

Map ID	Waterbody	HAS	Sample Location Description	Location ID	Latitude	Longitude	Name	Parameter Std.	Std. Unit	Std. Ref.	Type	Samples Dates	No. Taken	Exceedance No.	%	Reference
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Conductivity	900	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	7	78%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	TDS	750	mg/L	Basin Plan	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	2	22%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Fe	0.3	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	5	56%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Pb	0.015	mg/L	MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	1	11%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	F	1	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	1	11%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	total phosphorous	0.1	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	1	11%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Nitrate+Nitrite	10	mg/L	Basin Plan	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	1	11%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Sulfates	250	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	2	22%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>
12	DeLuz Creek	902.21	DeLuz Creek near DeLuz/Fallbrook (4.85 mi us from mouth)	USGS 11044800	332511	1171915	Mn	0.05	mg/L	Secondary MCL	water chemistry	12/9/97, 3/3/98, 5/26/98, 8/4/98, 11/9/98, 2/10/99, 5/11/99, 3/7/00, 6/2/00	9	2	22%	<i>Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.</i>

TABLE 3
Toxic Substances Monitoring Program

1998 Freshwater Fish Code List*

Species Code	Common Name	Species Name	Family Name
AC	Arroyo Chub	<i>Gila orcutti</i>	Cyprinidae
BLB	Black Bullhead	<i>Ameiurus melas</i>	Ictaluridae
BN	Brown Trout	<i>Salmo trutta</i>	Salmonidae
CCF	Channel Catfish	<i>Ictalurus punctatus</i>	Ictaluridae
CP	Carp	<i>Cyprinus carpio</i>	Cyprinidae
GAM	Mosquitofish	<i>Gambusia affinis</i>	Poeciliidae
GSF	Green Sunfish	<i>Lepomis cyanellus</i>	Centrarchidae
GSH	Golden Shiner	<i>Notemigonus crysoleucas</i>	Cyprinidae
HCH	Hitch	<i>Lavinia exilicauda</i>	Cyprinidae
LMB	Largemouth Bass	<i>Micropterus salmoides</i>	Centrarchidae
MOL	Sailfin Molly	<i>Poecilia latipinna</i>	Poeciliidae
PRS	Red Shiner	<i>Cyprinella lutrensis</i>	Cyprinidae
RBT	Rainbow Trout	<i>Oncorhynchus mykiss</i>	Salmonidae
RSF	Redear Sunfish	<i>Lepomis microlophus</i>	Centrarchidae
SBF	Sacramento Blackfish	<i>Orthodon microlepidotus</i>	Cyprinidae
SKR	Sucker	<i>Catostomus sp.</i>	Catostomidae
STB	Threespine Stickleback	<i>Gasterosteus aculeatus</i>	Gasterosteidae
TL	Tilapia	<i>Tilapia sp.</i>	Cichlidae
WCF	White Catfish	<i>Ameiurus catus</i>	Ictaluridae

1998 Marine Fish Code List*

Species Code	Common Name	Species Name	Family Name
BSS	Brown Smoothhound Shark	<i>Mustelus henlei</i>	Carcharhinidae
MUL	Striped Mullet	<i>Mugil cephalus</i>	Mugilidae

1998 Non-Fish Code List

Species Code	Common Name	Species Name	Family Name
PACI	Crayfish	<i>Pacifastacus leniusculus</i>	Astacidae

* Common and scientific fish names were obtained from Robins, C.R., R.M. Bailey, C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, and W.B. Scott. 1991. Common and Scientific Names of Fishes from the United States and Canada. American Fisheries Society Special Publication 20, Bethesda, Maryland.

TABLE 2
Toxic Substances Monitoring Program
Preliminary Summary of 1998 Data: Organic Chemicals in Fish and Crayfish (ppb, wet weight)

Station Number	Station Name				Species Code	Tissue Type	Sample Date	Aldrin	alpha- Chlor- dene	cis- Chlor- dane	gamma- Chlor- dene	trans- Chlor- dane	cis- Nona- chlor	trans- Nona- chlor	Oxy- chlor- dane	Total Chlor- dane	Chlor- pyrifos	Dacthal
902.21.01	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	<10.0	ND	<20.0	ND
902.21.01	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	<10.0	ND	<20.0	ND
902.22.02	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	<10.0	ND	<20.0	ND
905.23.01	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	<10.0	ND	<20.0	18.6
909.11.09	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.3	<5.0	16.9	<2.0	<4.0	<25.0	41.2	<10.0	41.2	<20.0	63.2
909.12.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.3	<5.0	<3.0	4.7	<4.0	195.0	204.0	53.7	452.7	<20.0	5.0

NA Means that the sample was not analyzed for the chemical.

ND Means that the chemical was not detected.

< Means that the chemical was not detected above the indicated limit of detection.

F = Filet.

W = Whole Body.

Species codes are listed in Table 3.

Table 1
Toxic Substances Monitoring Program
Preliminary Summary of 1998 Data: Trace Elements in Fish and Crayfish (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury (++)	Nickel	Selenium	Silver	Zinc
902.21.01	DeLuz Creek	BLB	F	07/07/98	0.023	0.0006	0.081	0.3432	<0.0003		0.0030	0.279	<0.0013	6.74
902.21.01	DeLuz Creek	BLB	F	07/07/98	<0.017	0.0007	0.065	0.3849	<0.0003		0.0040	0.316	<0.0013	6.00
902.21.01	DeLuz Creek	BLB	L	07/07/98	0.076	0.0220	0.065	4.5530	0.0023		0.0040	0.853	0.0062	15.00
902.21.01	DeLuz Creek	BLB	L	07/07/98	0.079	0.0200	0.054	4.7690	0.0027		0.0030	0.778	0.0082	14.20
902.22.02	Sandia Canyon Cr	BLB	F	07/07/98	0.028	0.0059	0.061	0.4965	0.0322		0.0050	0.469	<0.0013	7.28
902.22.02	Sandia Canyon Cr	BLB	L	07/07/98	0.105	0.0157	0.060	3.6490	0.0004		0.0020	1.450	0.0061	14.70
905.23.01	Felicita Cr/East Fork	GAM	W	07/08/98	0.037	0.0051	0.100	0.8854	0.0016		0.0350	0.325	0.0065	24.90
909.11.09	San Diego R/d/s Alvarado Cr	GSH	W	08/08/98	0.121	0.0131	0.087	1.0460	0.0400		<0.0010	0.528	0.0026	34.30
909.12.00	F-G St Salt Marsh/Chula Vista	MOL	W	07/08/98	0.338	0.0302	0.894	4.3880	0.4719		0.2320	0.429	0.0552	-0.003

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit.

Species codes are listed in Table 3.

++ = Mercury data will be available by the end of June.

The EDL 85 and EDL 95 for trace elements in Whole fish calculated using 1978-87 data (ppm, wet weight)

0.40	0.79	Arsenic
0.10	0.17	Cadmium
0.17	0.25	Chromium
3.39	3.96	Copper
0.39	0.53	Lead
0.06	0.07	Mercury
0.17	0.42	Nickel
1.60	3.27	Selenium
<0.02	0.04	Silver
38.90	40.60	Zinc

Table 1
Toxic Substances Monitoring Program
Preliminary Summary of 1998 Data: Trace Elements in Fish and Crayfish (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
635.20.16	Cold Stream Cr/u/s Donner Cr	BN	F	10/15/98	0.058	<0.0003	0.127	0.4894	<0.0003	0.071	0.0020	0.136	<0.0013	4.21
635.20.16	Cold Stream Cr/u/s Donner Cr	BN	L	10/15/98	0.023	0.0473	0.119	10.4200	<0.0003	NA	<0.0010	0.577	0.2390	14.90
637.20.31	Susan R/u/s Susanville	RBT	F	10/16/98	<0.017	<0.0003	0.114	0.3884	<0.0003	0.030	0.0040	0.101	<0.0013	4.90
637.20.31	Susan R/u/s Susanville	RBT	L	10/16/98	0.049	0.0303	0.111	73.5900	<0.0003	NA	0.0100	0.907	0.3805	19.40
715.40.08	Palo Verde Outfall Drain	LMB	F	11/12/98	0.068	<0.0003	0.058	0.2224	<0.0003	NA	0.0020	0.614	<0.0013	4.66
723.10.01	Alamo R/Calipatria	CCF	F	11/11/98	0.118	<0.0003	0.110	0.2526	<0.0003	NA	<0.0010	0.786	<0.0013	4.52
723.10.02	New R/Westmorland	CCF	F	11/11/98	0.058	<0.0003	0.067	0.3041	<0.0003	0.044	0.0050	0.826	<0.0013	5.55
723.10.02	New R/Westmorland	CCF	L	11/11/98	0.129	0.0091	0.090	1.5630	0.0514	NA	0.0020	2.200	0.0023	16.70
728.00.90	Salton Sea/South	TL	F	11/11/98	1.310	<0.0003	0.084	0.2784	<0.0003	<0.005	0.0070	2.200	<0.0013	4.72
728.00.90	Salton Sea/South	TL	L	11/11/98	0.700	0.0118	0.158	0.9736	0.0148	NA	0.1480	4.150	0.0046	17.30
728.00.92	Salton Sea/North	TL	F	11/10/98	1.900	<0.0003	0.060	0.1789	<0.0003	<0.005	0.0060	2.730	<0.0013	3.75
728.00.92	Salton Sea/North	TL	L	11/10/98	0.854	0.0333	0.106	1.5690	0.0197	NA	0.2370	6.270	0.0042	19.90
801.11.05	Delhi Channel	MUL	W	06/09/98	0.882	0.0224	0.284	1.5780	0.2108	0.006	0.0870	0.949	0.0109	14.50
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/09/98	0.344	0.0915	0.200	0.9073	0.0410	0.005	0.0400	1.050	0.0052	24.50
801.11.09	San Diego Cr/Barranca Pkwy	PRS	W	06/09/98	0.200	0.1514	0.094	0.6872	0.0138	0.030	0.0050	0.971	0.0034	41.10
801.11.96	Peters Canyon Channel	PRS	W	06/09/98	0.116	0.0891	0.105	0.8800	0.0218	0.042	0.0190	1.130	0.0018	36.70
801.11.99	Upper Newport Bay/Newport Dunes	BSS	F	06/10/98	8.620	0.0028	0.171	0.3616	<0.0003	0.541	0.0040	0.301	<0.0013	3.65
801.11.99	Upper Newport Bay/Newport Dunes	BSS	L	06/10/98	7.730	0.2400	0.640	0.9350	<0.0001	0.131	<0.0002	1.950	0.0080	4.13
902.21.01	DeLuz Creek	BLB	F	07/07/98	0.023	0.0006	0.081	0.3432	<0.0003	0.047	0.0030	0.279	<0.0013	6.74
902.21.01	DeLuz Creek	BLB	F	07/07/98	<0.017	0.0007	0.065	0.3849	<0.0003	0.040	0.0040	0.316	<0.0013	6.00
902.21.01	DeLuz Creek	BLB	L	07/07/98	0.076	0.0220	0.065	4.5530	0.0023	NA	0.0040	0.853	0.0062	15.00
902.21.01	DeLuz Creek	BLB	L	07/07/98	0.079	0.0200	0.054	4.7690	0.0027	NA	0.0030	0.778	0.0082	14.20
902.22.02	Sandia Canyon Cr	BLB	F	07/07/98	0.028	0.0059	0.061	0.4965	0.0322	0.043	0.0050	0.469	<0.0013	7.28
902.22.02	Sandia Canyon Cr	BLB	L	07/07/98	0.105	0.0157	0.060	3.6490	0.0004	NA	0.0020	1.450	0.0061	14.70
905.23.01	Felicita Cr/East Fork	GAM	W	07/08/98	0.037	0.0051	0.100	0.8854	0.0016	0.034	0.0350	0.325	0.0065	24.90
909.11.09	San Diego R/d/s Alvarado Cr	GSH	W	08/08/98	0.121	0.0131	0.087	1.0460	0.0400	0.014	<0.0010	0.528	0.0026	34.30
909.12.00	F-G St Salt Marsh/Chula Vista	MOL	W	07/08/98	0.338	0.0302	0.894	4.3880	0.4719	<0.005	0.2320	0.429	0.0552	-0.003

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit.
 Species codes are listed in Table 3.

