

**TSMP - 1978 to 2000 San Diego River Chlordane Data Summary**  
**Organics - wet weight**

Staname	Collection Date	Common	Number	Weight (mean, g)	Tissue	Chlordane (ppb)
SD Rvr / Fashin Valley	Apr-84	Largemouth Bass	4	298.2	fillet	< 5.0
SD Rvr / Mission Center Dr	Jun-92	White Crappie	21	48.2	fillet	< 5.0
SD Rvr / Stadium Way	Jul-87	Redear Sunfish	7	107.8	fillet	< 5.0
SD Rvr / Stadium Way	Jul-87	Redear Sunfish	6	112.7	fillet	< 5.0
SD Rvr / Old Mission Dam	Mar-79	Green Sunfish	15	51.2	fillet	< 5.0 *
SD Rvr / Old Mission Dam	Mar-79	Red Swamp Crayfish	21	NM	whole	< 5.0 *
SD Rvr / Old Mission Dam	May-80	Green Sunfish	25	25.2	fillet	20.0
SD Rvr / Old Mission Dam	May-80	Red Swamp Crayfish	31	NM	whole	< 5.0
SD Rvr / Old Mission Dam	Jun-83	Carp	4	2653.0	fillet	383.0
SD Rvr / Old Mission Dam	Jun-83	Green Sunfish	9	23.6	fillet	5.0
SD Rvr / Old Mission Dam	May-86	Largemouth Bass	9	53.6	fillet	5.2
SD Rvr / Old Mission Dam	Jun-88	Largemouth Bass	6	175.6	fillet	< 5.0
SD Rvr / Old Mission Dam	Jun-88	Largemouth Bass	3	189.3	fillet	7.5
SD Rvr / Riverford Road	Jun-85	Carp	5	1206.6	fillet	78.0
SD Rvr / Riverford Road	Jun-85	Carp	5	1214.2	fillet	77.8
SD Rvr / Riverford Road	Jun-85	Largemouth Bass	7	94.4	fillet	< 5.0
SD Rvr / d/s Alvarado Cr	Aug-98	Golden Shiner	33	1.1	whole	41.2
SD Rvr / u/s Taylor St	Jun-97	Blue Gill	6	64.9	fillet	< 5.0
SD Rvr / u/s Taylor St	Aug-99	Largemouth Bass	4	30.3	fillet	3.0

