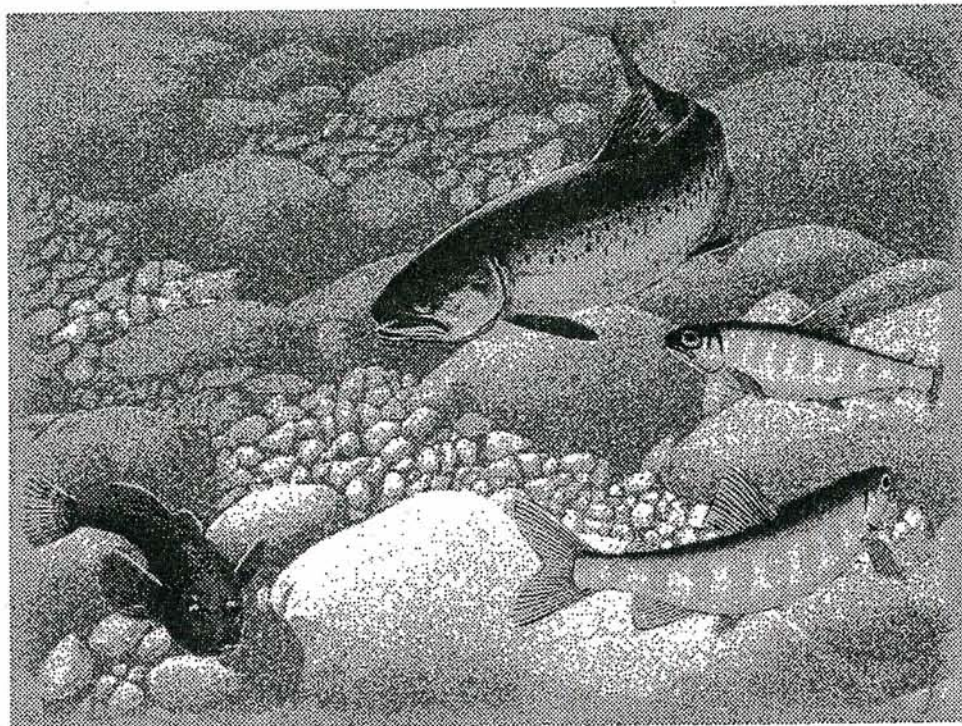


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Toxic Substances Monitoring Program 1994-95 Data Report

October 1997

**STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY**



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**TOXIC SUBSTANCES MONITORING PROGRAM
1994-95
DATA REPORT**

Prepared by
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Field and Laboratory Operations Conducted by the
Water Pollution Control Laboratory
California Department of Fish and Game

**STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY**

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LIST OF ABBREVIATIONS

DBP	Dichlorobenzophenone
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DDMS	Dichlorodiphenylmonochlorosaturatedethane
DDMU	Dichlorodiphenylmonochlorounsaturatedethane
DFG	California Department of Fish and Game
d/s	Downstream
EDL	Elevated Data Level(s)
FDA or (USFDA)	United States Food and Drug Administration
HCB	Hexachlorobenzene
HCH	Hexachlorocyclohexane
MIS	Median International Standard(s)
MTRL	Maximum Tissue Residue Level(s)
NAS	National Academy of Sciences
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
ppb	Parts Per Billion (ng/g)
ppm	Parts Per Million (ug/g)
RWQCBs	California Regional Water Quality Control Boards
SWRCB	California State Water Resources Control Board
TSMP	Toxic Substances Monitoring Program
USEPA	United States Environmental Protection Agency
u/s	Upstream

1. TOXIC SUBSTANCES MONITORING PROGRAM

1994-95

Introduction

The Toxic Substances Monitoring Program (TSMP) was initiated in 1976 by the California State Water Resources Control Board (SWRCB). The TSMP was organized to provide a uniform statewide approach to the detection and evaluation of the occurrence of toxic substances in fresh, estuarine, and marine waters of the State through the analysis of fish and other aquatic life. The TSMP primarily targets water bodies with known or suspected impaired water quality and is not intended to give an overall water quality assessment. The California Department of Fish and Game (DFG) carries out the statewide TSMP for the SWRCB by collecting and analyzing samples. The SWRCB provides funding for the program under an ongoing interagency agreement with the DFG. Sampling stations are selected primarily by the nine Regional Water Quality Control Boards (RWQCB) which are identified on the inside back cover.

The DFG reports annual sampling results to the SWRCB. The information is transmitted to the RWQCBs and to other federal, State, and local agencies. This report is the formal report presenting the results of the 1994 and 1995 sampling and analysis programs. The TSMP results are routinely transmitted to the Office of Environmental Health Hazard Assessment (OEHHA) of the California Environmental Protection Agency, which has responsibility for evaluating pollutant levels based on human health concerns and issuing fish consumption health advisories if indicated.

The TSMP 1994-95 Data Report provides information on the statewide occurrence and levels of toxic substances and the data can be used by the RWQCBs and other agencies to identify waters impacted by toxic pollutants and to eventually abate such problems. TSMP results are also used by the SWRCB and RWQCBs in the statewide Water Quality Assessment (WQA) report. Water bodies are classified from good to impaired water quality relative to each other and ranked according to this classification and resource value. TSMP results are used to assist in the WQA ranking process. For example, water bodies that exceed human health criteria are considered more impaired than water bodies that only exceed environmental protection criteria. TSMP results are also used in the regulatory activities of the RWQCBs and the Department of Pesticide Regulation.

Summary

Tables 1 and 2 list the 45 stations (36 water bodies) sampled in 1994 and the 56 stations (50 water bodies) sampled in 1995. Tissue samples were not collected from Region 3 in 1994. Regional maps showing 1994 and 1995 station locations are in Appendix A. Station location descriptions and latitude and longitude information can be found in Appendices B and C, respectively. In 1994, 19 stations were sampled for the first time, while 16 stations were sampled for the first time in 1995. A total of 52 fish samples were analyzed in 1994 and 77 fish samples and two crayfish samples were analyzed in 1995 (Appendix D). A new tissue, ova, from Pacific herring collected in San Francisco Bay was analyzed in the 1994 TSMP. A sediment sample collected in 1994 from Region 4 was also analyzed for metal and organic chemicals (Appendices E and F). New fish species analyzed include Pacific herring and California roach collected in 1994 and black croaker and round stingray collected in 1995.

Species collected in 1994 and 1995 are listed in Table 3 (freshwater fish), Table 4 (marine fish), and Table 5 (non-fish species).

Sampling results were compared to criteria such as Maximum Tissue Residue Levels (MTRLs), U.S. Food and Drug Administration (FDA) action levels, Median International Standards (MIS), and the National Academy of Sciences (NAS) recommended guidelines for predator protection (see section 3. Administrative and Comparative Criteria). MTRLs were developed from human health water quality objectives in the *Draft November 26, 1990 Functional Equivalent Document - Development of Water Quality Plans For: Inland Surface Waters of California and Enclosed Bays and Estuaries of California* (SWRCB 1990), the *Draft April 9, 1991 Supplement to the Functional Equivalent Document* (SWRCB 1991), and the *1997 California Ocean Plan* (SWRCB 1997).

Freshwater MTRLs were exceeded in 1994-95 at 18 water bodies in all regions, except Region 3 and 5 (Appendix G). Marine MTRLs were exceeded at five water bodies in Regions 2, 8, and 9 (Appendix H). An FDA action level was exceeded in three samples in 1995. FDA action levels were not exceeded in 1994. The only FDA action level exceeded was for mercury in three largemouth bass samples collected in Region 1 (Appendix I). Two of the samples came from Lake Pillsbury and the other sample came from Lake Sonoma. Both Lake Pillsbury and Lake Sonoma have a history of elevated mercury levels. Six samples also exceeded the MIS for Mercury in Regions 1, 3, and 7 (Appendix I). Two samples exceeded the MIS for selenium. Both were collected from the Salton Sea in Region 7 (Appendix I). The NAS guidelines for organic chemicals were exceeded in 12 samples from 7 water bodies in Regions 4, 7, and 8 (Appendix J). The NAS guideline for toxaphene was exceeded in all but one of the 12 of the samples. Chlordane, DDT, and dieldrin were the other organic chemicals found above the NAS guidelines.

Zinc was found at the highest concentration found to date in the Program in a whole sample. A 1994 threespine stickleback sample from Santa Paula Creek in Region 4 contained 77 ppm zinc. The previous high whole body zinc concentration (74 ppm) occurred in a 1980 crayfish sample collected from the Colorado River in Region 7. Another sample from Region 4 contained the third highest concentration of zinc in filet tissue found to date. Arroyo chub collected from the Santa Clara River Estuary in 1994 contained 26 ppm zinc in the filet. The two previous high zinc levels in filet (36 and 32 ppm) were found in two 1983 goldfish samples from Harbor Park Lake, also in Region 4. Arsenic continues to be found at elevated levels in marine fish filet (Appendix K). Arsenic was detected in a 1995 round stingray sample from Marina del Rey (Region 4) at the highest level ever measured in filet (6.2 ppm). Sargo and yellowfin croaker collected at the same location and at the same time had much lower concentrations of arsenic in the filet (0.91 and 1.2 ppm, respectively).

Samples from the Imperial Valley (Region 7) continue to have some of the highest levels of the pesticide dacthal found Statewide (Appendix J). In 1994, carp from the New River and catfish from the Alamo River contained the second (4,100 ppb) and third highest (4,000 ppb) levels in filet found in the TSMP. The highest level of dacthal found in filet tissue (5,700 ppb) occurred in a 1985 carp sample from Rice Drain 3 also in Region 7. Mosquitofish collected from Peach Drain in 1994 contained the highest level (5,500 ppb) of dacthal found to date in a whole sample. The previous high dacthal level in a whole sample was only 1,200 ppb in a 1987 hitch sample from the Salinas Reclamation Canal in Region 4. In 1994, diazinon was found at the highest levels found to date in both filet and whole body samples (Appendix J). Carp from the New River contained 140 ppb diazinon in filet tissue. This is only the eighth time diazinon has been detected in filet tissue since the TSMP began in 1976. All but two of these detections occurred in the

Imperial Valley. A whole sample of red shiner from San Diego Creek in Region 8 contained 440 ppb diazinon. The previous high level (260 ppb) also occurred in red shiner from the same station in 1991. Diazinon has been detected 15 times in whole samples since 1976 with more than half of those detection occurring in the San Diego Creek drainage.

Additional tabular summaries of chemistry data are provided in Appendices L through Q. Marine fish samples exceeding organic chemical criteria are summarized in Appendix L. Lipid weight data exceedances are summarized in Appendix M (freshwater) and Appendix N (marine). Summaries of all chemistry data are provided in Appendix O (trace elements), Appendix P (organic chemicals), and Appendix Q (lipid weight data). A complete TSMP sampling history is provided in Appendix R.

TABLE 1
1994 Toxic Substances Monitoring Program#

Station Name	Sample	Collection Date	Analyses
<u>Region 1</u>			
Big Sulfur Creek	Sucker (SKR)	10/12/94	As,Cd,Hg,Ni,Se, Organics
Laguna de Santa Rosa/Stony Point	Fathead Minnow (FHM)	10/13/94	Metals, Organics
Mark West Creek	Bluegill (BG)	10/13/94	Metals, Organics
Russian River/Duncans Mills	Sculpin (SCP)	10/13/94	Metals, Organics
Russian River/Wohler Bridge	Sucker (SKR)	10/13/94	Metals, Organics
Santa Rosa Creek/Willowside Road	Sucker (SKR)	10/13/94	As,Cd,Hg,Ni,Se, Organics
<u>Region 2</u>			
San Francisco Bay*	Pacific Herring (PHG)	02/23/95	As,Cd,Hg,Ni,Se, Organics
	Pacific Herring (PHG)	02/23/95	As,Cd,Hg,Ni,Se, Organics
	Pacific Herring (PHG)	02/23/95	As,Cd,Hg,Ni,Se, Organics
Walker Creek/Walker Creek Ranch*	California Roach (RCH)	02/03/94	Hg
<u>Region 4</u>			
Arroyo Conejo	Black Bullhead (BLB)	06/23/94	Organics
Arroyo Conejo/d/s Forks	Black Bullhead (BLB)	06/23/94	Organics
Ballona Lagoon*	Pacific Staghorn Sculpin (STG)	06/22/94	Metals, Organics
Ballona Wetlands	Longjaw Mudsucker (LJM)	06/22/94	Metals, Organics
Harbor Park Lake	Carp (CP)	06/14/94	As,Cd,Hg,Ni,Se, Organics
Santa Clara River Estuary*	Largemouth Bass (LMB)	06/14/94	Metals, Organics
	Arroyo Chub (AC)	06/24/94	Metals, Organics
	Threespine Stickleback (STB)	06/24/94	Metals, Organics
Santa Paula Creek/Stekel Park*	Threespine Stickleback (STB)	06/24/94	Metals, Organics
Ventura River Estuary	Sediment (SED)	06/24/94	As,Hg,Se, Organics
<u>Region 5</u>			
Merced River/Hatfield St Recreation Area	Bluegill (BG)	11/18/94	Se
	Green Sunfish (GSF)	11/18/94	Se
San Joaquin River/Crows Landing*	Green Sunfish (GSF)	11/30/94	Se
San Joaquin River/Fremont Ford	Green Sunfish (GSF)	11/30/94	Se
San Joaquin River/Mossdale	Carp (CP)	11/17/94	Se
	Largemouth Bass (LMB)	11/17/94	Se
San Joaquin River/Newman	Green Sunfish (GSF)	11/22/94	Se
	Smallmouth Bass (SMB)	11/22/94	Se
San Joaquin River/Patterson Bridge*	Green Sunfish (GSF)	11/22/94	Se

Tissue samples were not collected from Region 3 in 1994.

* Stations sampled for the first time in 1994.

TABLE 1 (continued)
1994 Toxic Substances Monitoring Program

Station Name	Sample	Collection Date	Analyses
<u>Region 6</u>			
Little Truckee River*	Brown Trout	(BN) 10/06/94	Metals
Mojave River*	Arroyo Chub	(AC) 10/28/94	Metals, Organics
Pleasant Valley Reservoir*	Brown Trout	(BN) 09/28/94	Metals
Prosser Reservoir*	Rainbow Trout	(RBT) 10/06/94	Metals
Silver Lake*	Brown Trout	(BN) 09/28/94	Metals
<u>Region 7</u>			
Alamo River/Calipatria	Carp	(CP) 10/27/94	As,Cd,Hg,Ni,Se, Organics
	Channel Catfish	(CCF) 10/27/94	Metals, Organics
New River/International Boundary	Carp	(CP) 11/02/94	As,Cd,Hg,Ni,Se, Organics
New River/Westmorland	Carp	(CP) 10/27/94	As,Cd,Hg,Ni,Se, Organics
<u>Region 8</u>			
Anza Channel	Fathead Minnow	(FHM) 06/01/94	Metals, Organics
Big Bear Lake/Dam*	Largemouth Bass	(LMB) 06/08/94	Metals, Organics
Big Bear Lake/Rathbone Creek*	Largemouth Bass	(LMB) 06/08/94	Metals, Organics
Lake Elsinore	Carp	(CP) 06/09/94	As,Cu,Pb,Hg,Se,Zn, Organics
Peters Canyon Channel	Red Shiner	(PRS) 06/02/94	Metals, Organics
	Red Shiner	(PRS) 06/02/94	Metals, Organics
San Diego Creek/Michelson Drive	Red Shiner	(PRS) 06/02/94	Metals, Organics
Santa Ana River/Prado Dam	Brown Bullhead	(BB) 06/01/94	Metals, Organics
<u>Region 9</u>			
Ostrich Farm Creek*	Green Sunfish	(GSF) 06/11/94	Organics
Rainbow Creek/Highway 15	Black Bullhead	(BLB) 06/09/94	Organics
San Diego River/Old Mission Dam	Largemouth Bass	(LMB) 06/10/94	Metals, Organics
San Juan Creek/Doheny State Park	Red Shiner	(PRS) 06/12/94	Organics
San Juan Creek/La Novia Avenue*	Largemouth Bass	(LMB) 06/12/94	Organics
Santa Margarita River/Sandia Creek Drive*	Black Bullhead	(BLB) 06/11/94	Organics
Sweetwater River/Interstate 805*	Carp	(CP) 06/10/94	Organics
Trabuco Creek/Oso Road*	Red Shiner	(PRS) 06/12/94	Organics

* Stations sampled for the first time in 1994.

TABLE 2
1995 Toxic Substances Monitoring Program

Station Name	Sample	Collection Date	Analyses
<u>Region 1</u>			
Lake Pillsbury	Laregmouth Bass	(LMB) 09/23/95	Metals
	Sacramento Squawfish	(SQF) 09/23/95	Metals
Lake Pillsbury/Eel River Arm	Largemouth Bass	(LMB) 07/12/95	Hg
	Largemouth Bass	(LMB) 07/12/95	Hg
	Largemouth Bass	(LMB) 07/12/95	Hg
	Largemouth Bass	(LMB) 07/12/95	Hg
	Sacramento Squawfish	(SQF) 09/23/95	As,Cd,Hg,Ni,Se
	Sacramento Squawfish	(SQF) 09/23/95	As,Cd,Hg,Ni,Se
	Lake Sonoma	Largemouth Bass	(LMB) 09/22/95
	Largemouth Bass	(LMB) 09/22/95	Metals, Organics
<u>Region 2</u>			
Corte Madera Creek*	California Roach	(RCH) 10/06/95	As,Hg,Se, Organics
Napa River/d/s Sewage Treatment Plant*	California Roach	(RCH) 10/04/95	As,Cu,Hg,Se, Organics
Napa River/Pioneer Park*	Bluegill	(BG) 10/04/95	As,Cu,Hg,Se, Organics
	Brown Bullhead	(BB) 10/04/95	As,Cu,Hg,Se, Organics
Petaluma River/Petaluma	Green Sunfish	(GSF) 10/05/95	As,Cu,Hg,Se, Organics
San Fransquito Creek*	Sucker	(SKR) 11/09/95	As,Cu,Hg,Se, Organics
Sonoma Creek	California Roach	(RCH) 10/05/95	As,Cu,Hg,Se, Organics
Walker Creek	Pacific Staghorn Sculpin	(STG) 10/05/95	Hg
Walker Creek/Walker Creek Ranch	California Roach	(RCH) 10/05/95	Hg
Walnut Creek	Green Sunfish	(GSF) 11/09/95	As,Cu,Pb,Hg,Se,Zn, Organics
<u>Region 3</u>			
Lake Hernandez/San Benito River	Channel Catfish	(CCF) 11/30/95	Metals
	Largemouth Bass	(LMB) 11/30/95	Metals
<u>Region 4</u>			
Ballona Lagoon	Pacific Staghorn Sculpin	(STG) 06/27/95	Metals
Madrona Marsh Preserve*	Mosquitofish	(GAM) 06/27/95	Metals, Organics
Malibu Creek/Tapia Park	Red Swamp Crayfish	(PROI) 06/29/95	Metals
Malibu Creek/u/s Tapia Discharge*	Red Swamp Crayfish	(PROI) 06/29/95	Metals
Marina del Rey/Basin D*	Round Stingray	(RSR) 06/28/95	Metals, Organics
	Sargo	(SAR) 06/28/95	Metals, Organics
	Yellowfin Croaker	(YFC) 06/28/95	Metals, Organics
	Santa Clara River Estuary	Santa Ana Sucker	(SAKR) 06/30/95
Santa Paula Creek/Stekel Park	Arroyo Chub	(AC) 06/30/95	Metals
<u>Region 5</u>			
Old River	Largemouth Bass	(LMB) 04/25/96	Se
	Largemouth Bass	(LMB) 04/24/96	Se
	Redear Sunfish	(RSF) 04/25/96	Se

* Stations sampled for the first time in 1995.

TABLE 2 (continued)
1995 Toxic Substances Monitoring Program

Station Name	Sample	Collection Date	Analyses	
<u>Region 5 (continued)</u>				
Paradise Cut/Tracy	Largemouth Bass	(LMB)	04/26/96	Se
	White Catfish	(WCF)	04/26/96	Se
Salt Slough	White Catfish	(WCF)	04/22/96	Se
San Joaquin River/Crows Landing	White Catfish	(WCF)	04/29/96	Se
San Joaquin River/Fremont Ford	Brown Bullhead	(BB)	04/22/96	Se
<u>Region 6</u>				
Arrowbear Lake*	Black Bullhead	(BLB)	10/24/95	Metals, Organics
Haiwee Reservoir	Largemouth Bass	(LMB)	09/07/95	Metals
Indian Creek Reservoir*	Rainbow Trout	(RBT)	10/16/95	Metals, Organics
Mammoth Creek/d/s Murphy's Gulch*	Brown Trout	(BN)	09/05/95	Metals, Organics
Trout Creek/Truckee/d/s Meeks Lumber	Brook Trout	(BK)	09/14/95	Metals, Organics
Upper Truckee River*	Brown Trout	(BN)	08/15/95	Metals, Organics
<u>Region 7</u>				
Coachella Valley Stormwater Channel	Red Shiner	(PRS)	10/24/95	Se, Organics
	Redbelly Tilapia	(TLZ)	10/24/95	Se, Organics
Fig Lake	Carp	(CP)	10/28/95	Se, Organics
	Carp	(CP)	10/28/95	Se, Organics
New River/Westmorland	Channel Catfish	(CCF)	10/27/95	Hg,Se, Organics
Palo Verde Outfall Drain	Carp	(CP)	10/25/95	Se, Organics
	Largemouth Bass	(LMB)	10/25/95	Se, Organics
Peach Drain	Mosquitofish	(GAM)	10/28/95	Se, Organics
Salton Sea/South	Redbelly Tilapia	(TLZ)	10/27/95	Se, Organics
	Redbelly Tilapia	(TLZ)	10/27/95	Se, Organics
<u>Region 8</u>				
Anaheim Bay/Sunset Boatworks*	Yellowfin Croaker	(YFC)	06/17/95	Metals, Organics
Big Bear Lake	Largemouth Bass	(LMB)	06/20/95	Metals, Organics
Lake Elsinore	Carp	(CP)	06/17/95	As,Cu,Pb,Hg,Se,Zn, Organics
Newport Bay	Black Croaker	(BCK)	06/18/95	Metals, Organics
Peters Canyon Channel	Red Shiner	(PRS)	06/17/95	Metals, Organics
San Diego Creek/Michelson Drive	Red Shiner	(PRS)	06/17/95	Metals, Organics
	Red Shiner	(PRS)	06/17/95	Metals, Organics
Santa Ana River/Imperial Highway Bridge	Carp	(CP)	07/25/95	Metals, Organics
	Channel Catfish	(CCF)	07/25/95	Metals, Organics
Santa Ana River/Prado Dam	Bullhead	(BH)	07/25/95	Metals, Organics
<u>Region 9</u>				
Agua Hedionda*	Barred Sand Bass	(BSB)	07/28/95	Metals, Organics
Aliso Creek*	Red Shiner	(PRS)	07/29/95	Metals, Organics
	Red Shiner	(PRS)	07/29/95	Metals, Organics

* Stations sampled for the first time in 1995.

