	
	Precision Ref Std	2.49	
	Precision of Sample Duplicate	0.00	
	Blank	ND	mg/L
	Reference Standard	85.5	
	Ref Std Duplicate	83.4	
	Sample Duplicate	1.2	
	True Value Ref Std	77.3	
	Total Suspended Solids 1L	1.2	

Labworks ID AA30427
Samples: AA30425 AA30426 AA30427

Analysis Code: SSHATCH_1L
AnalysisEndDate: 6/27/2008

Patty Buckell **Reviewed By:** 8/5/08 **Date:** **Laboratory Director:** 8/13/08 **Date**

Quality Control Acceptance Criteria Solids
Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water
Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, August 05, 2008 07:57

DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY
2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

Name: Charles Vertucci
Agency: Devine Tarbell & Associates, Inc.
Address: 2720 Gateway Oaks Dr., Suite 300
City: Sacramento. CA 95833

WPCL LABORATORY QUALITY CONTROL REPORT

LABORATORY NUMBER: L-416-08

Batch Name	QA Parameter	Result	Units
ALK_FIA-3701	Recovery of Spike Dup 9/1/06	116	%
	Recovery Ref Std	96.5	
	Precision	1.99	
	Recovery of Spike 9/1/06	118	
	Precision of Sample Duplicate	0.00	
	Alkalinity as CaCO3	7.0	mg/L
	Blank	ND	
	Spike Duplicate	34.8	
	Expected Spike	30.0	
	Reference Standard	63.1	
	Spike Result	35.5	
	Sample Duplicate	8.8	
	True Value Ref Std	65.4	
	Value of Sample Spiked	0.00	
	Spike Amount	30.0	mg/L as CaCO3

Labworks ID AA30436
Samples: AA30506 AA30507 AA30508 AA30509 AA30510

Analysis Code: ALK_FIA
AnalysisEndDate: 7/7/2008

Batch Name	QA Parameter	Result	Units
HARD_FIA-3674	Value of Sample Spiked	17.2	
	Recovery of Spike Dup 9/1/06	105	%
	Recovery Ref Std	102	
	Precision	0.00	
	Recovery of Spike 9/1/06	105	
	Precision of Sample Duplicate	0.58	
	Spike Amount	100	mg/L
	Blank	ND	
	Spike Duplicate	122	
	Expected Spike	117	
	Hardness as CaCO3	17.2	
	Reference Standard	188	
	Spike Result	122	
	Sample Duplicate	17.1	
	True Value Ref Std	185	

Labworks ID AA30435
Samples: AA30500 AA30501 AA30502 AA30503 AA30504 AA30505

Analysis Code: HARD_FIA
AnalysisEndDate: 7/2/2008

Quality Control Acceptance Criteria Solids
Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water
Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, August 05, 2008 07:58

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-416-08

Batch Name	QA Parameter	Result	Units
NO2_FIA-3672	Recovery of Spike Dup 9/1/06	97.5	%
	Recovery Ref Std	96.6	
	Precision	4.02	
	Recovery of Spike 9/1/06	102	
	Precision of Sample Duplicate	0.00	
	Spike Amount	0.0200	mg/L
	Blank	ND	
	Spike Duplicate	0.0195	
	Expected Spike	0.0200	
	Reference Standard	0.0588	
	Nitrite as N	ND	
	Spike Result	0.0203	
	Sample Duplicate	ND	
	True Value Ref Std	0.0609	
	Value of Sample Spiked	0.00	

Labworks ID AA30506
Samples: AA30506 AA30507 AA30508 AA30509 AA30510

Analysis Code: NO2_FIA
AnalysisEndDate: 6/26/2008

Batch Name	QA Parameter	Result	Units
NO3_FIA-3801	Recovery of Spike Dup 9/1/06	92.2	%
	Recovery Ref Std	95.6	
	Precision	0.00	
	Recovery of Spike 9/1/06	92.2	
	Precision of Sample Duplicate	4.76	
	Spike Amount	0.0500	mg/L
	Blank	-0.0050	
	Spike Duplicate	0.0584	
	Expected Spike	0.0623	
	Reference Standard	0.0430	
	Nitrate as N	0.0123	
	Spike Result	0.0584	
	Sample Duplicate	0.0129	
	True Value Ref Std	0.0450	
	Value of Sample Spiked	0.0123	