NM = not measured

ND = not detected

No sampling on SD Rvr in 2000

\* = one chlordane species (OCDAN) had a detection limit of 10.0 ppb

Table 1

## Toxic Substances Monitoring Program

## Preliminary Summary of 1999 Data: Trace Elements in Fish and Clams (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
801.11.89	Lower Newport Bay/Rhine Ch	YFC	L	08/10/99	NA	NA	0.089	5.3300	0.1290	NA	NA	NA	0.0060	23.90
801.11.96	Peters Canyon Channel	PRS	W	08/05/99	0.179	0.0350	0.121	1.2300	0.0300	0.048	0.1370	4.110	<0.0020	45.80
801.11.96	Peters Canyon Channel	PRS	W	08/05/99	0.190	0.0360	0.171	1.2900	0.0380	0.040	0.1390	4.240	0.0030	44.70
801.11.99	Upper Newport Bay/Newport Dunes	ORC	F	08/04/99	1.300	<0.0020	NA	NA	NA	0.050	0.0170	0.760	NA	NA
801.11.99	Upper Newport Bay/Newport Dunes	ORC	L	08/04/99	NA	NA	0.088	6.2600	0.0080	NA	NA	NA	<0.0020	18.40
901.12.##	Aliso Cr/Pacific Park Dr	PRS	W	08/27/99	0.245	0.2240	0.110	1.3000	0.0710	<0.015	0.1950	1.610	<0.0020	32.50
902.11.01	Santa Margarita R/Stuart Mesa Rd	CKF	W	08/25/99	0.221	0.0050	0.050	1.1200	0.0320	<0.015	0.1900	0.248	0.0270	28.30
902.22.03	Rainbow Creek	GSF	F	08/26/99	0.031	<0.0020	NA	NA	NA	0.051	0.0080	0.388	NA	NA
902.22.03	Rainbow Creek	GSF	L	08/26/99	NA	NA	0.067	2.4500	0.0100	NA	NA	NA	<0.0020	16.70
902.32.##	Murrietta Cr/u/s Temecula Cr	BLB	F	08/26/99	0.036	<0.0020	NA	NA	NA	0.059	0.0370	0.287	NA	NA
902.32.##	Murrietta Cr/u/s Temecula Cr	BLB	L	08/26/99	NA	NA	0.100	9.2500	0.0070	NA	NA	NA	0.0290	19.20
904.10.##	Loma Alta Cr/College Blvd	GAM	W	08/26/99	0.217	0.0220	0.236	3.6900	0.0770	0.061	0.1990	0.371	0.0340	37.70
904.21.02	Buena Vista Lagoon	LMB	F	08/25/99	0.072	<0.0020	NA	NA	NA	0.054	0.0100	0.392	NA	NA
904.21.02	Buena Vista Lagoon	LMB	L	08/25/99	NA	NA	0.122	3.8300	0.0210	NA	NA	NA	0.0060	21.90
904.31.##	Agua Hedionda Cr/El Camino Real	GAM	W	08/24/99	0.386	0.0250	0.220	1.3400	0.0380	<0.015	0.1520	0.461	0.0050	25.90
904.51.03	San Marcos Cr	LMB	F	08/24/99	0.045	<0.0020	NA	NA	NA	0.046	0.0230	0.335	NA	NA
904.51.03	San Marcos Cr	LMB	L	08/24/99	NA	NA	0.193	3.0800	<0.0020	NA	NA	NA	<0.0020	16.00
904.61.07	Escondido Cr/Elfin Forest Park	GSF	F	08/24/99	0.064	0.0010	NA	NA	NA	0.050	0.3410	0.496	NA	NA
904.61.07	Escondido Cr/Elfin Forest Park	GSF	L	08/24/99	NA	NA	0.070	2.4400	0.0100	NA	NA	NA	0.0050	17.30
907.11.03	San Diego R/u/s Taylor St	LMB	F	08/23/99	0.096	<0.0020	NA	NA	NA	0.035	0.0150	0.854	NA	NA
907.11.03	San Diego R/u/s Taylor St	LMB	L	08/23/99	NA	NA	0.112	5.9400	0.0130	NA	NA	NA	0.0130	23.10

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit. NA = Not Analyzed.  
Species codes are listed in Table 3.

Mercury FDA 1.0ppm

**TABLE 2**  
**Toxic Substances Monitoring Program**  
**Preliminary Summary of 1999 Data: Organic Chemicals in Fish and Clams (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
801.11.09	San Diego Cr/Barranca Pkwy	PRS	W	08/05/99	<1.0	<1.0	4.2	<1.0	2.3	2.3	5.7	2.1	16.6	<2.0	<2.0
801.11.89	Lower Newport Bay/Rhine Ch	YFC	F	08/10/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
801.11.96	Peters Canyon Channel	PRS	W	08/05/99	<1.0	<1.0	3.2	<1.0	2.6	2.9	9.1	1.4	19.3	4.2	<2.0
801.11.96	Peters Canyon Channel	PRS	W	08/05/99	<1.0	<1.0	3.3	<1.0	2.8	3.2	9.8	1.5	20.7	5.2	<2.0
801.11.99	Upper Newport Bay/Newport Dunes	ORC	F	08/04/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	1.9	<1.0	1.9	<2.0	<2.0
901.12.##	Aliso Cr/Pacific Park Dr ✓	PRS	W	08/27/99	<1.0	<1.0	5.4	1.2	2.0	<2.0	5.3	3.6	17.5	4.3	4.1
902.11.01	Santa Margarita R/Stuart Mesa Rd ✓	CKF	W	08/25/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
902.22.03	Rainbow Creek ✓	GSF	F	08/26/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
902.32.##	Murrietta Cr/u/s Temecula Cr ✓	BLB	F	08/26/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	2.0	<1.0	2.0	<2.0	<2.0
904.10.##	Loma Alta Cr/College Blvd ✓	GAM	W	08/26/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	1.6	<1.0	1.6	<2.0	<2.0

  