MIS 88m

1.5 3 10 20 2 5 - 2 - 45

NASC

05.444

MIS 1

1.4

10 28

FDR

1.0 14.4

Table 1
Toxic Substances Monitoring Program
Preliminary Summary of 1998 Data: Trace Elements in Fish and Crayfish (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
508.10.45	Sacramento R/Keswick Dam	RBT	F	11/30/98	0.068	0.0037	0.178	0.5935	<0.0003	0.048	0.0190	0.363	<0.0013	4.94
508.10.45	Sacramento R/Keswick Dam	RBT	L	11/30/98	0.334	1.0240	0.281	112.6000	0.0057	NA	0.1400	4.450	0.2039	20.00
510.00.30	Sacramento R/Hood	WCF	F	10/27/98	0.040	0.0018	0.066	0.4423	<0.0003	0.476	<0.0010	0.163	<0.0013	4.66
510.00.30	Sacramento R/Hood	WCF	W	10/27/98	0.070	0.0426	0.276	1.2380	0.0942	0.338	0.1010	0.338	0.0054	12.40
510.00.30	Sacramento R/Hood	LMB	F	11/19/98	0.136	0.0003	0.065	0.2056	<0.0003	0.779	0.0020	0.312	<0.0013	3.18
510.00.30	Sacramento R/Hood	LMB	W	11/19/98	0.167	0.0136	0.242	0.4209	0.1944	0.326	<0.0010	0.491	<0.0013	10.80
516.31.01	Camp Far West	LMB	F	10/28/98	NA	NA	NA	NA	NA	0.338	NA	NA	NA	NA
516.31.01	Camp Far West	LMB	W	10/28/98	0.047	0.0281	0.192	1.0180	0.0541	0.275	0.0700	0.354	0.0026	13.50
535.30.02	Tuolumne R/Shilo Rd	LMB	F	09/11/98	0.046	<0.0003	0.040	0.1649	<0.0003	0.277	<0.0010	0.406	<0.0013	5.02
535.30.02	Tuolumne R/Shilo Rd	LMB	W	09/11/98	0.044	0.0037	0.146	0.3669	0.3321	0.122	<0.0010	0.476	<0.0013	13.40
535.70.03	Merced R/Hatfield St Rec Area	CCF	F	11/05/98	0.041	0.0005	0.129	0.3658	<0.0003	0.328	<0.0010	0.319	<0.0013	5.66
535.70.03	Merced R/Hatfield St Rec Area	CCF	W	11/05/98	0.082	0.0144	0.218	0.5988	0.1475	0.145	<0.0010	0.454	0.0014	16.40
535.70.03	Merced R/Hatfield St Rec Area	LMB	F	11/05/98	0.053	<0.0003	0.071	0.2095	<0.0003	0.439	<0.0010	0.521	<0.0013	4.19
535.70.03	Merced R/Hatfield St Rec Area	LMB	W	11/05/98	0.080	0.0066	0.220	1.0780	0.0385	0.113	<0.0010	0.414	0.0029	12.80
541.10.90	San Joaquin R/Vernalis	LMB	F	08/18/98	0.090	0.0003	0.058	0.2323	<0.0003	0.316	<0.0010	0.681	<0.0013	6.21
541.10.90	San Joaquin R/Vernalis	LMB	W	08/18/98	0.138	0.0031	0.135	0.4096	0.0640	0.156	<0.0010	0.663	<0.0013	12.90
541.10.90	San Joaquin R/Vernalis	WCF	F	08/26/98	0.048	0.0007	0.067	0.4002	<0.0003	0.333	0.0010	0.222	<0.0013	5.38
541.10.92	San Joaquin R/Crows Landing	LMB	F	09/11/98	0.063	0.0004	0.065	0.1808	<0.0003	0.307	0.0020	0.669	<0.0013	5.06
541.20.16	Mud Slough	WCF	F	12/17/98	0.021	0.0003	0.148	0.3474	<0.0003	0.192	0.0070	0.192	<0.0013	6.10
544.00.31	Old River/CV Pumps	WCF	F	09/03/98	0.041	<0.0003	0.063	0.3556	<0.0003	0.223	0.0040	0.177	<0.0013	3.69
551.20.00	Mendota Pool	LMB	F	11/04/98	0.125	<0.0003	0.103	0.2574	<0.0003	0.250	0.0030	0.709	<0.0013	5.97
603.10.06	Crowley Lake	RBT	F	09/23/98	0.100	<0.0003	0.122	0.4257	<0.0003	0.181	0.0020	0.222	<0.0013	4.85
603.10.06	Crowley Lake	RBT	L	09/23/98	0.218	0.0090	0.128	23.9800	<0.0003	NA	0.0140	2.090	0.1464	18.50
626.80.04	Little Rock Cr/u/s Res	STB	W	11/09/98	0.022	0.0163	0.182	1.6080	0.0897	0.037	0.0530	0.216	0.0027	28.80
632.10.05	Poison Creek	RBT	F	09/17/98	<0.017	<0.0003	0.122	0.4586	<0.0003	0.044	0.0130	0.152	<0.0013	3.84
632.10.05	Poison Creek	RBT	L	09/17/98	0.115	0.0168	0.081	25.8400	<0.0003	NA	0.0050	1.770	0.1492	17.60
634.10.02	Heavenly Valley Creek	BN	F	09/30/98	0.028	0.0006	0.060	0.2934	<0.0003	0.041	<0.0010	0.153	<0.0013	5.72
634.10.02	Heavenly Valley Creek	BN	L	09/30/98	<0.017	0.0354	0.081	17.2800	<0.0003	NA	0.0040	0.512	0.2623	22.10
634.10.07	Upper Truckee R/Tahoe Paradise	BN	F	09/30/98	0.094	<0.0001	0.259	0.5210	<0.0001	0.191	0.0060	0.203	<0.0013	4.32
634.10.07	Upper Truckee R/Tahoe Paradise	BN	L	09/30/98	0.050	0.0425	0.084	11.3500	0.0011	NA	0.0020	0.576	0.1867	13.80

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit.
 Species codes are listed in Table 3.

Table 1

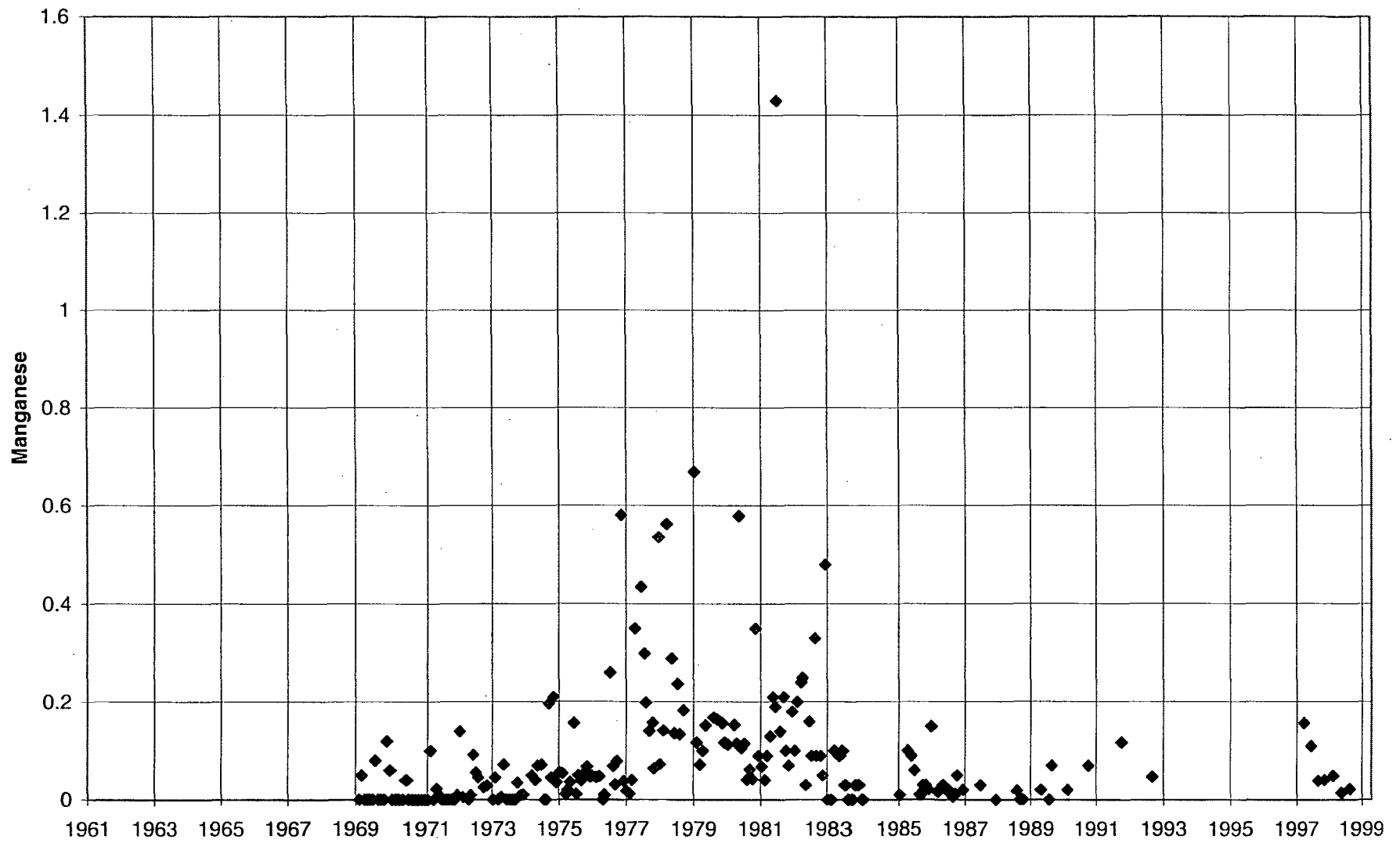
Toxic Substances Monitoring Program

Preliminary Summary of 1998 Data: Trace Elements in Fish and Crayfish (ppm, wet weight)