TABLE 2 (continued)
1995 Toxic Substances Monitoring Program

Station Name	Sample	Collection Date	Analyses
<u>Region 9 (continued)</u>			
Buena Vista Lagoon	Largemouth Bass	(LMB) 07/28/95	Metals, Organics
Los Penasquitos Creek	Largemouth Bass	(LMB) 11/05/95	Metals, Organics
Los Penasquitos Creek/u/s I-805*	Largemouth Bass	(LMB) 11/11/95	Metals, Organics
Penasquitos Lagoon	Pacific Staghorn Sculpin	(STG) 07/28/95	Metals, Organics
Rainbow Creek	Arroyo Chub	(AC) 07/26/95	Organics
	Arroyo Chub	(AC) 07/26/95	Organics
San Elijo Lagoon/Central Basin*	California Killifish	(CKF) 07/29/95	Metals, Organics
San Juan Creek/Doheny State Park	Red Shiner	(PRS) 07/29/95	Metals, Organics
	Red Shiner	(PRS) 07/29/95	Metals, Organics
Sweetwater Marsh	Longjaw Mudsucker	(LJM) 07/26/95	Metals, Organics
Tecolote Creek	Green Sunfish	(GSF) 07/28/95	Metals, Organics

* Stations sampled for the first time in 1995.

TABLE 3

Toxic Substances Monitoring Program
 1994-95 Freshwater Fish Code List*

Species Code	Common Name	Species Name	Family Name
AC	Arroyo Chub	<i>Gila orcutti</i>	Cyprinidae
BB	Brown Bullhead	<i>Ameiurus nebulosus</i>	Ictaluridae
BG	Bluegill	<i>Lepomis macrochirus</i>	Centrarchidae
BH	Bullhead	<i>Ameiurus sp.</i>	Ictaluridae
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
CKF	California Killifish	<i>Fundulus parvipinnis</i>	Cyprinodontidae
CP	Carp	<i>Cyprinus carpio</i>	Cyprinidae
FHM	Fathead Minnow	<i>Pimephales promelas</i>	Cyprinidae
GAM	Mosquitofish	<i>Gambusia affinis</i>	Poeciliidae
GSF	Green Sunfish	<i>Lepomis cyanellus</i>	Centrarchidae
LJM	Longjaw Mudsucker	<i>Gillichthys mirabilis</i>	Gobiidae
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
RSF	Redear Sunfish	<i>Lepomis microlophus</i>	Centrarchidae
SAKR	Santa Ana Sucker	<i>Catostomus santaanae</i>	Catostomidae
SCP	Sculpin	<i>Cottus sp.</i>	Cottidae
SKR	Sucker	<i>Catostomus sp.</i>	Catostomidae
SMB	Smallmouth Bass	<i>Micropterus dolomieu</i>	Centrarchidae
SQF	Sacramento Squawfish	<i>Ptychocheilus grandis</i>	Cyprinidae
STB	Threespine Stickleback	<i>Gasterosteus aculeatus</i>	Gasterosteidae
STG	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	Cottidae
TLZ	Redbelly Tilapia	<i>Tilapia zillii</i>	Cichlidae
WCF	White Catfish	<i>Ameiurus catus</i>	Ictaluridae

* 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 4

Toxic Substances Monitoring Program
 1994-95 Marine Fish Code List*

Species Code	Common Name	Species Name	Family Name
BCK	Black Croaker # #	<i>Cheilotrema saturnum</i>	Sciaenidae
BSB	Barred Sand Bass	<i>Paralabrax nebulifer</i>	Serranidae
PHG	Pacific Herring #	<i>Clupea harengus</i>	Clupeidae
RSR	Round Stingray # #	<i>Urolophus halleri</i>	Urolophidae
SAR	Sargo	<i>Anisotremus davidsoni</i>	Haemulidae
YFC	Yellowfin Croaker	<i>Umbrina roncador</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.

Collected for the first time in 1994.

Collected for the first time in 1995.

TABLE 5

Toxic Substances Monitoring Program
 1994-95 Non-Fish Code List

Species Code	Common Name	Species Name	Family Name
PROI	Red Swamp Crayfish	<i>Procambarus clarki</i>	Astacidae

2. FIELD AND LABORATORY OPERATIONS

The presence of many toxic substances in fresh waters is determined by analyzing tissues from fish and other aquatic organisms. Concentrations of these substances in water are often too low or transitory to be reliably detected through the more traditional methods of analysis of water samples. Also, many toxic substances are not water soluble, but can be found associated with sediment or organic matter. Fish and other aquatic organisms are sampled because they bioaccumulate and bioconcentrate toxic substances to levels which may be many hundreds of times the levels actually in the water. This concentration factor facilitates detection of toxic pollutants. The following is a general overall discussion of field and laboratory procedures. A detailed discussion is provided in Appendix S.

Substances Measured

A total of 10 trace elements (metals) and approximately 45 pesticides and PCBs (organic chemicals) are analyzed in the TSMP on a regular basis. Additional substances, such as polynuclear aromatic hydrocarbons (PAHs), pentachlorophenol (PCP), and tetrachlorophenol (TCP), are looked for on a request basis only. Not every sample is analyzed for all metals or organic chemicals. Each sample at each station is handled individually. The requesting agency, usually the RWQCBs, will specify the type of analysis for each sample. Starting in 1993, the trace elements arsenic, cadmium, nickel, mercury, and selenium are routinely analyzed in filet tissue. Previously, only mercury and selenium were routinely analyzed in filet tissue. All other metals are analyzed in the liver. This change was brought about by the development of MTRLs for arsenic, cadmium, and nickel which are measured in edible (filet) tissue. All organic chemicals have historically been analyzed in filet or muscle tissue. When only very small fish are available, metal or organic chemical analysis is performed on a whole body composite of larger than usual numbers of individual fish.

Sample Size

Composite samples, using six fish of each species, are collected whenever possible. The number and size uniformity of the fish in each composite depends upon their availability. Replicate composites are collected and analyzed to measure the variability of toxicant concentrations in single species composites collected at the same time and place. Collection of the same species from all stations is desirable to minimize possible variation in the data due to differences in pollutant uptake between species. However, this is not possible over the entire State due to the variety of habitat sampled and limited collection time available in the program. All reasonable efforts are made to maintain both station-to-station and year-to-year uniformity in collections.

Wet and Lipid Weight Measurements

Tissue concentrations of metals and organic chemicals are measured on a wet weight basis. Metal data are presented in parts per million (ppm), while organic chemical data are presented in parts per billion (ppb). In addition to wet weight measures, organic chemicals are also expressed on a lipid weight basis. Lipid weight measurements offer several advantages. Because chlorinated hydrocarbons are much more soluble in lipids (fat tissues) than in water, they partition into lipid-rich tissues of aquatic organisms (Stout and Beezhold 1981). Animals with higher proportions of lipid in their tissue usually have had higher concentrations of chlorinated hydrocarbon pollutants (Phillips 1980). Factors such as season, water temperature, health of the organism, stress on the organism, and type of species can affect the lipid levels of samples collected for analysis and can, therefore, cause variability in results. Use of lipid weight measurements may reduce this source of variability, although disadvantages have also been noted (Phillips 1980). As a result, lipid weight values may represent a more realistic measure of environmental availability of chlorinated hydrocarbons than wet weight values. Wet weight measures, however, remain the preferred measure for most readers because all standards for human health and for predator protection are based on wet weight measures. Also, wet weight measures better reflect the exposure of predators or humans to the actual concentration in freshly caught fish.

Station Numbers

Each TSMP station is identified by a unique seven digit number derived from the SWRCBs hydrologic basin planning maps. The first digit of a station number signifies one of the nine RWQCBs. The second and third digits represent a hydrologic area, while the fourth and fifth digits identify a hydrologic subarea. The sixth and seventh digits represent the distance in miles above the downstream hydrologic boundary. For example, station 519.21.01 is in Region 5, hydrologic area 19, subarea 21, and is one mile upstream from the hydrologic unit boundary. Not all mileage indicators are accurate, however. In certain instances, it was necessary to assign an arbitrary mileage indicator. For example, the arbitrary designation is used when two or more stations within the same hydrologic subarea are located within the same number of miles of the hydrologic boundary, resulting in the same station number. In this case, one or more of the stations is arbitrarily assigned a mileage designator from 90 to 99.

3. ADMINISTRATIVE AND COMPARATIVE CRITERIA

In this report, as in previous TSMP reports, the term “criteria” is used to refer to the criteria against which a particular metal or organic chemical is being compared. As more than one criterion may apply to any one metal or organic compound, a hierarchy was established. The intent of the hierarchy is to compare data against the more important criterion. In general, FDA action levels and the “Median International Standards” (MIS), human health-related criteria, are considered more important or critical. Following human health criteria are NAS guidelines, predator protection criteria. Last in the hierarchy are “elevated data levels” (EDL). Maximum Tissue Residue Levels (MTRLs), a relatively new human health related criteria, are considered separately. All appropriate 1994-95 data are compared to MTRLs in addition to following the usual hierarchy. The criteria mentioned above are discussed below.

In interpreting the TSMP data by any of the criteria provided, the reader is cautioned that there is no simple relationship between concentrations of toxic substances observed in tissue samples and actual concentrations in water. Different aquatic organisms tend to bioaccumulate a given toxic substance in water to different levels; however, the differences usually do not prevent a general interpretation of the data. The reader is also cautioned that the limited number of samples obtained and analyzed at each station in a single year is generally too small to provide a statistically sound basis for making absolute statements on toxic substance concentrations. The values reported herein should be accepted as indicators of relative levels of toxic pollution in water, not as absolute values. In this sense, trends over time and ranking values of a toxic substance in a particular species provide only an indication of areas where fish are evidently accumulating concentrations which are above “normal”.

Maximum Tissue Residue Levels (MTRLs)

MTRLs were developed by SWRCB staff from human health water quality objectives in the *Draft November 26, 1990 Functional Equivalent Document - Development of Water Quality Plans For: Inland Surface Waters of California and Enclosed Bays and Estuaries of California* (SWRCB 1990), the *Draft April 9, 1991 Supplement to the Functional Equivalent Document* (SWRCB 1991), and the *1997 California Ocean Plan* (SWRCB 1997). The draft objectives or criteria represent concentrations in water that protect against consumption of fish, shellfish, and water (freshwater only) that contain substances at levels which could result in significant human health problems. MTRLs are used as alert levels or guidelines indicating water bodies with potential human health concerns and are an assessment tool and not compliance or enforcement criteria. MTRLs are compared only to file or edible tissue samples and should not be compared to whole body or liver samples. Tables 6 and 7 list freshwater and marine MTRLs for those substances monitored in the TSMP. The MTRLs for many of the carcinogens listed in Table 6 and 7 are below the current tissue detection limit for those substances (see Appendix S for detection limits).

The MTRLs were calculated by multiplying the draft human health water quality criteria by the bioconcentration factor (BCF) for each substance as recommended in the USEPA *Draft Assessment and Control of Bioconcentratable Contaminants in Surface Waters* (USEPA 1991). BCFs were taken from the USEPA 1980 Ambient Water Quality Criteria Documents for each substance. MTRLs were not calculated for objectives that are based on maximum contaminant levels (MCLs) or taste and odor criteria.

FDA Action Levels and NAS Guidelines

The U.S. Food and Drug Administration (FDA) has established maximum concentration levels for some toxic substances in human foods (USFDA 1985). The levels are based on specific assumptions of the quantities of food consumed by humans and upon the frequency of their consumption. The FDA limits are intended to protect humans from the chronic effects of toxic substances consumed in foodstuffs. The National Academy of Sciences (NAS) has established recommended maximum concentrations of toxic substance concentrations in freshwater fish tissue (NAS 1973). They were established not only to protect the organisms containing the toxic compounds, but also to protect the species that consume these contaminated organisms. The specific action levels and guidelines used in this report are shown in Table 8 at the end of this section.

Median International Standards (MIS) for Trace Elements

The Food and Agriculture Organization of the United Nations has published a survey of health protection criteria used by member nations (Nauen 1983). These criteria vary somewhat in the tissues to be analyzed or the level of protection desired, but may be compared qualitatively. Table 9 at the end of this section summarizes these standards as an indication of what other countries have determined to be unsafe levels of trace elements. Though the standards do not apply within the United States, they provide an indication of what other nations consider to be an elevated concentration of trace elements in fish tissues. Measurements in liver should not be compared to Median International Standards. A description of how the Median International Standards were compiled by SWRCB staff is provided in Appendix T.

Elevated Data Levels

The “elevated data level” (EDL) was introduced by SWRCB staff in 1983 as an internal comparative measure which ranks a given concentration of a particular substance with previous data from the TSMP. The EDL is calculated by ranking all of the results for a given chemical from the highest concentration measured down to and including those records where the chemical was not detected. From this, a cumulative distribution is constructed and percentile rankings are calculated. For example, the 50th percentile corresponds to the median or “middle” value rather than to the mean. With a large number of records, the median can be approximately compared to the mean.

Starting in 1990, EDL calculations were modified to reflect the growing number of marine species analyzed in the TSMP. In the past, EDL calculations for wet weight measures were grouped by similar tissue types, such as filet or whole-body samples. In 1990, the EDL calculations were further split into freshwater and marine fish types. Now when any sample is compared to an EDL, it is compared to the EDL calculated from the same fish and tissue types (i.e. freshwater fish filets are compared only to other freshwater fish filets, etc.). The substance most affected by the change in the EDL calculations was arsenic. The EDL criteria for arsenic in freshwater fish livers and whole samples were lowered by approximately half from 1978-1989 calculations. A separate copper EDL is calculated for salmonid liver tissue because trout are known to accumulate copper to higher levels than other species. White bass also seem to accumulate copper and other trace elements to higher levels. Starting in 1988, white bass are not included in the EDL calculations. White bass are found only in a few locations in California and further sampling of this species will be avoided whenever possible. In calculating the EDLs for lipid weight measures of organic chemicals, all tissue types are combined because lipid weight measures in different tissue types tend to be far more similar than wet weight measures (Phillips 1980). However, like wet weight measures, EDL lipid weight calculations were also split into freshwater and marine fish types. The 1978-1995 EDLs and the number of data points used to calculate each EDL are provided in Tables 10 through 18 at the end of this section.

The 85th percentile (EDL 85) was chosen as an indication that a chemical is elevated from the median. The 85th percentile corresponds to measures used by the U.S. Fish and Wildlife Service in their National Contaminant Biomonitoring Program and would represent approximately one and one-half standard deviations from the mean, if the data were normally distributed. The 95th percentile (EDL 95) was chosen to indicate values that are highly elevated above the median. The 95th percentile would represent two standard deviations from the mean, if the data were normally distributed. When used along with other information, these measures provide a useful guideline to determine if a chemical has been found in unusually high concentrations. A more detailed description of EDL rankings is provided in Appendix U. The reader is again cautioned that EDLs are not directly related to potentially adverse human or animal health effects; they are only a way to compare findings in a particular area with the larger data base of findings from all over the state.

TABLE 6
Toxic Substances Monitoring Program

Maximum Tissue Residue Levels (MTRLs) for Carcinogens in Inland Surface Waters

Substance	Water Quality Criteria ^a (µg/l)	BCF ^b (l/kg)	MTRL ^c (µg/kg, ppb)
aldrin	0.00013	d	0.05
arsenic	5.0 ^e	44	200.0 (0.2 ppm)
chlordane (total)	0.00008	14100	1.1
DDT (total)	0.00059	53600	32.0
dieldrin	0.00014	4670	0.65
heptachlor	0.00016	11200	1.8
heptachlor epoxide	0.00007	11200	0.8
hexachlorobenzene (HCB)	0.00066	8690	6.0
hexachlorocyclohexane (HCH), alpha	0.0039	130	0.5
hexachlorocyclohexane (HCH), beta	0.014	130	1.8
hexachlorocyclohexane (HCH), gamma	0.019	130	2.5
PAHs (total)	0.0028	30	0.08
PCBs (total)	0.00007	31200	2.2
pentachlorophenol (PCP)	0.28	11	3.1
toxaphene	0.00067	13100	8.8

Maximum Tissue Residue Levels (MTRLs) for Non-carcinogens in Inland Surface Waters

Substance	Water Quality Criteria ^a (mg/l)	BCF ^b (l/kg)	MTRL ^c (mg/kg, ppm)
cadmium	0.01	64	0.64
endosulfan (total)	0.0009	270	0.25 (250 ppb)
endrin	0.0008	3970	3.0 (3,000 ppb)
mercury	0.000012	f	1.0
nickel	0.6	47	28.0

- From Draft November 26, 1990 Functional Equivalent Document - Development of Water Quality Plans For: Inland Surface Waters of California and Enclosed Bays and Estuaries of California (SWRCB 1990) and the Draft April 9, 1991 Supplement to the Functional Equivalent Document (SWRCB 1991). MTRLs were not developed for objectives based on maximum contaminant levels (MCLs) or taste and odor criteria.
- Bioconcentration Factors taken from the USEPA 1980 Ambient Water Quality Criteria Documents for each substance.
- MTRLs were calculated by multiplying the Water Quality Objective by the BCF, except for aldrin, arsenic, and mercury.
- Aldrin MTRL is derived from a combination of aldrin and dieldrin risk factors and BCFs as recommended in the USEPA 1980 "Ambient Water Quality Criteria for Aldrin/Dieldrin" (USEPA 1980).
- Arsenic MTRL was calculated from the formula $NSRL \div (WI/BCF) + FC = MTRL$. [NSRL (California's No Significant Risk Level for arsenic) = 10 µg/d, WI (Water Intake) = 2 l/d, FC (daily fish consumption) = 0.0065 kg/d].
- The MTRL for mercury is the FDA action level. The water quality objective for mercury in the Inland Surface Waters Plan is based on the FDA action level as recommended in the USEPA 1985 "Ambient Water Quality Criteria for Mercury" (USEPA 1985).

TABLE 7
Toxic Substances Monitoring Program

Maximum Tissue Residue Levels (MTRLs) for Carcinogens in Ocean Waters ^a

Substance	Water Quality Objective ^b (µg/l)	BCF ^c (l/kg)	MTRL ^d (µg/kg, ppb wet weight)
aldrin	0.000022	e	0.1
chlordane (total)	0.000023	14100	0.32
DDT (total)	0.00017	53600	9.1
dieldrin	0.00004	4670	0.2
heptachlor	0.00072	11200	8.1
hexachlorobenzene (HCB)	0.00021	8690	2.0
PCBs (total)	0.000019	31200	0.6
toxaphene	0.00021	13100	2.75

- a. The TSMP does not analyze for any of the non-carcinogens listed in the human health section of Table B of the 1997 Ocean Plan.
- b. From Table B, Objectives for Human Health, "California Ocean Plan" (SWRCB 1997).
- c. Bioconcentration Factors taken from the USEPA 1980 Ambient Water Quality Criteria Documents for each substance.
- d. MTRLs were calculated by multiplying the Water Quality Objective by the BCF, except for aldrin.
- e. Aldrin MTRL is derived from a combination of aldrin and dieldrin risk factors and BCFs as recommended in the USEPA 1980 "Ambient Water Quality Criteria for Aldrin/Dieldrin" (USEPA 1980).

TABLE 8
 NAS Guidelines and FDA Action Levels for Toxic Chemicals in Fish
 (wet weight)

Chemical	NAS ^a		FDA ^b	
	Recommended Guideline for Freshwater Fish		Action Level for Freshwater and Marine Fish	
	(Whole Fish)		(Edible Portion)	
	ug/g (ppm)	ng/g (ppb)	ug/g (ppm)	ng/g (ppb)
Mercury	0.5	500	1.0 ^d	1,000
DDT (total)	1.0	1,000	5.0	5,000
PCB (total)	0.5	500	2.0 ^e	2,000
aldrin	0.1 ^c	100	0.3	300
dieldrin	0.1 ^c	100	0.3	300
endrin	0.1 ^c	100	0.3	300
heptachlor	0.1 ^c	100	0.3	300
heptachlor epoxide	0.1 ^c	100	0.3	300
chlordane (total)	0.1 ^c	100	0.3	300
lindane	0.1	100	-	-
hexachlorocyclo- hexane (total)	0.1 ^c	100	-	-
endosulfan (total)	0.1 ^c	100	-	-
toxaphene	0.1 ^c	100	5.0	5,000

- a. National Academy of Sciences-National Academy of Engineering. 1973. Water Quality Criteria, 1972 (Blue Book). U.S. Environmental Protection Agency, Ecological Research Series.
- b. U. S. Food and Drug Administration. 1984. Shellfish Sanitation Interpretation: Action Levels for Chemical and Poisonous Substances, June 21, 1984. U.S.F.D.A., Shellfish Sanitation Branch, Washington, D.C.
- c. Individually or in combination. Chemicals in this group under NAS Guidelines are referred to as Chemical Group A in this report.
- d. As methyl mercury.
- e. A tolerance, rather than an action level, has been established for PCBs (21CFR 109, published May 29, 1984). An action level is revoked when a regulation establishes a tolerance for the same substance and use.

TABLE 9
 Median International Standards for Trace Elements
 in Freshwater Fish and Marine Shellfish^a
 (edible portion, ppm, wet weight)

Element	Fish	Shellfish	Range	Number of Countries with Standards
Antimony	1.0	1.0	1.0 to 1.5	3
Arsenic	1.5	1.4	0.1 to 5.0	11
Cadmium	0.3	1.0	0.05 to 2.0	10
Chromium	1.0	1.0	1.0	1
Copper	20.0	20.0	10 to 100	8
Fluoride	150.0	-	150.0	1
Fluorine	17.5	-	10 to 25	2
Lead	2.0	2.0	0.5 to 10.0	19
Mercury	0.5	0.5	0.1 to 1.0	28
Selenium	2.0	0.3	0.3 to 2.0	3
Tin	150.0	190.0	50 to 250	8
Zinc	45.0	70.0	40 to 100	6

a. Based on: Nauen, C. C., Compilation of Legal Limits for Hazardous Substances in Fish and Fishery Products, Food and Agriculture Organization of the United Nations, 1983.