Labworks ID AA30494
Samples: AA30494 AA30495 AA30496 AA30497 AA30498 AA30499

Analysis Code: NO3_FIA
AnalysisEndDate: 7/22/2008

Quality Control Acceptance Criteria Solids

Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water

Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, August 05, 2008 07:58

WPCL LABORATORY QUALITY CONTROL REPORT **LABORATORY NUMBER:** L-416-08

Batch Name	QA Parameter	Result	Units
TSSHATCH_1-3624	Recovery Ref Std	111	%
	Recovery Ref Std Duplicate	108	
	Precision Ref Std	2.49	
	Precision of Sample Duplicate	0.00	
	Blank	ND	mg/L
	Reference Standard	85.5	
	Ref Std Duplicate	83.4	
	Sample Duplicate	1.2	
	True Value Ref Std	77.3	
	Total Suspended Solids 1L	1.2	

Labworks ID AA30427
Samples: AA30489 AA30490 AA30491 AA30492 AA30493

Analysis Code: SSHATCH_1L
AnalysisEndDate: 6/27/2008

Patty Gerkenel 8/5/08
Reviewed By: **Date:**

D3 Clone 8/13/08
Laboratory Director: **Date**

Quality Control Acceptance Criteria Solids
Duplicate Precision 0-25
Recovery of Spike 80-120
Recovery Reference Standard 70-130
Method Blank <RL

Quality Control Acceptance Criteria Water
Duplicate Precision 0-20
Recovery of Spike 80-120
Recovery Reference Standard 80-120
Method Blank <RL

Tuesday, August 05, 2008 07:58

Sierra Foothill Laboratory, Inc.
255 Scottsville Blvd
PO Box 1268
Jackson, CA 95642

03/17/2008

Phone 209/223-2800
Fax 209/223-2747
Email info@sierralab.com

Project Chain of Custody

PG&E
PG&E
Elizabeth Frantz
3400 Crow Canyon Rd
San Ramon, CA 94583-
Phone: 925/866-5345 Fax: 925/866-5681

Mokelumne R Project: **MOK**

Bottles Required for Requested Tests

_____Plastic 125 ml Sterilized Sodium Thiosulfate for Bacti
4 C: FC15

Requested Laboratory Tests

Fecal Coliform Bacteria, 15 tu FC15 W SM9221E

SFL #	Sample ID	G/C	W/S	#Bot	By	Date/Time
	NFMR 2 0222554	G	W		JT/LK	3/17/08 11:50
	TC1 0222549	✓	✓		✓	✓ 13:50
	NFMR3 0222547	✓	✓		✓	✓ 14:35

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/17/08	16:10	Jena Bocard	3/17/08	16:10

Received on Ice? ☐ Yes ☐ No **Method of Shipment:** ☐ UPS ☐ FedEx ☐ Lone Star ☐ Hand ☐ Airborne ☐ Other

Cooler/Sample Secure? ☐ Yes ☐ No **Tracking or Shipping Number:**_____

Sierra Foothill Laboratory, Inc.
255 Scottsville Blvd
PO Box 1268
Jackson, CA 95642

Phone 209/223-2800
Fax 209/223-2747
Email info@sierralab.com

Project Chain of Custody

PG&E
PG&E
Elizabeth Frantz
3400 Crow Canyon Rd
San Ramon, CA 94583-
Phone: 925/866-5345 Fax: 925/866-5681

Mokelumne R Project: **MOK**

Bottles Required for Requested Tests

_____Plastic 125 ml Sterilized Sodium Thiosulfate for Bacti
4 C: FC15

Requested Laboratory Tests

Fecal Coliform Bacteria, 15 tu FC15 W SM9221E

SFL #	Sample ID	G/C	W/S	#Bot	By	Date/Time
	BC 2	G	W		JT/EK	3/18/08 09:20
	MC 2	"	"		✓	" 10:20
	BR1	✓	"		✓	✓ 11:20
	MR1	"	"		✓	" 14:30
	NFMR1	✓	"		✓	" 15:20

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/18/08	15:25	Jana Bottano	3/18/08	15:25

Received on Ice? ☐ Yes ☐ No **Method of Shipment:** ☐ UPS ☐ FedEx ☐ Lone Star ☐ Hand ☐ Airborne ☐ Other