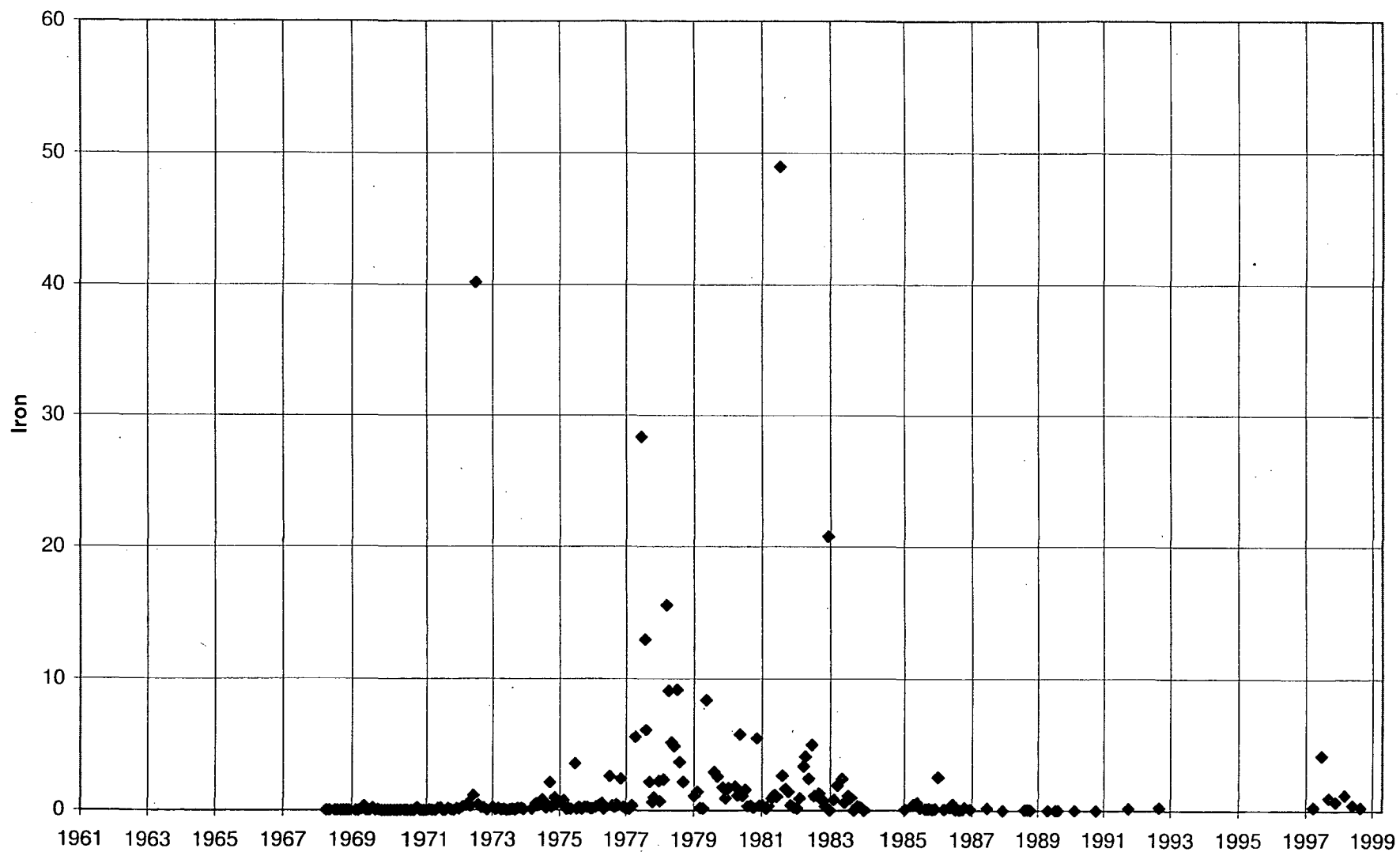
Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
114.21.03	Laguna de Santa Rosa/Sebastopol	CP	F	08/13/98	0.069	<0.0003	0.070	0.2738	<0.0003	0.084	0.0080	0.153	<0.0013	5.46
114.21.03	Laguna de Santa Rosa/Sebastopol	RSF	F	08/13/98	0.025	0.0004	0.088	0.2364	<0.0003	0.192	0.0060	0.196	<0.0013	5.06
114.21.03	Laguna de Santa Rosa/Sebastopol	RSF	L	08/13/98	<0.017	0.0028	0.009	0.1242	<0.0003	NA	0.0020	<0.017	<0.0013	1.56
114.21.03	Laguna de Santa Rosa/Sebastopol	SBF	F	08/13/98	<0.017	<0.0003	0.083	0.2453	<0.0003	0.113	0.0030	0.130	<0.0013	4.87
114.21.03	Laguna de Santa Rosa/Sebastopol	SBF	F	08/13/98	<0.017	0.0004	0.106	0.2662	<0.0003	0.119	0.0020	0.138	<0.0013	5.57
114.21.03	Laguna de Santa Rosa/Sebastopol	SKR	F	08/13/98	0.046	<0.0003	0.080	0.2062	<0.0003	0.134	0.0020	0.170	<0.0013	2.99
114.21.04	Laguna de Santa Rosa/Occidental	BLB	F	08/13/98	<0.017	<0.0003	0.079	0.1779	<0.0003	0.137	0.0130	0.148	<0.0013	3.39
114.21.04	Laguna de Santa Rosa/Occidental	BLB	L	08/13/98	0.097	0.0197	0.108	8.1110	0.0738	NA	0.0620	1.510	0.0469	23.70
114.21.04	Laguna de Santa Rosa/Occidental	CP	F	08/13/98	0.032	<0.0003	0.055	0.2213	<0.0003	0.062	0.0100	0.143	<0.0013	4.66
114.21.04	Laguna de Santa Rosa/Occidental	CP	F	08/13/98	0.030	<0.0003	0.085	0.2727	<0.0003	0.069	0.0060	0.171	<0.0013	4.62
114.21.04	Laguna de Santa Rosa/Occidental	CCF	F	08/13/98	<0.017	<0.0003	0.137	0.2032	<0.0003	0.130	0.0030	0.117	<0.0013	5.45
114.21.04	Laguna de Santa Rosa/Occidental	CCF	L	08/13/98	0.061	0.0099	0.141	1.8100	0.0047	NA	0.0090	1.250	<0.0013	19.80
114.21.04	Laguna de Santa Rosa/Occidental	PACI	F	08/13/98	<0.017	<0.0003	0.010	0.3475	0.0023	0.053	0.0240	<0.017	<0.0013	0.73
114.21.04	Laguna de Santa Rosa/Occidental	SBF	F	08/13/98	0.028	<0.0003	0.085	0.2667	<0.0003	0.132	0.0050	0.139	<0.0013	5.27
114.21.04	Laguna de Santa Rosa/Occidental	SBF	F	08/13/98	0.034	<0.0003	0.114	0.2691	<0.0003	0.122	0.0040	0.139	<0.0013	5.09
309.10.04	Old Salinas R/Monterey Dunes Brg	HCH	F	07/15/98	0.092	0.0007	0.093	0.3304	<0.0003	0.168	0.0030	0.323	<0.0013	6.68
309.10.93	Salinas R/Davis Rd	SKR	W	07/13/98	0.124	0.0857	0.657	1.0230	0.0495	0.031	0.6160	0.499	0.0054	14.10
309.10.94	Salinas R/HWY 1 Brg	SKR	F	07/14/98	0.088	0.0014	0.071	0.3303	<0.0003	0.090	0.0880	0.536	<0.0013	4.80
309.10.95	Tembladero Sl/Castroville	GAM	W	07/14/98	0.088	0.0272	0.128	0.9605	0.0150	0.032	0.0300	0.363	0.0031	26.20
402.10.05	Ventura R/d/s OVSD Discharge	AC	W	06/26/98	0.095	0.0526	0.248	2.3400	0.0006	0.016	0.0110	1.780	0.0077	28.10
402.10.06	Ventura R/u/s OVSD Discharge	AC	W	06/26/98	0.128	0.1145	0.173	2.0060	0.0009	0.026	0.0330	1.960	0.0080	30.90
403.12.07	Conejo Creek	GAM	W	06/25/98	0.044	0.0183	0.127	0.9886	0.0051	0.021	<0.0010	0.579	0.0233	27.60
403.12.07	Conejo Creek	GAM	W	06/25/98	0.059	0.0202	0.155	1.0760	0.0062	0.026	<0.0010	0.706	0.0266	27.90
403.67.08	Arroyo Simi/Madera Rd	AC	W	06/25/98	0.138	0.0363	0.098	1.1720	0.0537	0.011	0.0550	1.590	0.0060	22.30
404.23.04	Lindero Lake	CP	F	06/24/98	0.345	0.0017	0.100	0.7774	<0.0003	0.011	0.0030	4.610	<0.0013	9.31
405.15.02	El Dorado Park Lake	LMB	F	06/23/98	0.041	<0.0003	0.070	0.2196	<0.0003	0.602	0.0040	0.107	<0.0013	4.28
405.15.02	El Dorado Park Lake	LMB	L	06/23/98	0.133	0.0227	0.100	6.1250	<0.0003	NA	0.0020	0.613	0.0026	17.50
405.15.22	McArthur Park Lake	GSF	F	06/24/98	0.048	<0.0003	0.086	0.3130	<0.0003	0.044	0.0030	1.020	<0.0013	5.95
405.15.22	McArthur Park Lake	GSF	L	06/24/98	0.128	0.0057	0.056	1.1050	0.0953	NA	0.0050	1.800	<0.0013	12.60
405.15.97	Belvedere Park Lake	LMB	W	06/24/98	0.031	0.0164	0.061	0.5067	0.0196	0.061	0.0220	0.573	0.0031	20.30

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit.
 Species codes are listed in Table 3.