Station Number	Dieldrin	o,p' DDD	p,p' DDD	o,p' DDE	p,p' DDE	o,p' DDT	p,p' DDT	p,p' DDMU	p,p' DDMS	Total DDT	Dicofol	Diazinon	Endo-sulfan I	Endo-sulfan II	Endo-sulfan Sulfate	Total Endo-sulfan	Endrin	Ethion
801.11.09	4.1	3.2	27.0	<2.0	139.0	<3.0	<5.0	8.9	NA	178.1	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
801.11.89	<2.0	<2.0	<2.0	<2.0	22.8	<3.0	<5.0	<3.0	NA	22.8	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
801.11.96	3.3	5.8	24.4	2.7	503.0	<3.0	<5.0	10.9	NA	546.8	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
801.11.96	3.4	5.8	25.8	2.8	516.0	3.1	<5.0	11.4	NA	564.9	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
801.11.99	<2.0	<2.0	6.0	<2.0	54.5	<3.0	<5.0	3.3	NA	63.9	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
901.12.##	8.8	<2.0	<2.0	<2.0	9.4	<3.0	<5.0	<3.0	NA	9.4	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
902.11.01	<2.0	2.6	4.8	<2.0	15.2	<3.0	<5.0	<3.0	NA	22.5	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
902.22.03	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0	<5.0	<3.0	NA	ND	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
902.32.##	<2.0	<2.0	<2.0	<2.0	2.9	<3.0	<5.0	<3.0	NA	2.9	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
904.10.##	<2.0	<2.0	<2.0	<2.0	7.6	<3.0	<5.0	<3.0	NA	7.6	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0

  

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma-HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-chlor	Oxa-diazon	Ethyl Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
801.11.09	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.7	<5.0	329.0	<2.0	<4.0	<25.0	71.0	14.0	85.0	81.4	102.1
801.11.89	<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	39.0	<10.0	39.0	<20.0	ND
801.11.96	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.6	<5.0	59.6	<2.0	<4.0	<25.0	26.0	15.0	41.0	72.0	94.6
801.11.96	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.6	<5.0	62.7	<2.0	<4.0	<25.0	29.0	15.0	44.0	80.5	104.6
801.11.99	<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	21.0	<10.0	21.0	<20.0	1.9
901.12.##	<1.0	<2.0	<2.0	<1.0	ND	<2.0	2.9	0.4	<5.0	41.9	<2.0	<4.0	<25.0	22.0	<10.0	22.0	<20.0	29.2
902.11.01	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	5.2	<2.0	<4.0	<25.0	<10.0	<10.0	ND	<20.0	ND
902.22.03	<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
902.32.##	<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	2.0
904.10.##	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	4.9	<2.0	<4.0	<25.0	21.0	<10.0	21.0	<20.0	1.6

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

ND Means that the chemical was not detected.

&lt; 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.

*Chlordane* ~~3.0~~ *ppb* FDA  
*0.3* *ppm*

**TABLE 2**

Toxic Substances Monitoring Program

Preliminary Summary of 1999 Data: Organic Chemicals in Fish and Clams (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
904.21.02	Buena Vista Lagoon	LMB	F	08/25/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
904.31.##	Agua Hedionda Cr/El Camino Real	GAM	W	08/24/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	4.7	2.6	7.2	<2.0	<2.0
904.51.03	San Marcos Cr	LMB	F	08/24/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
904.61.07	Escondido Cr/Elfin Forest Park	GSF	F	08/24/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	ND	<2.0	<2.0
907.11.03	San Diego R/u/s Taylor St	LMB	F	08/23/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	3.0	<1.0	3.0	<2.0	<2.0

  

Station Number	Dieldrin	o,p' DDD	p,p' DDD	o,p' DDE	p,p' DDE	o,p' DDT	p,p' DDT	p,p' DDMU	p,p' DDMS	Total DDT	Dicofol	Diazinon	Endo-sulfan I	Endo-sulfan II	Endo-sulfan Sulfate	Total Endo-sulfan	Endrin	Ethion
904.21.02	<2.0	<2.0	<2.0	<2.0	2.2	<3.0	<5.0	<3.0	NA	2.2	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
904.31.##	<2.0	<2.0	3.3	<2.0	42.8	<3.0	<5.0	<3.0	NA	46.1	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
904.51.03	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0	<5.0	<3.0	NA	ND	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
904.61.07	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0	<5.0	<3.0	NA	ND	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0
907.11.03	<2.0	<2.0	<2.0	<2.0	4.8	<3.0	<5.0	<3.0	NA	4.8	NA	<20.0	<2.0	NA	NA	ND	<2.0	<6.0