Cooler/Sample Secure? ☐ Yes ☐ No **Tracking or Shipping Number:**_____

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
JUSTIN TORTOSA	916-576-0323	CHUCK VERTUCCI	L-155-08
Address		**Address** 2720 GATEWAY OAKS DR SUITE 300	**Field Number**
2720 GATEWAY OAKS DR. ST 300		**City** SACRAMENTO **CA** **Zip** 95833	**Lab Storage**
City SACRAMENTO **CA**	**Zip** 95833	**Copies To**	**Spill Title**
Date Required/Reason Standard 30 day		**Address**	**Suspect**
Shipped Via		**City** **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Analysis Requested >>>

Water Temp: F or C pH: DO: mg/L Conductivity: *u* mhos/cm

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	EPA 160.2 TSS	EPA 130.2 HARDNESS	SM2320B ALKALINITY	SM4500NO3-E NITRATE-N			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
BC2	2/14/08	920				X		X				X				1				4°C		
BC2	"	"					X					X				1					HNO_3	
BC2	"	"							X			X				1					H_2SO_4	
MC2	"	1020				X		X				X				1				4°C		
MC2	"	"					X					X				1					HNO_3	
MC2	"	"							X			X				1					H_2SO_4	
BR1	"	1120				X		X				X				1				4°C		
BR1	"	"					X					X				1					HNO_3	
BR1	"	"							X			X				1					H_2SO_4	
NFMR5	"	1320				X		X				X				2				4°C		

Problem Description

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
[signature]	Justin Tortosa	3/19/08	[signature]	P Burkett	3/19/08 0940

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER: GOLDENROD**

FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
Justin Tortosa	916.576.0321	Chuck Vertucci	L-155-08
Address		**Address**	**Field Number**
2720 Gateway Oaks Dr., suite 300		2720 Gateway Oaks Dr. Suite 300	
City	**Zip**	**City / Zip**	**Lab Storage**
Sacramento	CA 95833	Sacramento CA 95833	
		Copies To	**Spill Title**
Date Required/Reason		**Address**	**Suspect**
Standard 30 day			
Shipped Via		**City / Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Analysis Requested >>>

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	EPA 160.2 TSS	EPA 130.2 Hardness	SM 2320B Alkalinity	SM 4500NO3-E Nitrate			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
NFMR5	2/18/08	1320					X					X				1					HNO_3	
NFMR5	"	"							X			X				1					H_2SO_4	
MR1	"	1430				X		X				X				2				4°C		
MR1	"	"					X					X				1					HNO_3	
MR1	"	"							X			X				1					H_2SO_4	

Problem Description

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Reliquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
[signature]	Justin Tortosa	3/19/08	[signature]	P Buckwell	3/19/08 0940

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER: GOLDENROD** FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
Justin Tortosa	916-576-1027	Chuck Van Laan	L-149-08
Address		**Address**	**Field Number**
2720 Gateway Oaks Dr Suite 300		2720 Gateway Oaks Dr Suite 300	
City	**Zip**	**City** / **Zip**	**Lab Storage**
Sacramento	CA 95833	Sacramento CA 95833	
		Copies To	**Spill Title**
Date Required/Reason		**Address**	**Suspect**
Standard 30 day			
Shipped Via		**City** / **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Analysis Requested >>>

Water Temp: F or C pH: DO: mg/L Conductivity: u mhos/cm

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	TOC TDS TSS	CA TRPH Hydrocarbons	SM 5520B Hydrocarbons	Semi-Volatile Organics			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
NEMR2	3/12/08	1150				✓		✓				X				1				✓		
NEMR2	"	"					✓					X				1					✓	
NEMR2	"	"							✓			X				1						✓
TC1	"	1350				✓		✓				X				1				✓		
TC1	"	"					✓					X				1					✓	
TC1	"	"							✓			X				1						✓
NEMR3	"	1135				✓		✓				X				1				✓		
NEMR3	"	"					✓					X				1					✓	
NEMR3	"	"							✓			X				1						✓
Field Blank	"	1100					✓					X				1					✓	

Problem Description Hakelumne River Project

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
[illegible]	Justin Tortosa	3/12/08			
			[illegible]	D.B. CLAVE	3/12/08

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER: GOLDENROD** FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
Justin Tortosa	916.576.0329	Mark Vertosa	L-149-08
Address		**Address**	**Field Number**
2320 Gateway Oaks Dr suite 300		2320 Gateway Oaks Dr suite 300	
City	**Zip**	**City** / **Zip**	**Lab Storage**
Sacramento	CA 95833	Sacramento CA 95833	
		Copies To	**Spill Title**
Date Required/Reason		**Address**	**Suspect**
Standard 30 days			
Shipped Via		**City** / **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: *u* mhos/cm

