

Tecolote Creek

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STATION	METHOD	PARAMETER	UNITS	SAMPLE DATE		
				11/8/98	1/25/99	3/15/99
<b>GRAB SAMPLES</b>						
<b>GENERAL/PHYSICAL/ORGANIC</b>						
SD5		TEMPERATURE	C	NM		
SD5		pH	UNITS	7.46	7.14	6.49
SD5	EPA 413.2	OIL AND GREASE	MG/L	0.70	< 0.5	< 0.5
SD5	SM 2510-B	ELECTRICAL CONDUCTIVITY	UMHOS/CM	6070	629	542
<b>BACTERIOLOGICAL</b>						
SD5	9221B/MMO-MUG	TOTAL COLIFORM	MPN/100ML	241900	125900	613000
SD5	9221E/MMO-MUG	FECAL COLIFORM	MPN/100ML	> 1600	> 1600	> 1600
SD5	9230	FECAL STREPTOCOCCI	MPN/100ML	< 1	> 1600	240
<b>COMPOSITE SAMPLES</b>						
<b>INORGANIC - WET CHEM</b>						
SD5	SM 5210-B	BOD	MG/L	30.0	5.0	9.0
SD5	SM 5220-C	CHEMICAL OXYGEN DEMAND	MG/L	61.0	33.0	33.0
SD5	SM 2340-B	TOTAL HARDNESS	MG/L	148	218	277
SD5	SM 5540-C	SURFACTANTS (MBAS)	MG/L	0.51	0.08	< 0.05
SD5	SM 4500 NH <sub>3</sub> -C	AMMONIA AS NITROGEN	MG/L	0.6	0.57	0.51
SD5	SM 4500 NO <sub>3</sub> -E	NITRATE-N	MG/L	0.52	0.70	0.53
SD5	SM 4500 NO <sub>2</sub> -B	NITRITE-N	MG/L	0.10	< 0.05	0.05
SD5	SM 4500 P-E	DISSOLVED PHOSPHOROUS	MG/L	0.52	0.15	0.10
SD5	SM 4500 P-E	TOTAL PHOSPHORUS	MG/L	0.61	0.16	0.16
SD5	SM 4500 H-B	pH	UNITS	7.55	7.39	7.99
SD5	SM 2540-C	TOTAL DISSOLVED SOLIDS	MG/L	1492	563	660
SD5	SM 4500 NH <sub>3</sub> -C	TOTAL KJELDAHL NITROGEN	MG/L	0.12	2.93	1.85
SD5	SM 2540-D	TOTAL SUSPENDED SOLIDS	MG/L	913	540	55.0
SD5	SM 2130 B	TURBIDITY	NTU	84.0	45.0	17.0
<b>INORGANIC - METALS</b>						
SD5	EPA 200.7	ARSENIC	MG/L	0.004	0.0015	0.002
SD5	EPA 200.7	CADMIUM	MG/L	0.004	< 0.00025	< 0.00025
SD5	EPA 200.7	CHROMIUM	MG/L	< 0.005	0.009	0.056
SD5	EPA 200.7	COPPER	MG/L	< 0.005	< 0.005	< 0.005
SD5	EPA 200.7	NICKEL	MG/L	0.02	< 0.005	0.009
SD5	EPA 200.7	LEAD	MG/L	0.04	0.003	0.023
SD5	EPA 200.7	ANTIMONY	MG/L	< 0.0015	< 0.0015	< 0.0015
SD5	EPA 200.7	SELENIUM	MG/L	0.004	< 0.001	< 0.001
SD5	EPA 200.7	ZINC	MG/L	< 0.025	< 0.025	0.071
<b>ORGANOPHOSPHATE PESTICIDES</b>						
SD5	EPA 8141	DIAZINON	UG/L	0.40	0.28	0.41
SD5	EPA 8141	CHLORPYRIFOS	UG/L	< 0.05	--	< 0.50

0.5 mg/L

City of San Diego NPDES & Co Permittee

**1999 – 2000 CITY OF SAN DIEGO  
AND CO-PERMITTEE NPDES  
STORMWATER MONITORING  
PROGRAM REPORT**

*Prepared for*  
The City of San Diego  
Engineering & Development Department  
1010 Second Avenue, Suite 500  
San Diego, CA 92101