  

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma-HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-chlor	Oxa-diazon	Ethyl Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
904.21.02	<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
904.31.##	<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	7.2
904.51.03	<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
904.61.07	<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
907.11.03	<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	18.0	<10.0	18.0	<20.0	3.0

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.

*OK*  
*PLB 2.0ppm*

**TABLE 3**  
 Toxic Substances Monitoring Program  
 1999 Species Code List

**Freshwater Fish \***

Species Code	Common Name	Species Name	Family Name
AC	Arroyo Chub	<i>Gila orcutti</i>	Cyprinidae
BB	Brown Bullhead	<i>Ameiurus nebulosus</i>	Ictaluridae
BCR	Black Crappie	<i>Pomoxis nigromaculatus</i>	Centrarchidae
BG	Bluegill	<i>Lepomis macrochirus</i>	Centrarchidae
BK	Brook Trout	<i>Salvelinus fontinalis</i>	Salmonidae
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
LMB	Largemouth Bass	<i>Micropterus salmoides</i>	Centrarchidae
PCP	Prickly Sculpin	<i>Cottus asper</i>	Cottidae
PRS	Red Shiner	<i>Cyprinella lutrensis</i>	Cyprinidae
RBT	Rainbow Trout	<i>Oncorhynchus mykiss</i>	Salmonidae
RCH	California Roach	<i>Hesperoleucus symmetricus</i>	Cyprinidae
SKR	Sucker	<i>Catostomus sp.</i>	Catostomidae
SPM	Sacramento Pike Minnow	<i>Ptychocheilus grandis</i>	Cyprinidae
STB	Threespine Stickleback	<i>Gasterosteus aculeatus</i>	Gasterosteidae
TL	Tilapia	<i>Tilapia sp.</i>	Cichlidae

**Marine Fish \***

Species Code	Common Name	Species Name	Family Name
CKF	California Killifish	<i>Fundulus parvipinnis</i>	Cyprinodontidae
ORC	Orangemouth Corvina	<i>Cynoscion xanthulus</i>	Sciaenidae
SSP	Shiner Perch	<i>Cymatogaster aggregata</i>	Embiotocidae
STF	Starry Flounder	<i>Platichthys stellatus</i>	Pleuronectidae
YFC	Yellowfin Croaker	<i>Umbrina roncadior</i>	Sciaenidae

**Non-Fish**

Species Code	Common Name	Species Name	Family Name
TFC	Asiatic Clam (transplant)	<i>Corbicula manilensis</i>	Corbiculidae

\* 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.

Total Chlorobenzene chloroprenols Dacth.1

PPM

Table I Aldrin & cis  
Toxic Substances Monitoring Program  
Preliminary Summary of 1997 Data