TABLE 10. TSMP EDL 85 AND EDL 95 for Trace Elements in Fish Livers
 Calculated Using 1978 - 1995 Data.
 (ppm, wet weight)

Freshwater Fish

Element	Fish Type*	EDL 85	EDL 95	Number of Samples
Arsenic	All	0.21	0.68	555
Cadmium	All	0.36	0.99	569
Chromium	All	0.03	0.07	620
Copper	Non	12.00	33.00	501
Copper	Salmo	170.00	230.00	146
Lead	All	0.10	0.20	619
Mercury	All	ID	ID	9
Nickel	All	<0.10	0.20	553
Selenium	All	3.32	4.74	112
Silver	All	0.26	0.76	622
Zinc	All	28.00	38.00	621

Marine Fish

Element	EDL 85	EDL 95	Number of Samples
Arsenic	7.03	17.23	35
Cadmium	1.10	3.26	36
Chromium	<0.02	0.05	45
Copper	21.90	29.60	47
Lead	0.20	0.56	46
Mercury	ID	ID	0
Nickel	<0.10	0.13	35
Selenium	ID	ID	5
Silver	0.67	2.27	47
Zinc	39.95	45.65	47

* Non = Includes all non-salmonid species. Salmo = Family Salmonidae (trouts).

All= All fish species.

< = EDL lies below the indicated detection limit.

ID = Insufficient data to calculate the EDL.

TABLE 11. TSMP EDL 85 AND EDL 95 for Trace Elements in Whole Fish
 Calculated Using 1978 - 1995 Data.
 (ppm, wet weight)

Freshwater Fish

Element	EDL 85	EDL 95	Number of Samples
Arsenic	0.41	0.88	170
Cadmium	0.12	0.19	167
Chromium	0.23	0.54	167
Copper	3.30	4.30	170
Lead	0.20	0.46	167
Mercury	0.11	0.22	174
Nickel	0.21	0.56	168
Selenium	1.40	1.90	194
Silver	0.02	0.04	167
Zinc	42.00	49.00	167

Marine Fish

Element	EDL 85	EDL 95	Number of Samples
Arsenic	ID	ID	3
Cadmium	ID	ID	3
Chromium	ID	ID	3
Copper	ID	ID	5
Lead	ID	ID	3
Mercury	ID	ID	5
Nickel	ID	ID	3
Selenium	ID	ID	3
Silver	ID	ID	3
Zinc	ID	ID	3

ID = Insufficient data to calculate the EDL.

TABLE 12. TSMP EDL 85 AND EDL 95 for Trace Elements in Fish Filets
 Calculated Using 1978 - 1995 Data.
 (ppm, wet weight)

Freshwater Fish

Element	EDL 85	EDL 95	Number of Samples
Arsenic	0.14	0.43	133
Cadmium	<0.01	0.01	112
Chromium	<0.02	<0.02	26
Copper	0.69	0.99	26
Lead	<0.10	<0.10	26
Mercury	0.80	1.70	1248
Nickel	<0.10	<0.10	112
Selenium	1.00	1.80	566
Silver	<0.02	<0.02	26
Zinc	21.40	30.20	26

Marine Fish

Element	EDL 85	EDL 95	Number of Samples
Arsenic	1.76	5.56	16
Cadmium	<0.01	<0.01	15
Chromium	ID	ID	1
Copper	ID	ID	1
Lead	ID	ID	1
Mercury	0.13	0.55	52
Nickel	<0.10	<0.10	15
Selenium	3.28	3.80	64
Silver	ID	ID	1
Zinc	ID	ID	1

< = EDL lies below the indicated detection limit.

ID = Insufficient data to calculate the EDL.

TABLE 13
 TSMP EDL 85 AND EDL 95 For Organic Chemicals in Freshwater Fish Filets
 Calculated Using 1978 - 1995 Data.
 (ppb, wet weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	<5.0	<5.0	803
Chemical Group A	334.0	1167.2	823
Chlordene, Alpha	<5.0	<5.0	699
Chlordene, Gamma	<2.0	<2.0	699
Cis-chlordane	12.0	36.4	808
Cis-nonachlor	5.4	18.0	699
Oxychlordane	<5.0	<5.0	807
Trans-chlordane	7.4	21.0	808
Trans-nonachlor	17.2	44.0	779
Total Chlordane	38.8	117.8	808
Chlorpyrifos	<10.0	25.7	803
Dacthal	12.0	345.5	809
Diazinon	<50.0	<50.0	784
DDD, o,p'	11.0	33.6	808
DDD, p,p'	77.6	232.0	808
DDE, o,p'	<10.0	23.0	808
DDE, p,p'	540.0	1955.0	809
DDMS, p,p'	<30.0	<30.0	637
DDMU, p,p'	<5.0	36.0	808
DDT, o,p'	<10.0	15.0	806
DDT, p,p'	23.0	100.0	808
Total DDT	667.9	2424.4	809
Dicofol (Kelthane)	<100.0	<100.0	803
Dichlorobenzophenone, p,p'	ID	ID	6
Dieldrin	9.4	32.5	790
Endosulfan I	<5.0	22.3	794
Endosulfan II	<70.0	79.8	312
Endosulfan sulfate	<85.0	120.0	312
Total Endosulfan	*	49.3	794
Endrin	<15.0	<15.0	806
Ethion	<20.0	<20.0	805
HCH, Alpha	<2.0	<2.0	806
HCH, Beta	<10.0	<10.0	806
HCH, Delta	<2.0	<2.0	806
HCH, Gamma (Lindane)	<2.0	3.0	806
Total HCH	*	4.0	806
Heptachlor	<5.0	<5.0	803
Heptachlor Epoxide	<5.0	<5.0	803
Hexachlorobenzene	<2.0	5.0	806
Methoxychlor	<15.0	<15.0	801
Oxadiazon	<5.0	13.0	273
Parathion, Ethyl	<10.0	<10.0	784
Parathion, Methyl	<10.0	<10.0	784
PCB-1248	<50.0	<50.0	839
PCB-1254	<50.0	140.5	839
PCB-1260	54.2	180.0	839
Total PCB	120.0	350.0	839
Pentachlorophenol	2.8	4.9	21
2,3,5,6-tetrachlorophenol	<2.0	<2.0	21
Toxaphene	187.0	889.5	821

< = EDL lies below the indicated detection limit.

ID = Insufficient data to calculate the EDL.

* = EDL lies below the detection limit of individual congeners.

TABLE 14
 TSMP EDL 85 AND EDL 95 For Organic Chemicals in Marine Fish Filets
 Calculated Using 1978 - 1995 Data.
 (ppb, wet weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	<5.0	<5.0	57
Chemical Group A	39.1	135.3	57
Chlordene, Alpha	<5.0	<5.0	56
Chlordene, Gamma	<5.0	<5.0	56
Cis-chlordane	9.5	27.2	57
Cis-nonachlor	<5.0	24.0	56
Oxychlordane	<5.0	<5.0	57
Trans-chlordane	<5.0	14.3	57
Trans-nonachlor	14.4	40.2	57
Total Chlordane	32.0	120.3	57
Chlorpyrifos	<10.0	<10.0	57
Dacthal	14.4	30.0	57
Diazinon	<50.0	<50.0	57
DDD, o,p'	<10.0	<10.0	57
DDD, p,p'	23.3	47.6	57
DDE, o,p'	<10.0	<10.0	57
DDE, p,p'	209.0	386.5	57
DDMS, p,p'	<30.0	<30.0	29
DDMU, p,p'	<15.0	28.4	57
DDT, o,p'	<10.0	<10.0	57
DDT, p,p'	<10.0	29.5	57
Total DDT	255.1	519.5	57
Dicofol (Kelthane)	<100.0	<100.0	57
Dichlorobenzophenone, p,p'	ID	ID	6
Dieldrin	<5.0	6.2	57
Endosulfan I	<5.0	<5.0	52
Endosulfan II	<70.0	<70.0	31
Endosulfan sulfate	<85.0	<85.0	31
Total Endosulfan	*	*	52
Endrin	<15.0	<15.0	57
Ethion	<20.0	<20.0	57
HCH, Alpha	<2.0	2.0	57
HCH, Beta	<10.0	<10.0	57
HCH, Delta	<5.0	<5.0	57
HCH, Gamma (Lindane)	<2.0	2.9	57
Total HCH	*	3.9	57
Heptachlor	<5.0	<5.0	57
Heptachlor Epoxide	<5.0	<5.0	57
Hexachlorobenzene	<2.0	<2.0	57
Methoxychlor	<15.0	<15.0	57
Oxadiazon	<5.0	<5.0	36
Parathion, Ethyl	<10.0	<10.0	57
Parathion, Methyl	<10.0	<10.0	57
PCB-1248	<50.0	<50.0	57
PCB-1254	114.5	271.5	57
PCB-1260	89.0	201.5	57
Total PCB	220.4	496.0	57
Pentachlorophenol	ID	ID	0
2,3,5,6-tetrachlorophenol	ID	ID	0
Toxaphene	<100.0	<100.0	57

< = EDL lies below the indicated detection limit.

ID = Insufficient data to calculate the EDL.

* = EDL lies below the detection limit of individual congeners.

TABLE 15
 TSMP EDL 85 AND EDL 95 For Organic Chemicals in Whole Freshwater Fish
 Calculated Using 1978 - 1995 Data.
 (ppb, wet weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	<5.0	<5.0	202
Chemical Group A	1533.0	3058.3	202
Chlordene, Alpha	<5.0	<5.0	202
Chlordene, Gamma	<5.0	9.7	202
Cis-chlordane	30.7	57.9	202
Cis-nonachlor	16.7	27.0	202
Oxychlordane	9.0	16.9	202
Trans-chlordane	20.0	36.0	202
Trans-nonachlor	44.0	65.7	202
Total Chlordane	128.8	195.1	202
Chlorpyrifos	25.4	61.9	202
Dacthal	97.1	471.0	202
Diazinon	<50.0	73.7	201
DDD, o,p'	44.0	140.0	202
DDD, p,p'	254.0	893.0	202
DDE, o,p'	15.0	40.9	202
DDE, p,p'	1570.0	3490.0	202
DDMS, p,p'	<30.0	<30.0	89
DDMU, p,p'	46.4	120.0	202
DDT, o,p'	41.7	109.0	202
DDT, p,p'	124.0	336.0	202
Total DDT	2393.4	5037.7	202
Dicofol (Kelthane)	<100.0	<100.0	202
Dichlorobenzophenone, p,p'	ID	ID	0
Dieldrin	46.4	378.5	201
Endosulfan I	6.7	43.7	189
Endosulfan II	<70.0	80.0	134
Endosulfan sulfate	<85.0	226.0	134
Total Endosulfan	11.3	289.1	189
Endrin	<15.0	29.8	202
Ethion	<20.0	<20.0	202
HCH, Alpha	<2.0	<2.0	202
HCH, Beta	<10.0	<10.0	202
HCH, Delta	<5.0	<5.0	202
HCH, Gamma (Lindane)	2.7	7.9	202
Total HCH	3.0	9.3	202
Heptachlor	<5.0	<5.0	202
Heptachlor Epoxide	<5.0	9.8	202
Hexachlorobenzene	3.6	9.1	202
Methoxychlor	<15.0	<15.0	202
Oxadiazon	240.0	968.0	136
Parathion, Ethyl	<10.0	<10.0	201
Parathion, Methyl	<10.0	<10.0	201
PCB-1248	<50.0	<50.0	203
PCB-1254	120.0	358.5	203
PCB-1260	77.1	160.0	203
Total PCB	219.6	472.5	203
Pentachlorophenol	ID	ID	5
2,3,5,6-tetrachlorophenol	ID	ID	5
Toxaphene	921.0	2290.0	202

< = EDL lies below the indicated detection limit.
 ID = Insufficient data to calculate the EDL.

TABLE 16
 TSMP EDL 85 AND EDL 95 For Organic Chemicals in Whole Marine Fish
 Calculated Using 1978 - 1995 Data.
 (ppb, wet weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	ID	ID	2
Chemical Group A	ID	ID	2
Chlordene, Alpha	ID	ID	2
Chlordene, Gamma	ID	ID	2
Cis-chlordane	ID	ID	2
Cis-nonachlor	ID	ID	2
Oxychlordane	ID	ID	2
Trans-chlordane	ID	ID	2
Trans-nonachlor	ID	ID	2
Total Chlordane	ID	ID	2
Chlorpyrifos	ID	ID	2
Dacthal	ID	ID	2
Diazinon	ID	ID	2
DDD, o,p'	ID	ID	2
DDD, p,p'	ID	ID	2
DDE, o,p'	ID	ID	2
DDE, p,p'	ID	ID	2
DDMS, p,p'	ID	ID	1
DDMU, p,p'	ID	ID	2
DDT, o,p'	ID	ID	2
DDT, p,p'	ID	ID	2
Total DDT	ID	ID	2
Dicofol (Kelthane)	ID	ID	2
Dichlorobenzophenone, p,p'	ID	ID	0
Dieldrin	ID	ID	2
Endosulfan I	ID	ID	2
Endosulfan II	ID	ID	2
Endosulfan sulfate	ID	ID	2
Total Endosulfan	ID	ID	2
Endrin	ID	ID	2
Ethion	ID	ID	2
HCH, Alpha	ID	ID	2
HCH, Beta	ID	ID	2
HCH, Delta	ID	ID	2
HCH, Gamma (Lindane)	ID	ID	2
Total HCH	ID	ID	2
Heptachlor	ID	ID	2
Heptachlor Epoxide	ID	ID	2
Hexachlorobenzene	ID	ID	2
Methoxychlor	ID	ID	2
Oxadiazon	ID	ID	1
Parathion, Ethyl	ID	ID	2
Parathion, Methyl	ID	ID	2
PCB-1248	ID	ID	2
PCB-1254	ID	ID	2
PCB-1260	ID	ID	2
Total PCB	ID	ID	2
Pentachlorophenol	ID	ID	0
2,3,5,6-tetrachlorophenol	ID	ID	0
Toxaphene	ID	ID	2

ID = Insufficient data to calculate the EDL.

TABLE 17
 TSMP EDL 85 AND EDL 95 for Organic Chemicals in
 Filet and Whole Freshwater Fish
 Calculated Using 1980 - 1995 Lipid Data
 (ppb, lipid weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	*	*	925
Chemical Group A	19739.1	82129.4	946
Chlordene, Alpha	*	*	898
Chlordene, Gamma	*	85.9	898
Cis-chlordane	780.8	2085.5	931
Cis-nonachlor	282.6	987.8	898
Oxychlordane	*	206.5	931
Trans-chlordane	361.0	1087.5	931
Trans-nonachlor	1340.9	3430.3	931
Total Chlordane	3109.9	7233.3	931
Chlorpyrifos	*	1740.1	925
Dacthal	1340.9	21073.4	932
Diazinon	*	*	905
DDD, o,p'	471.6	2510.9	931
DDD, p,p'	5363.2	18563.0	931
DDE, o,p'	*	852.5	931
DDE, p,p'	45584.6	125457.7	932
DDMS, p,p'	*	*	647
DDMU, p,p'	281.1	2123.2	931
DDT, o,p'	*	1504.6	930
DDT, p,p'	470.5	4633.2	930
Total DDT	55721.7	160117.5	932
Dicofol (Kelthane)	*	*	925
Dichlorobenzophenone, p,p'	ID	ID	6
Dieldrin	638.2	3165.3	912
Endosulfan I	72.1	1410.5	904
Endosulfan II	*	1502.0	445
Endosulfan sulfate	*	6851.4	445
Total Endosulfan	139.0	5178.2	904
Endrin	*	*	929
Ethion	*	*	928
HCH, Alpha	*	*	929
HCH, Beta	*	*	929
HCH, Delta	*	*	929
HCH, Gamma (Lindane)	*	217.9	929
Total HCH	*	377.0	929
Heptachlor	*	*	925
Heptachlor Epoxide	*	*	925
Hexachlorobenzene	20.0	287.2	929
Methoxychlor	*	*	924
Oxadiazon	400.1	4491.8	410
Parathion, Ethyl	*	*	906
Parathion, Methyl	*	*	906
PCB-1248	*	*	961
PCB-1254	1338.1	9252.5	961
PCB-1260	1615.2	9235.5	961
Total PCB	5428.2	29815.2	961
Pentachlorophenol	242.8	353.6	20
2,3,5,6-tetrachlorophenol	*	231.2	20
Toxaphene	11593.5	63773.6	944

ID = Insufficient data to calculate the EDL.

* = EDL lies below the detection limit of individual congeners.

TABLE 18
 TSMP EDL 85 AND EDL 95 for Organic Chemicals in
 Filet and Whole Marine Fish
 Calculated Using 1980 - 1995 Lipid Data
 (ppb, lipid weight)

Element	EDL 85	EDL 95	Number of Samples
Aldrin	*	*	62
Chemical Group A	1435.8	5916.4	62
Chlordene, Alpha	*	*	61
Chlordene, Gamma	*	*	61
Cis-chlordane	353.0	655.8	62
Cis-nonachlor	*	582.1	61
Oxychlordane	*	*	62
Trans-chlordane	*	230.8	62
Trans-nonachlor	400.2	834.5	62
Total Chlordane	1069.6	1735.4	62
Chlorpyrifos	*	*	62
Dacthal	1273.9	2115.4	62
Diazinon	*	*	62
DDD, o,p'	*	*	62
DDD, p,p'	1218.5	5871.4	62
DDE, o,p'	*	*	62
DDE, p,p'	32187.7	107217.8	62
DDMS, p,p'	*	*	30
DDMU, p,p'	*	812.1	62
DDT, o,p'	*	*	62
DDT, p,p'	*	414.2	62
Total DDT	33675.2	143331.4	62
Dicofol (Kelthane)	*	*	62
Dichlorobenzophenone, p,p'	ID	ID	0
Dieldrin	*	255.4	62
Endosulfan I	*	*	57
Endosulfan II	*	*	36
Endosulfan sulfate	*	*	36
Total Endosulfan	*	*	57
Endrin	*	*	62
Ethion	*	*	62
HCH, Alpha	*	*	62
HCH, Beta	*	*	62
HCH, Delta	*	*	62
HCH, Gamma (Lindane)	*	95.8	62
Total HCH	*	151.8	62
Heptachlor	*	*	62
Heptachlor Epoxide	*	*	62
Hexachlorobenzene	*	*	62
Methoxychlor	*	*	62
Oxadiazon	*	*	40
Parathion, Ethyl	*	*	62
Parathion, Methyl	*	*	62
PCB-1248	*	*	62
PCB-1254	4221.2	7939.4	62
PCB-1260	4737.8	38473.3	62
Total PCB	9649.1	39227.1	62
Pentachlorophenol	ID	ID	0
2,3,5,6-tetrachlorophenol	ID	ID	0
Toxaphene	*	*	62

ID = Insufficient data to calculate the EDL.

* = EDL lies below the detection limit of individual congeners.

4. LITERATURE CITED

- Adrian, W.J. 1971. A New Wet Digestion Method for Biological Material Utilizing Pressure. *Atom. Absorption Newsletter* 10 (4):96.
- (DFG) Department of Fish and Game. 1990. Laboratory Quality Assurance Program Plan (March 14, 1990). Environmental Services Division, California Department of Fish and Game. Sacramento, California.
- Evans, S.J., M.S. Johnson, and R.T. Leah. 1986. Determination of Mercury in Fish Tissue, a Rapid, Automated Technique for Routine Analysis. School of Biology, University of Liverpool, U. K. *In Varian Pamphlet No. AA-60*, May 1986. Walnut Creek, Calif.
- (NAS) National Academy of Sciences-National Academy of Engineering. 1973. Water Quality Criteria 1972 (Blue Book). EPA Ecological Research Series. EPA-R3-73-033. U.S. Environmental Protection Agency, Washington, D.C.
- Nauen, C.E. 1983. Compilation of Legal Limits for Hazardous Substances in Fish and Fishery Products, Circular No. 764. FRI/C764, Food and Agricultural Organization of the United Nations.
- Phillips, D.J.H. 1980. Quantitative Aquatic Biological Indicators. Applied Science Publishers Ltd, Ripple Road, Barking, Essex, England. Pages 38-90.
- 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.
- Stout, V.F. and F.L. Beezhold. 1981. Chlorinated hydrocarbon levels in fishes and shellfishes of the northeastern Pacific Ocean including the Hawaiian Islands. *Mar. Fish. Rev.* 43:1:1-12.
- (SWRCB) State Water Resources Control Board. 1997. California Ocean Plan - Water Quality Control Plan, Ocean Waters of California. July 23, 1997. State Water Resources Control Board, California Environmental Protection Agency, Sacramento, California.
- (SWRCB) State Water Resources Control Board. 1991. Draft Supplement Functional Equivalent Document - Development of Statewide Water Quality Control Plans: (1). Inland Surface Waters of California and (2). Enclosed Bays and Estuaries of California. April 9, 1991. State Water Resources Control Board, California Environmental Protection Agency, Sacramento, California.
- (SWRCB) State Water Resources Control Board. 1990. Draft Functional Equivalent Document - Development of Water Quality Plans For: Inland Surface Waters of California and Enclosed Bays and Estuaries of California. November 26, 1990. State Water Resources Control Board, California Environmental Protection Agency, Sacramento, California.

LITERATURE CITED (continued)

- (USEPA) U.S. Environmental Protection Agency. 1991. "Draft" Assessment and Control of Bioconcentratable Contaminants in Surface Waters. March 1991. Office of Water, U.S. EPA, Washington, D.C.
- (USEPA) U.S. Environmental Protection Agency. 1985. Ambient Water Quality Criteria for Mercury. EPA 440/5-84-026. U.S. EPA, Office of Water Regulations and Standards, Washington, D.C.
- (USEPA) U.S. Environmental Protection Agency. 1980. Ambient Water Quality Criteria for Aldrin/Dieldrin. EPA 440/5-80-019. U.S. EPA, Office of Water Regulations and Standards, Washington, D.C.
- (USFDA) U.S. Food and Drug Administration, Bureau of Foods. 1985. Action Levels for Poisonous or Deleterious Substances in Human Food and Animal Feed. USFDA, Washington, D.C.
- Uthe, J.F., H.C. Freeman, J.R. Johnson, and P. Michalik. 1974. Comparison of wet ashing and dry ashing for the determination of arsenic in marine organisms, using methylated arsenals for standards. *Assoc. Official Analytical Chem., J.*, 57(6):1363-1365.