August 10, 2000

***URS Greiner Woodward Clyde***

1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108-4314  
619-294-9400 Fax: 619-293-7920

In association with:

**APPL, Inc.**

**California Watersports**

**D-TEK Environmental Testing Laboratory**

**MBC Applied Environmental Sciences**

**MGD Technologies, Inc.**

**Motile Laboratory Services**

**University of Washington**

**Weatherwatch Services**

Hedionda stations to identify water-borne pathogens. In addition, sediment samples were collected within a public access point in the lagoon to assess the bacteria trapped in the sediment and possibly available for resuspension. A new quality assurance/quality control procedure (QA/QC) was established and implemented for bacteria samples to assess possible contamination.

Finally, in response to TMDL issues concerning diazinon and chlorpyrifos in urban runoff, an Insecticide Use Survey was created and distributed to 5,000 households and posted on the County of San Diego web site to assess trends of purchase, use, and disposal.

### **1.3 OVERVIEW OF SCOPE OF WORK**

URSGWC provided storm water monitoring services for the co-permittees during the seventh year of the wet-weather monitoring program (1999/2000). The 1999/2000 monitoring program consisted of the following sampling services:

- Pre- and post season sediment sampling at Chollas Creek and San Diego Bay locations. These locations have been monitored since wet-weather monitoring season 1994/95.
- Chemical water quality monitoring during three storm events at five mass loading stations throughout San Diego County, AH1-Agua Hedionda, SV1-Sorrento Valley, SD13-California, SD5-Tecolote, SD8-Chollas. The mass loading stations represent large areas of the County that drain into important receiving waters. Stations SD5-Tecolote and SD8-Chollas have been monitored since the start of the wet-weather monitoring program in 1993/94. Stations SD13-California and SV1-Sorrento Valley were added to the program in 1996/97. Station AH1-Agua Hedionda was added to the program in 1998/99, concurrently with the bacteria monitoring program.
- Bacteria monitoring during three storm events at two creek monitoring stations, AH-Co and AH-Re, and two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, for a total of four stations in the Agua Hedionda watershed. Stations AH-Co and AH-Re were monitored for bacteria in 1998/99. Stations AH-Coc and AH-Rec were added to the program in 1999/2000.
- Pathogen monitoring during three storm events at four creek monitoring stations, AH-Os, AH-Co, AH-Re, and AH1, and two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, for a total of six stations in the Agua Hedionda watershed. Two of the creek stations monitored for pathogens, AH-Co and AH-Re, and the two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, were also monitored for bacteria. One of the creek stations, AH1, monitored for pathogens was also monitored as a mass loading station.
- Post storm event bacteria and pathogen monitoring at three sampling transect locations, AH-L, AH-Lc, and AH-Lm, in Agua Hedionda Lagoon. This monitoring was performed one day and seven days after the first and third storm events that bacteria monitoring in creek and creek input stations was performed. This monitoring was not conducted following the second bacteria monitoring event because rain occurred one day and seven days following the event. Station AH-L was monitored for bacteria in 1998/99. Stations AH-Lc and AH-Lm were added to the program in 1999/2000.