Analysis Requested >>>

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	EPA 160.2 TSS	EPA 130.1 Hardness	SM 2320B Alkalinity	SM 4500NO3-N Nitrate as N			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
Field Blank	3/14/08								✓			✓				1						

Problem Description

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
[signature]	Justin Tortosa	3/14/08			
			[signature]	D. Crane	3/14/08

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER: GOLDENROD**

FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD Page 1 of 1

Sampler: CHUCK VERTUCCI Ph #	Send Results To: CHUCK VERTUCCI	Lab Number
Address: 2720 GATEWAY OAKS DR SUT 300	Address: 2720 GATEWAY OAKS DR SUITE 300	Field Number
City: SACRAMENTO CA Zip: 95833	City: SACRAMENTO CA Zip: 95833	Lab Storage
Date Required/Reason: 30 DAY	Copies To	
Shipped Via	Address	
	City Zip	

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separare sheet if necessary)	Collection Date	Collection Time	Trace Elements (Specify Below)	Total Mercury	Dissolved Mercury	Total MethylHg	Dissolved MethylHg	TSS	SSC	EPA220 COPPER		Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
BR1	6/24	1100								X		X				1					HNO3	
NFMR3	6/24	1303								X		X				1						
NFMR5	6/25	1320								X		X				1						
NFMR2	6/25	1120								X		X				1						
TC1	6/24	1400								X		X				1						
MR1	6/25	1421								X		X				1						
MC2	6/26	930								X		X				1						
BC2	6/26	850								X		X				1						
FIELD BLANK	6/25	1510								X		X				1						

Project Name: MOKELUMNE RIVER PROJECT

Comments/Special Instructions: All samples field preserved (HNO_3)

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name
Chuck Vertucci	Charles Vertucci	6/26		

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

LAB # 07A

DATE RECEIVED: 6 24 08

TIME RECEIVED:

CUSTOMER NAME: Renee Tarbell

BILL TO:

ADDRESS:

ADDRESS:

CITY, STATE, ZIP:

CITY, STATE, ZIP:

ATTENTION:

ATTENTION:

PREPAID: CHECK/RECEIPT #:

P.O. #: REQUISITION #:

ID #	SOURCE DESCRIPTION	ANALYSIS	SAMPLING & CONTAINER INFORMATION:				
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	TC1	FC15	G	W	P	6 24 08 / 1400	CAFK
	824222						
	BR1	FC15				/ 1100	
	50150						
	NFHR 3	FC15				/ 1303	
	824217						

RELINQUISHED BY: DATE/TIME: 6/24/08 / 1530

RECEIVED BY: DATE/TIME: 6 24 08 / 1530

RELINQUISHED BY: DATE/TIME:

RECEIVED BY: DATE/TIME:

DATA ENTERED:

C.O.C. FORMS

Date: Time:

LAB #_____

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

DATE RECEIVED: 6-25-08 TIME RECEIVED: _____

CUSTOMER NAME: Dennis Tarbell BILL TO: _____

ADDRESS: _____ ADDRESS: _____

CITY, STATE, ZIP: _____ CITY, STATE, ZIP: _____

ATTENTION: _____ ATTENTION: _____

PREPAID: _____ CHECK/RECEIPT #: _____ P.O. #: _____ REQUISITION #: _____

ID #	SOURCE DESCRIPTION	ANALYSIS	SAMPLING & CONTAINER INFORMATION:				
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	MR1	FC15	G	W	P	6-25-08 / 1421	CK/BK
	824210						
	NFMR2	FC15				11120	
	824211						
	NFMR2	FC15				11320	
	824213						

RELINQUISHED BY: [signature] DATE/TIME: 6-25-08 1500

RECEIVED BY: [signature] DATE/TIME: 6-25-08 / 1500

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED BY: _____ DATE/TIME: _____

DATA ENTERED: _____

C.O.C. FORMS

Date: _____ Time: _____

6-26-08

LAB #_____

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

DATE RECEIVED: 6-26-08 TIME RECEIVED: _____

CUSTOMER NAME: Kleinfelder Associ BILL TO: _____

ADDRESS: _____ ADDRESS: _____

CITY, STATE, ZIP: _____ CITY, STATE, ZIP: _____

ATTENTION: _____ ATTENTION: _____

PREPAID: 425.00 CHECK/RECEIPT #: Credit Card P.O. #: _____ REQUISITION #: _____

ID #	SOURCE DESCRIPTION	ANALYSIS	SAMPLING & CONTAINER INFORMATION:				
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	MC2	FC15	G	W	P	6-26-08 / 0930	CV/EK
	824209		↓	↓	↓	↓	↓
	BC2	FC15	↓	↓	↓	↓ / 0850	↓
	824224						
	$85.00 x 8	= 425.00					