APPENDIX A

**Maps Showing
1994-95 Station Locations**

APPENDIX A

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*** The Sacramento and Tulare Lake Basins in Region 5 were not sampled 1994-95. Maps for those Basins are not included in this report.

Figure 1. TSMP Monitoring Stations 1994-95 - North Coast Region (1)

NORTH COAST HYDROLOGIC BASIN PLANNING AREA (NC)

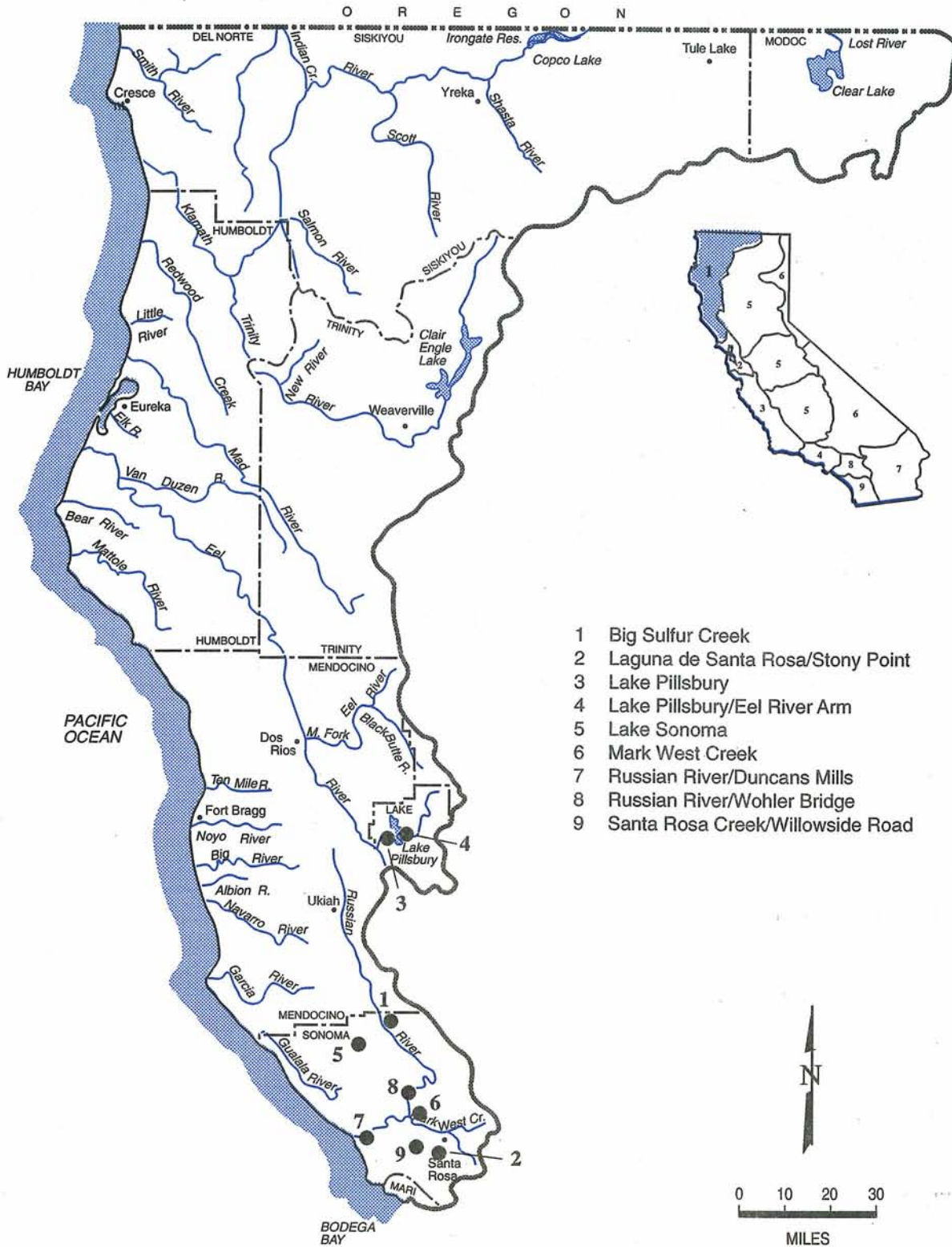


Figure 2. TSMP Monitoring Stations 1994-95 - San Francisco Bay Region (2)

SAN FRANCISCO BAY HYDROLOGIC BASIN PLANNING AREA (SF)

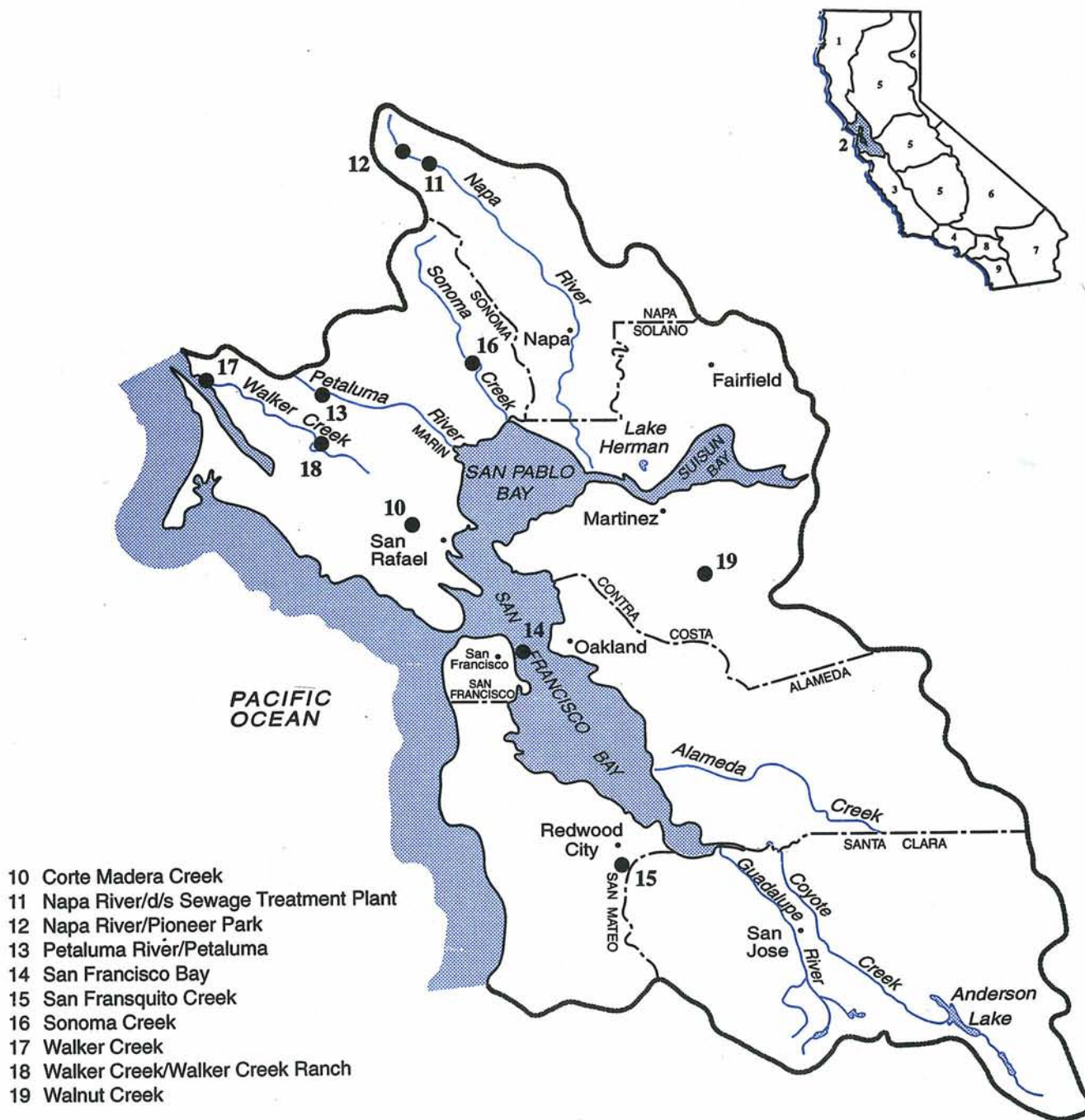
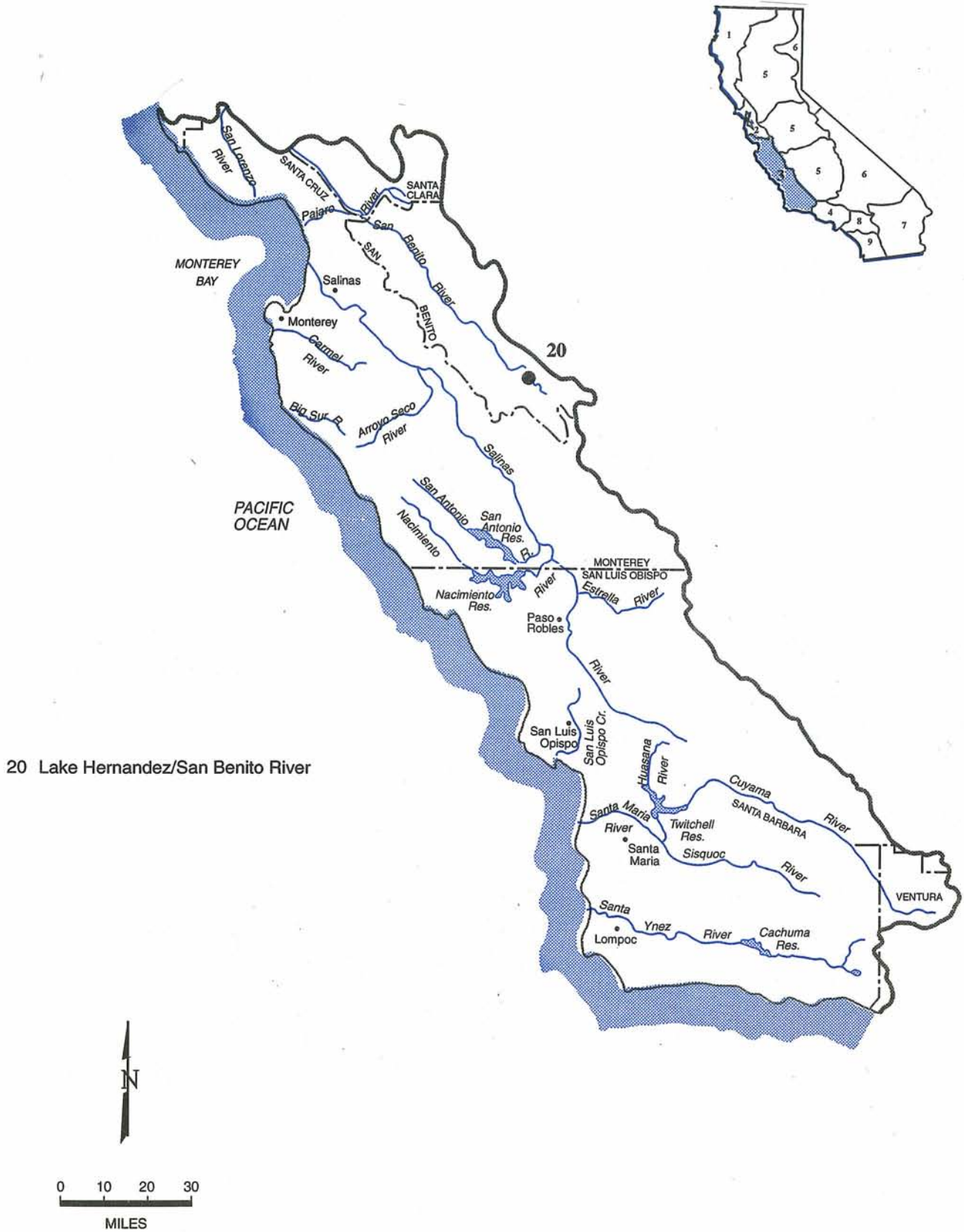


Figure 3. TSMP Monitoring Stations 1994-95 - Central Coast Region (3)

CENTRAL COAST HYDROLOGIC BASIN PLANNING AREA (CC)



20 Lake Hernandez/San Benito River

Figure 4. TSMP Monitoring Stations 1994-95 - Los Angeles Region (4)

LOS ANGELES HYDROLOGIC BASIN PLANNING AREA (LA)

- 21 Arroyo Conejo
- 22 Arroyo Conejo/d/s Forks
- 23 Ballona Lagoon
- 24 Ballona Wetlands
- 25 Harbor Park Lake
- 26 Madrona Marsh Preserve
- 27 Malibu Creek/Tapia Park
- 28 Malibu Creek/u/s Tapia Discharge
- 29 Marina del Rey/Basin D
- 30 Santa Clara River Estuary
- 31 Santa Paula Creek/Stekel Park
- 32 Ventura River Estuary

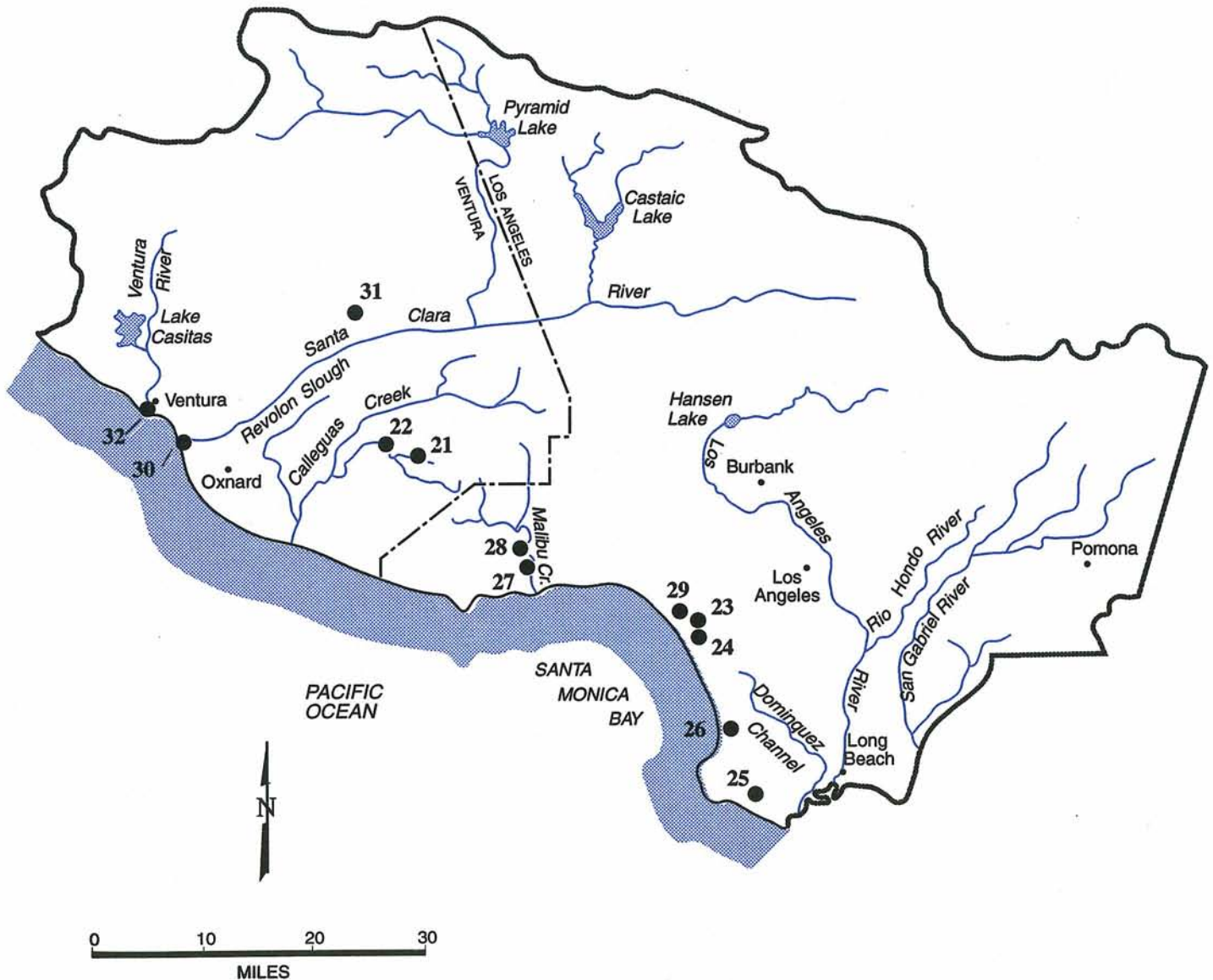


Figure 5b. TSMP Monitoring Stations 1994-95 - Central Valley Region (5)

SAN JOAQUIN HYDROLOGIC BASIN PLANNING AREA (SJ)

- 33 Merced River/Hatfield St Recreation Area
- 34 Old River
- 35 Paradise Cut/Tracy
- 36 Salt Slough
- 37 San Joaquin River/Crows Landing
- 38 San Joaquin River/Fremont Ford
- 39 San Joaquin River/Mossdale
- 40 San Joaquin River/Newman
- 41 San Joaquin River/Patterson Bridge

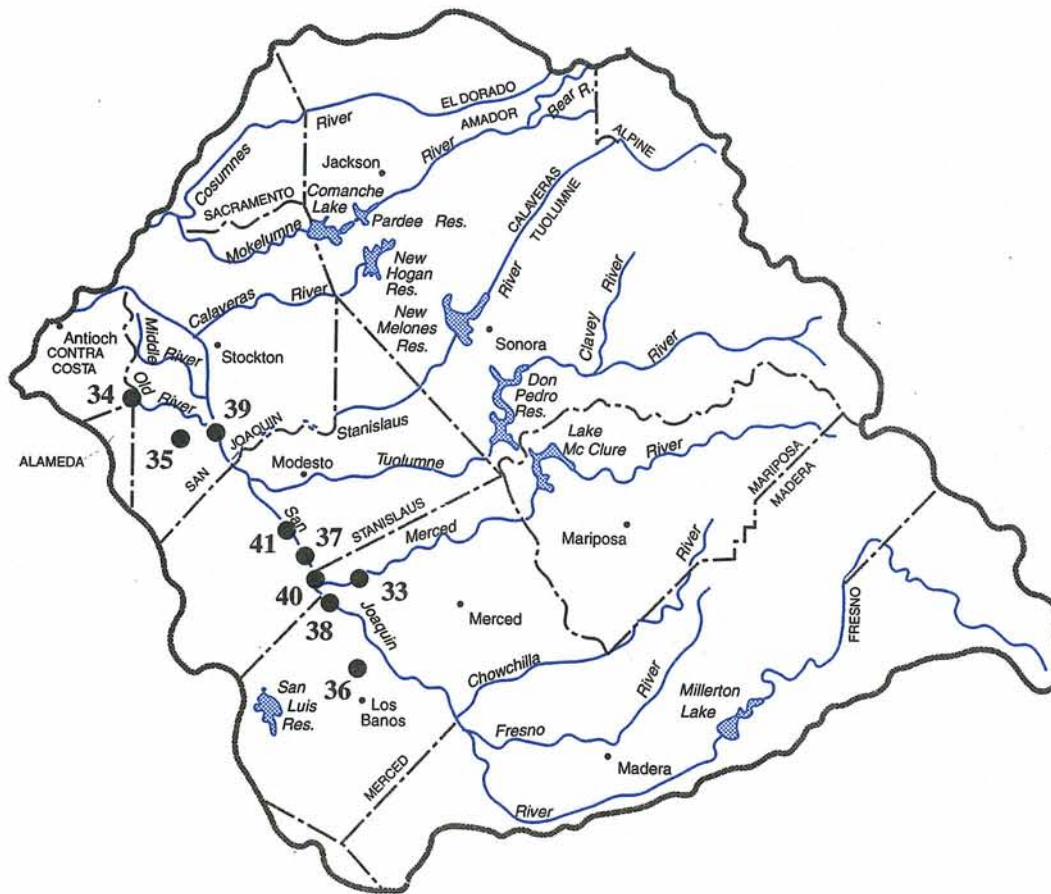


Figure 6a. TSMP Monitoring Stations 1994-95 - Lahontan Region (6)

NORTH LAHONTAN HYDROLOGIC BASIN PLANNING AREA (NL)