gamma

trans

cis

801.11.89	Lower Newport Bay/Rhine Ch	CM	L	07/11/97	1.080	0.0520	0.394	4.3800	0.0770	NA	0.0160
3.260	0.0020 22.20										
801.11.96	Peters Canyon Channel	PRS	W	06/19/97	0.057	0.0480	0.029	0.4100	0.0100	0.015	<0.0002
0.850	0.0010 23.70										
801.11.96	Peters Canyon Channel	PRS	W	06/19/97	0.063	0.0470	0.034	0.4300	0.0150	0.012	<0.0002
0.880	0.0010 23.30										
801.11.99	Upper Newport Bay/Newport Dunes	DT	F	06/20/97	1.480	<0.0001	<0.001	0.1100	<0.0001	0.028	0.0004
0.700	0.0010 3.83										
801.11.99	Upper Newport Bay/Newport Dunes	DT	L	06/20/97	5.180	0.1850	0.677	22.1000	0.0090	NA	0.0290
2.540	0.0340 73.00										
902.11.01	Santa Margarita R/Stuart Mesa Rd	GAM	W	06/24/97	0.058	0.0030	0.006	0.4700	0.0020	0.018	<0.0002
0.160	0.0060 16.40										
906.40.01	Rose Cr/d/s Mission Bay Dr	GAM	W	06/23/97	0.065	0.0020	0.023	0.5800	0.0560	0.012	<0.0002
0.210	0.0030 16.90										
906.40.01	Rose Cr/d/s Mission Bay Dr	GAM	W	06/23/97	0.057	0.0020	0.024	0.6400	0.0620	0.012	<0.0002
0.220	0.0030 16.40										
907.11.03	San Diego R/u/s Taylor St	BG	F	06/23/97	<u>0.023</u>	<0.0001	0.004	0.1200	<0.0001	0.015	<0.0002
0.340	<0.0003 2.69										
907.11.03	San Diego R/u/s Taylor St	BG	L	06/23/97	0.221	0.0160	0.502	1.0800	<0.0001	NA	0.0100
2.060	0.0010 16.30										
909.12.03	Sweetwater R/Interstate 805	LMB	W	06/22/97	0.012	0.0010	0.004	0.1800	0.0090	0.022	<0.0002
0.130	0.0005 10.80										
910.20.05	Otay R/Apache Service Pond	BG	F	06/22/97	0.031	<0.0001	<0.001	0.0700	0.0003	0.053	<0.0002
0.360	<0.0003 3.29										
910.20.05	Otay R/Apache Service Pond	BG	L	06/22/97	0.237	0.0140	0.576	1.5600	<0.0001	NA	0.0220
2.220	0.0010 20.90										
911.11.04	Tijuana R/Dairy Mart Rd	GAM	W	06/22/97	0.052	0.0010	0.017	0.4100	0.0190	0.012	<0.0002
0.330	0.0110 12.80										

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit. NA = Not Analyzed.  
Species codes are listed in Table 3.

**TABLE 2**  
**Toxic Substances Monitoring Program**  
**Preliminary Summary of 1997 Data: Organic Chemicals in Fish (ppb, wet weight)**

Total Station Number	Chlor- pyrifos	Dacthal 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
728.00.92	ND	Salton Sea/North	ORC	F	11/18/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
801.11.05	8.9	Delhi Channel	PRS	W	06/18/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.9	<5.0
801.11.07	ND	San Diego Cr/Michelson Dr	PRS	W	06/19/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
801.11.09	ND	San Diego Cr/Barranca Pkwy	PRS	W	06/19/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
801.11.89	ND	Lower Newport Bay/Rhine Ch	CM	F	07/11/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
801.11.96	26.3	Peters Canyon Channel	PRS	W	06/19/97	<5.0	<5.0	9.4	<5.0	5.9	<5.0	11.0	<5.0
801.11.96	40.9	Peters Canyon Channel	PRS	W	06/19/97	<5.0	<5.0	11.0	<5.0	6.9	5.0	13.0	5.0
801.11.99	ND	Upper Newport Bay/Newport Dunes	DT	F	06/20/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
902.11.01	ND	Santa Margarita R/Stuart Mesa Rd	GAM	W	06/24/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
906.40.01	16.5	Rose Cr/d/s Mission Bay Dr	GAM	W	06/23/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	11.0	5.5

  