RELINQUISHED BY: [signature] DATE/TIME: 6-26-08 / 1037

RECEIVED BY: [signature] DATE/TIME: 6-26-08 / 1037

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED BY: _____ DATE/TIME: _____

DATA ENTERED: _____

C.O.C. FORMS

Date: _____ Time: _____

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD Page 3 of 3

Sampler: CHUCK VERTUCCI Ph #: 916 576 0404	Send Results To: CHUCK VERTUCCI	Lab Number: L-416-08
Address: 2720 GATEWAY OAKS SUITE 300	Address: 2720 GATEWAY OAKS DR SUITE 300	Field Number:
City: SACRAMENTO CA Zip: 95833	City: SACRAMENTO CA Zip: 95833	Lab Storage:
Date Required/Reason: 30 DAYS	Copies To:	
Shipped Via:	Address:	
	City: Zip:	

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Analysis Requested

Sample Identification/Location (map on separare sheet if necessary)	Collection Date	Collection Time	Trace Elements (Specify Below)	ALKALINITY	~~Total Alkalinity~~	~~Dissolved Metals~~	HARDNESS	NITRATE AS N	~~Total Hardness~~	TSS	~~Dissolved Metals~~	~~TDS~~	~~TSS~~			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
MR1	6/25	1421		X						X						X				1				4°C		
MR1	6/25	1421					X									X				1					NO3	
MR1	6/25	1421						X								X				1					SO4	
~~MR1~~ @										~~X~~						~~X~~				~~4~~				4°C		

Project Name: MOKELUMNE RIVER PROJECT

Comments/Special Instructions:

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name
Chuck Vertucci	Charles Vertucci	6/26	L Taylor	6/26/08 12:02 pm

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
CHUCK VERTUCCI	9165760986	CHUCK VERTUCCI	L-4/6-08
Address		**Address** 2720 GATEWAY OAKS DR SUITE 300	**Field Number**
2720 GATEWAY OAKS DR ST 300		**City** SACRAMENTO CA **Zip** 95833	**Lab Storage**
City SACRAMENTO CA	**Zip** 95833	**Copies To**	**Spill Title**
Date Required/Reason 30 DAYS		**Address**	**Suspect**
Shipped Via		**City** **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	ALKALINITY	HARDNESS	NITRATE AS N	TSS			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
MC 2	6/26	930				X			X			X				1				4°C		
MC2	6/26	930					X					X				1					HNO_3	
MC2	6/26	930						X				X				1					H_2SO_4	
~~MC2~~ @									~~X~~			~~X~~				~~1~~				4°C		
BC2	6/26	850				X			X			X				1				4°C	~~HNO_3~~ @	
BC2	6/26	850					X					X				1					~~H_2SO_4~~ HNO_3	
BC2	6/26	850						X				X				1				"	H_2SO_4	
~~BC2~~ @									~~X~~			~~X~~				~~1~~				4°C		

Problem Description MOKELUMNE RIVER PROJECT

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
Chuck Vertucci	Charles Vertucci	6/26	[signature]	Jennifer Riley	6/26/08 12:00 pm

LAB COPIES: WHITE, CANARY, PINK SUBMITTER: GOLDENROD FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
CHUCK VERTUCCI	916 576 0486	CHUCK VERTUCCI	L-416-08
Address		**Address**	**Field Number**
2720 GATEWAY OAKS SUITE 300		2720 GATEWAY OARS DR. SUT 300	
City	**Zip**	**City** / **Zip**	**Lab Storage**
SACRAMENTO	CA 95833	SACRAMENTO CA / 95833	
		Copies To	**Spill Title**
Date Required/Reason		**Address**	**Suspect**
30 DAY			
Shipped Via		**City** / **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	ALKALINITY	HARDNESS	NITRATE AS N	TSS			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
NFMR 5	6/25	1320				X			X			X				1				4°C		
NFMR5	6/25	1320					X					X				1					HNO_3	
NFMR5	6/25	1320						X				X				1					H_2SO_4	
~~NFMR5~~																						
NFMR2	6/25	1120				X			X			X				1				4°C		
NFMR2	6/25	1120					X					X				1					HNO_3	
NFMR2	6/25	1120						X				X				1					H_2SO_4	
FIELD BLANK	6/25	1510					X					X				1					HNO_3	
FIELD BLANK	6/25	1510						X				X				1					H_2SO_4	