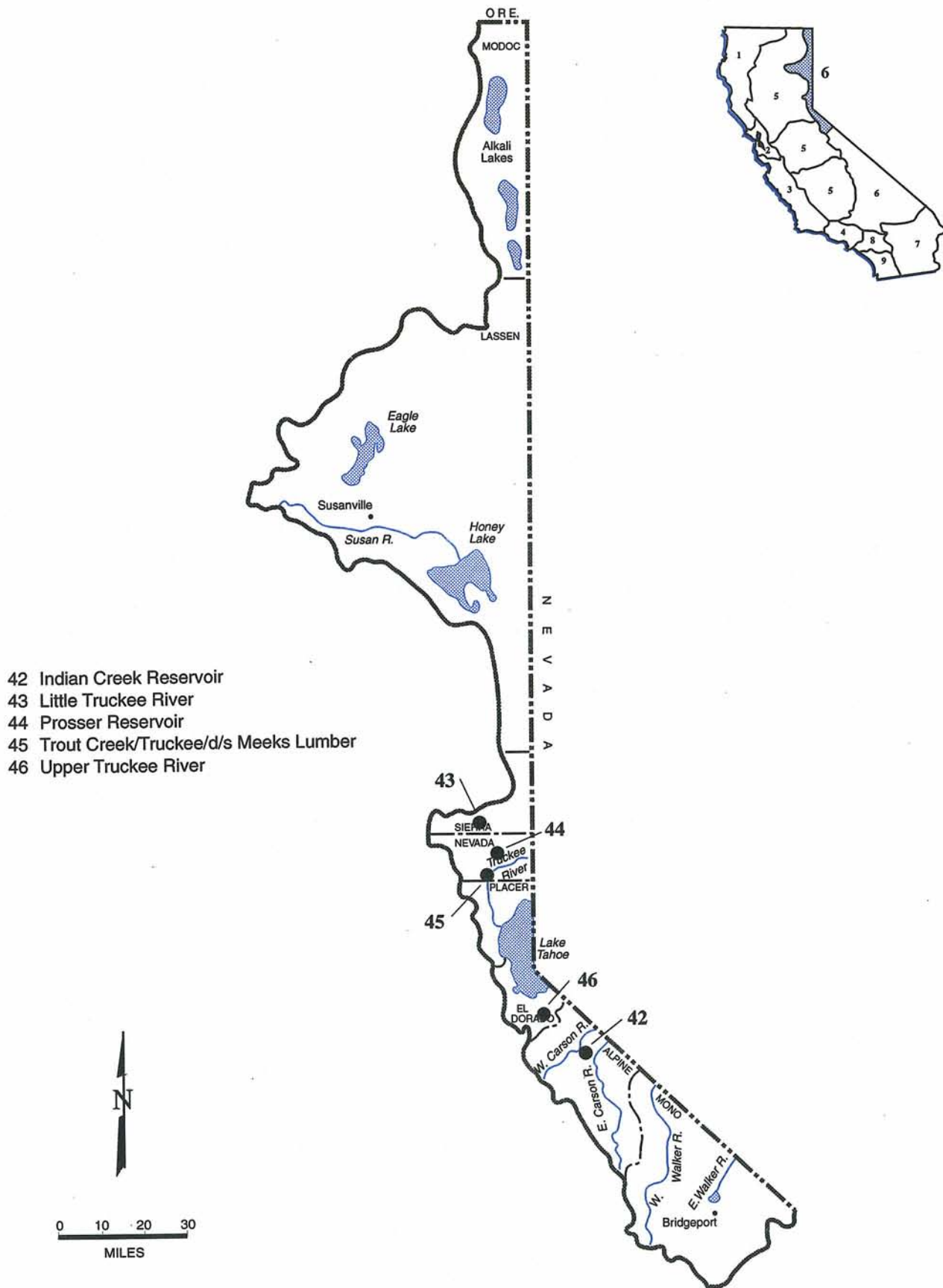


Figure 6b. TSMP Monitoring Stations 1994-95 - Lahontan Region (6)

SOUTH LAHONTAN HYDROLOGIC BASIN PLANNING AREA (SL)

- 47 Arrowbear Lake
- 48 Haiwee Reservoir
- 49 Mammoth Creek/d/s Murphy's Gulch
- 50 Mojave River
- 51 Pleasant Valley Reservoir
- 52 Silver Lake

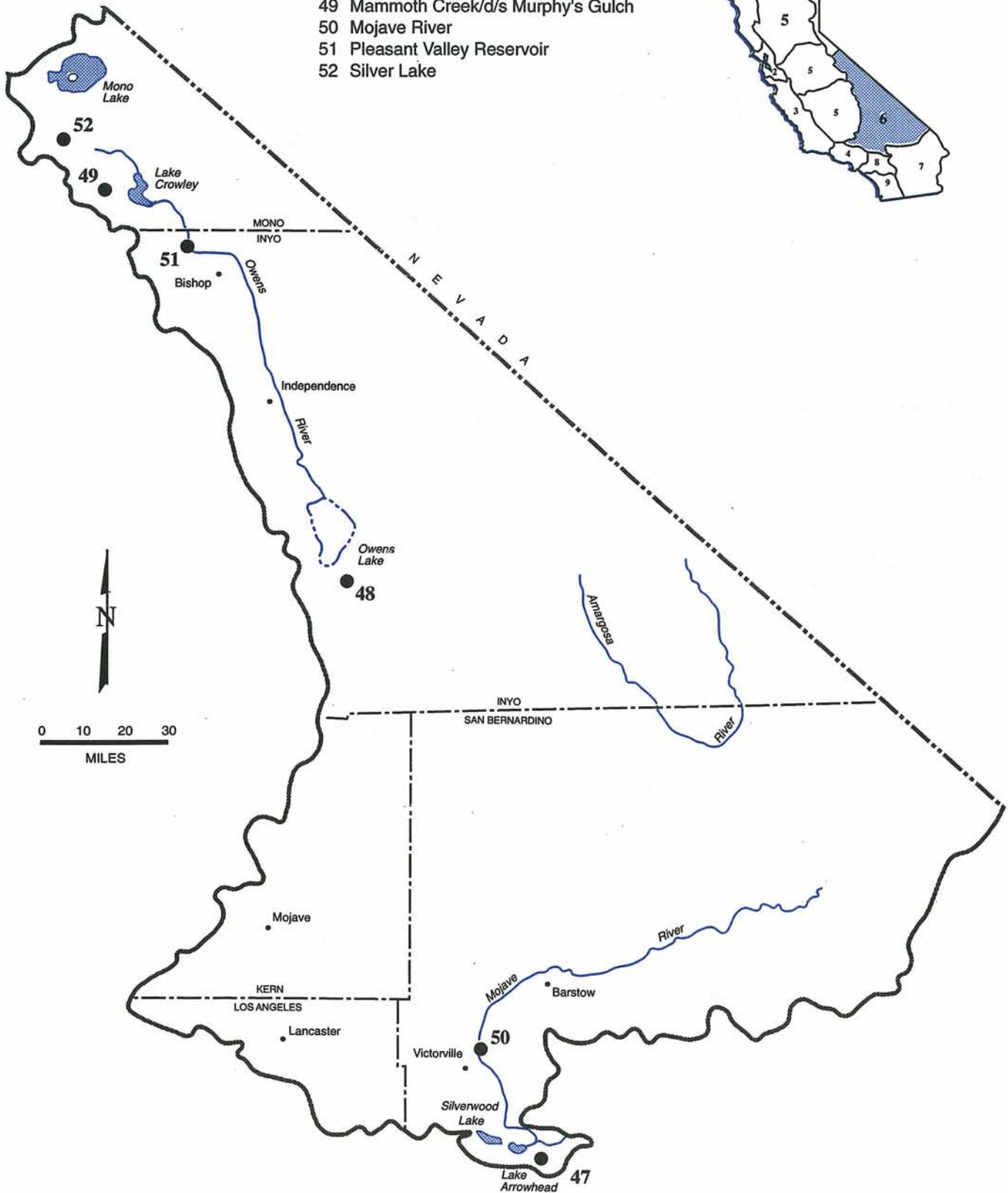


Figure 7. TSMP Monitoring Stations 1994-95 - Colorado River Basin Region (7)

COLORADO RIVER HYDROLOGIC BASIN PLANNING AREA (CR)

- 53 Alamo River/Calipatria
- 54 Coachella Valley Stormwater Channel
- 55 Fig Lake
- 56 New River/International Boundary
- 57 New River/Westmorland
- 58 Palo Verde Outfall Drain
- 59 Peach Drain
- 60 Salton Sea/South

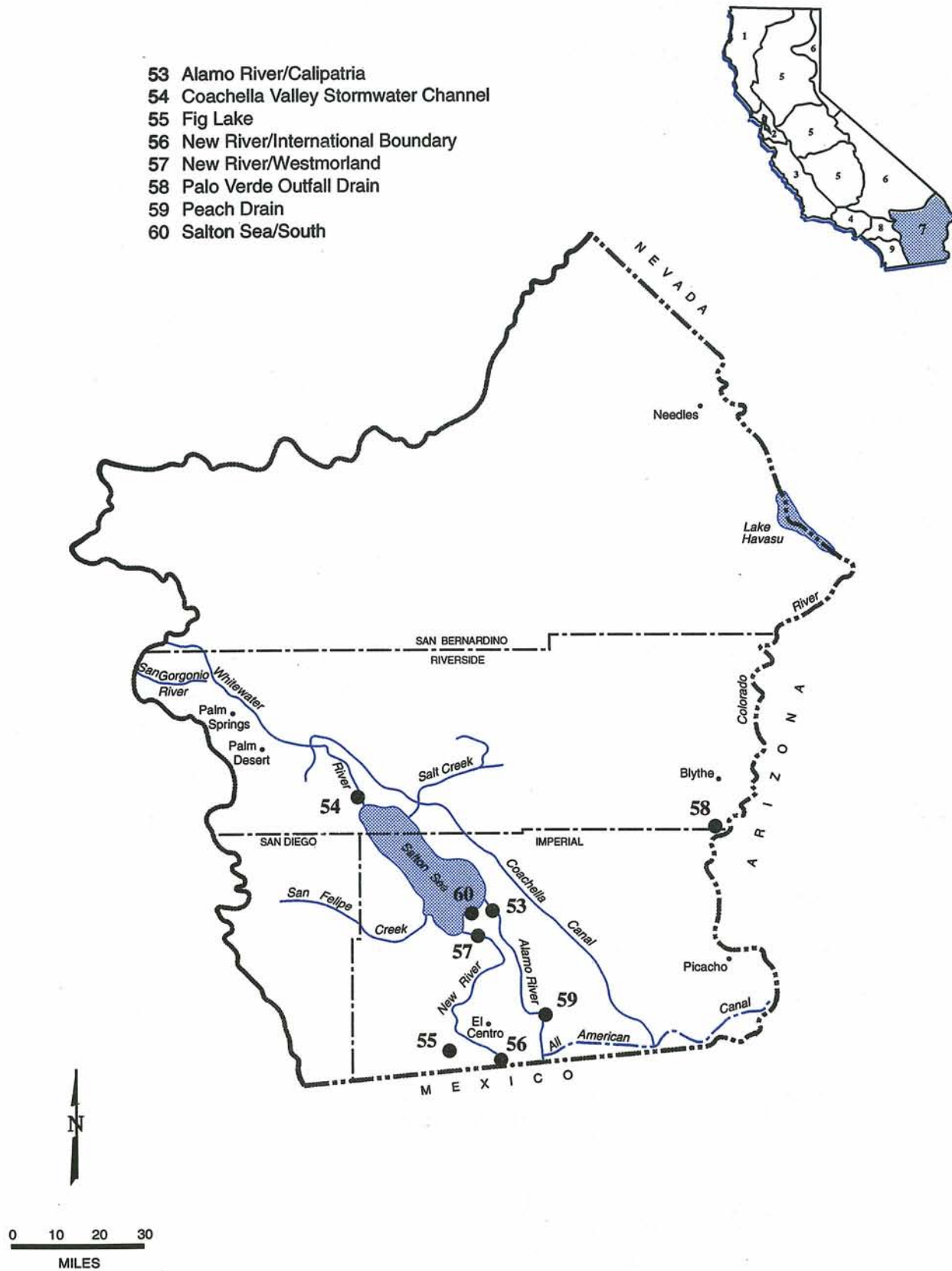


Figure 8. TSMP Monitoring Stations 1994-95 - Santa Ana Region (8)

SANTA ANA HYDROLOGIC BASIN PLANNING AREA (SA)

- 61 Anaheim Bay/Sunset Boatworks
- 62 Anza Channel
- 63 Big Bear Lake
- 64 Big Bear Lake/Dam
- 65 Big Bear Lake/Rathbone Creek
- 66 Lake Elsinore
- 67 Newport Bay
- 68 Peters Canyon Channel
- 69 San Diego Creek/Michelson Drive
- 70 Santa Ana River/Imperial Highway Bridge
- 71 Santa Ana River/Prado Dam

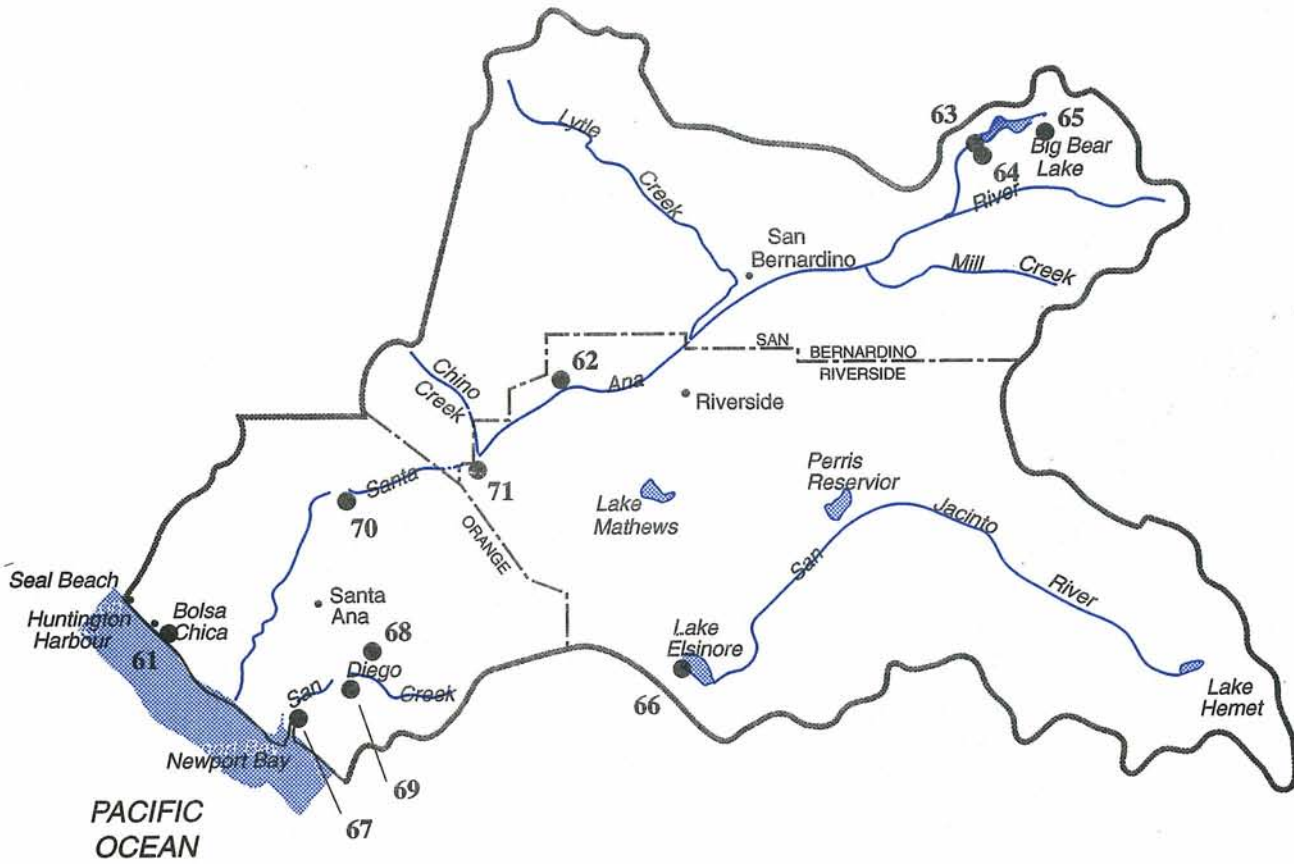
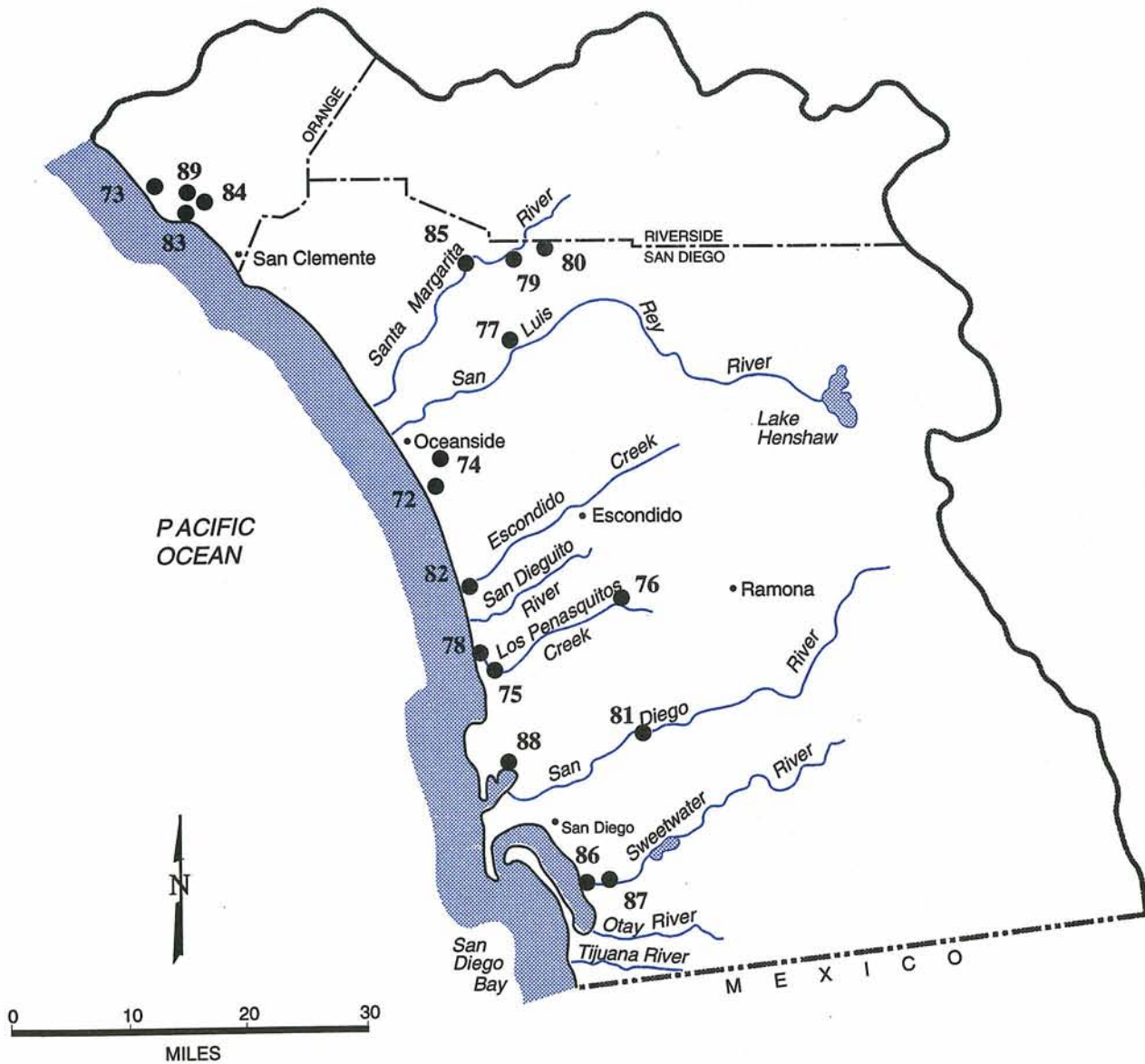


Figure 9. TSMP Monitoring Stations 1994-95 - San Diego Region (9)

SAN DIEGO HYDROLOGIC BASIN PLANNING AREA (SD)

- | | |
|------------------------------------|---|
| 72 Agua Hedionda | 81 San Diego River/Old Mission Dam |
| 73 Aliso Creek | 82 San Elijo Lagoon/Central Basin |
| 74 Buena Vista Lagoon | 83 San Juan Creek/Doheny State Park |
| 75 Los Penasquitos Creek | 84 San Juan Creek/La Novia Avenue |
| 76 Los Penasquitos Creek/u/s I-805 | 85 Santa Margarita River/Sandia Creek Drive |
| 77 Ostrich Farm Creek | 86 Sweetwater Marsh |
| 78 Penasquitos Lagoon | 87 Sweetwater River/Interstate 805 |
| 79 Rainbow Creek | 88 Tecolote Creek |
| 80 Rainbow Creek/Highway 15 | 89 Trabuco Creek/Oso Road |