# SECTION FIVE

# Results

**Table 5-5  
CONVENTIONAL, BIOLOGICAL AND ORGANIC COMPOUNDS AT MASS LOADING STATIONS (SD5, SD8, SD13, SV1), 1997/98**

Mass Loading Stations		SD5			SD8			SD13			SV1		
Conventional/Biological/Organic Constituents	Units	11/10/97	12/6/97	3/25/98	11/10/97	12/6/97	3/14/98	11/10/97	11/26/97	2/3/98	11/10/97	11/26/97	2/3/98
Laboratory pH	pH units	7.35	7.82	7.27	6.97	7.56 <sup>e</sup>	6.70 <sup>e</sup>	6.35 <sup>e</sup>	7.10	6.70	7.41	8.90	7.19
Electrical conductivity	µmhos/cm	1130	1690	726	310	155	1146	732	337	61	—	259	62
Total hardness	mg/l	694	186	124	116	39	96.4	44.2	16.5	14.4	46.3	52.0	54.7
Total suspended solids	mg/l	410	503	2024	182	315	805	350	140	198	164	258	348
Total dissolved solids	mg/l	1730	447	318	374	250	344	167	92	98	154	180	214
Turbidity	NTU	160	27	96	90	29	24	62	71	43	63	68	392
Biochemical oxygen demand	mg/l	33	43	22	49	24	40 <sup>e</sup>	39	62	4	15	52	15
Chemical oxygen demand	mg/l	89	20	22	146	44	135	85	100	17	124	87	22
Total coliform	MPN/100ml	>160,000	>20,000	>20,000	>160,000	>20,000	—	>160,000	>20,000	>20,000	—	>20,000	16,500
Fecal coliform	MPN/100ml	160,000	3,640	8,850	>160,000	9,450	—	90,000	10,900	9,450	—	3,640	420
Fecal streptococci	MPN/100ml	160,000	16,000 <sup>e</sup>	50	>160,000	16,000 <sup>e</sup>	—	160,000 <sup>e</sup>	230	170	—	2,400	1,600
Oil and grease	mg/l	3.6	1.6	0.6	6.9	<0.5	4.56	2.9	1.3	<0.5	—	<0.5	<0.5
Total petroleum hydrocarbons (TPH)	mg/l	—	—	—	—	—	—	—	—	—	—	—	—
Surfactants (MBAS)	mg/l	<0.10	0.05	0.20	<0.10	0.07	0.66 <sup>e</sup>	0.14	0.062	<0.05	0.10	0.112	0.08
Total Kjeldahl nitrogen	mg/l	1.6	<1.0	1.1	1.6	<1.0	15.0	1.5	1.41	1.6	0.95	1.32	<1.0
Nitrate-nitrite as nitrogen	mg/l	1.7	—	—	3.5	—	—	2.8	—	—	2.3	—	—
Nitrate-nitrogen	mg/l	—	0.54	0.5	—	0.52	0.4	—	1.0	0.5	—	1.5	0.3
Nitrite - nitrogen	mg/l	—	0.06	0.05	—	0.08	<0.05	—	<0.05	<0.05	—	0.05	<0.05
Ammonia as nitrogen	mg/l	0.56	0.57	0.60	1.3	0.4	10.0	0.55	1.09	<0.5	1.3	0.80	<0.5
Total phosphorus	mg/l	0.70	0.12	0.23	0.7	<0.10	2.2	0.90	0.70	0.36	0.30	0.273	0.25
Dissolved phosphorus	mg/l	<0.10	0.10	0.12	0.40	<0.10	1.41	0.50	0.54	0.21	0.10	0.15	0.12
Total cyanide	mg/l	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	—	<0.02	<0.02
Bis (2-ethylhexyl) phthalate*	µg/l	15 <sup>e</sup>	24.7	13.3	24 <sup>e</sup>	8.72	37.5	—	94.5	10.9	—	14.7	9.98
Butyl benzyl phthalate	µg/l	<10 <sup>e</sup>	<2.5	2.51	<10 <sup>e</sup>	<2.5	13.3	—	29.3	<2.5	—	12.8	<2.5
Di-n-butyl phthalate	µg/l	<10 <sup>e</sup>	37.5	42.7	<10 <sup>e</sup>	34.6	15.9	—	49.8	55.7	—	69.5	43.8

\* Bis (2-ethylhexyl) phthalate was detected in a field equipment blank taken prior to the start of the wet-weather monitoring season. Since this compound was detected in the blank, levels present in the stormwater should be considered as non-detect at an elevated level.

<sup>e</sup> Estimated result due to sample holding time exceedence.