Problem Description MOKELUMNE RIVER PROJECT

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
Chuck Vertucci	Charles Vertucci	6/26	[illegible]		6/26/08 12pm

LAB COPIES: WHITE, CANARY, PINK SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
CHUCK VERTUCCI	916-576-1966	CHUCK VERTUCCI	
Address		**Address**	**Field Number**
2720 GATEWAY OAKS DR SUITE 300		2720 GATEWAY OAKS DR SUITE 300	
City	**Zip**	**City** / **Zip**	**Lab Storage**
SACRAMENTO CA	95833	SACRAMENTO CA 95833	
		Copies To	**Spill Title**
Date Required/Reason		**Address**	**Suspect**
30 DAY			
Shipped Via		**City** / **Zip**	**Index-PCA**

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: *u* mhos/cm

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	Analysis Requested >>> Alkalinity	Hardness	Chlorides	TSS			Sample Type: Water	Filtered Water	Soil	Tissue	Number of Containers: Plastic	Glass	VOA Vial		Preservation: Temp	Acid	
BR1	6/24	1100				X			X			X				1				4°C		
BR1	6/24	1100					X					X				1					HNO3	
BR1	6/24	1100						X				X				1					H2SO4	
~~BR1 MS~~									X			X				2				~~4°C~~		
NEMR3	6/24	1303				X			X			X				1				4°C		
NEMR3	6/24	1303					X					X				1					HNO3	
NEMR3	6/24	1303						X				X				1					H2SO4	
~~NEMR3 MS~~									X			X				2				4°C		
~~[illegible]~~							X					X				1					HNO3	
~~[illegible]~~								X				X				1					H2SO4	

Problem Description MORELUMNE RIVER PROJECT

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
Chuck Vertucci	Chuck Vertucci	6/24/03			

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

LAB COPIES: WHITE, CANARY, PINK **SUBMITTER: GOLDENROD**

FG 1000 (Rev. 9/01)

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler	Ph #	Send Results To	Lab Number
CHUCK VERCHECI	916 506 0186	CHUCK VERCHECI	
Address		Address	Field Number
2720 GATEWAY OAKS SE 300			
City	Zip	City / Zip	Lab Storage
SACRAMENTO CA	95833	SACRAMENTO CA 95832	
		Copies To	Spill Title
Date Required/Reason		Address	Suspect
ASAP			
Shipped Via		City / Zip	Index-PCA

☐ Fish & Wildlife Loss Date:_____ Region:_____

☐ DFG Code Violation:_____

☐ Suspected or Potential Problem

☐ Routine Analysis

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Analysis Requested >>>

Sample Identification/Location (Draw map on separate sheet if necessary)	Collection Date	Collection Time	Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Sample Type: Water	Sample Type: Filtered Water	Sample Type: Soil	Sample Type: Tissue	Number of Containers: Plastic	Number of Containers: Glass	Number of Containers: VOA Vial	[illegible]	Preservation: Temp	Preservation: Acid	[illegible]
[illegible]						X			X			X				1				4°C		
[illegible]							X					X				1					HCl	
[illegible]								X				X				1					HCl	
[illegible]									X			X				3						
TCI	6/24	1400				X			X			X				1				4°C		
TCI	6/24	1400					X					X				1					HNO3	
TCI	6/24	1400						X				X				1					HNO3	
[illegible]									X			X				3				4°C		

Problem Description: MOKELUMNE RIVER PROJECT

Suspect/Incident Location

Comments/Special Instructions

Pollution Action Kit: Yes☐ No☐

Glove Size: Large ☐ Medium ☐

Hazmat Shipper Requested: Yes☐ No☐

Samples Relinquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name	Date
Chuck Verchecci	Charles Verchecci	6/24/08			

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

LAB COPIES: WHITE, CANARY, PINK SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/