APPENDIX B

1994-95

Station Descriptions

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
111.63.13	Lake Pillsbury/Eel River Arm	Lake	Station located in the Eel River Arm.
111.63.14	Lake Pillsbury	Lake	Station located near Lake Pillsbury Resort.
114.11.05	Russian R/Duncans Mills	Sonoma	Station located at the Moscow Road bridge crossing of the Russian River at Duncans Mills.
114.11.23	Russian R/Wohler Brg	Sonoma	Station located on the Russian River downstream of the rubber dam below Wohler Bridge.
114.21.10	Laguna de Santa Rosa/Stony Pt	Sonoma	Station located on Laguna de Santa Rosa at Stony Point Road.
114.22.90	Santa Rosa Cr/Willowside Rd	Sonoma	Station located on Santa Rosa Creek at Willowside Road.
114.23.00	Mark West Creek	Sonoma	Station located 200 yards upstream from the Trenton-Healdsburg Road Bridge.
114.24.12	Lake Sonoma	Sonoma	Station located from the Rockpile Road Bridge upstream 1/2 mile in the Warm Springs Creek arm.
114.26.00	Big Sulfur Creek	Sonoma	Station located about one mile upstream of its confluence with the Russian River.
201.12.01	Walker Creek	Marin	Station located between Highway 1 Bridge and Camp Tomales Bridge.
201.12.10	Walker Cr/Walker Creek Ranch	Marin	Station located 1 mile d/s Marshall Petaluma Road at Walker Creek Ranch.
203.13.04	Corte Madera Creek	Marin	Station located between Sir Francis Drake and Bank Roads.
204.10.00	San Francisco Bay	San Francisco	Station located 1/8 mile d/s of the Bay Bridge between Yerba Buena Island and San Francisco.
205.50.06	San Fransquito Creek	Santa Clara	Station located at Willow Road Crossing by Santa Cruz Avenue.
206.30.14	Petaluma R/Petaluma	Sonoma	Station located just upstream Corona Road.
206.40.08	Sonoma Creek	Sonoma	Station located just upstream of the Watamaugh Road Crossing.
206.50.34	Napa R/d/s Sewage Treatment	Napa	Station located at Dunaweal Lane crossing.
206.50.36	Napa R/Pioneer Park	Napa	Station located in Calistoga at Elm Street.
207.32.06	Walnut Creek	Contra Costa	Station located off North Main Street at the Lincoln Street Bridge crossing.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
305.50.60	Lake Hernandez/San Benito R	San Benito	Station located in Lake Hernandez on the San Benito River.
402.10.00	Ventura River Estuary	Ventura	Station located downstream train bridge and just above mouth.
403.11.00	Santa Clara River Estuary	Ventura	Station located downstream from Harbor Road overpass at McGrath State Park.
403.21.10	Santa Paula Cr/Stekel Park	Ventura	Station located in northern part of the park.
403.64.02	Arroyo Conejo	Ventura	Station located upstream of second wet crossing of the creek. Access is through the Thousand Oaks Sewage Treatment Plant.
403.64.03	Arroyo Conejo/d/s Forks	Ventura	Station located downstream of weir below waste treatment plant.
404.21.04	Malibu Cr/Tapia Park	Los Angeles	Station located downstream from treatment plant to flow gaging station.
404.21.05	Malibu Cr/u/s Tapia Discharge	Los Angeles	Station located upstream of treatment plant discharge at Tapia Park.
405.12.07	Madrona Marsh Preserve	Los Angeles	Station located northeast of intersection of Madrona Avenue and Sepulveda Boulevard.
405.12.90	Harbor Park Lake	Los Angeles	Station located in the Wilmington area of the City of Los Angeles.
405.13.03	Ballona Wetlands	Los Angeles	Station located north of Culver Boulevard at Nicholson Street.
405.13.90	Ballona Lagoon	Los Angeles	Station located just above outlet to Marina Del Rey channel at Via Marina road.
405.13.91	Marina del Rey/Basin D	Los Angeles	Station located northeast of Via Marina Avenue and Panay Way.
535.70.03	Merced R/Hatfield St Rec Area	Merced	Station located at George J. Hatfield State Recreation Area.
541.10.91	San Joaquin R/Newman	Merced	Station located near the Hills Ferry crossing.
541.10.92	San Joaquin R/Crows Landing	Stanislaus	Station located upstream of the Crows Landing bridge.
541.10.93	San Joaquin R/Patterson Bridge	Stanislaus	Station located between boat ramp at County Park and Las Palmas Avenue bridge.
541.20.07	Salt Slough	Merced	Station located upstream of bridge on Highway 165.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
541.20.90	San Joaquin R/Fremont Ford	Merced	Station located near Fremont Ford State Recreation Area.
544.00.16	Old River	Contra Costa/ San Joaquin	Station located from the Bascule Bridge upstream about two miles to the mouth of Rock Slough along the Contra Costa/San Joaquin County line
544.00.32	Paradise Cut/Tracy	San Joaquin	Station located from 300 yards upstream of the high voltage powerline to ½ mile upstream.
544.00.90	San Joaquin R/Mossdale	San Joaquin	Station located 1 1/2 miles upstream Mossdale launch ramp.
601.00.93	Silver Lake	Mono	Station located along the south west shore of the lake.
603.10.16	Mammoth Cr/d/s Murphy's Gulch	Mono	Station located between Hwy 395 and frontage road east of Hwy 395.
603.20.36	Pleasant Valley Res	Inyo	Station located at the north end of the lake in the inflow current.
603.30.05	Haiwee Reservoir	Inyo	Station located at the north end of the reservoir along North Haiwee Dam.
628.20.13	Mojave River	San Bernardino	Station located at the lower narrows north of Victorville at powerline and gasoline crossing.
628.20.40	Arrowbear Lake	San Bernardino	Station located in Arrowbear Lake community.
632.20.00	Indian Creek Res	Alpine	Station located around the perimeter of the lake.
634.10.03	Upper Truckee River	El Dorado	Station located opposite the intersection of Armstrong and Lodi Roads.
635.20.08	Prosser Reservoir	Nevada	Station located along perimeter of lake.
635.20.09	Trout Cr/Truckee/d/s	Nevada	Station located 1/2 mile downstream of Meeks Lumber Highway 89.
636.00.14	Little Truckee River	Sierra	Station located upstream of HWY 89 bridge.
715.40.08	Palo Verde Outfall Drain	Imperial	Station located from the boat ramp off Clark Way in Palo Verde downstream ¾ of a mile.
719.47.00	Coachella Valley Stormwater Ch	Riverside	Station located 1/4 mile upstream from the mouth.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
723.10.01	Alamo R/Calipatria	Imperial	Station located approximately 1/4 to one mile upstream of the Garst Road Bridge near Calipatria.
723.10.02	New R/Westmorland	Imperial	Station located at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland.
723.10.28	Peach Drain	Imperial	Station located at highway 115 crossing.
723.10.45	Fig Lake	Imperial	Station Located approximately 100 to 200 yards upstream of the lake outlet to the New River.
723.10.58	New R/Inter Boundary	Imperial	Station located near the international boundary.
728.00.90	Salton Sea/South	Imperial	Station located near the mouth of the Alamo River.
801.11.07	San Diego Cr/Michelson Dr	Orange	Station located between MacArthur Boulevard and Michelson Drive. Station formerly located at MacArthur Blvd., but moved upstream out of tidewater.
801.11.96	Peters Canyon Channel	Orange	Station located upstream of Moulton Parkway Bridge.
801.11.97	Newport Bay	Orange	Station located in Newport Bay.
801.11.98	Anaheim Bay/Sunset Boatworks	Orange	Station located about 25 yards in from Sunset Aquatic Shipyard.
801.13.00	Santa Ana R/Imperial HWY Brg	Orange	Station located from the Imperial Highway Bridge upstream 50 yards.
801.25.00	Santa Ana R/Prado Dam	Riverside	Station located immediately below Prado Dam.
801.26.03	Anza Channel	Riverside	Station located at the end of Geranium Street.
801.71.07	Big Bear Lk/Dam	San Bernardino	Station located about 200 yards from the dam along the south shore.
801.71.10	Big Bear Lake	San Bernardino	Station located at Metcalf and Grout Bays.
801.71.12	Big Bear Lk/ Rathbone Creek	San Bernardino	Station located in the vicinity of the mouth of Rathbone Creek.
802.31.00	Lake Elsinore	Riverside	Station located west of Interstate 15.
901.12.00	Aliso Creek	Orange	Station located at county park above Pacific Coast Highway.
901.20.00	San Juan Cr/Doheny State Park	San Diego	Station located upstream and under Highway 1 bridge.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
901.20.03	San Juan Cr/La Novia Avenue	Orange	Station located downstream from La Novia Avenue crossing.
901.20.04	Trabuco Cr/Oso Road	Orange	Station located at abandoned crossing at Oso Road.
902.21.01	Santa Margarita R/Sandia Cr Dr	San Diego	Station located downstream from Sandia Creek Drive bridge.
902.22.03	Rainbow Creek	San Diego	Station located at Water District road crossing about 1/2 mile upstream of the Santa Margarita River.
902.23.01	Rainbow Cr/HWY 15	San Diego	Station located at 5th Street east of Highway 15, near culvert at crossing.
903.12.02	Ostrich Farm Creek	San Diego	Station located just above the confluence with the San Luis Rey river.
904.21.02	Buena Vista Lagoon	San Diego	Station located in the eastern and northern portions of the lagoon off Jefferson and Vista Way east of Interstate 5.
904.31.01	Agua Hedionda	San Diego	Station located along north shore of the lagoon near the marina.
904.61.00	San Elijo Lagoon/Central Basin	San Diego	Station located below walking bridge along preserve trail.
906.10.01	Penasquitos Lagoon	San Diego	Station located between the mouth of the lagoon and the railroad crossing.
906.10.02	Los Penasquitos Cr	San Diego	Station located opposite the Curtis Electronics building off Roseville Road.
906.10.10	Los Penasquitos Cr/u/s I-805	San Diego	Station located 2 miles downstream of Penasquitos Creek Ranch County Park.
906.50.02	Tecolote Creek	San Diego	Station located upstream from the bridge at Tecolote Canyon Golf Course.
907.12.02	San Diego R/Old Mission Dam	San Diego	Station located just downstream of Old Mission Dam in Fortuna Park.
909.12.01	Sweetwater Marsh	San Diego	Station located in the constructed marsh area below the culvert under the road access to Interstate 5.
909.12.03	Sweetwater R/Interstate 805	San Diego	Station located across from Plaza Bonita under Interstate 805 Overpass.

APPENDIX B

1994-95

Station Descriptions

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
111.63.13	Lake Pillsbury/Eel River Arm	Lake	Station located in the Eel River Arm.
111.63.14	Lake Pillsbury	Lake	Station located near Lake Pillsbury Resort.
114.11.05	Russian R/Duncans Mills	Sonoma	Station located at the Moscow Road bridge crossing of the Russian River at Duncans Mills.
114.11.23	Russian R/Wohler Brg	Sonoma	Station located on the Russian River downstream of the rubber dam below Wohler Bridge.
114.21.10	Laguna de Santa Rosa/Stony Pt	Sonoma	Station located on Laguna de Santa Rosa at Stony Point Road.
114.22.90	Santa Rosa Cr/Willowside Rd	Sonoma	Station located on Santa Rosa Creek at Willowside Road.
114.23.00	Mark West Creek	Sonoma	Station located 200 yards upstream from the Trenton-Healdsburg Road Bridge.
114.24.12	Lake Sonoma	Sonoma	Station located from the Rockpile Road Bridge upstream 1/2 mile in the Warm Springs Creek arm.
114.26.00	Big Sulfur Creek	Sonoma	Station located about one mile upstream of its confluence with the Russian River.
201.12.01	Walker Creek	Marin	Station located between Highway 1 Bridge and Camp Tomales Bridge.
201.12.10	Walker Cr/Walker Creek Ranch	Marin	Station located 1 mile d/s Marshall Petaluma Road at Walker Creek Ranch.
203.13.04	Corte Madera Creek	Marin	Station located between Sir Francis Drake and Bank Roads.
204.10.00	San Francisco Bay	San Francisco	Station located 1/8 mile d/s of the Bay Bridge between Yerba Buena Island and San Francisco.
205.50.06	San Fransquito Creek	Santa Clara	Station located at Willow Road Crossing by Santa Cruz Avenue.
206.30.14	Petaluma R/Petaluma	Sonoma	Station located just upstream Corona Road.
206.40.08	Sonoma Creek	Sonoma	Station located just upstream of the Watamaugh Road Crossing.
206.50.34	Napa R/d/s Sewage Treatment	Napa	Station located at Dunaweal Lane crossing.
206.50.36	Napa R/Pioneer Park	Napa	Station located in Calistoga at Elm Street.
207.32.06	Walnut Creek	Contra Costa	Station located off North Main Street at the Lincoln Street Bridge crossing.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
305.50.60	Lake Hernandez/San Benito R	San Benito	Station located in Lake Hernandez on the San Benito River.
402.10.00	Ventura River Estuary	Ventura	Station located downstream train bridge and just above mouth.
403.11.00	Santa Clara River Estuary	Ventura	Station located downstream from Harbor Road overpass at McGrath State Park.
403.21.10	Santa Paula Cr/Stekel Park	Ventura	Station located in northern part of the park.
403.64.02	Arroyo Conejo	Ventura	Station located upstream of second wet crossing of the creek. Access is through the Thousand Oaks Sewage Treatment Plant.
403.64.03	Arroyo Conejo/d/s Forks	Ventura	Station located downstream of weir below waste treatment plant.
404.21.04	Malibu Cr/Tapia Park	Los Angeles	Station located downstream from treatment plant to flow gaging station.
404.21.05	Malibu Cr/u/s Tapia Discharge	Los Angeles	Station located upstream of treatment plant discharge at Tapia Park.
405.12.07	Madrona Marsh Preserve	Los Angeles	Station located northeast of intersection of Madrona Avenue and Sepulveda Boulevard.
405.12.90	Harbor Park Lake	Los Angeles	Station located in the Wilmington area of the City of Los Angeles.
405.13.03	Ballona Wetlands	Los Angeles	Station located north of Culver Boulevard at Nicholson Street.
405.13.90	Ballona Lagoon	Los Angeles	Station located just above outlet to Marina Del Rey channel at Via Marina road.
405.13.91	Marina del Rey/Basin D	Los Angeles	Station located northeast of Via Marina Avenue and Panay Way.
535.70.03	Merced R/Hatfield St Rec Area	Merced	Station located at George J. Hatfield State Recreation Area.
541.10.91	San Joaquin R/Newman	Merced	Station located near the Hills Ferry crossing.
541.10.92	San Joaquin R/Crows Landing	Stanislaus	Station located upstream of the Crows Landing bridge.
541.10.93	San Joaquin R/Patterson Bridge	Stanislaus	Station located between boat ramp at County Park and Las Palmas Avenue bridge.
541.20.07	Salt Slough	Merced	Station located upstream of bridge on Highway 165.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
541.20.90	San Joaquin R/Fremont Ford	Merced	Station located near Fremont Ford State Recreation Area.
544.00.16	Old River	Contra Costa/ San Joaquin	Station located from the Bascule Bridge upstream about two miles to the mouth of Rock Slough along the Contra Costa/San Joaquin County line
544.00.32	Paradise Cut/Tracy	San Joaquin	Station located from 300 yards upstream of the high voltage powerline to ½ mile upstream.
544.00.90	San Joaquin R/Mossdale	San Joaquin	Station located 1 1/2 miles upstream Mossdale launch ramp.
601.00.93	Silver Lake	Mono	Station located along the south west shore of the lake.
603.10.16	Mammoth Cr/d/s Murphy's Gulch	Mono	Station located between Hwy 395 and frontage road east of Hwy 395.
603.20.36	Pleasant Valley Res	Inyo	Station located at the north end of the lake in the inflow current.
603.30.05	Haiwee Reservoir	Inyo	Station located at the north end of the reservoir along North Haiwee Dam.
628.20.13	Mojave River	San Bernardino	Station located at the lower narrows north of Victorville at powerline and gasoline crossing.
628.20.40	Arrowbear Lake	San Bernardino	Station located in Arrowbear Lake community.
632.20.00	Indian Creek Res	Alpine	Station located around the perimeter of the lake.
634.10.03	Upper Truckee River	El Dorado	Station located opposite the intersection of Armstrong and Lodi Roads.
635.20.08	Prosser Reservoir	Nevada	Station located along perimeter of lake.
635.20.09	Trout Cr/Truckee/d/s	Nevada	Station located 1/2 mile downstream of Meeks Lumber Highway 89.
636.00.14	Little Truckee River	Sierra	Station located upstream of HWY 89 bridge.
715.40.08	Palo Verde Outfall Drain	Imperial	Station located from the boat ramp off Clark Way in Palo Verde downstream ¾ of a mile.
719.47.00	Coachella Valley Stormwater Ch	Riverside	Station located 1/4 mile upstream from the mouth.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
723.10.01	Alamo R/Calipatria	Imperial	Station located approximately 1/4 to one mile upstream of the Garst Road Bridge near Calipatria.
723.10.02	New R/Westmorland	Imperial	Station located at the gauging station about one mile downstream of the Lack Road Bridge near Westmorland.
723.10.28	Peach Drain	Imperial	Station located at highway 115 crossing.
723.10.45	Fig Lake	Imperial	Station Located approximately 100 to 200 yards upstream of the lake outlet to the New River.
723.10.58	New R/Inter Boundary	Imperial	Station located near the international boundary.
728.00.90	Salton Sea/South	Imperial	Station located near the mouth of the Alamo River.
801.11.07	San Diego Cr/Michelson Dr	Orange	Station located between MacArthur Boulevard and Michelson Drive. Station formerly located at MacArthur Blvd., but moved upstream out of tidewater.
801.11.96	Peters Canyon Channel	Orange	Station located upstream of Moulton Parkway Bridge.
801.11.97	Newport Bay	Orange	Station located in Newport Bay.
801.11.98	Anaheim Bay/Sunset Boatworks	Orange	Station located about 25 yards in from Sunset Aquatic Shipyard.
801.13.00	Santa Ana R/Imperial HWY Brg	Orange	Station located from the Imperial Highway Bridge upstream 50 yards.
801.25.00	Santa Ana R/Prado Dam	Riverside	Station located immediately below Prado Dam.
801.26.03	Anza Channel	Riverside	Station located at the end of Geranium Street.
801.71.07	Big Bear Lk/Dam	San Bernardino	Station located about 200 yards from the dam along the south shore.
801.71.10	Big Bear Lake	San Bernardino	Station located at Metcalf and Grout Bays.
801.71.12	Big Bear Lk/ Rathbone Creek	San Bernardino	Station located in the vicinity of the mouth of Rathbone Creek.
802.31.00	Lake Elsinore	Riverside	Station located west of Interstate 15.
901.12.00	Aliso Creek	Orange	Station located at county park above Pacific Coast Highway.
901.20.00	San Juan Cr/Doheny State Park	San Diego	Station located upstream and under Highway 1 bridge.

APPENDIX B (continued)
 Toxic Substances Monitoring Program
 1994-95 Station Descriptions

Station Number	Station Name	County	Description
901.20.03	San Juan Cr/La Novia Avenue	Orange	Station located downstream from La Novia Avenue crossing.
901.20.04	Trabuco Cr/Oso Road	Orange	Station located at abandoned crossing at Oso Road.
902.21.01	Santa Margarita R/Sandia Cr Dr	San Diego	Station located downstream from Sandia Creek Drive bridge.
902.22.03	Rainbow Creek	San Diego	Station located at Water District road crossing about 1/2 mile upstream of the Santa Margarita River.
902.23.01	Rainbow Cr/HWY 15	San Diego	Station located at 5th Street east of Highway 15, near culvert at crossing.
903.12.02	Ostrich Farm Creek	San Diego	Station located just above the confluence with the San Luis Rey river.
904.21.02	Buena Vista Lagoon	San Diego	Station located in the eastern and northern portions of the lagoon off Jefferson and Vista Way east of Interstate 5.
904.31.01	Agua Hedionda	San Diego	Station located along north shore of the lagoon near the marina.
904.61.00	San Elijo Lagoon/Central Basin	San Diego	Station located below walking bridge along preserve trail.
906.10.01	Penasquitos Lagoon	San Diego	Station located between the mouth of the lagoon and the railroad crossing.
906.10.02	Los Penasquitos Cr	San Diego	Station located opposite the Curtis Electronics building off Roseville Road.
906.10.10	Los Penasquitos Cr/u/s I-805	San Diego	Station located 2 miles downstream of Penasquitos Creek Ranch County Park.
906.50.02	Tecolote Creek	San Diego	Station located upstream from the bridge at Tecolote Canyon Golf Course.
907.12.02	San Diego R/Old Mission Dam	San Diego	Station located just downstream of Old Mission Dam in Fortuna Park.
909.12.01	Sweetwater Marsh	San Diego	Station located in the constructed marsh area below the culvert under the road access to Interstate 5.
909.12.03	Sweetwater R/Interstate 805	San Diego	Station located across from Plaza Bonita under Interstate 805 Overpass.

APPENDIX C

1994-95

Station Latitudes and Longitudes

APPENDIX C
 Toxic Substances Monitoring Program
 1994-95 Sampling Stations - Latitude and Longitude

Station Number	Station Name	Latitude	Longitude	USGS 7.5' MAP
111.63.13	Lake Pillsbury/Eel River Arm	39°26'13"	122°58'08"	Lake Pillsbury
111.63.14	Lake Pillsbury	39°25'20"	122°57'05"	Lake Pillsbury
114.11.05	Russian R/Duncans Mills	38°27'15"	123°02'55"	Duncans Mills
114.11.23	Russian R/Wohler Brg	38°30'25"	122°52'55"	Guerneville
114.21.10	Laguna de Santa Rosa/Stony Pt	38°21'05"	122°44'25"	Cotati
114.22.90	Santa Rosa Cr/Willowside Rd	38°26'45"	122°48'20"	Sebastopol
114.23.00	Mark West Creek	38°29'35"	122°43'55"	Sebastopol
114.24.12	Lake Sonoma	38°42'35"	123°01'30"	Warm Springs Dam
114.26.00	Big Sulfur Creek	38°49'30"	122°42'35"	Asti
201.12.01	Walker Creek	38°14'55"	122°54'52"	Tomales
201.12.10	Walker Cr/Walker Creek Ranch	38°10'34"	122°49'15"	Point Reyes NE
203.13.04	Corte Madera Creek	37°58'32"	122°33'45"	San Rafael
204.10.00	San Francisco Bay	37°48'08"	122°22'25"	San Francisco North
205.50.06	San Fransquito Creek	32°50'50"	115°25'26"	Palo Alto
206.30.14	Petaluma R/Petaluma	38°15'41"	122°39'40"	Cotati
206.40.08	Sonoma Creek	38°16'03"	122°28'03"	Sonoma
206.50.34	Napa R/d/s Sewage Treatment	38°34'06"	122°33'20"	Yountville
206.50.36	Napa R/Pioneer Park	38°34'30"	122°34'48"	Yountville
207.32.06	Walnut Creek	37°54'03"	122°03'30"	Walnut Creek
305.50.60	Lake Hernandez/San Benito R	36°23'35"	120°50'00"	Hernandez Reservoir
402.10.00	Ventura River Estuary	34°16'29"	119°18'25"	Ventura
403.11.00	Santa Clara River Estuary	34°13'45"	119°15'33"	Oxnard
403.21.10	Santa Paula Cr/Stekel Park	34°24'42"	119°04'56"	Santa Paula Peak
403.64.02	Arroyo Conejo	34°12'35"	118°55'05"	Newbury Park
403.64.03	Arroyo Conejo/d/s Forks	34°12'51"	118°55'51"	Newbury Park
404.21.04	Malibu Cr/Tapia Park	34°04'39"	118°42'04"	Malibu Beach
404.21.05	Malibu Cr/u/s Tapia Discharge	34°05'02"	118°42'39"	Malibu
405.12.07	Madrona Marsh Preserve	33°49'37"	118°20'36"	Torrance
405.12.90	Harbor Park Lake	33°47'15"	118°17'30"	Torrance
405.13.03	Ballona Wetlands	33°57'43"	118°26'43"	Venice
405.13.90	Ballona Lagoon	33°57'59"	118°27'18"	Venice
405.13.91	Marina del Rey/Basin D	33°58'52"	118°27'30"	Venice
535.70.03	Merced R/Hatfield St Rec Area	37°21'30"	120°57'10"	Gustine
541.10.91	San Joaquin R/Newman	37°21'00"	120°58'30"	Gustine
541.10.92	San Joaquin R/Crows Landing	37°25'42"	121°00'46"	Crows Landing
541.10.93	San Joaquin R/Patterson Bridge	37°21'07"	120°57'28"	Crows Landing
541.20.07	Salt Slough	37°14'50"	120°51'00"	San Luis Ranch
541.20.90	San Joaquin R/Fremont Ford	37°18'15"	120°55'25"	Gustine
544.00.16	Old River	37°59'55"	121°34'45"	Woodward Island
544.00.32	Paradise Cut/Tracy	37°48'10"	121°24'35"	Union Island
544.00.90	San Joaquin R/Mossdale	37°46'03"	121°18'18"	Lathrope
601.00.93	Silver Lake	37°46'27"	119°07'26"	June Lake & Koip Peak
603.10.16	Mammoth Cr/d/s Murphy's Gulch	37°38'19"	118°54'13"	Old Mammoth
603.20.36	Pleasant Valley Res	37°25'31"	118°32'35"	Rovana
603.30.05	Haiwee Reservoir	36°11'17"	117°57'54"	Haiwee Reservoir