Table 5-1  
 CONVENTIONAL, BIOLOGICAL AND ORGANIC COMPOUNDS  
 AT MASS LOADING STATIONS (AH1, SD5, SD8, SD13, SV1), 1999/2000

Parameter	Units	AH1			SV1			SD5			SD8			SD13		
		1/25/00	2/20/00	3/5/00	1/25/00	3/5/00	4/17/00	2/12/00	2/20/00	3/5/00	2/12/00	2/20/00	3/5/00	2/12/00	2/20/00	3/5/00
<b>Grab Samples</b>																
<b>General/Physical/Organic</b>																
Field pH	units	8.3	7.7	8.0	8.3	8.6	--	7.6	7.7	8.1	7.9	8.6	8.3	8.3	8.4	9.0
Oil and Grease	mg/l	3.24	3.54	2.28	2.98	2.54	2.10	4.16	1.56	2.96	1.92	2.04	1.48	1.76	1.76	5.60
Electrical Conductivity	umhos/cm	2160	1172	1194	463	312	120	746	823	792	186	187	185	118	107	98.0
<b>Bacteriological</b>																
Total Coliform	mpn/100ml	>1600	>1600	300	--	>1600	300	240	>1600	900	500	>1600	>1600	>1600	>1600	>1600
Fecal Coliform	mpn/100ml	>1600	>1600	<2.0	--	>1600	240	<2.0	>1600	<2.0	<2.0	>1600	>1600	>1600	>1600	>1600
Fecal Streptococci	mpn/100ml	>1600	>1600	<2.0	--	>1600	23.0	<2.0	>1600	<2.0	<2.0	>1600	>1600	<2.0	>1600	>1600
<b>Composite Samples</b>																
<b>Inorganic - Wet Chemistry</b>																
Laboratory pH	units	7.50	7.30	7.51	6.73	6.75	7.06	7.50	7.10	7.50	7.52	6.90	7.20	7.50	7.02	7.03
Biochemical Oxygen Demand	mg/l	6.00	2.98	6.60	17.7	3.30	3.00	11.7	2.38	5.70	7.80	2.54	6.10	7.60	5.25	5.00
Chemical Oxygen Demand	mg/l	70	66	41	141	28	42	74	60	36	41	104	57	50	48	35
Nitrate - nitrogen	mg/l	1.60	1.42	1.58	3.50	2.33	2.33	3.30	0.60	2.30	3.22	1.04	3.10	2.67	1.24	2.32
Nitrite - nitrogen	mg/l	0.057	<0.050	<0.050	0.280	<0.050	0.070	0.065	<0.050	<0.050	0.086	<0.050	<0.050	0.064	<0.050	<0.050
Ammonia as Nitrogen	mg/l	0.40	<0.10	0.11	3.6	0.29	1.21	1.57	<0.10	<0.10	1.65	<0.10	0.21	1.28	0.11	<0.10
Total Kjeldahl Nitrogen	mg/l	0.85	4.02	2.11	0.28	0.52	0.80	2.10	0.77	1.83	2.98	3.10	2.36	3.70	2.26	2.61
Dissolved Phosphorous	mg/l	0.12	0.22	<0.01	0.23	<0.01	<0.01	<0.01	0.13	<0.01	0.33	0.26	0.22	0.45	0.32	0.18
Total Phosphorous	mg/l	0.16	1.04	0.74	0.21	0.31	0.06	0.21	0.34	0.40	0.46	0.33	0.60	0.51	0.39	0.20
Total Hardness	mg/l CaCO3	52.2	155	35.3	44.6	21.0	26.0	216	126	105	40.9	35.1	45.5	44.3	35.3	25.0
Total Dissolved Solids	mg/l	1356	335	362	372	69	133	279	304	302	120	111	140	132	116	117
Total Suspended Solids	mg/l	65	134	286	53	174	34	478	80	87	457	62	200	45	39	42
Turbidity	ntu	22	52	58	30	25	13	17	63	60	50	27	38	18	32	35
Surfactants (MBAS)	mg/l	0.33	0.21	0.08	1.49	0.13	0.60	0.48	0.24	0.20	0.35	0.22	0.13	0.47	0.44	0.14
<b>Organophosphate Pesticides</b>																
Diazinon	µg/l	<0.50	0.47**	0.29	<0.50	<0.05	<0.50	0.30*	0.39**	0.18	0.27*	0.35**	0.20**	0.43*	0.48**	.08
Chlorpyrifos	µg/l	<0.50	<0.50	<0.05	<0.50	<0.05	<0.50	<0.50	<0.50	<0.05	<0.50	<0.50	0.04*	<0.50	<0.50	<0.05

Asterisk (\*) indicates an estimated value that is below quantification limit. Double asterisk (\*\*) indicates the percent difference between primary and confirmation columns is greater than 40%.