Total Station Number	Endrin	Dieldrin	o,p' Ethion	p,p' DDD	o,p' DDE	p,p' DDE	o,p' DDT	p,p' DDT	p,p' DDMU	p,p' DDMS	Total DDT	Dicofol	Diazinon	Endo- sulfan I	Endo- sulfan II	Endo- sulfan Sulfate
728.00.92	ND	<5.0	<10.0	<10.0	<10.0	190.0	<10.0	<10.0	<15.0	NA	190.0	NA	<50.0	<5.0	NA	NA
801.11.05	ND	5.5	<10.0	30.0	<10.0	160.0	<10.0	<10.0	<15.0	NA	190.0	NA	<50.0	<5.0	NA	NA
801.11.07	ND	11.0	<10.0	29.0	<10.0	160.0	<10.0	<10.0	<15.0	NA	189.0	NA	<50.0	<5.0	<70.0	<85.0
801.11.09	ND	<5.0	<10.0	11.0	<10.0	85.0	<10.0	<10.0	<15.0	NA	96.0	NA	<50.0	<5.0	NA	NA
801.11.89	ND	<5.0	<10.0	11.0	<10.0	130.0	<10.0	<10.0	<15.0	NA	141.0	NA	<50.0	<5.0	<70.0	<85.0
801.11.96	ND	9.6	<10.0	47.0	<10.0	740.0	22.0	38.0	35.0	NA	882.0	NA	<50.0	<5.0	NA	NA
801.11.96	ND	11.0	<10.0	54.0	<10.0	800.0	24.0	52.0	37.0	NA	967.0	NA	<50.0	<5.0	NA	NA
801.11.99	ND	<5.0	<10.0	12.0	<10.0	140.0	<10.0	<10.0	<15.0	NA	152.0	NA	<50.0	<5.0	<70.0	<85.0
902.11.01	ND	<5.0	<10.0	17.0	<10.0	74.0	<10.0	<10.0	<15.0	NA	91.0	NA	<50.0	<5.0	NA	NA
906.40.01	ND	5.8	<10.0	<10.0	<10.0	8.7	<10.0	<10.0	<15.0	NA	8.7	NA	<50.0	<5.0	<70.0	<85.0

Table 2  
1997

Toxaphene Station Group Number A	alpha-Chemical HCH	beta-HCH	delta-HCH	gamma-HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-chlor	Oxa-diazon	Ethyl Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB
728.00.92	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
<100.0	ND															
801.11.05	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	8.7	<10.0	<10.0	<50.0	89.7	<50.0	89.7
495.0	509.4															
801.11.07	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	76.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
121.0	132.0															
801.11.09	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	100.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
<100.0	ND															
801.11.89	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	272.0	74.9	346.9
<100.0	ND															
801.11.96	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	42.0	<10.0	<10.0	<50.0	57.5	<50.0	57.5
405.0	440.9															
801.11.96	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	48.0	<10.0	<10.0	<50.0	67.6	<50.0	67.6
447.0	498.9															
801.11.99	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
<100.0	ND															
902.11.01	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
<100.0	ND															
906.40.01	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	68.0	<10.0	<10.0	<50.0	74.2	<50.0	74.2
<100.0	22.3															

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 2**  
**Toxic Substances Monitoring Program**  
**Preliminary Summary of 1997 Data: Organic Chemicals in Fish (ppb, wet weight)**

Total Chlor- Station Chlor- Number dane	Chlor- pyrifos	Dacthal 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
906.40.01 16.2 <10.0		Rose Cr/d/s Mission Bay Dr	GAM	W	06/23/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	11.0	5.2
907.11.03 ND <10.0		San Diego R/u/s Taylor St	BG	F	06/23/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
909.12.03 52.6 <10.0		Sweetwater R/Interstate 805	LMB	W	06/22/97	<5.0	<5.0	5.8	<5.0	<5.0	10.0	31.0	5.8
910.20.05 ND <10.0		Otay R/Apache Service Pond	BG	F	06/22/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
911.11.04 ND <10.0		Tijuana R/Dairy Mart Rd	GAM	W	06/22/97	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

  

Total Station Endo- Number sulfan	Dieldrin Endrin Ethion DDD	o,p' DDD	p,p' DDD	o,p' DDE	p,p' DDE	o,p' DDT	p,p' DDT	p,p' DDMU	p,p' DDMS	Total DDT	Dicofol	Diazinon	Endo- sulfan I	Endo- sulfan II	Endo- sulfan Sulfate
906.40.01 ND <15.0	5.8 <20.0	<10.0	<10.0	<10.0	8.6	<10.0	<10.0	<15.0	NA	8.6	NA	<50.0	<5.0	<70.0	<85.0
907.11.03 ND <15.0	<5.0 <20.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	NA	<50.0	<5.0	NA	NA
909.12.03 ND <15.0	<5.0 <20.0	<10.0	<10.0	<10.0	39.0	<10.0	<10.0	<15.0	NA	39.0	NA	<50.0	<5.0	NA	NA
910.20.05 ND <15.0	<5.0 <20.0	<10.0	<10.0	<10.0	50.0	<10.0	<10.0	<15.0	NA	50.0	NA	<50.0	<5.0	NA	NA
911.11.04 ND <15.0	<5.0 <20.0	<10.0	14.0	<10.0	40.0	<10.0	<10.0	<15.0	NA	54.0	NA	<50.0	<5.0	<70.0	<85.0