APPENDIX C (continued)
 Toxic Substances Monitoring Program
 1994-95 Sampling Stations - Latitude and Longitude

Station Number	Station Name	Latitude	Longitude	USGS 7.5' MAP
628.20.13	Mojave River	34°34'09"	117°18'57"	Victorville
628.20.40	Arrowbear Lake	34°12'46"	117°04'37"	Keller Peak
632.20.00	Indian Creek Res	38°44'45"	119°43'41"	Markleeville
634.10.03	Upper Truckee River	38°35'17"	119°59'10"	South Lake Tahoe
635.20.08	Prosser Reservoir	39°23'05"	120°09'27"	Hobart Mills
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	39°19'55"	120°10'22"	Truckee
636.00.14	Little Truckee River	39°28'45"	120°13'58"	Hobart Mills
715.40.08	Palo Verde Outfall Drain	33°21'10"	114°42'55"	Palo Verde
719.47.00	Coachella Valley Stormwater Ch	33°30'40"	116°03'35"	Mecca
723.10.01	Alamo R/Calipatria	33°11'45"	115°35'15"	Niland
723.10.02	New R/Westmorland	33°06'15"	115°39'50"	Calipatria SW
723.10.28	Peach Drain	32°50'48"	115°24'19"	Holtville West
723.10.45	Fig Lake	32°45'45"	115°41'55"	Seeley
723.10.58	New R/Inter Boundary	32°40'20"	115°31'00"	Heber
728.00.90	Salton Sea/South	33°12'50"	115°37'20"	Niland
801.11.07	San Diego Cr/Michelson Dr	33°40'15"	117°50'05"	Tustin
801.11.96	Peters Canyon Channel	33°42'15"	117°48'10"	Tustin
801.11.97	Newport Bay	33°36'55"	117°54'17"	Newport Beach
801.11.98	Anaheim Bay/Sunset Boatworks	33°43'41"	118°04'24"	Seal Beach
801.13.00	Santa Ana R/Imperial HWY Brg	33°51'25"	117°47'20"	Orange
801.25.00	Santa Ana R/Prado Dam	33°53'10"	117°38'25"	Prado Dam
801.26.03	Anza Channel	33°57'00"	117°27'30"	Riverside West
801.71.07	Big Bear Lk/Dam	34°14'29"	116°58'18"	Big Bear Lake
801.71.10	Big Bear Lake	34°15'10"	116°43'01"	Fawnskin
801.71.12	Big Bear Lk/Rathbone Creek	34°15'17"	116°53'26"	Fawnskin
802.31.00	Lake Elsinore	33°39'35"	117°22'05"	Lake Elsinore
901.12.00	Aliso Creek	33°30'43"	117°45'06"	San Juan Capistrano
901.20.00	San Juan Cr/Doheny State Park	33°27'47"	117°41'05"	Dana Point
901.20.03	San Juan Cr/La Novia Avenue	33°30'06"	117°38'51"	San Juan Capistrano
901.20.04	Trabuco Cr/Oso Road	33°30'58"	117°40'20"	San Juan Capistrano
902.21.01	Santa Margarita R/Sandia Cr Dr	33°24'53"	117°14'40"	Temecula
902.22.03	Rainbow Creek	33°24'09"	117°12'28"	Temecula
902.23.01	Rainbow Cr/HWY 15	33°24'49"	117°09'24"	Temecula
903.12.02	Ostrich Farm Creek	33°17'19"	117°13'24"	Bonsall
904.21.02	Buena Vista Lagoon	33°10'40"	117°20'40"	San Luis Rey
904.31.01	Agua Hedionda	32°08'41"	117°19'35"	San Luis Rey
904.61.00	San Elijo Lagoon/Central Basin	33°00'50"	117°16'31"	Del Mar
906.10.01	Penasquitos Lagoon	32°55'55"	117°15'25"	Del Mar
906.10.02	Los Penasquitos Cr	32°54'20"	117°13'45"	Del Mar
906.10.10	Los Penasquitos Cr/u/s I-805	32°55'53"	117°10'01"	Del Mar
906.50.02	Tecolote Creek	32°47'00"	117°11'05"	La Jolla
907.12.02	San Diego R/Old Mission Dam	32°50'20"	117°02'40"	La Mesa
909.12.01	Sweetwater Marsh	32°38'45"	117°06'10"	National City
909.12.03	Sweetwater R/Interstate 805	32°39'27"	117°04'12"	National City

APPENDIX D

Summary of 1994-95 Species Data

APPENDIX D
Toxic Substances Monitoring Program
Summary of 1994-95 Species Data

Station Number	Station Name	Species Code	Common Name	Sample Date	Sample Number	Age (Yr.)	Weight* (g)	Size* (mm)	Percent Water				Percent Lipid			
									F**	W**	L**	O**	F**	W**	O**	
111.63.13	Lake Pillsbury/Eel River Arm	LMB	Largemouth Bass	07/12/95	1	5	1477.5	424.0	79.1							
111.63.13	Lake Pillsbury/Eel River Arm	LMB	Largemouth Bass	07/12/95	1	4	1194.2	388.0	73.7							
111.63.13	Lake Pillsbury/Eel River Arm	LMB	Largemouth Bass	07/12/95	1	4	1126.5	375.0	78.3							
111.63.13	Lake Pillsbury/Eel River Arm	LMB	Largemouth Bass	07/12/95	1	3	498.7	303.0	79.7							
111.63.13	Lake Pillsbury/Eel River Arm	SQF	Sacramento Squawfish	09/23/95	13	1-2	32.2	149.0	78.7							
111.63.13	Lake Pillsbury/Eel River Arm	SQF	Sacramento Squawfish	09/23/95	8	2-3	102.0	221.0	79.5			84.4				
111.63.14	Lake Pillsbury	LMB	Largemouth Bass	09/23/95	1	6	2005.7	457.0	78.0			75.0				
111.63.14	Lake Pillsbury	SQF	Sacramento Squawfish	09/23/95	6	2-3	110.6	221.0	79.7			82.1				
114.11.05	Russian R/Duncans Mills	SCP	Sculpin	10/13/94	12	2-4	5.4	74.3			77.9				3.76	
114.11.23	Russian R/Wohler Brg	SKR	Sucker	10/13/94	12	1	6.1	81.6			77.7				2.54	
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	Fathead Minnow	10/13/94	16	1	2.6	63.8			77.3				2.60	
114.22.90	Santa Rosa Cr/Willowside Rd	SKR	Sucker	10/13/94	12	2	73.0	173.0	80.7					0.39		
114.23.00	Mark West Creek	BG	Bluegill	10/13/94	6	3	28.5	107.0	79.1			NA		2.15		
114.24.12	Lake Sonoma	LMB	Largemouth Bass	09/22/95	6	2-3	354.3	267.0	78.4			75.0		0.25		
114.24.12	Lake Sonoma	LMB	Largemouth Bass	09/22/95	3	4-5	1379.0	419.0	79.1			78.4		0.61		
114.26.00	Big Sulfur Creek	SKR	Sucker	10/12/94	11	2	42.1	151.0	81.0					0.16		
201.12.01	Walker Creek	STG	Pacific Staghorn Sculpin	10/05/95	20	0-1	3.0	58.1			79.5					
201.12.10	Walker Cr/Walker Creek Ranch	RCH	California Roach	02/03/94	9	2-3	11.1	90.2			74.9					
201.12.10	Walker Cr/Walker Creek Ranch	RCH	California Roach	10/05/95	9	3	9.7	91.2			75.0					
203.13.04	Corte Madera Creek	RCH	California Roach	10/06/95	9	3	19.3	105.0	78.7					1.64		
204.10.00	San Francisco Bay	PHG	Pacific Herring	02/23/95	5	4-5	104.1	195.0	74.6				76.3	6.74	2.38	
204.10.00	San Francisco Bay	PHG	Pacific Herring	02/23/95	5	2-3	66.8	170.0	76.4				77.4	4.04	2.30	
204.10.00	San Francisco Bay	PHG	Pacific Herring	02/23/95	5	3-4	80.7	178.0	74.9				76.3	5.45	1.86	
205.50.06	San Fransquito Creek	SKR	Sucker	11/09/95	21	1	4.3	72.4			80.0			1.31		
206.30.14	Petaluma R/Petaluma	GSF	Green Sunfish	10/05/95	6	2-3	27.1	111.0	79.2			78.8		0.22		
206.40.08	Sonoma Creek	RCH	California Roach	10/05/95	12	3	6.7	85.0			73.6			6.62		
206.50.34	Napa R/d/s Sewage Treatment	RCH	California Roach	10/04/95	23	1-2	1.0	49.2			79.6			1.87		
206.50.36	Napa R/Pioneer Park	BG	Bluegill	10/04/95	2	3	42.6	126.0	79.8			NA		0.13		
206.50.36	Napa R/Pioneer Park	BB	Brown Bullhead	10/04/95	1	2	90.7	195.0	80.7			NA		0.48		
207.32.06	Walnut Creek	GSF	Green Sunfish	11/09/95	5	2-4	41.8	124.0	78.4			74.1		0.22		
305.50.60	Lake Hernandez/San Benito R	CCF	Channel Catfish	11/30/95	2	13+	3575.8	630.0	78.1			78.1				
305.50.60	Lake Hernandez/San Benito R	LMB	Largemouth Bass	11/30/95	5	2	280.0	253.0	79.6			80.2				
403.11.00	Santa Clara River Estuary	AC	Arroyo Chub	06/24/94	200	0	0.2	0.3	82.0					2.60		
403.11.00	Santa Clara River Estuary	SAKR	Santa Ana Sucker	06/30/95	35	1-2	2.5	60.0			75.9			6.74		
403.21.10	Santa Paula Cr/Stekel Park	STB	Threespine Stickleback	06/24/94	36	1	1.5	48.6			76.8			1.43		

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APPENDIX D (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Species Data

Station Number	Station Name	Species Code	Common Name	Sample Date	Sample Number	Age (Yr.)	Weight* (g)	Size* (mm)	Percent Water				Percent Lipid			
									F**	W**	L**	O**	F**	W**	O**	
403.21.10	Santa Paula Cr/Stekel Park	AC	Arroyo Chub	06/30/95	6	NA	8.4	83.8		77.3						
403.64.02	Arroyo Conejo	BLB	Black Bullhead	06/23/94	6	4	326.4	264.0	80.5					1.38		
403.64.03	Arroyo Conejo/d/s Forks	BLB	Black Bullhead	06/23/94	4	4	66.4	170.0	80.5					1.93		
404.21.04	Malibu Cr/Tapia Park	PROI	Red Swamp Crayfish	06/29/95	7	NA	22.0	45.9	83.7							
404.21.05	Malibu Cr/u/s Tapia Discharge	PROI	Red Swamp Crayfish	06/29/95	8	NA	24.5	50.4	82.8							
405.12.07	Madrona Marsh Preserve	GAM	Mosquitofish	06/27/95	30	0-1	0.8	38.2		76.5					2.43	
405.12.90	Harbor Park Lake	CP	Carp	06/14/94	6	3-4	2043.0	439.0	75.4					6.23		
405.12.90	Harbor Park Lake	LMB	Largemouth Bass	06/14/94	6	3-4	902.8	362.0	80.3		77.6			0.17		
405.13.03	Ballona Wetlands	LJM	Longjaw Mudsucker	06/22/94	18	1-2	20.6	119.0	81.8		61.1			0.10		
405.13.90	Ballona Lagoon	STG	Pacific Staghorn Sculpin	06/22/94	10	1	25.1	120.0	79.8		63.6			0.26		
405.13.90	Ballona Lagoon	STG	Pacific Staghorn Sculpin	06/27/95	12	1	28.1	122.0	78.3		59.2					
405.13.91	Marina del Rey/Basin D	RSR	Round Stingray	06/28/95	4	NA	446.6	340.0	77.9		54.5			0.19		
405.13.91	Marina del Rey/Basin D	SAR	Sargo	06/28/95	1	NA	474.0	260.0	74.2		48.4			3.06		
405.13.91	Marina del Rey/Basin D	YFC	Yellowfin Croaker	06/28/95	7	NA	149.5	223.0	77.8		74.0			0.60		
535.70.03	Merced R/Hatfield St Rec Area	BG	Bluegill	11/18/94	4	3-5	81.7	146.0	79.6							
535.70.03	Merced R/Hatfield St Rec Area	GSF	Green Sunfish	11/18/94	7	2-3	48.5	135.0	79.1							
541.10.91	San Joaquin R/Newman	GSF	Green Sunfish	11/22/94	2	2-3	39.6	126.0	79.5							
541.10.91	San Joaquin R/Newman	SMB	Smallmouth Bass	11/22/94	1	2	257.0	251.0	78.2							
541.10.92	San Joaquin R/Crows Landing	GSF	Green Sunfish	11/30/94	6	2-3	38.2	122.0	78.8							
541.10.92	San Joaquin R/Crows Landing	WCF	White Catfish	04/29/96	1	4	178.6	222.0	80.2							
541.10.93	San Joaquin R/Patterson Bridge	GSF	Green Sunfish	11/22/94	4	2-3	40.6	120.0	78.8							
541.20.07	Salt Slough	WCF	White Catfish	04/22/96	2	4-5	154.8	213.0	79.5							
541.20.90	San Joaquin R/Fremont Ford	GSF	Green Sunfish	11/30/94	1	3	44.6	129.0	77.2							
541.20.90	San Joaquin R/Fremont Ford	BB	Brown Bullhead	04/22/96	2	1-2	62.4	160.0	82.7							
544.00.16	Old River	LMB	Largemouth Bass	04/24/96	6	2-4	713.6	333.0	80.4							
544.00.16	Old River	LMB	Largemouth Bass	04/25/96	6	3-5	1100.9	388.0	80.3							
544.00.16	Old River	RSF	Redear Sunfish	04/25/96	6	3-4	214.3	198.0	80.2							
544.00.32	Paradise Cut/Tracy	LMB	Largemouth Bass	04/26/96	6	2-4	672.8	326.0	81.1							
544.00.32	Paradise Cut/Tracy	WCF	White Catfish	04/26/96	6	5-6	265.2	250.0	81.1							
544.00.90	San Joaquin R/Mossdale	CP	Carp	11/17/94	6	3-4	1341.1	395.0	75.4							
544.00.90	San Joaquin R/Mossdale	LMB	Largemouth Bass	11/17/94	6	2-3	418.2	285.0	78.9							
601.00.93	Silver Lake	BN	Brown Trout	09/28/94	6	3-4	204.9	275.0	80.2		82.7					
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	Brown Trout	09/05/95	5	3	254.8	257.0	75.6		79.9			1.67		
603.20.36	Pleasant Valley Res	BN	Brown Trout	09/28/94	6	3-4	550.2	355.0	79.2		81.5					

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APPENDIX D (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Species Data

Station Number	Station Name	Species Code	Common Name	Sample Date	Sample Number	Age (Yr.)	Weight* (g)	Size* (mm)	Percent Water				Percent Lipid			
									F**	W**	L**	O**	F**	W**	O**	
603.30.05	Haiwee Reservoir	LMB	Largemouth Bass	09/07/95	6	1-2	90.1	166.0	79.3		76.8					
628.20.13	Mojave River	AC	Arroyo Chub	10/28/94	25	NA	3.5	62.6		77.6					0.41	
628.20.40	Arrowbear Lake	BLB	Black Bullhead	10/24/95	10	1-2	35.0	144.0	81.5		81.2			0.67		
632.20.00	Indian Creek Res	RBT	Rainbow Trout	10/16/95	1	3	1762.2	493.0	73.3		79.4			2.58		
634.10.03	Upper Truckee River	BN	Brown Trout	08/15/95	7	1	30.9	134.0	79.3		80.3			0.58		
635.20.08	Prosser Reservoir	RBT	Rainbow Trout	10/06/94	3	3	565.8	320.0	75.9		78.2					
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	BK	Brook Trout	09/14/95	6	3-4	88.8	186.0	77.1		77.5			1.01		
636.00.14	Little Truckee River	BN	Brown Trout	10/06/94	6	3-4	292.1	283.0	77.4		81.1					
715.40.08	Palo Verde Outfall Drain	CP	Carp	10/25/95	6	3-4	1418.7	402.0	77.5					2.42		
715.40.08	Palo Verde Outfall Drain	LMB	Largemouth Bass	10/25/95	5	2-4	484.9	301.0	79.2					0.10		
719.47.00	Coachella Valley Stormwater Ch	PRS	Red Shiner	10/24/95	27	1-2	1.3	49.7		74.2					5.35	
719.47.00	Coachella Valley Stormwater Ch	TLZ	Redbelly Tilapia	10/24/95	17	0	4.7	60.2		74.4					3.19	
723.10.01	Alamo R/Calipatria	CP	Carp	10/27/94	1	4	1800.2	451.0	80.1					0.44		
723.10.01	Alamo R/Calipatria	CCF	Channel Catfish	10/27/94	1	5	643.4	373.0	75.4		76.8			5.31		
723.10.02	New R/Westmorland	CP	Carp	10/27/94	1	3	921.8	374.0	80.7					0.21		
723.10.02	New R/Westmorland	CCF	Channel Catfish	10/27/95	6	2-4	169.1	247.0	80.3					0.73		
723.10.28	Peach Drain	GAM	Mosquitofish	10/28/95	28	0-1	1.1	44.1		76.9					2.60	
723.10.45	Fig Lake	CP	Carp	10/28/95	6	2	270.2	253.0	81.3					0.19		
723.10.45	Fig Lake	CP	Carp	10/28/95	5	2	265.9	250.0	81.7					0.31		
723.10.58	New R/Inter Boundary	CP	Carp	11/02/94	4	4-5	2327.0	492.0	71.5					8.65		
728.00.90	Salton Sea/South	TLZ	Redbelly Tilapia	10/27/95	5	2-3	333.0	266.0	87.7					0.42		
728.00.90	Salton Sea/South	TLZ	Redbelly Tilapia	10/27/95	6	2-3	343.3	272.0	79.3					0.19		
801.11.07	San Diego Cr/Michelson Dr	PRS	Red Shiner	06/02/94	39	2	2.1	53.7		74.4					5.30	
801.11.07	San Diego Cr/Michelson Dr	PRS	Red Shiner	06/17/95	46	1-2	1.3	45.8		75.4					6.88	
801.11.07	San Diego Cr/Michelson Dr	PRS	Red Shiner	06/17/95	45	1-2	1.6	48.8		75.8					7.04	
801.11.96	Peters Canyon Channel	PRS	Red Shiner	06/02/94	31	2	2.7	56.8		73.3					8.53	
801.11.96	Peters Canyon Channel	PRS	Red Shiner	06/02/94	30	2	2.6	55.6		76.6					4.66	
801.11.96	Peters Canyon Channel	PRS	Red Shiner	06/17/95	37	1-2	1.3	45.5		74.2					5.77	
801.11.97	Newport Bay	BCK	Black Croaker	06/18/95	2	NA	178.8	256.0	77.0		78.9			1.30		
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	Yellowfin Croaker	06/17/95	3	NA	403.7	290.0	75.9		65.3			1.69		
801.13.00	Santa Ana R/Imperial HWY Brg	CP	Carp	07/25/95	3	2	534.9	278.0	77.1					3.18		
801.13.00	Santa Ana R/Imperial HWY Brg	CCF	Channel Catfish	07/25/95	1	5	500.5	330.0	75.8		82.3					
801.25.00	Santa Ana R/Prado Dam	BB	Brown Bullhead	06/01/94	8	2-3	82.1	176.0	82.0		80.1			0.26		
801.25.00	Santa Ana R/Prado Dam	BH	Bullhead	07/25/95	6	2-3	135.9	206.0	79.7		80.6			1.68		

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APPENDIX D (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Species Data

Station Number	Station Name	Species Code	Common Name	Sample Date	Sample Number	Age (Yr.)	Weight* (g)	Size* (mm)	Percent Water				Percent Lipid			
									F**	W**	L**	O**	F**	W**	O**	
801.26.03	Anza Channel	FHM	Fathead Minnow	06/01/94	22	1	3.0	60.7		76.4						4.64
801.71.07	Big Bear Lk/Dam	LMB	Largemouth Bass	06/08/94	6	2	204.0	226.0	79.7		78.0			0.13		
801.71.10	Big Bear Lake	LMB	Largemouth Bass	06/20/95	6	3	507.2	286.0	80.0		79.4			0.15		
801.71.12	Big Bear Lk/Rathbone Creek	LMB	Largemouth Bass	06/08/94	6	2-3	454.0	284.0	79.8		79.6			0.11		
802.31.00	Lake Elsinore	CP	Carp	06/09/94	6	3	745.2	337.0	74.2					7.26		
802.31.00	Lake Elsinore	CP	Carp	06/17/95	6	2-3	878.6	360.0	74.5					5.61		
901.12.00	Aliso Creek	PRS	Red Shiner	07/29/95	31	1-2	1.5	48.6		74.9						4.72
901.12.00	Aliso Creek	PRS	Red Shiner	07/29/95	30	1-2	1.6	50.0		74.9						4.46
901.20.00	San Juan Cr/Doheny State Park	PRS	Red Shiner	06/12/94	26	2	1.5	47.7		76.5						3.01
901.20.00	San Juan Cr/Doheny State Park	PRS	Red Shiner	07/29/95	64	1-2	0.9	42.6		74.8						7.43
901.20.00	San Juan Cr/Doheny State Park	PRS	Red Shiner	07/29/95	65	1-2	1.0	42.4		74.2						8.31
901.20.03	San Juan Cr/La Novia Avenue	LMB	Largemouth Bass	06/12/94	9	1	64.9	160.0	78.7					0.10		
901.20.04	Trabuco Cr/Oso Road	PRS	Red Shiner	06/12/94	40	2	2.3	54.0		74.5						5.20
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	Black Bullhead	06/11/94	10	1-2	46.6	143.0	74.3					1.09		
902.22.03	Rainbow Creek	AC	Arroyo Chub	07/26/95	15	NA	6.8	75.7		70.0						10.20
902.22.03	Rainbow Creek	AC	Arroyo Chub	07/26/95	14	NA	7.0	76.2		70.0						9.61
902.23.01	Rainbow Cr/HWY 15	BLB	Black Bullhead	06/09/94	10	1-2	43.5	146.0	81.8					0.38		
903.12.02	Ostrich Farm Creek	GSF	Green Sunfish	06/11/94	3	3-4	78.5	151.0	78.6					0.08		
904.21.02	Buena Vista Lagoon	LMB	Largemouth Bass	07/28/95	1	3	424.4	285.0	78.7		78.4			0.05		
904.31.01	Agua Hedionda	BSB	Barred Sand Bass	07/28/95	12	NA	21.0	115.0	79.6		77.2			0.14		
904.61.00	San Elijo Lagoon/Central Basin	CKF	California Killifish	07/29/95	23	NA	4.1	65.7		77.0						1.49
906.10.01	Penasquitos Lagoon	STG	Pacific Staghorn Sculpin	07/28/95	10	1	29.0	128.0	80.3		70.1			0.16		
906.10.02	Los Penasquitos Cr	LMB	Largemouth Bass	11/05/95	6	2-3	418.6	282.0	78.3		80.3			0.30		
906.10.10	Los Penasquitos Cr/u/s I-805	LMB	Largemouth Bass	11/11/95	6	2-3	499.3	289.0	78.6		79.3			0.24		
906.50.02	Tecolote Creek	GSF	Green Sunfish	07/28/95	2	3-4	64.0	144.0	81.5		77.1			0.04		
907.12.02	San Diego R/Old Mission Dam	LMB	Largemouth Bass	06/10/94	3	2	189.3	234.0	79.5		78.0			0.05		
909.12.01	Sweetwater Marsh	LJM	Longjaw Mudsucker	07/26/95	14	1	6.7	78.2		81.6						0.74
909.12.03	Sweetwater R/Interstate 805	CP	Carp	06/10/94	6	3-4	1048.2	403.0	81.3					0.44		

* Weight and Size are either individual or mean values as indicated by sample number.