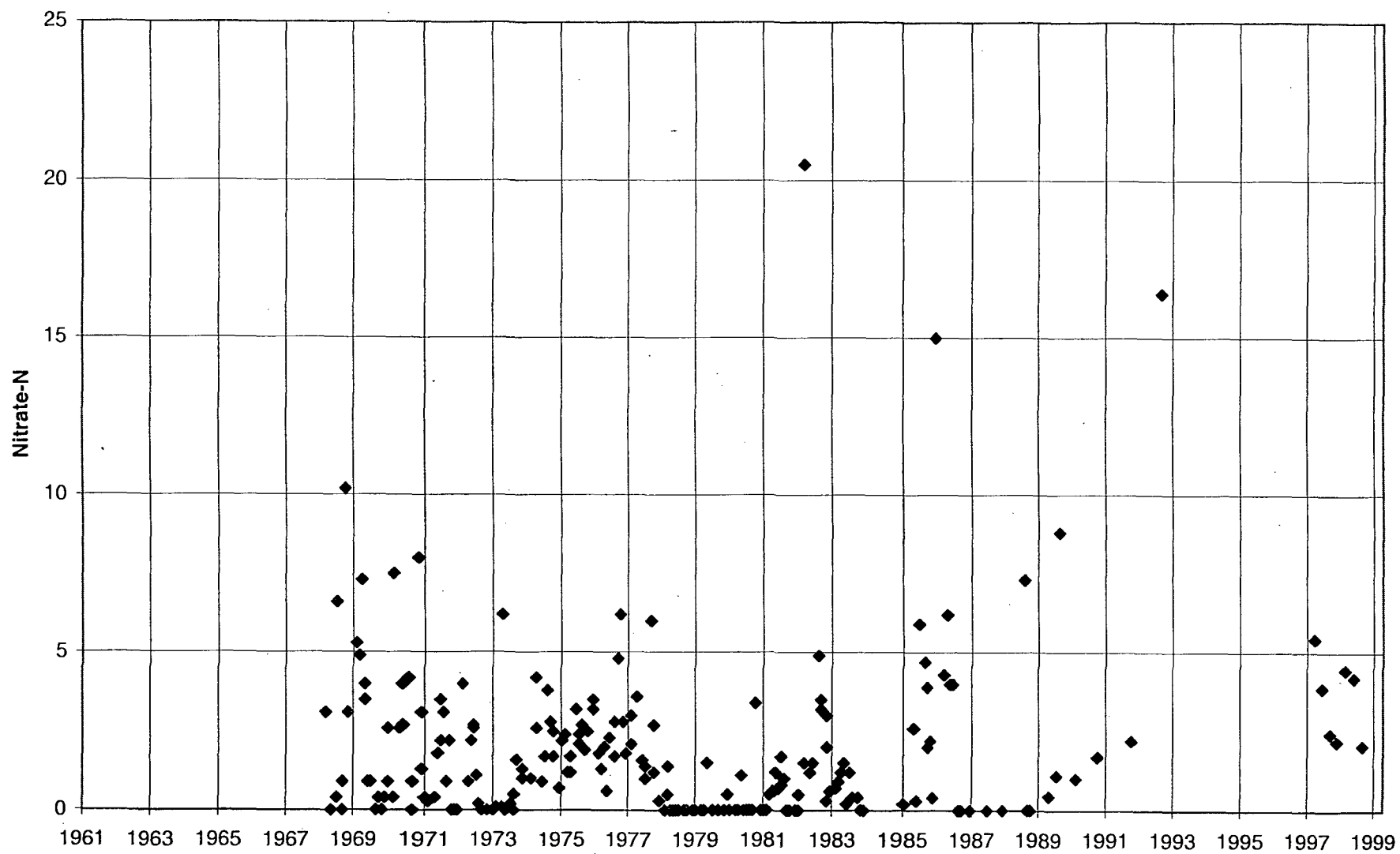
De Luz Creek near Fallbrook



De Luz Creek near Fallbrook

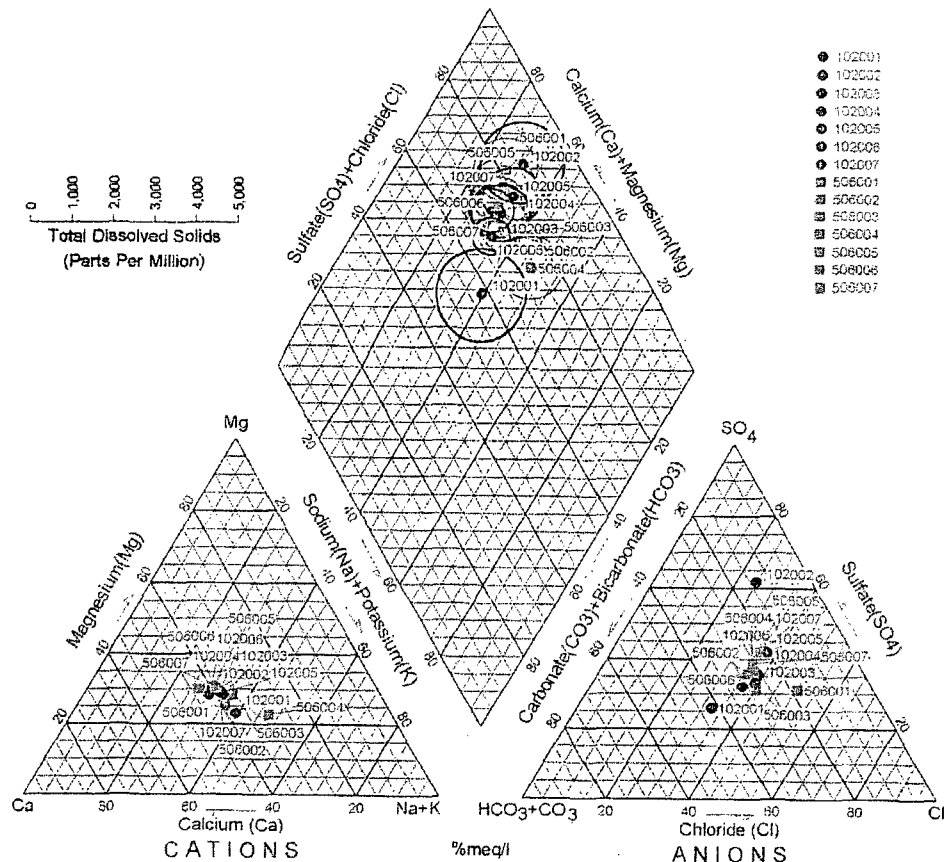


De Luz Creek near Fallbrook



De Luz Creek Near Fallbrook & MW-2 (Sta. 506 & 102)

1997 through 1999



Prepared By: SKR
Checked By: KEM

SWDIV
NAVFACENGCOM
SAN DIEGO, CALIFORNIA

LAWCrandall
LAWGIBB Group Member

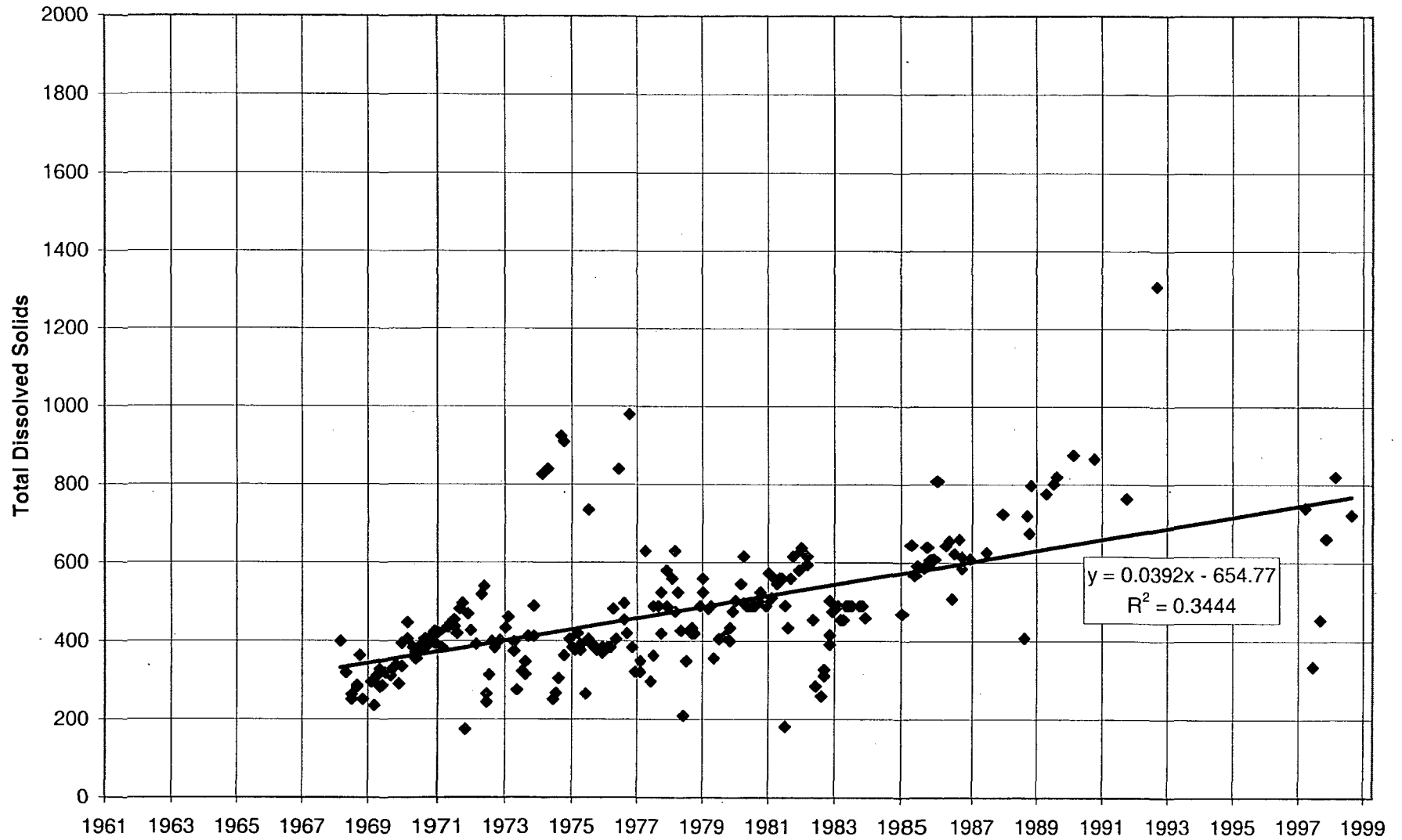
A Division of Law Engineering and Environmental Services, Inc.