Fax = (916) 569-3456

LAB #_____

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

DATE RECEIVED: 9-25-08 TIME RECEIVED: _____

CUSTOMER NAME: Robin Tarkell BILL TO: _____

ADDRESS: _____ ADDRESS: _____

CITY, STATE, ZIP: _____ CITY, STATE, ZIP: _____

ATTENTION: _____ ATTENTION: _____

PREPAID: _____ CHECK/RECEIPT #: _____ P.O. #: _____ REQUISITION #: _____

ID #	SOURCE DESCRIPTION	ANALYSIS	SAMPLING & CONTAINER INFORMATION:				
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	BC2	FC15	4	W	P	9-25-08/1130	JT
	0222558		↓	↓	↓	↓	
	MC2	FC15	↓	↓	↓	↓ /1205	↓
	0222560						

RELINQUISHED BY: [signature] DATE/TIME: 9/25/08 1440

RECEIVED BY: [signature] DATE/TIME: 9-25-08/1440

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED BY: _____ DATE/TIME: _____

DATA ENTERED: _____

C.O.C. FORMS

Date: _____ Time: _____

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

LAB #_____

DATE RECEIVED: 9-24-08

TIME RECEIVED: _____

CUSTOMER NAME: Leanne Jarshell

BILL TO: _____

ADDRESS: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

CITY, STATE, ZIP: _____

ATTENTION: _____

ATTENTION: _____

PREPAID: _____ CHECK/RECEIPT #: _____

P.O. #: _____ REQUISITION #: _____

ID #	SOURCE DESCRIPTION	ANALYSIS	SAMPLING & CONTAINER INFORMATION:				
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	NHFR5	FC15	G	W	P	9-24-08/1305	JT
	022256						
	NFMR3	FC15				1120	
	022256Z						
	~~NFMR3~~	~~FC15~~				~~1120~~	
	* Blank Bottle						
	BR1	FC15				1010	
	022254						
	MR1	FC15				1415	
	022255						

RELINQUISHED BY: [signature] DATE/TIME: 9-24-08/1450

RECEIVED BY: [signature] DATE/TIME: 9-24-08/1450

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED BY: _____ DATE/TIME: _____

DATA ENTERED: _____

C.O.C. FORMS

Date: _____ Time: _____

LAB #_____

SIERRA FOOTHILL LABORATORY
P.O. Box 1268 • 255 Scottsville Blvd.
Jackson, CA 95642
(209) 223-2800

DATE RECEIVED:_____ TIME RECEIVED:_____

CUSTOMER NAME: [illegible] BILL TO: _____

ADDRESS: _____ ADDRESS: _____

CITY, STATE, ZIP: _____ CITY, STATE, ZIP: _____

ATTENTION: _____ ATTENTION: _____

PREPAID:_____ CHECK/RECEIPT #:_____ P.O. #:_____ REQUISITION #:_____

ID #	SOURCE DESCRIPTION	ANALYSIS		SAMPLING & CONTAINER INFORMATION:			
			G/C	W, W/W, S	P/G	DATE/HR COLLECTED	BY
	NMFR 2	FC15	G	S	P	9-23-05 / 1145	JT
	0222555						
	TC1	FC15				/ 1400	
	0222561						

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED BY: [illegible] DATE/TIME: 9-23-05 / 1542

RELINQUISHED BY: [illegible] DATE/TIME: 9/23/05 1542

RECEIVED BY: _____ DATE/TIME: _____

DATA ENTERED: _____

C.O.C. FORMS

Date:_____ Time:_____

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD Page 3 of 3

~~Page 1 of 1~~ 9/26/08

Sampler	Ph #	Send Results To		Lab Number
Justin Tortosa	916.576.0327	Chuck Vertucci		L-722-08
Address		Address		Field Number
2720 Gateway Oaks Dr. Suite 300		2720 Gateway Oaks Dr. Suite 300		
City	Zip	City	Zip	Lab Storage
Sacramento	CA 95833	Sacramento	CA 95833	
		Copies To		
Date Required/Reason		Address		
standard				
Shipped Via		City	Zip	
FedEx				

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separare sheet if necessary)	Collection Date	Collection Time	TSS	Hardness	Total Nitrate	Alkalinity			SSC			Sample Type: Water	Sample Type: Filtered Water	Sample Type: Soil	Sample Type: Tissue	Number of Containers: Plastic	Number of Containers: Glass	Number of Containers: VOA Vial		Preservation: Temp	Preservation: Acid	
MC2	09/25/08	1205	x									x				1				x		
MC2	09/25/08	1205		x									x			1					x	
MC2	09/25/08	1205			x							x				1					x	
MC2	09/25/08	1205				x						x				2				x		
BC2	09/25/08	1130	x									x				1				x		
BC2	09/25/08	1130		x									x			1					x	
BC2	09/25/08	1130			x							x				1					x	
BC2	09/25/08	1130				x						x				2				x		