# SECTION FIVE

# Chemical Analyses

**Table 5-2  
DISSOLVED METAL, TOTAL METAL, AND HARDNESS DATA SUMMARY —  
MASS LOADING STATIONS (AH1, SD5, SD8, SD13, SV1), 1999/2000**

PARAMETER	AH1			SV1			SD5			SD8			SD13		
	1/25/00	2/20/00	3/5/00	1/25/00	3/5/00	4/17/00	2/12/00	2/20/00	3/5/00	2/12/00	2/20/00	3/5/00	2/12/00	2/20/00	3/5/00
TOTAL HARDNESS (mg/l CaCO <sub>3</sub> )	52.2	155	35.3	44.6	21.0	26.0	216	126	105	40.9	35.1	45.5	44.3	35.3	25.0
TOTAL METALS (µg/l)															
ANTIMONY	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
ARSENIC	<1.0	18.0	7.0	<1.0	<1.0	<1.0	<1.0	6.0	9.0	<1.0	7.0	5.0	<1.0	5.0	3.0
CADMIUM	<0.25	1.0	0.25	<0.25	<0.25	<0.25	<0.25	1.0	<0.25	<0.25	2.0	<0.25	2.0	1.0	<0.25
CHROMIUM	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
COPPER	<5.0	54.0	20.0	40.0	10.0	<5.0	36.0	17.0	<5.0	29.0	16.0	14.0	33.0	17.0	<5.0
LEAD	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	27.0	<1.0	<1.0	15.0	<1.0	<1.0	15.0	<1.0	<1.0
NICKEL	<5.0	50.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
SELENIUM	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ZINC	10.0	110.0	50.0	110.0	80.0	110.0	160.0	12.0	50.0	96.0	50.0	80.0	110.0	94.0	60.0
DISSOLVED METALS (µg/l)															
ANTIMONY	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
ARSENIC	<1.0	11.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5.0	<1.0	1.0	4.0	<1.0
CADMIUM	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
CHROMIUM	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
COPPER	<5.0	<5.0	<5.0	38.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
LEAD	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
NICKEL	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
SELENIUM	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ZINC	10.0	<1.0	5.0	70.0	9.0	40.0	16.0	12.0	<1.0	19.0	28.0	8.0	19.0	53.0	9.0

## SECTION FIVE

## Chemical Analyses

Table 5-2  
 TOTAL METAL AND HARDNESS DATA SUMMARY —  
 MASS LOADING STATIONS (AH1, SD5, SD8, SD13, SV1), 1998/99

Metals Results 1997/98		AH1			SD5			SD8			SD13			SV1		
		11/8/98	1/31/99	3/15/99	11/8/98	1/25/99	3/15/99	11/8/98	1/25/99	3/15/99	11/8/98	1/25/99	3/15/99	11/8/98	1/25/99	3/15/99
Arsenic	mg/l	0.008	<0.001	<0.001	0.004	0.0015	0.002	0.006	0.0018	0.003	<0.001	<0.001	0.006	0.006	0.0012	0.002
Cadmium	mg/l	0.007	<0.00025	<0.00025	0.004	<0.00025	<0.00025	0.002	<0.00025	<0.00025	0.0069	<0.00025	<0.00025	0.016	<0.00025	<0.00025
Chromium	mg/l	<0.005	<0.005	0.12	<0.005	0.009	0.056	<0.005	0.015	0.035	<0.005	0.019	0.07	<0.005	0.023	0.02
Copper	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	0.015	<0.005	<0.005	0.10	<0.005	<0.005	0.022
Nickel	mg/l	0.03	<0.005	0.01	0.02	<0.005	0.009	0.04	0.028	0.016	0.03	0.048	0.029	0.006	0.088	0.018
Lead	mg/l	<0.001	<0.001	0.0017	0.04	0.003	0.023	<0.001	0.007	0.082	0.009	0.006	0.145	0.01	0.009	0.039
Antimony	mg/l	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.003	0.0019	<0.0015	<0.0015	<0.0015	<0.0015
Selenium	mg/l	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.001
Zinc	mg/l	0.03	0.194	0.035	<0.025	<0.025	0.071	0.03	0.048	0.21	0.06	0.036	0.51	<0.025	<0.025	0.15
Total hardness	mg/l	137	365	568	148	218	277	77	42.5	90.8	32.9	24.5	130	151	41.0	102

