

Table 11-25. Analytes Measured at the Sweetwater Mass Loading Station.

ANALYTE	UNITS	WQO ¹	SOURCE	2001-2002			2002-2003			2003-2004			2004-2005			2005-2006			2006-2007			Frequency Above WQO	Mean Ratio to WQO
				02/17/02	03/17/02	04/25/02	12/16/02	02/11/03	02/25/03	11/12/03	02/03/04	02/18/04	10/17/04	02/11/05	02/18/05	10/18/05	01/02/06	02/19/06	10/14/06	1/30/07	2/19/07		
General / Physical / Organic																							
Electrical Conductivity	umhos/cm			3820	3430	2980	2990	2760	1955	3040	1742	1995	529	5070	3260	3430	4090	2690	1890	4100	3520		
Oil And Grease	mg/L	15	USEPA Multi-Sector General Permit	1	1	1	4.47	2	1	4.43	<1	1.05	<1	<1	<1	<1	<1	<1	<5	<5	<5	0%	0.10
pH	pH Units	6.5-8.5	Basin Plan	7.5	7.4	7.3	7.56	6.87	6.94	7.20	7.83	7.58	7.24	7.52	7.49	7.66	8.14	8.09	7.8	7.79	7.60	0%	0.00
Bacteriological																							
Enterococci	MPN/100 mL			300	16,000	9,000	8,000	14,000	30,000	18,792	1,879	17,000	800	3,000	50,000	50,000	5,000	13,000	110,000	3,000	1,300		
Fecal Coliform	MPN/100 mL	400	Basin Plan	130	500	11,000	23,000	7,000	1,700	4,000	2,200	2,300	300	1,300	1,300	3,000	8,000	2,300	8,000	170	5,000	83%	11.28
Total Coliform	MPN/100 mL			23,000	5,000	230,000	30,000	30,000	170,000	300,000	130,000	130,000	30,000	13,000	28,000	130,000	30,000	80,000	50,000	3,000	30,000		
Wet Chemistry																							
Ammonia As N	mg/L			0.16	0.3	0.2	0.25	0.28	0.19	0.16	0.1	0.15	0.39	0.14	0.14	<0.1	<0.1	0.19	0.79	0.67	1.24		
Un-ionized Ammonia as N	µg/L	25 (a)	Basin Plan				2.28	0.64	0.42	0.67	1.44	1.55	1.0	0.8	1.1	0.7	1.8	4.9	14.2	8.1	11.3	0%	0.14
Biochemical Oxygen Demand	mg/L	30	USEPA Multi-Sector General Permit	2	14.2	4.7	<2.0	20.4	5.89	9.32	46.7	15.3	19.8	2.57	3.42	4.96	3.72	2.22	115	3.66	3.36	11%	0.52
Chemical Oxygen Demand	mg/L	120	USEPA Multi-Sector General Permit	70	63	55	59	85	39	104	69	86	44	123	74	47	44	102	119	54	45	6%	0.59
Dissolved Organic Carbon	mg/L						9.68	25.2	8.94	21.9	7.94	88.2	25.7	5.24	6.19	5.04	19	10.5	86.9	13.6	12.8		
Dissolved Phosphorus	mg/L	2	USEPA Multi-Sector General Permit	<0.05	0.2	0.1	0.34	0.20	0.10	0.4	0.18	0.12	0.2	0.18	0.45	0.26	0.43	0.24	0.28	0.21	0.32	0%	0.12
Nitrate As N	mg/L	10	Basin Plan	0.4	0.3	0.2	0.54	0.81	0.39	2.19	0.25	0.27	0.07	1.02	1.93	0.55	1.52	1.44	1.36	<0.05	0.74	0%	0.08
Nitrite As N	mg/L	1	Basin Plan	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	0%	0.03
Surfactants (MBAS)	mg/L	0.5	Basin Plan	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0%	0.43
Total Dissolved Solids	mg/L	1500	Basin Plan	2000	1050	2870	793	1660	1150	1880	1780	2230	2860	2370	1410	2640	2140	2070	1990	2060	1290	72%	1.27
Total Kjeldahl Nitrogen	mg/L			1.5	3	1.2	1.0	1.0	0.8	2.8	<0.5	0.7	2.1	1.4	1.8	1	1.7	2.5	2.2	1.4	2.4		
Total Organic Carbon	mg/L						40.7	12.9	6.72	20.8	12.5	96.4	30.1	10.9	11.7	12.1	14	13.2	88.8	13.8	13		
Total Phosphorus	mg/L	2	USEPA Multi-Sector General Permit	0.18	0.29	0.1	0.54	0.22	0.14	0.43	0.22	0.16	0.25	0.57	0.47	0.52	0.45	0.54	0.4	0.28	0.39	0%	0.17
Total Suspended Solids	mg/L	100	USEPA Multi-Sector General Permit	21	47	23	74	14	51	<20	<20	<20	20	26	102	<20	<20	<20	45	<20	91	6%	0.32
Turbidity	NTU	20	Basin Plan	7.7	20.2	8.24	62.9	13	46.5	15.2	11.5	16.8	4.03	5.8	48.8	11.4	9.07	21.7	32.2	9.6	65.8	39%	1.14
Pesticides																							
Chlorpyrifos	µg/L	0.02	CA Dept. of Fish & Game	<0.03*	<0.03*	0.03	0.053	0.059	<0.03*	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.002	<0.002	<0.002	20%	0.66
Diazinon	µg/L	0.08	CA Dept. of Fish & Game	0.10	0.27	<0.03	0.301	0.146	0.171	0.084	<0.01	0.026	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.004	<0.004	<0.004	33%	0.80
Malathion	µg/L	0.43	CA Dept. of Fish & Game				0.24	<0.10	<0.10	0.423	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	0.097	0.063	<0.006	0%	0.15
Hardness																							
Total Hardness	mg CaCO3/L			932	499	1010	344	758	549	817	728	816	1210	991	556	1130	1020	966	807	999	626		
Total Metals																							
Antimony	mg/L	0.006	Basin Plan	<0.002	<0.002	<0.002	0.004	0.004	0.003	<0.005	<0.005	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.002	0.002	0.004	0%	0.42
Arsenic	mg/L	0.34/0.05	40 CFR 131/ Basin Plan	0.002	0.002	0.003	0.004	0.002	0.003	0.005	0.007	0.005	0.004	0.005	<0.002	0.008	0.005	0.005	0.011	0.002	0.003	0%	0.09
Cadmium	mg/L	(b)	40 CFR 131	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	0%	0.09
Chromium	mg/L	(b)	CTR (Cr VI)	<0.005	0.007	<0.005	0.009	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0%	0.01
Copper	mg/L	(b)	40 CFR 131	<0.005	0.010	0.006	0.010	0.018	0.007	0.009	0.013	0.012	<0.005	<0.005	0.005	<0.005	0.005	0.005	0.011	0.006	0.012	0%	0.26
Lead	mg/L	(b)	40 CFR 131	0.002	0.006	0.003	0.010	0.003	<0.002	0.002	<0.002	0.003	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	0.003	<0.001	0.004	0%	0.14
Nickel	mg/L	(b)/0.1	40 CFR 131/ Basin Plan	0.003	0.003	0.004	<0.002	0.002	<0.002	0.004	0.002	<0.002	0.002	0.003	0.002	0.007	0.004	0.003	0.004	0.003	0.004	0%	0.02
Selenium	mg/L	0.02	40 CFR 131	0.003	<0.002	<0.002	<0.004	<0.004	<0.004	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.004	<0.005	<0.004	<0.004	<0.004	0%	0.11
Zinc	mg/L	(b)	40 CFR 131	<0.02	0.04																		