Project Name: Mokelumne Water Quality

Comments/Special Instructions

Samples Reliquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name
[signature]	Justin Tortosa	9/26/2008	[signature]	Scot Harris
		9.26.08		

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD Page 2 of 3

~~Page 1 of 1~~

Sampler	Ph #	Send Results To		Lab Number
Justin Tortosa	916.576.0327	Chuck Vertucci		L-721-08
Address		Address		Field Number
2720 Gateway Oaks Dr. Suite 300		2720 Gateway Oaks Dr. Suite 300		
City	Zip	City	Zip	Lab Storage
Sacramento	CA 95833	Sacramento	CA 95833	
		Copies To		
Date Required/Reason		Address		
standard				
Shipped Via		City	Zip	
FedEx				

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separare sheet if necessary)	Collection Date	Collection Time	TSS	Hardness	Total Nitrate	Alkalinity			SSC			Sample Type: Water	Sample Type: Filtered Water	Sample Type: Soil	Sample Type: Tissue	Number of Containers: Plastic	Number of Containers: Glass	Number of Containers: VOA Vial		Preservation: Temp	Preservation: Acid	
MR1	09/24/08	1415	x									x				1				x		
MR1	09/24/08	1415		x									x			1					x	
MR1	09/24/08	1415			x							x				1					x	
MR1	09/24/08	1415				x						x				2				x		
NFMR3	09/24/08	1200	x									x				1				x		
NFMR3	09/24/08	1200		x									x			1					x	
NFMR3	09/24/08	1200			x							x				1					x	
NFMR3	09/24/08	1200				x						x				2				x		
NFMR5	09/24/08	1305	x									x				1				x		
NFMR5	09/24/08	1305		x									x			1					x	
NFMR5	09/24/08	1305			x							x				1					x	
NFMR5	09/24/08	1305				x						x				2				x		

Project Name Mokelumne Water Quality

Comments/Special Instructions

Samples Reliquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name
[signature]	Justin Tortosa	9/26/2008	[signature]	Scot Harris
		9.26.08		

DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD Page 1 of 3

~~Page 1 of 1~~ 9/26/08

Sampler	Ph #	Send Results To		Lab Number
Justin Tortosa	916.576.0327	Chuck Vertucci		L-720-08
Address		**Address**		**Field Number**
2720 Gateway Oaks Dr. Suite 300		2720 Gateway Oaks Dr. Suite 300		
City	**Zip**	**City**	**Zip**	**Lab Storage**
Sacramento	CA 95833	Sacramento	CA 95833	
		Copies To		
Date Required/Reason		**Address**		
standard				
Shipped Via		**City**	**Zip**	
FedEx				

Water Temp: F or C pH: DO: mg/L Conductivity: umhos/cm

Sample Identification/Location (Draw map on separare sheet if necessary)	Collection Date	Collection Time	TSS	Hardness	Total Nitrate	Alkalinity			SSC			Sample Type: Water	Sample Type: Filtered Water	Sample Type: Soil	Sample Type: Tissue	Number of Containers: Plastic	Number of Containers: Glass	Number of Containers: VOA Vial		Preservation: Temp	Preservation: Acid	
NFMR2	09/23/08	1145	x									x				1				x		
NFMR2	09/23/08	1145		x									x			1					x	
NFMR2	09/23/08	1145			x							x				1					x	
NFMR2	09/23/08	1145				x						x				2				x		
TC1	09/23/08	1400	x									x				1				x		
TC1	09/23/08	1400		x									x			1					x	
TC1	09/23/08	1400			x							x				1					x	
TC1	09/23/08	1400				x						x				2				x		
BR1	09/24/08	1010	x									x				1				x		
BR1	09/24/08	1010		x									x			1					x	
BR1	09/24/08	1010			x							x				1					x	
BR1	09/24/08	1010				x						x				2				x		

Project Name Mokelumne Water Quality

Comments/Special Instructions

Samples Reliquished By (Signature)	Print Name	Date	Received By (Signature)	Print Name
[signature]	Justin Tortosa	9/26/2008	[signature]	Scott Harris
		9-26-08		