PIPER DIAGRAM
STATIONS 506 & 102
SANTA MARGARITA
RIVER WATERSHED

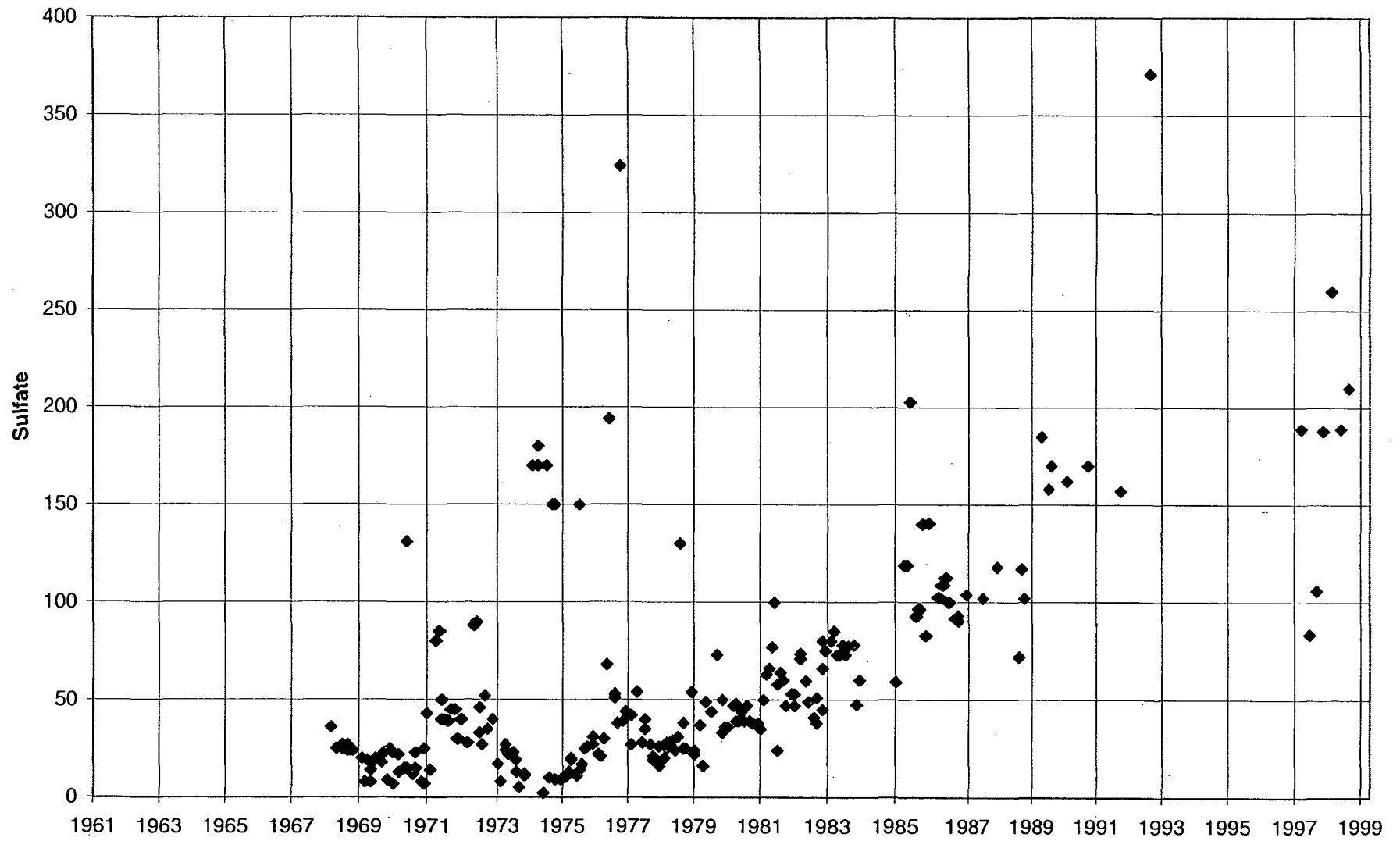
PROJECT: 70300-7-0193

Figure: 13

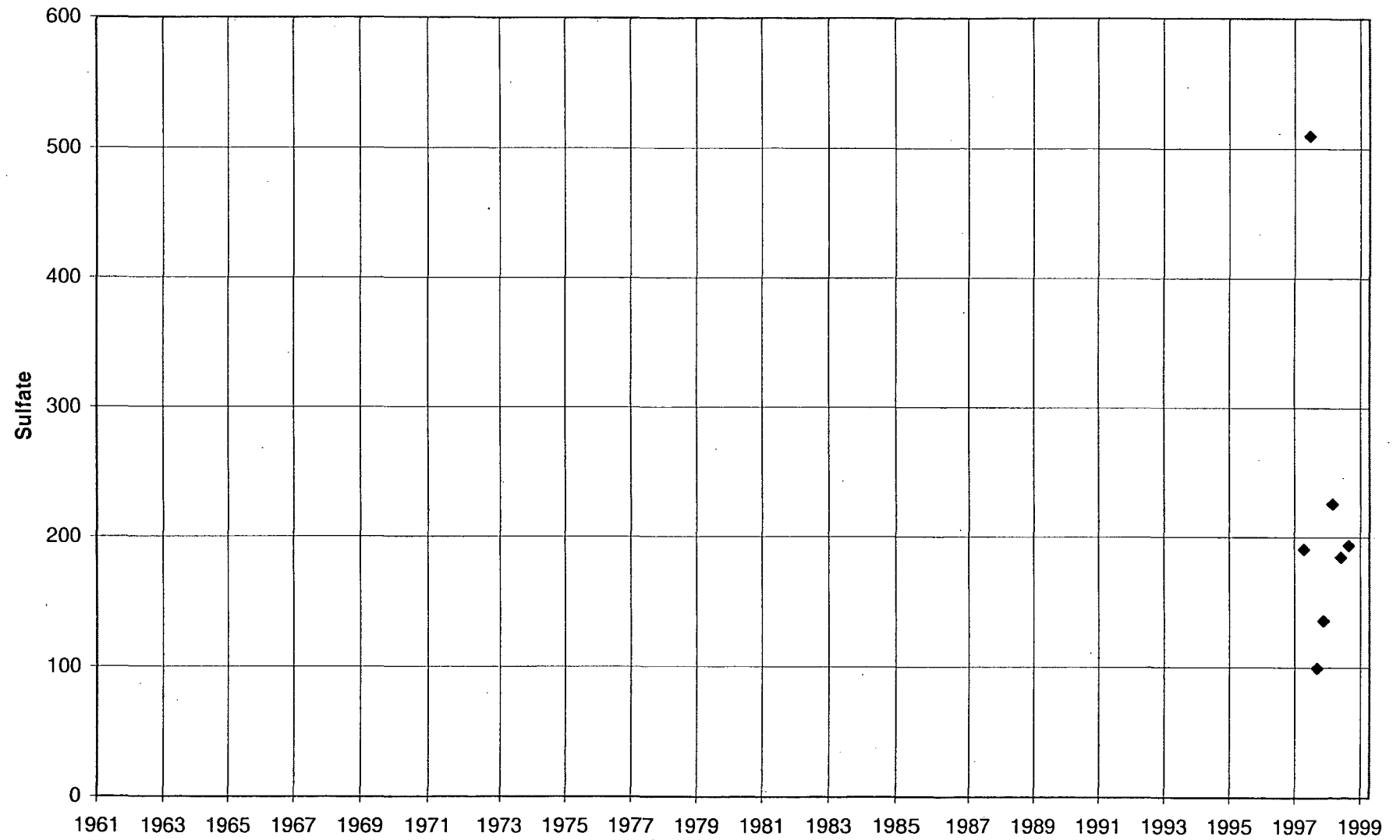
De Luz Creek near Fallbrook



De Luz Creek near Fallbrook



Well 02 -- De Luz Creek



fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
02	06	surface water	Zinc	ND	mg/L	0.03	3/3/98	3
03	06	surface water	Zinc	ND	mg/L	0.01	5/26/98	5
01	06	surface water	Zinc	0.013	mg/L	0.0100	12/9/97	12
08	06	surface water	Zinc	NS	mg/L	0.02	9/28/99	9
11	06	surface water	Zinc	ND	mg/L	0.01	6/1/00	6
07	06	surface water	Zinc	ND	mg/L	0.02	5/11/99	5
04	06	surface water	Zinc	ND	mg/L	0.01	8/4/98	8
06	06	surface water	Zinc	ND	mg/L	0.01	2/10/99	2
05	06	surface water	Zinc	ND	mg/L	0.01	11/9/98	11
09	06	surface water	Zinc	NS	mg/L	0.02	12/6/99	12
10	06	surface water	Zinc	ND	mg/L	0.01	3/7/00	3
06	06	surface water	Total Organic Carbon	3.18	mg/L	1	2/10/99	2
03	06	surface water	Total Organic Carbon	4.79	mg/L	1	5/26/98	5
05	06	surface water	Total Organic Carbon	1.47	mg/L	1	11/9/98	11
01	06	surface water	Total Organic Carbon	7.28	mg/L	1.00	12/9/97	12
08	06	surface water	Total Organic Carbon	NS	mg/L	1	9/28/99	9
09	06	surface water	Total Organic Carbon	NS	mg/L	1	12/6/99	12
10	06	surface water	Total Organic Carbon	7.3	mg/L	0.1	3/7/00	3
11	06	surface water	Total Organic Carbon	6.1	mg/L	0.5	6/1/00	6
07	06	surface water	Total Organic Carbon	2.62	mg/L	1	5/11/99	5
02	06	surface water	Total Organic Carbon	3.47	mg/L	1	3/3/98	3
04	06	surface water	Total Organic Carbon	2.86	mg/L	1	8/4/98	8
04	06	surface water	Total Dissolved Solids	662	mg/L	10	8/4/98	8
05	06	surface water	Total Dissolved Solids	821	mg/L	10	11/9/98	11
07	06	surface water	Total Dissolved Solids	723	mg/L	10	5/11/99	5
09	06	surface water	Total Dissolved Solids	NS	mg/L	10	12/6/99	12
06	06	surface water	Total Dissolved Solids	700	mg/L	10	2/10/99	2
03	06	surface water	Total Dissolved Solids	455	mg/L	10	5/26/98	5
02	06	surface water	Total Dissolved Solids	336	mg/L	10	3/3/98	3
01	06	surface water	Total Dissolved Solids	740	mg/L	10.0	12/9/97	12
11	06	surface water	Total Dissolved Solids	925	mg/L	5	6/1/00	6
10	06	surface water	Total Dissolved Solids	661	mg/L	5	3/7/00	3
08	06	surface water	Total Dissolved Solids	NS	mg/L	10	9/28/99	9
06	06	surface water	Total Coliform	500	mpn/100ml	2	2/10/99	2
03	06	surface water	Total Coliform	300	mpn/100ml	2	5/26/98	5
04	06	surface water	Total Coliform	900	mpn/100ml	2	8/4/98	8
02	06	surface water	Total Coliform	1600	mpn/100ml	2	3/3/98	3
09	06	surface water	Total Coliform	NS	mpn/100ml	2	12/6/99	12

fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
01	06	surface water	Total Coliform	>1600	mpn/100ml	2	12/9/97	12
11	06	surface water	Total Coliform	500	MPN/100 m	2	6/1/00	6
08	06	surface water	Total Coliform	NS	mpn/100ml	2	9/28/99	9
10	06	surface water	Total Coliform	1,600	MPN/100 m	3.0	3/7/00	3
07	06	surface water	Total Coliform	>23	mpn/100ml	2	5/11/99	5
05	06	surface water	Total Coliform	>1600	mpn/100ml	2	11/9/98	11
05	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	11/9/98	11
11	06	surface water	Surfactants (MBAS)	ND	mg/L	0.03	6/1/00	6
07	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	5/11/99	5
09	06	surface water	Surfactants (MBAS)	NS	mg/L	0.1	12/6/99	12
01	06	surface water	Surfactants (MBAS)	ND	mg/L	0.100	12/9/97	12
08	06	surface water	Surfactants (MBAS)	NS	mg/L	0.1	9/28/99	9
10	06	surface water	Surfactants (MBAS)	ND	mg/L	0.03	3/7/00	3
02	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	3/3/98	3
03	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	5/26/98	5
04	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	8/4/98	8
06	06	surface water	Surfactants (MBAS)	ND	mg/L	0.1	2/10/99	2
10	06	surface water	Sulfate	167	mg/L	5	3/7/00	3
09	06	surface water	Sulfate	NS	mg/L	50	12/6/99	12
07	06	surface water	Sulfate	210	mg/L	50	5/11/99	5
11	06	surface water	Sulfate	259	mg/L	5	6/1/00	6
01	06	surface water	Sulfate	189	mg/L	10.0	12/9/97	12
02	06	surface water	Sulfate	83.5	mg/L	4	3/3/98	3
08	06	surface water	Sulfate	NS	mg/L	50	9/28/99	9
03	06	surface water	Sulfate	106	mg/L	10	5/26/98	5
04	06	surface water	Sulfate	188	mg/L	50	8/4/98	8
05	06	surface water	Sulfate	260	mg/L	5	11/9/98	11
06	06	surface water	Sulfate	189	mg/L	5	2/10/99	2
11	06	surface water	Sodium	104	mg/L	0.25	6/1/00	6
08	06	surface water	Sodium	NS	mg/L	0.3	9/28/99	9
06	06	surface water	Sodium	78.7	mg/L	0.3	2/10/99	2
04	06	surface water	Sodium	78.2	mg/L	0.3	8/4/98	8
02	06	surface water	Sodium	53	mg/L	4	3/3/98	3
10	06	surface water	Sodium	75.5	mg/L	0.25	3/7/00	3
05	06	surface water	Sodium	87.7	mg/L	0.3	11/9/98	11
03	06	surface water	Sodium	57.3	mg/L	0.3	5/26/98	5
07	06	surface water	Sodium	83.2	mg/L	0.3	5/11/99	5
09	06	surface water	Sodium	NS	mg/L	0.3	12/6/99	12

fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
01	06	surface water	Sodium	72.7	mg/L	0.300	12/9/97	12
04	06	surface water	Potassium	1.61	mg/L	0.3	8/4/98	8
10	06	surface water	Potassium	2.2	mg/L	0.5	3/7/00	3
03	06	surface water	Potassium	1.68	mg/L	0.3	5/26/98	5
07	06	surface water	Potassium	1.79	mg/L	1	5/11/99	5
11	06	surface water	Potassium	2.3	mg/L	0.5	6/1/00	6
08	06	surface water	Potassium	NS	mg/L	1	9/28/99	9
02	06	surface water	Potassium	ND	mg/L	2	3/3/98	3
09	06	surface water	Potassium	NS	mg/L	1	12/6/99	12
05	06	surface water	Potassium	2.35	mg/L	0.3	11/9/98	11
01	06	surface water	Potassium	3.04	mg/L	0.300	12/9/97	12
06	06	surface water	Potassium	2.04	mg/L	1	2/10/99	2
08	06	surface water	Phosphorus	NS	mg/L	0.01	9/28/99	9
06	06	surface water	Phosphorus	ND	mg/L	0.01	2/10/99	2
03	06	surface water	Phosphorus	0.014	mg/L	0.01	5/26/98	5
01	06	surface water	Phosphorus	0.089	mg/L	0.01	12/9/97	12
09	06	surface water	Phosphorus	NS	mg/L	0.01	12/6/99	12
07	06	surface water	Phosphorus	0.046	mg/L	0.01	5/11/99	5
05	06	surface water	Phosphorus	0.04	mg/L	0.01	11/9/98	11
02	06	surface water	Phosphorus	0.151	mg/L	0.01	3/3/98	3
04	06	surface water	Phosphorus	0.08	mg/L	0.01	8/4/98	8
10	06	surface water	Phosphate	1.4	mg/L	0.30	3/7/00	3
02	06	surface water	Phosphate	NS	mg/L	0.3	3/3/98	3
04	06	surface water	Phosphate	NS	mg/L	0.3	8/4/98	8
06	06	surface water	Phosphate	NS	mg/L	0.3	2/10/99	2
07	06	surface water	Phosphate	NS	mg/L	0.3	5/11/99	5
05	06	surface water	Phosphate	NS	mg/L	0.3	11/9/98	11
01	06	surface water	Phosphate	NS	mg/L	0.3	12/9/97	12
11	06	surface water	Phosphate	ND	mg/L	0.30	6/1/00	6
08	06	surface water	Phosphate	NS	mg/L	0.3	9/28/99	9
09	06	surface water	Phosphate	NS	mg/L	0.3	12/6/99	12
03	06	surface water	Phosphate	NS	mg/L	0.3	5/26/98	5
08	06	surface water	pH	NS	pH units	2.5-12.0	9/28/99	9
04	06	surface water	pH	8.15	pH units	2.5-12.0	8/4/98	8
02	06	surface water	pH	7.97	pH units	2.0-12.5	3/3/98	3
01	06	surface water	pH	7.94	pH units	2.0-12.5	12/9/97	12
09	06	surface water	pH	NS	pH units	2.5-12.0	12/6/99	12
10	06	surface water	pH	8.07	mg/L	0.01	3/7/00	3

fIdRound	fIdWell	fIdMatrix	fIdNewName	fIdWell6	fIdUnits	fIdDL	fIdSampleDate	fIdSampleMont
07	06	surface water	pH	8.2	pH units	2.5-12.0	5/11/99	5
06	06	surface water	pH	8.13	pH units		2/10/99	2
03	06	surface water	pH	7.93	pH units	2.5-12.0	5/26/98	5
11	06	surface water	pH	7.21	mg/L	0.01	6/1/00	6
10	06	surface water	pH	8.07	mg/L	0.01	3/7/00	3
11	06	surface water	pH	7.21	mg/L	0.01	6/1/00	6
05	06	surface water	Oil and Grease	ND	mg/L	1	11/9/98	11
11	06	surface water	Oil and Grease	ND	mg/L	0.5	6/1/00	6
07	06	surface water	Oil and Grease	ND	mg/L	1.01	5/11/99	5
10	06	surface water	Oil and Grease	ND	mg/L	0.5	3/7/00	3
11	06	surface water	Oil and Grease	ND	mg/L	0.5	6/1/00	6
09	06	surface water	Oil and Grease	NS	mg/L	1.01	12/6/99	12
01	06	surface water	Oil and Grease	ND	mg/L	1.22	12/9/97	12
06	06	surface water	Oil and Grease	ND	mg/L	1	2/10/99	2
10	06	surface water	Oil and Grease	ND	mg/L	0.5	3/7/00	3
04	06	surface water	Oil and Grease	ND	mg/L	1.15	8/4/98	8
03	06	surface water	Oil and Grease	1.33	mg/L	0.952	5/26/98	5
08	06	surface water	Oil and Grease	NS	mg/L	1.01	9/28/99	9
02	06	surface water	Oil and Grease	ND	mg/L	0.952	3/3/98	3
05	06	surface water	Nitrogen	0.619	mg/L	0.1	11/9/98	11
04	06	surface water	Nitrogen	NS	mg/L	0.1	8/4/98	8
10	06	surface water	Nitrogen	ND	mg/L	0.05	3/7/00	3
04	06	surface water	Nitrogen	NS	mg/L	0.1	8/4/98	8
01	06	surface water	Nitrogen	0.447	mg/L	0.100	12/9/97	12
06	06	surface water	Nitrogen	NS	mg/L	0.1	2/10/99	2
04	06	surface water	Nitrogen	NS	mg/L	0.1	8/4/98	8
09	06	surface water	Nitrogen	NS	mg/L	0.4	12/6/99	12
08	06	surface water	Nitrogen	NS	mg/L	0.4	9/28/99	9
06	06	surface water	Nitrogen	NS	mg/L	0.1	2/10/99	2
07	06	surface water	Nitrogen	0.509	mg/L	0.4	5/11/99	5
02	06	surface water	Nitrogen	NS	mg/L	0.1	3/3/98	3
02	06	surface water	Nitrogen	NS	mg/L	0.1	3/3/98	3
06	06	surface water	Nitrogen	NS	mg/L	0.1	2/10/99	2
03	06	surface water	Nitrogen	0.6	mg/Kg	0.5	5/26/98	5
02	06	surface water	Nitrogen	NS	mg/L	0.1	3/3/98	3
01	06	surface water	Nitrate-N	5.44	mg/L	5.00	12/9/97	12
03	06	surface water	Nitrate-N	2.45	mg/L	0.5	5/26/98	5
02	06	surface water	Nitrate-N	3.89	mg/L	2	3/3/98	3

fIdRound	fIdWell	fIdMatrix	fIdNewName	fIdWell6	fIdUnits	fIdDL	fIdSampleDate	fIdSampleMont
06	06	surface water	Nitrate-N	4.21	mg/L	0.05	2/10/99	2
09	06	surface water	Nitrate-N	NS	mg/L	0.1	12/6/99	12
11	06	surface water	Nitrate-N	2.8	mg/L	0.05	6/1/00	6
10	06	surface water	Nitrate-N	29.2	mg/L	0.05	3/7/00	3
08	06	surface water	Nitrate-N	NS	mg/L	0.1	9/28/99	9
04	06	surface water	Nitrate-N	2.2	mg/L	0.1	8/4/98	8
07	06	surface water	Nitrate-N	2.06	mg/L	0.1	5/11/99	5
05	06	surface water	Nitrate-N	4.46	mg/L	0.05	11/9/98	11
04	06	surface water	Mercury	NS	mg/L	0.0002	8/4/98	8
08	06	surface water	Mercury	NS	mg/L	0.0002	9/28/99	9
10	06	surface water	Mercury	ND	mg/L	0.0002	3/7/00	3
07	06	surface water	Mercury	ND	mg/L	0.0002	5/11/99	5
05	06	surface water	Mercury	ND	mg/L	0.0002	11/9/98	11
09	06	surface water	Mercury	NS	mg/L	0.0002	12/6/99	12
03	06	surface water	Mercury	ND	mg/L	0.0002	5/26/98	5
06	06	surface water	Mercury	NS	mg/L	0.0002	2/10/99	2
11	06	surface water	Mercury	NS	mg/L	0.0002	6/1/00	6
01	06	surface water	Mercury	ND	mg/L	0.000200	12/9/97	12
02	06	surface water	Mercury	NS	mg/L	0.0002	3/3/98	3
05	06	surface water	Manganese	0.0488	mg/L	0.01	11/9/98	11
04	06	surface water	Manganese	0.0407	mg/L	0.01	8/4/98	8
08	06	surface water	Manganese	NS	mg/L	0.01	9/28/99	9
01	06	surface water	Manganese	0.157	mg/L	0.0100	12/9/97	12
07	06	surface water	Manganese	0.0215	mg/L	0.01	5/11/99	5
06	06	surface water	Manganese	0.0139	mg/L	0.01	2/10/99	2
02	06	surface water	Manganese	0.11	mg/L	0.01	3/3/98	3
03	06	surface water	Manganese	0.039	mg/L	0.01	5/26/98	5
09	06	surface water	Manganese	NS	mg/L	0.01	12/6/99	12
11	06	surface water	Manganese	ND	mg/L	0.005	6/1/00	6
10	06	surface water	Manganese	0.01	mg/L	0.005	3/7/00	3
01	06	surface water	Magnesium	43.5	mg/L	0.200	12/9/97	12
06	06	surface water	Magnesium	41.7	mg/L	0.2	2/10/99	2
02	06	surface water	Magnesium	20	mg/L	0.1	3/3/98	3
05	06	surface water	Magnesium	48.8	mg/L	0.2	11/9/98	11
07	06	surface water	Magnesium	43.7	mg/L	0.2	5/11/99	5
09	06	surface water	Magnesium	NS	mg/L	0.2	12/6/99	12
11	06	surface water	Magnesium	53.7	mg/L	0.2	6/1/00	6
03	06	surface water	Magnesium	24.3	mg/L	0.2	5/26/98	5

fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
10	06	surface water	Magnesium	31.3	mg/L	0.20	3/7/00	3
04	06	surface water	Magnesium	38.7	mg/L	0.2	8/4/98	8
08	06	surface water	Magnesium	NS	mg/L	0.2	9/28/99	9
09	06	surface water	Lead	NS	mg/L	0.001	12/6/99	12
07	06	surface water	Lead	ND	mg/L	0.001	5/11/99	5
10	06	surface water	Lead	ND	mg/L	0.005	3/7/00	3
03	06	surface water	Lead	ND	mg/L	0.001	5/26/98	5
05	06	surface water	Lead	ND	mg/L	0.001	11/9/98	11
04	06	surface water	Lead	ND	mg/L	0.001	8/4/98	8
08	06	surface water	Lead	NS	mg/L	0.001	9/28/99	9
06	06	surface water	Lead	ND	mg/L	0.001	2/10/99	2
02	06	surface water	Lead	ND	mg/L	0.015	3/3/98	3
01	06	surface water	Lead	0.023	mg/L	0.0200	12/9/97	12
11	06	surface water	Lead	ND	mg/L	0.005	6/1/00	6
07	06	surface water	Iron	0.247	mg/L	0.05	5/11/99	5
09	06	surface water	Iron	NS	mg/L	0.05	12/6/99	12
04	06	surface water	Iron	0.678	mg/L	0.05	8/4/98	8
02	06	surface water	Iron	4.2	mg/L	0.1	3/3/98	3
08	06	surface water	Iron	NS	mg/L	0.05	9/28/99	9
01	06	surface water	Iron	0.243	mg/L	0.0500	12/9/97	12
10	06	surface water	Iron	ND	mg/L	0.03	3/7/00	3
06	06	surface water	Iron	0.427	mg/L	0.05	2/10/99	2
11	06	surface water	Iron	ND	mg/L	0.03	6/1/00	6
03	06	surface water	Iron	0.971	mg/L	0.05	5/26/98	5
05	06	surface water	Iron	1.2	mg/L	0.05	11/9/98	11
07	06	surface water	Hydroxide	ND	mg/L	0.5	5/11/99	5
05	06	surface water	Hydroxide	ND	mg/L	0.5	11/9/98	11
11	06	surface water	Hydroxide	ND	mg/L	0.5	6/1/00	6
10	06	surface water	Hydroxide	ND	mg/L	0.5	3/7/00	3
08	06	surface water	Hydroxide	NS	mg/L	0.5	9/28/99	9
09	06	surface water	Hydroxide	NS	mg/L	0.5	12/6/99	12
04	06	surface water	Hydroxide	ND	mg/L	0.5	8/4/98	8
02	06	surface water	Hydroxide	ND	mg/L	0.5	3/3/98	3
06	06	surface water	Hydroxide	ND	mg/L	0.5	2/10/99	2
03	06	surface water	Hydroxide	ND	mg/L	0.5	5/26/98	5
01	06	surface water	Hydroxide	ND	mg/L	1.00	12/9/97	12
09	06	surface water	Hardness (CaCO3)	NS	mg/L	2	12/6/99	12
10	06	surface water	Hardness (CaCO3)	332	mg/L	1	3/7/00	3

fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
08	06	surface water	Hardness (CaCO3)	NS	mg/L	2	9/28/99	9
03	06	surface water	Hardness (CaCO3)	251	mg/L	5	5/26/98	5
04	06	surface water	Hardness (CaCO3)	428	mg/L	5	8/4/98	8
02	06	surface water	Hardness (CaCO3)	200	mg/L	10	3/3/98	3
11	06	surface water	Hardness (CaCO3)	492	mg/L	1	6/1/00	6
06	06	surface water	Hardness (CaCO3)	467	mg/L	1	2/10/99	2
07	06	surface water	Hardness (CaCO3)	394	mg/L	2	5/11/99	5
05	06	surface water	Hardness (CaCO3)	537	mg/L	1	11/9/98	11
01	06	surface water	Hardness (CaCO3)	408	mg/L	10.0	12/9/97	12
02	06	surface water	Fluoride	0.215	mg/L	0.2	3/3/98	3
06	06	surface water	Fluoride	0.255	mg/L	0.1	2/10/99	2
03	06	surface water	Fluoride	1.14	mg/L	1	5/26/98	5
07	06	surface water	Fluoride	0.279	mg/L	0.1	5/11/99	5
01	06	surface water	Fluoride	ND	mg/L	0.200	12/9/97	12
04	06	surface water	Fluoride	0.277	mg/L	0.1	8/4/98	8
05	06	surface water	Fluoride	0.282	mg/L	0.1	11/9/98	11
10	06	surface water	Fluoride	0.3	mg/L	0.1	3/7/00	3
11	06	surface water	Fluoride	0.5	mg/L	0.1	6/1/00	6
08	06	surface water	Fluoride	NS	mg/L	0.1	9/28/99	9
09	06	surface water	Fluoride	NS	mg/L	0.1	12/6/99	12
03	06	surface water	Fecal Coliform	30	mpn/100ml	2	5/26/98	5
05	06	surface water	Fecal Coliform	500	mpn/100ml	2	11/9/98	11
11	06	surface water	Fecal Coliform	70	MPN/mL	2	6/1/00	6
10	06	surface water	Fecal Coliform	900	MPN/100 m	2	3/7/00	3
08	06	surface water	Fecal Coliform	NS	mpn/100ml	2	9/28/99	9
07	06	surface water	Fecal Coliform	>23	mpn/100ml	2	5/11/99	5
04	06	surface water	Fecal Coliform	50	mpn/100ml	2	8/4/98	8
09	06	surface water	Fecal Coliform	NS	mpn/100ml	2	12/6/99	12
06	06	surface water	Fecal Coliform	50	mpn/100ml	2	2/10/99	2
02	06	surface water	Fecal Coliform	90	mpn/100ml	2	3/3/98	3
01	06	surface water	Fecal Coliform	900	mpn/100ml	2	12/9/97	12
05	06	surface water	Cyanide (Total)	ND	mg/L	0.005	11/9/98	11
04	06	surface water	Cyanide (Total)	NS	mg/L	0.005	8/4/98	8
10	06	surface water	Cyanide (Total)	ND	mg/L	0.01	3/7/00	3
09	06	surface water	Cyanide (Total)	NS	mg/L	0.005	12/6/99	12
06	06	surface water	Cyanide (Total)	NS	mg/L	0.005	2/10/99	2
11	06	surface water	Cyanide (Total)	NS	mg/L	0.01	6/1/00	6
08	06	surface water	Cyanide (Total)	NS	mg/L	0.005	9/28/99	9

fIdRound	fIdWell	fIdMatrix	fIdNewName	fIdWell6	fIdUnits	fIdDL	fIdSampleDate	fIdSampleMoni
01	06	surface water	Cyanide (Total)	ND	mg/L	0.00500	12/9/97	12
02	06	surface water	Cyanide (Total)	NS	mg/L	0.005	3/3/98	3
03	06	surface water	Cyanide (Total)	ND	mg/L	0.005	5/26/98	5
04	06	surface water	Cyanide (Total)	NS	mg/L	0.005	8/4/98	8
02	06	surface water	Cyanide (Total)	NS	mg/L	0.005	3/3/98	3
06	06	surface water	Cyanide (Total)	NS	mg/L	0.005	2/10/99	2
07	06	surface water	Cyanide (Total)	ND	mg/L	0.005	5/11/99	5
10	06	surface water	Copper	ND	mg/L	0.005	3/7/00	3
01	06	surface water	Copper	ND	mg/L	0.00500	12/9/97	12
11	06	surface water	Copper	ND	mg/L	0.005	6/1/00	6
06	06	surface water	Copper	NS	mg/L	0.005	2/10/99	2
07	06	surface water	Copper	ND	mg/L	0.005	5/11/99	5
03	06	surface water	Copper	ND	mg/L	0.005	5/26/98	5
04	06	surface water	Copper	ND	mg/L	0.005	8/4/98	8
05	06	surface water	Copper	ND	mg/L	0.005	11/9/98	11
09	06	surface water	Copper	NS	mg/L	0.005	12/6/99	12
08	06	surface water	Copper	NS	mg/L	0.005	9/28/99	9
02	06	surface water	Copper	ND	mg/L	0.02	3/3/98	3
02	06	surface water	Conductivity	544	umhos/cm	1	3/3/98	3
06	06	surface water	Conductivity	1120	umhos/cm	1	2/10/99	2
07	06	surface water	Conductivity	1180	umhos/cm	1	5/11/99	5
03	06	surface water	Conductivity	670	umhos/cm	1	5/26/98	5
04	06	surface water	Conductivity	1030	umhos/cm	1	8/4/98	8
01	06	surface water	Conductivity	1220	umhos/cm	1.00	12/9/97	12
05	06	surface water	Conductivity	1230	umhos/cm	1	11/9/98	11
09	06	surface water	Conductivity	NS	umhos/cm	1	12/6/99	12
11	06	surface water	Conductivity	1,400	mg/L	5	6/1/00	6
10	06	surface water	Conductivity	1,070	mg/L	5	3/7/00	3
08	06	surface water	Conductivity	NS	umhos/cm	1	9/28/99	9
02	06	surface water	Chloride	62.3	mg/L	20	3/3/98	3
04	06	surface water	Chloride	143	mg/L	1	8/4/98	8
03	06	surface water	Chloride	98.7	mg/L	10	5/26/98	5
01	06	surface water	Chloride	224	mg/L	50.0	12/9/97	12
08	06	surface water	Chloride	NS	mg/L	1	9/28/99	9
05	06	surface water	Chloride	164	mg/L	1	11/9/98	11
06	06	surface water	Chloride	141	mg/L	1	2/10/99	2
10	06	surface water	Chloride	135	mg/L	0.5	3/7/00	3
07	06	surface water	Chloride	142	mg/L	1	5/11/99	5

fIdRound	fIdWell	fIdMatrix	fIdNewName	fIdWell6	fIdUnits	fIdDL	fIdSampleDate	fIdSampleMont
10	06	surface water	Chloride	135	mg/L	0.5	3/7/00	3
11	06	surface water	Chloride	202	mg/L	0.5	6/1/00	6
11	06	surface water	Chloride	202	mg/L	0.5	6/1/00	6
09	06	surface water	Chloride	NS	mg/L	1	12/6/99	12
07	06	surface water	Carbonate	1.9	mg/L	0.5	5/11/99	5
11	06	surface water	Carbonate	20	mg/L	0.5	6/1/00	6
06	06	surface water	Carbonate	2.57	mg/L	0.5	2/10/99	2
08	06	surface water	Carbonate	NS	mg/L	0.5	9/28/99	9
02	06	surface water	Carbonate	0.941	mg/L	0.5	3/3/98	3
03	06	surface water	Carbonate	0.944	mg/L	0.5	5/26/98	5
01	06	surface water	Carbonate	1.3	mg/L	1.00	12/9/97	12
05	06	surface water	Carbonate	2.13	mg/L	0.5	11/9/98	11
04	06	surface water	Carbonate	2.23	mg/L	0.5	8/4/98	8
09	06	surface water	Carbonate	NS	mg/L	0.5	12/6/99	12
10	06	surface water	Carbonate	ND	mg/L	0.5	3/7/00	3
07	06	surface water	Calcium	94.2	mg/L	0.1	5/11/99	5
01	06	surface water	Calcium	103	mg/L	0.100	12/9/97	12
10	06	surface water	Calcium	68.4	mg/L	0.10	3/7/00	3
06	06	surface water	Calcium	88.4	mg/L	0.1	2/10/99	2
03	06	surface water	Calcium	50.8	mg/L	0.1	5/26/98	5
04	06	surface water	Calcium	84.4	mg/L	0.1	8/4/98	8
05	06	surface water	Calcium	103	mg/L	0.1	11/9/98	11
09	06	surface water	Calcium	NS	mg/L	0.1	12/6/99	12
08	06	surface water	Calcium	NS	mg/L	0.1	9/28/99	9
02	06	surface water	Calcium	51	mg/L	0.2	3/3/98	3
11	06	surface water	Calcium	119	mg/L	0.1	6/1/00	6
04	06	surface water	Boron	0.154	mg/L	0.1	8/4/98	8
08	06	surface water	Boron	NS	mg/L	0.1	9/28/99	9
06	06	surface water	Boron	0.146	mg/L	0.1	2/10/99	2
07	06	surface water	Boron	0.123	mg/L	0.1	5/11/99	5
01	06	surface water	Boron	ND	mg/L	0.5	12/9/97	12
10	06	surface water	Boron	ND	mg/L	0.1	3/7/00	3
09	06	surface water	Boron	NS	mg/L	0.1	12/6/99	12
05	06	surface water	Boron	0.218	mg/L	0.1	11/9/98	11
03	06	surface water	Boron	ND	mg/L	0.5	5/26/98	5
02	06	surface water	Boron	ND	mg/L	0.5	3/3/98	3
11	06	surface water	Boron	0.2	mg/L	0.1	6/1/00	6
04	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	8/4/98	8