Table I I-25. Analytes Measured at the Sweetwater Mass Loading Station.

Blank spaces have been verified and no data is available due to changes in the monitoring program.

¹ The Water Quality Objectives (WQO) are benchmarks for comparison of storm water results and were selected by the Copermittee Monitoring Workgroup for this program.

- (a) Un-ionized Ammonia is a calculated value, non-detectable values calculated at the detection limit. Basin Plan WQO is 0.025 mg/L; values shown here have been converted to $\mu\text{g/L}$.
- (b) Water Quality Objective for dissolved metal fractions are based on total hardness and are calculated as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.
- (c) Water Quality Objectives for dissolved metal fractions are based on water effects ratios (WER) and are calculated as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.
- (d) Water Quality Objective is based on the total recoverable form as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.
- (e) USEPA has not published an aquatic life criterion value.

Shaded text – bold values are above the **CCC** water quality objective and bold/underlined results are above the **CMC** water quality objective.

* Indicates detection limit above water quality objective, and not included in frequency above water quality objective calculation.

Sources
USEPA National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities, 65 Federal Register (FR) 64746, Final Siepmann and Finlayson 2000.
Basin Plan, September 8, 1994.
Assembly Bill 411 - Title 17 of the California Code of Regulations, Section 7958.
USEPA Federal Register Document 40 CFR Part 131, May 18, 2000.