**Table 5-1**  
**CONVENTIONAL, BIOLOGICAL AND ORGANIC COMPOUNDS**  
**AT MASS LOADING STATIONS (AH1, SD5, SD8, SD13, SV1), 1998/99**

Mass Loading Stations		AH1			SD5			SD8			SD13			SV1		
Conventional/Biological/ Organic Constituents	Units	11/8/98	1/31/99	3/15/99	11/8/98	1/25/99	3/15/99	11/8/98	1/25/99	3/15/99	11/28/98	1/25/99	3/15/99	11/8/98	1/25/99	3/15/99
Laboratory pH	pH units	7.58	7.95	8.47	7.55	7.39	7.99	7.19	6.98	7.00	6.88	6.66	6.46	7.63	7.36	7.11
Electrical conductivity	µmhos/cm	652	1560	2270	6070	629	542	286	270	215	451	221	136	2.03	-	141
Total hardness	mg/l	137	365	568	148	218	277	77	42.5	90.8	32.9	24.5	130	151	41.0	102
Total suspended solids	mg/l	979	35.0	5.0	913	540	55.0	7.58	280	159	<1.0	164	372	349	276	116
Total dissolved solids	mg/l	853	892	1611	1492	563	660	249	125	222	111	97.0	407	1624	125	249
Turbidity	NTU	72.0	8.0	14.0	84.0	450	17.0	69	38.0	21.0	10.0	22.0	68.0	22.0	40.0	26.0
Biochemical oxygen demand	mg/l	20	<3.0	5.25	30.0	5.0	9.0	19.0	6.0	11.0	<3.0	<3.0	24.0	37.0	4.0	11.0
Chemical oxygen demand	mg/l	34.0	<5.0	21.0	61.0	33.0	33.0	59.0	41.0	85.0	38	32	160	39.0	19.0	59.0
Total coliform	MPN/100ml	>241900	8130	197000	>241900	125900	613000	>241900	298700	>2419000	344800	307600	>2419000	141360	-	98000
Fecal coliform	MPN/100ml	>1600	240	>1600	>1600	>1600	>1600	>1600	>1600	>1600	>1600	>1600	>1600	>1600	-	>1600
Fecal streptococci	MPN/100ml	50	8	130	<1	>1600	240	30	>1600	240	240	>1600	240	30	-	130
Oil and grease	mg/l	0.67	<0.5	0.6	0.7	<0.5	<0.5	1.29	1.56	0.95	4.6	0.9	<0.5	1.11	-	<0.5
Surfactants (MBAS)	mg/l	0.25	0.07	<0.05	0.51	0.08	<0.05	0.48	0.19	0.07	0.15	0.12	0.17	0.21	0.19	0.16
Total Kjeldahl nitrogen	mg/l	<0.01	0.44	2.8	0.12	2.93	1.85	0.44	1.25	3.61	2.10	0.94	5.62	<0.01	0.16	1.70
Nitrate-nitrogen	mg/l	2.1	0.86	1.10	0.52	0.70	0.53	1.1	0.98	0.44	1.70	1.10	0.45	1.96	0.93	0.98
Nitrite - nitrogen	mg/l	<0.05	<0.05	<0.05	0.10	<0.05	0.05	0.06	0.12	0.14	0.19	0.07	<0.05	0.12	0.07	<0.05
Ammonia as nitrogen	mg/l	0.3	0.15	0.21	0.6	0.57	0.51	1.00	0.78	1.06	0.94	0.79	2.28	0.3	0.71	0.79
Total phosphorus	mg/l	0.72	0.13	0.12	0.61	0.16	0.16	1.28	0.3	0.17	0.46	0.33	0.32	1.61	0.09	0.08
Dissolved phosphorus	mg/l	0.57	0.12	0.10	0.52	0.15	0.10	1.07	0.27	0.22	0.41	0.34	0.18	1.39	0.09	0.08
Diazinon	µg/l	0.16	<0.50	0.38	0.40	0.28	0.41	0.46	0.46	0.53	0.72	0.47	0.79	0.23	<0.50	<0.50
Chlorpyrifos	µg/l	<0.05	-	<0.50	<0.05	-	<0.50	0.10	-	<0.50	-	-	<0.50	<0.05	-	<0.50