fIdRound	fIdWell	fIdMatrix	fIdNewName	fIdWell6	fIdUnits	fIdDL	fIdSampleDate	fIdSampleMont
08	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	9/28/99	9
06	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	2/10/99	2
09	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	12/6/99	12
02	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	3/3/98	3
10	06	surface water	Biochemical Oxygen Dem	ND	mg/L	2	3/7/00	3
05	06	surface water	Biochemical Oxygen Dem	ND	mg/L	2	11/9/98	11
07	06	surface water	Biochemical Oxygen Dem	ND	mg/L	2	5/11/99	5
11	06	surface water	Biochemical Oxygen Dem	NS	mg/L	2	6/1/00	6
03	06	surface water	Biochemical Oxygen Dem	ND	mg/L	2	5/26/98	5
01	06	surface water	Biochemical Oxygen Dem	ND	mg/L	2.00	12/9/97	12
06	06	surface water	Bicarbonate	172	mg/L	1	2/10/99	2
11	06	surface water	Bicarbonate	154	mg/L	1	6/1/00	6
01	06	surface water	Bicarbonate	139	mg/L	1.00	12/9/97	12
08	06	surface water	Bicarbonate	NS	mg/L	1	9/28/99	9
10	06	surface water	Bicarbonate	112	mg/L	1	3/7/00	3
05	06	surface water	Bicarbonate	168	mg/L	1	11/9/98	11
04	06	surface water	Bicarbonate	168	mg/L	1	8/4/98	8
02	06	surface water	Bicarbonate	81.4	mg/L	1	3/3/98	3
03	06	surface water	Bicarbonate	118	mg/L	1	5/26/98	5
07	06	surface water	Bicarbonate	172	mg/L	1	5/11/99	5
09	06	surface water	Bicarbonate	NS	mg/L	1	12/6/99	12
04	06	surface water	Arsenic	ND	mg/L	0.025	8/4/98	8
10	06	surface water	Arsenic	ND	mg/L	0.025	3/7/00	3
01	06	surface water	Arsenic	ND	mg/L	0.0250	12/9/97	12
03	06	surface water	Arsenic	0.026	mg/L	0.025	5/26/98	5
09	06	surface water	Arsenic	NS	mg/L	0.025	12/6/99	12
07	06	surface water	Arsenic	ND	mg/L	0.025	5/11/99	5
02	06	surface water	Arsenic	ND	mg/L	0.01	3/3/98	3
06	06	surface water	Arsenic	ND	mg/L	0.025	2/10/99	2
11	06	surface water	Arsenic	ND	mg/L	0.025	6/1/00	6
05	06	surface water	Arsenic	ND	mg/L	0.025	11/9/98	11
08	06	surface water	Arsenic	NS	mg/L	0.025	9/28/99	9
08	06	surface water	Alkalinity (CaCO3)	NS	mg/L	1	9/28/99	9
09	06	surface water	Alkalinity (CaCO3)	NS	mg/L	1	12/6/99	12
07	06	surface water	Alkalinity (CaCO3)	174	mg/L	1	5/11/99	5
06	06	surface water	Alkalinity (CaCO3)	175	mg/L	1	2/10/99	2
02	06	surface water	Alkalinity (CaCO3)	82.4	mg/L	1	3/3/98	3
11	06	surface water	Alkalinity (CaCO3)	174	mg/L	1	6/1/00	6

fldRound	fldWell	fldMatrix	fldNewName	fldWell6	fldUnits	fldDL	fldSampleDate	fldSampleMont
10	06	surface water	Alkalinity (CaCO3)	112	mg/L	1	3/7/00	3
01	06	surface water	Alkalinity (CaCO3)	140	mg/L	1.00	12/9/97	12
03	06	surface water	Alkalinity (CaCO3)	119	mg/L	1	5/26/98	5
04	06	surface water	Alkalinity (CaCO3)	170	mg/L	1	8/4/98	8
05	06	surface water	Alkalinity (CaCO3)	170	mg/L	1	11/9/98	11

De Luz Creek

DATA SUMMARY

Disc 1 of 2 (submitted by Camp Pendleton)

see Santa Mary File for data

LAW-Crandall

11043000	Daily Mean Discharge Data, "Murrieta C A Temecula, CA", 1930 to 1997, discharge as ft ³ / s
11044250	Daily Mean Discharge Data, Rainbow Cr near Fallbrook, CA, 1989 – 1998
11044800	Daily Mean Discharge Data, De Luz Cr near De Luz, CA, 1992 – 1997
11045300	Daily Mean Discharge Data, Fallbrook Cr, near Fallbrook, CA, 1993 – 1998
11046360	Daily Mean Discharge Data, Cristianitos C Ab San Mateo C Nr San Clemente, CA, 1993 – 1997
CADMaps	Southern California Road Map, San Mateo and Santa Margarita Watersheds, Monitoring Locations (San Mateo), Monitoring Locations (Santa Margarita)
Cover	2 pg cover = Final "Water Quality Studies and Proposed Watershed Monitoring Program for Portions of San Mateo and Santa Margarita River Watersheds (Vol. 2 of 2)
Cover2	2 pg cover = Final "Water Quality Studies and Proposed Watershed Monitoring Program for Portions of San Mateo and Santa Margarita River Watersheds (Vol. 1 of 2)
precip	trouble opening document, but appears to be rainfall data for 1942 – 1999 SC Dam, Oceanside, Escondido, Escondido 2
precip1	Graph with rainfall data from 1942 – 1999 SC Dam, Oceanside, Escondido, Escondido 2
precip10	San Clemente Dam 1942 – 1997 data = ?
precip11	Sam Clemente Dam Rainfall data 1942 – 1997
precip12	San Clemente Dam Precipitation Record 1940 – 1998
precip13	Oceanside & Oceanside Harbor Station Precipitation Record 1940 - 1998
precip14	Oceanside 1942 – 1997 data = ?
precip15	Oceanside Harbor Rainfall data 1943 – 1997
precip2	Combined Precipitation Record 1940 – 1998, location=?
precip3	Escondido, CA 1979 – 1997 data = ?
precip4	Escondido 2 Rainfall data 1979 – 1997
precip5	Escondido 2 Precipitation Record 1979 – 1997
precip6	Escondido 1931 – 1979 data = ?
precip7	Escondido Rainfall Record 1934 – 1979
precip8	Escondido Precipitation Record, 1940 – 1979
precip9	San Clem 1931 – 1979 data = ?
Report	Final Report of Water Quality Studies and Proposed Watershed Monitoring Program for Portions of San Mateo and Santa Margarita River Watershed Marine Corps Base, Camp Pendleton, California. Contract No. N68711-95-D-7573, D.O. 0021
table10	San Mateo Watershed 1998-1999 data on alkalinity, arsenic, bicarbonate, BOD, boron, calcium, carbonate, chloride, conductivity, copper, cyanide, fecal coliform, fluoride, hardness, hydroxide, iron, lead, magnesium, manganese, mercury, nitrate, nitrogen, oil & grease, pH, phosphorus, potassium, sodium, sulfate, surfactants, total coliform, TDS, TOC and zinc.

table11 Santa Margarita Watershed 1997-1999 data on alkalinity, arsenic, bicarbonate, BOD, boron, calcium, carbonate, chloride, conductivity, copper, cyanide, fecal coliform, fluoride, hardness, hydroxide, iron, lead, magnesium, manganese, mercury, nitrate, nitrogen, oil & grease, pH, phosphorus, potassium, sodium, sulfate, surfactants, total coliform, TDS, TOC and zinc.

Table8PDF Water Quality Evaluation Summary, San Mateo Watershed

WQ Microsoft Access Database: Many reports and tables (try reports on pollutant loading and surface waters)

SWR West Study

These GIS files require ArcView software before they can be opened. Some files also require the spatial analyst and 3-D analyst extensions to be loaded. Please see "Read me" file on disc. Some topo maps are .tif files.

SMRWQM-Group

SMR Figure3_41

Figure 3-4 = Proposed Water Quality Sampling Locations

SMRWQM-Draft Plan

Framework Monitoring Plan for the Santa Margarita River Watershed California

SMRWQM-Group Presentation

Powerpoint Presentation: Water Quality Monitoring and Water Management

Disc 2 of 2

LAW-Crandall

chart	Alkalinity Chart Fallbrook Cr near Fallbrook, CA
chart1	De Luz Cr, Fallbrook Cr, Murrieta Cr, Rainbow Cr, San Mateo Cr (x2), Sandia Cr, Santa Margarita River (x3) for alkalinity (2 types), aluminum, antimony and arsenic
chart10	Cristianitos Cr, De Luz Cr, Fallbrook Cr, Murrieta Cr, Rainbow Cr, San Mateo Cr, Sandia Cr, Santa Margarita Rvr for sodium, sulfate, surfactants, thallium, tin,
chart11	Santa Margarita Rvr, De Luz Cr, Cristianitos Cr, Murrieta Cr, Rainbow Cr, Sandia Cr, San Mateo Cr, Fallbrook Cr for TOC, vanadium and zinc
chart12	same creeks for fluoride
chart13	same creeks for oil & grease, pH, phosphate, phosphorus
chart14	same creeks for nitrate, nitrite
chart15	same creeks for historical data
chart16	same creeks for phosphate, potassium, selenium, silica, silicon
chart17	same creeks for TDS, TOC, vanadium, zinc
chart2	same creeks for arsenic, barium, beryllium, bicarbonate, BOD, boron
chart3	could not be opened
chart4	opens as gibberish
chart5	opens as gibberish
chart6	same creeks for fluoride, hardness, hydroxide, iron, lead
chart7	same creeks for lead, lithium, magnesium, manganese, mercury
chart8	could not open
chart9	same creeks for phosphorus, potassium, selenium, silica, silicon, silver
Piper Diagrams	

diagrams for 1997 – 1998 for magnesium, sodium + potassium, carbonate + bicarbonate, sulfate, chloride, calcium, sulfate + chloride, calcium + magnesium

SMR West Study

Final West Project

Appendix A	literature review
Appendix B	Plot of computed hydrograph with observed hydrograph
Appendix C	Plot of computed lake storage with observed storage
Appendix D	Plot of precipitation during and preceding Jan 1995 event
Appendix E	Cross section locations and flood plain delineations
Appendix F	Water surface profile plots
Appendix G	Water surface profile tables
Appendix H	Cross section plots
Appendix J	Plot of sub basin frequency flows
Appendix I	Plot of sediment frequency yield by LA Corps method
SMR Final	Final Report Santa Margarita River Hydrology, Hydraulics and Sedimentation Study

West Project Files

All supporting files and documents are included on this disc as word, excel and other file formats that are not .pdf.