  

Toxaphene Station Group Number A	alpha- Chemical HCH	beta- HCH	delta- HCH	gamma- HCH (Lindane)	Total HCH	Hepta- chlor	Hepta- chlor- epoxide	Hexa- chloro- benzene	Methoxy- chlor	Oxa- diazon	Ethyl Para- thion	Methyl Para- thion	PCB 1248	PCB 1254	PCB 1260	Total PCB
906.40.01 <100.0	<2.0 22.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	67.0	<10.0	<10.0	<50.0	83.3	<50.0	83.3
907.11.03 <100.0	<2.0 ND	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
909.12.03 <100.0	<2.0 52.6	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	11.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
910.20.05 <100.0	<2.0 ND	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND
911.11.04 <100.0	<2.0 ND	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	55.1	61.7	<50.0	116.8

**TABLE 3**  
Toxic Substances Monitoring Program

1997 Freshwater Fish Code List \*

Species Code	Common Name	Species Name	Family Name
BG	Blue gill	<i>Lepomis macrochirus</i>	Centrarchidae
BK	Brook Trout	<i>Salvelinus fontinalis</i>	Salmonidae
BN	Brown Trout	<i>Salmo trutta</i>	Salmonidae
CCF	Channel Catfish	<i>Ictalurus punctatus</i>	Ictaluridae
CP	Carp	<i>Cyprinus carpio</i>	Cyprinidae
FHM	Fathead Minnow	<i>Pimephales promelas</i>	Cyprinidae
GAM	Mosquitofish	<i>Gambusia affinis</i>	Poeciliidae
LMB	Largemouth Bass	<i>Micropterus salmoides</i>	Centrarchidae
PRS	Red Shiner	<i>Cyprinella lutrensis</i>	Cyprinidae
RBT	Rainbow Trout	<i>Oncorhynchus mykiss</i>	Salmonidae
RCH	California Roach	<i>Hesperoleucus symmetricus</i>	Cyprinidae
SCP	Sculpin	<i>Cottus sp.</i>	Cottidae
SKR	Sucker	<i>Catostomus sp.</i>	Catostomidae
SMB	Smallmouth Bass	<i>Micropterus dolomieu</i>	Centrarchidae
STB	Threespine Stickleback	<i>Gasterosteus aculeatus</i>	Gasterosteidae
TL	Tilapia	<i>Tilapia sp.</i>	Cichlidae

1997 Marine Fish Code List \*

Species Code	Common Name	Species Name	Family Name
CM	Chub Mackerel	<i>Scomber japonicus</i>	Scombridae
DT	Diamond Turbot	<i>Hypsopsetta guttulata</i>	Pleuronectidae
GSS	Gray Smoothhound Shark	<i>Mustelus californicus</i>	Carcharhinidae
LJM	Longjaw Mudsucker	<i>Gillichthys mirabilis</i>	Gobiidae
ORC	Orangemouth Corvina	<i>Cynoscion xanthulus</i>	Sciaenidae

\* 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 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
35.20.16	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
35.20.16	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
37.20.31	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
37.20.31	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
15.40.08	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
23.10.01	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
23.10.02	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
23.10.02	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
28.00.90	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
28.00.90	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
28.00.92	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
28.00.92	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
01.11.05	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
01.11.07	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
01.11.09	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
01.11.96	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
01.11.99	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
01.11.99	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
02.21.01	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
02.21.01	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
02.21.01	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
02.21.01	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
02.22.02	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
02.22.02	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
05.23.01	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
09.11.09	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
09.12.00	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

= 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
02.21.01	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
02.21.01	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
02.21.01	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
02.21.01	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
02.22.02	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
02.22.02	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
05.23.01	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
09.11.09	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
09.12.00	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

= 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 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	
02.21.01	<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
02.21.01	<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
02.22.02	<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
05.23.01	<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
09.11.09	<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
09.12.00	<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 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.