**Table 5-8  
TOTAL METAL AND HARDNESS DATA SUMMARY —  
INDUSTRIAL SITES (SC2, NC3, SD11), 1997/98**

Metals Results 1997/98		NC3			SC2			SD11		
		11/26/97	12/6/97	3/14/98	11/10/97	12/6/97	2/3/98	11/10/97	11/26/97	2/3/98
Silver	µg/l	<7	<7	<7	<5	<7	<7	<5	<7	<7
Arsenic	µg/l	<53	<53	<53	<1	<53	<53	5	<53	<53
Beryllium	µg/l	<0.3	<0.3	<0.3	<2	<0.3	<0.3	<2	<0.3	<0.3
Cadmium	µg/l	<4	<4	<4	0.60	<4	<4	0.70	<4	<4
Chromium	µg/l	<7	<7	18	<5	<7	22	<5	12	<7
Copper	µg/l	42	38	60	28	36	43	96	128	37
Aqueous Mercury	µg/l	<2	<2	<2	<0.5	<2	<2	<0.5	<2	<2
Nickel	µg/l	31	43	<15	11	39	<15	16	24	<15
Lead	µg/l	<42	<42	151	2	<42	<42	5	<42	<42
Antimony	µg/l	<32	<32	<32	2.7	<32	<32	<1.5	<32	<32
Selenium	µg/l	<75	<75	<75	1	<75	<75	<1	<75	<75
Thallium	µg/l	<40	<40	<40	<2	<40	<40	<2	<40	<40
Zinc	µg/l	204	214	81	543	482	149	606	876	190
Hardness	µg/l	67.0	148.0	221.0	50.0	18.0	35.9	66.7	39.0	16.1

**Table 5-9  
TOTAL METAL AND HARDNESS DATA SUMMARY —  
MASS LOADING STATIONS (SD5, SD8, SD13, SV1), 1997/98**

Metals Results 1997/98		SD5			SD8			SD13			SV1		
		11/10/97	12/6/97	3/25/98	11/10/97	12/6/97	3/14/98	11/10/97	11/26/97	2/3/98	11/10/97	11/26/97	2/3/98
Silver	µg/l	<5	<7	<7	<5	<7	<7	<5	<7	<7	<5	<7	<7
Arsenic	µg/l	1	<53	<53	2	<53	<53	<1	<53	<53	2	<53	<53
Beryllium	µg/l	<2	<0.3	<0.3	<2	<0.3	<0.3	<2	<0.3	<0.3	<2	<0.3	<0.3
Cadmium	µg/l	<0.25	<4	<4	0.30	<4	<4	<0.25	<4	<4	<0.25	<4	<4
Chromium	µg/l	<5	<7	19	<5	<7	11	<5	16	24	<5	11	23
Copper	µg/l	9	56	146	17	28	28	35	61	37	14	50	30
Aqueous Mercury	µg/l	<0.5	<2	<2	<0.5	<2	<2	<0.5	<2	<2	<0.5	<2	<2
Nickel	µg/l	<5	<15	<15	9	<15	<15	6	38	<15	5	27	<15
Lead	µg/l	<1	<42	<42	3	<42	95	5	<42	<42	1	<42	<42
Antimony	µg/l	<1.5	<32	<32	1.6	<32	<32	<1.5	<32	<32	<1.5	<32	<32
Selenium	µg/l	<1	<75	<75	1	<75	<75	<1	<75	<75	1	<75	<75
Thallium	µg/l	<2	<40	<40	<2	<40	<40	<2	<40	<40	<2	<40	<40
Zinc	µg/l	69	68	130	176	11	92	176	329	70	129	189	67
Hardness	µg/l	694.0	186.0	124.0	116.0	39.0	96.4	44.2	16.5	14.4	463	52.0	54.7