Size = the fork length of fish, total length of other organisms.

** F = Filet. L = Liver. W = Whole Body. O = Ova.

NA = Not Analyzed. Missing data indicate data not applicable to the sample or the analysis.

APPENDIX E

**Summary of 1994 Data
Trace Elements in Sediment
(ppm, dry weight)**

APPENDIX E

Toxic Substances Monitoring Program
Summary of 1994 Data: Trace Elements in Sediment (ppm, dry weight)

Station Number	Station Name	Sample Type	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
402.10.00	Ventura River Estuary	Sediment	06/24/94	10.0	NA	NA	NA	NA	<0.20	NA	1.10	NA	NA

APPENDIX F

Summary of 1994 Data Organic Chemicals in Sediment (ppb, dry weight)

APPENDIX F
 Toxic Substances Monitoring Program
 Summary of 1994 Data: Organic Chemicals in Sediment (ppb, dry weight)

Station Number	Station Name	Sample 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				
402.10.00	Ventura River Estuary	Sediment	06/24/94	<0.7	<0.7	<1.2	<0.8	1.7	<1.8	1.3	<1.1	3.0	3.8	<1.5				
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
402.10.00	0.4	<3.0	<3.1	<1.4	6.0	<1.5	<1.8	<2.7	NA	6.0	<15.0	<6.2	<0.3	<0.3	<0.5	ND	<0.2	<7.6
Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Ethyl-diazon	Methyl Para-thion	PCB Para-thion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A
402.10.00	<0.6	2.7	<1.1	<0.8	2.7	<0.7	<1.2	<0.4	<6.3	1.4	<1.0	<0.6	<14.0	38.5	14.7	53.2	<70.0	NA

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.

APPENDIX G

Summary of 1994-95 Data

Freshwater Fish Exceeding

Maximum Tissue Residue Levels (MTRLs)

APPENDIX G
Toxic Substances Monitoring Program
Summary of 1994-95 Data: Freshwater Fish Exceeding Maximum Tissue Residue Levels (MTRLs)

Station Number	Station Name	Species Code	Sample Date	Tissue Type	Arsenic (ppm)	Mercury (ppm)	Total Chlordane (ppb)	Total DDT (ppb)	Dieldrin (ppb)	gamma-HCH (ppb)	Hexachlorbenzene (ppb)	Total PCB (ppb)	Toxaphene (ppb)
111.63.13	Lake Pillsbury/Eel River Arm	LMB	07/12/95	F		1.8							
114.24.12	Lake Sonoma	LMB	09/22/95	F		1.8							
203.13.04	Corte Madera Creek	RCH	10/06/95	F			13.1						
403.64.02	Arroyo Conejo	BLB	06/23/94	F			18.0	32.0					
403.64.03	Arroyo Conejo/d/s Forks	BLB	06/23/94	F			77.6			2.9			
405.12.90	Harbor Park Lake	CP	06/14/94	F			213.7	232.0	7.2			219.0	
405.12.90	Harbor Park Lake	LMB	06/14/94	F			12.0						
405.13.03	Ballona Wetlands	LJM	06/22/94	F	1.40								
405.13.90	Ballona Lagoon	STG	06/22/94	F	0.88								
405.13.90	Ballona Lagoon	STG	06/27/95	F	0.94								
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	09/05/95	F	0.55								
715.40.08	Palo Verde Outfall Drain	CP	10/25/95	F				182.0				227.0	
715.40.08	Palo Verde Outfall Drain	LMB	10/25/95	F				46.0					
723.10.01	Alamo R/Calipatria	CP	10/27/94	F			7.1	3081.0	11.0			69.0	120.0
723.10.01	Alamo R/Calipatria	CCF	10/27/94	F	0.20		12.8	696.0	50.0				220.0
723.10.02	New R/Westmorland	CP	10/27/94	F				140.0					
723.10.02	New R/Westmorland	CCF	10/27/95	F			5.3	318.0	8.3				190.0
723.10.58	New R/Inter Boundary	CP	11/02/94	F			202.0	594.0	9.4	8.1	29.0	429.0	
801.13.00	Santa Ana R/Imperial HWY Brg	CP	07/25/95	F			6.0			3.3			
802.31.00	Lake Elsinore	CP	06/09/94	F			5.9	73.0					
802.31.00	Lake Elsinore	CP	06/17/95	F			11.4	100.0				88.0	
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	06/11/94	F				77.0					
902.23.01	Rainbow Cr/HWY 15	BLB	06/09/94	F				70.0					
906.10.01	Penasquitos Lagoon	STG	07/28/95	F	0.47								
907.12.02	San Diego R/Old Mission Dam	LMB	06/10/94	F			7.5						
909.12.03	Sweetwater R/Interstate 805	CP	06/10/94	F			25.0	63.0					

F = Filet. Species codes are listed in Table 3.

APPENDIX H

Summary of 1994-95 Data

Marine Fish Exceeding

Maximum Tissue Residue Levels (MTRLs)

APPENDIX H

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Marine Fish Exceeding Maximum Tissue Residue Levels (MTRLs)
(ppb, wet weight)

Station Number	Station Name	Species Code	Sample Date	Tissue Type	Total Chlordane	Total DDT	Dieldrin	Total PCB
204.10.00	San Francisco Bay	PHG	02/23/95	F		69.0		
204.10.00	San Francisco Bay	PHG	02/23/95	F		36.0		
204.10.00	San Francisco Bay	PHG	02/23/95	F		41.0		
405.13.91	Marina del Rey/Basin D	SAR	06/28/95	F	30.7	101.0	5.3	255.0
405.13.91	Marina del Rey/Basin D	YFC	06/28/95	F		60.0		59.0
801.11.97	Newport Bay	BCK	06/18/95	F		66.0		
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	06/17/95	F	28.5	243.0		70.0
904.31.01	Agua Hedionda	BSB	07/28/95	F		76.0		

F = Filet. Species codes are listed in Table 4.

APPENDIX I

Summary of 1994-95 Data

Trace Elements in Freshwater Fish Exceeding Selected Criteria

(ppm, wet weight)

APPENDIX I
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Trace Elements in Freshwater Fish Exceeding Selected Criteria
 (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury (N/M/F)	Nickel	Selenium (E/M)	Silver	Zinc
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95						0.61***				
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95						0.57***				
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95						1.80##				
111.63.13	Lake Pillsbury/Eel River Arm	SQF	L	09/23/95				47.00**					0.26*	
111.63.14	Lake Pillsbury	LMB	F	09/23/95						1.00##				
111.63.14	Lake Pillsbury	SQF	L	09/23/95				62.00**					0.44*	
114.11.05	Russian R/Duncans Mills	SCP	W	10/13/94							0.30*			
114.11.23	Russian R/Wohler Brg	SKR	W	10/13/94			0.74**				1.00**			
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	W	10/13/94			0.58**				0.41*			
114.24.12	Lake Sonoma	LMB	F	09/22/95						0.57***				
114.24.12	Lake Sonoma	LMB	F	09/22/95						1.80##				
114.24.12	Lake Sonoma	LMB	L	09/22/95				100.00**					0.44*	54.00**
206.50.34	Napa R/d/s Sewage Treatment	RCH	W	10/04/95	0.48*									
206.50.36	Napa R/Pioneer Park	BB	L	10/04/95				19.00*						
305.50.60	Lake Hernandez/San Benito R	CCF	F	11/30/95						0.69***				
305.50.60	Lake Hernandez/San Benito R	CCF	L	11/30/95			0.10**							
305.50.60	Lake Hernandez/San Benito R	LMB	F	11/30/95						0.52***				
403.11.00	Santa Clara River Estuary	SAKR	W	06/30/95		0.15*								
403.21.10	Santa Paula Cr/Stekel Park	STB	W	06/24/94				9.40**						77.00**
403.21.10	Santa Paula Cr/Stekel Park	AC	W	06/30/95										43.00*
405.13.03	Ballona Wetlands	LJM	L	06/22/94						0.20**				
405.13.90	Ballona Lagoon	STG	L	06/22/94				15.00*		0.40**				44.00**
405.13.90	Ballona Lagoon	STG	L	06/27/95						0.40**				34.00*
601.00.93	Silver Lake	BN	L	09/28/94			0.04*	220.00*					2.30**	
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	L	09/05/95									2.20**	
603.20.36	Pleasant Valley Res	BN	L	09/28/94				210.00*					0.82**	
628.20.13	Mojave River	AC	W	10/28/94										42.00*
628.20.40	Arrowbear Lake	BLB	L	10/24/95						0.14*				

W = Whole Body. F = Filet. L = Liver. * = Equals or exceeds EDL 85. ** = Equals or exceeds EDL 95. *** = Equals or exceeds MIS.

= Equals or exceeds NAS recommended guideline. ## = Equals or exceeds FDA action level. Species codes are listed in Table 3.

(N/M/F) means that whole body samples were compared to NAS criteria and filet samples were compared to MIS and FDA criteria.

(E/M) means that whole body samples were compared to EDL 85 and EDL 95 and filet samples were compared to MIS.

Results for all other trace elements were compared to EDL 85 and EDL 95.

APPENDIX I (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Trace Elements in Freshwater Fish Exceeding Selected Criteria
 (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury (N/M/F)	Nickel	Selenium (E/M)	Silver	Zinc
632.20.00	Indian Creek Res	RBT	L	10/16/95									1.10**	28.00*
634.10.03	Upper Truckee River	BN	L	08/15/95									0.30*	35.00*
635.20.08	Prosser Reservoir	RBT	L	10/06/94			0.07**							
636.00.14	Little Truckee River	BN	L	10/06/94			0.03*						0.41*	
723.10.28	Peach Drain	GAM	W	10/28/95								1.90**		
723.10.58	New R/Inter Boundary	CP	F	11/02/94						0.50***				
728.00.90	Salton Sea/South	TLZ	F	10/27/95								3.20***		
728.00.90	Salton Sea/South	TLZ	F	10/27/95								2.90***		
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94								1.60*		49.00**
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95		0.13*								
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95		0.12*								
801.11.96	Peters Canyon Channel	PRS	W	06/02/94		0.13*								46.00*
801.11.96	Peters Canyon Channel	PRS	W	06/02/94		0.13*								44.00*
801.11.96	Peters Canyon Channel	PRS	W	06/17/95		0.14*								
901.12.00	Aliso Creek	PRS	W	07/29/95		0.50**								48.00*
901.12.00	Aliso Creek	PRS	W	07/29/95		0.43**								47.00*
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95		0.72**						1.90**		
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95		0.79**					0.21*	1.90**		
904.21.02	Buena Vista Lagoon	LMB	L	07/28/95				28.00*					0.27*	39.00**
906.10.01	Penasquitos Lagoon	STG	L	07/28/95				26.00*						53.00**
906.10.02	Los Penasquitos Cr	LMB	L	11/05/95				27.00*					0.38*	
906.50.02	Tecolote Creek	GSF	L	07/28/95						0.22**				
909.12.01	Sweetwater Marsh	LJM	W	07/26/95	1.10**					0.40*				

W = Whole Body. F= Filet. L = Liver. * = Equals or exceeds EDL 85. ** = Equals or exceeds EDL 95. *** = Equals or exceeds MIS.

= Equals or exceeds NAS recommended guideline. ## = Equals or exceeds FDA action level. Species codes are listed in Table 3.

(N/M/F) means that whole body samples were compared to NAS criteria and filet samples were compared to MIS and FDA criteria.

(E/M) means that whole body samples were compared to EDL 85 and EDL 95 and filet samples were compared to MIS.

Results for all other trace elements were compared to EDL 85 and EDL 95.

APPENDIX J

Summary of 1994-95 Data

Organic Chemicals in Freshwater Fish Exceeding Selected Criteria (ppb, wet weight)

APPENDIX J
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Selected Criteria
 (ppb, wet weight)

Station Number	Station Name	Species	Tissue Code	Sample Date	Total Chlordane (N/F)	Chlorpyrifos (EDL)	Dacthal (EDL)	Total DDT (N/F)
403.11.00	Santa Clara River Estuary	AC	F	06/24/94			52.0*	
403.11.00	Santa Clara River Estuary	SAKR	W	06/30/95				
403.64.02	Arroyo Conejo	BLB	F	06/23/94				
403.64.03	Arroyo Conejo/d/s Forks	BLB	F	06/23/94		39.0**		
405.12.90	Harbor Park Lake	CP	F	06/14/94	213.7#			
719.47.00	Coachella Valley Stormwater Ch	PRS	W	10/24/95			900.0**	
719.47.00	Coachella Valley Stormwater Ch	TLZ	W	10/24/95			220.0*	
723.10.01	Alamo R/Calipatria	CP	F	10/27/94		27.0**	770.0**	3081.0#
723.10.01	Alamo R/Calipatria	CCF	F	10/27/94		180.0**	4000.0**	
723.10.02	New R/Westmorland	CP	F	10/27/94			220.0*	

Station Number	Diazinon (EDL)	Dieldrin (N/F)	Total Endosulfan (N/F)	Hexachlorobenzene (EDL)	Oxadiazon (EDL)	Total PCB (N/F)	Toxaphene (N/F)	Chemical Group A (N)
403.11.00							250.0#	250.0#
403.11.00							570.0#	575.5#
403.64.02					25.0**			
403.64.03								
405.12.90					13.0**			220.9#
719.47.00								
719.47.00								
723.10.01							120.0#	144.4#
723.10.01							220.0#	314.8#
723.10.02								

* = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95. # = Equals or exceeds NAS recommended guideline.
 ## = Equals or exceeds FDA action level. (EDL) means that the results were compared to EDL 85 and EDL 95 values.
 (N) means that the results were compared to NAS criteria only. (N/F) means that the results were compared to NAS and FDA criteria.
 F = Filet. W = Whole Body. Species codes are listed in Table 3.

APPENDIX J
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Selected Criteria
 (ppb, wet weight)

Station Number	Station Name	Species	Tissue Code	Sample Date	Total Chlordane (N/F)	Chlorpyrifos (EDL)	Dacthal (EDL)	Total DDT (N/F)
723.10.02	New R/Westmorland	CCF	F	10/27/95		78.0**	430.0**	
723.10.28	Peach Drain	GAM	W	10/28/95			5500.0**	5106.0#
723.10.58	New R/Inter Boundary	CP	F	11/02/94	202.0#	130.0**	4100.0**	
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94				
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95		55.0*	140.0*	
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95		59.0*	130.0*	
801.11.96	Peters Canyon Channel	PRS	W	06/02/94				
801.11.96	Peters Canyon Channel	PRS	W	06/02/94				
801.11.96	Peters Canyon Channel	PRS	W	06/17/95		40.0*		
802.31.00	Lake Elsinore	CP	F	06/17/95			31.0*	

Station Number	Diazinon (EDL)	Dieldrin (N/F)	Total Endosulfan (N/F)	Hexachlorobenzene (EDL)	Oxadiazon (EDL)	Total PCB (N/F)	Toxaphene (N/F)	Chemical Group A (N)
723.10.02							190.0#	209.2#
723.10.28		220.0#					2800.0#	3074.4#
723.10.58				29.0**				225.6#
801.11.07	440.0**						120.0#	151.5#
801.11.07					420.0*			
801.11.07	87.0**				360.0*		320.0#	365.6#
801.11.96							300.0#	350.8#
801.11.96							390.0#	452.5#
801.11.96	74.0**						540.0#	574.9#
802.31.00								

* = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95. # = Equals or exceeds NAS recommended guideline.
 ## = Equals or exceeds FDA action level. (EDL) means that the results were compared to EDL 85 and EDL 95 values.
 (N) means that the results were compared to NAS criteria only. (N/F) means that the results were compared to NAS and FDA criteria.
 F = Filet. W = Whole Body. Species codes are listed in Table 3.

APPENDIX J
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Selected Criteria
 (ppb, wet weight)

Station Number	Station Name	Species	Tissue Code	Sample Date	Total Chlordane (N/F)	Chlorpyrifos (EDL)	Dacthal (EDL)	Total DDT (N/F)
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95				
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95				
901.20.03	San Juan Cr/La Novia Avenue	LMB	F	06/12/94				
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	F	06/11/94				
902.22.03	Rainbow Creek	AC	W	07/26/95				
902.22.03	Rainbow Creek	AC	W	07/26/95				
902.23.01	Rainbow Cr/HWY 15	BLB	F	06/09/94				

Station Number	Diazinon (EDL)	Dieldrin (N/F)	Total Endosulfan (N/F)	Hexachlorobenzene (EDL)	Oxadiazon (EDL)	Total PCB (N/F)	Toxaphene (N/F)	Chemical Group A (N)
901.20.00					340.0*			
901.20.00					310.0*			
901.20.03					56.0**			
902.21.01					25.0**			
902.22.03					240.0*			
902.22.03					280.0*			
902.23.01					34.0**			

* = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95. # = Equals or exceeds NAS recommended guideline.
 ## = Equals or exceeds FDA action level. (EDL) means that the results were compared to EDL 85 and EDL 95 values.
 (N) means that the results were compared to NAS criteria only. (N/F) means that the results were compared to NAS and FDA criteria.
 F = Filet. W = Whole Body. Species codes are listed in Table 3.

APPENDIX K

Summary of 1994-95 Data

Trace Elements in Marine Fish Exceeding Selected Criteria

(ppm, wet weight)

APPENDIX K
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Trace Elements in Marine Fish Exceeding Selected Criteria
 (ppm, wet weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury (EDL/F)	Nickel	Selenium	Silver	Zinc
204.10.00	San Francisco Bay	PHG	F	02/23/95	1.80*									
405.13.91	Marina del Rey/Basin D	RSR	F	06/28/95	6.20**									
405.13.91	Marina del Rey/Basin D	RSR	L	06/28/95			0.08**							
405.13.91	Marina del Rey/Basin D	SAR	L	06/28/95					0.48*					

W = Whole Body. F= Filet. L = Liver. * = Equals or exceeds EDL 85. ** = Equals or exceeds EDL 95. ## = Equals or exceeds FDA action level.
 (EDL/F) means that whole body samples were compared to EDL 85 and EDL 95 values and filet samples were compared to FDA criteria.
 Results for all other trace elements were compared to EDL 85 and EDL 95. Species codes are listed in Table 4.

APPENDIX L

Summary of 1994-95 Data

Organic Chemicals in Marine Fish Exceeding Selected Criteria (ppb, wet weight)

APPENDIX L

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Organic Chemicals in Marine Fish Exceeding Selected Criteria
(ppb, wet weight)

Station Number	Station Name	Species Code	Sample Date	Tissue Type	Total PCB (EDL/F)
405.13.91	Marina del Rey/Basin D	SA	06/28/95	F	255.0*

* = Exceeds EDL 85. F = Filet.

(EDL/F) means that whole body samples were compared to EDL 85 and EDL 95 values and filet samples were compared to FDA criteria. Species codes are listed in Table 4.

APPENDIX M

Summary of 1994-95 Data

Organic Chemicals in Freshwater Fish

Exceeding Lipid Weight EDL 85 and EDL 95

(ppb, lipid weight)

APPENDIX M

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Lipid Weight EDL 85 and EDL 95
(ppb, lipid weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Total Chlordane	Chlor-pyrifos	Dacthal	Total DDT	Dieldrin
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	W	10/13/94					
114.22.90	Santa Rosa Cr/Willowside Rd	SKR	F	10/13/94					
403.11.00	Santa Clara River Estuary	AC	F	06/24/94			2000.0*		
403.64.02	Arroyo Conejo	BLB	F	06/23/94					
403.64.03	Arroyo Conejo/d/s Forks	BLB	F	06/23/94	4020.7*	2020.7**			
405.12.90	Harbor Park Lake	CP	F	06/14/94	3430.2*				
405.12.90	Harbor Park Lake	LMB	F	06/14/94	7185.6*				
715.40.08	Palo Verde Outfall Drain	CP	F	10/25/95					
719.47.00	Coachella Valley Stormwater Ch	PRS	W	10/24/95			16822.4*		
719.47.00	Coachella Valley Stormwater Ch	TLZ	W	10/24/95			6896.6*		

Station Number	Total Endosulfan	Hexa-chloro-benzene	gamma-HCH (Lindane)	Total HCH	Oxadiazon	Total PCB	Toxaphene	Chemical Group A
114.21.10					1500.0*			
114.22.90					1282.1*			
403.11.00								
403.64.02					1811.6*			
403.64.03								
405.12.90								
405.12.90								
715.40.08						9380.2*		
719.47.00								
719.47.00								

F = Filet. W = Whole Body. * = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95.
Species codes are listed in Table 3.

APPENDIX M

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Lipid Weight EDL 85 and EDL 95
(ppb, lipid weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Total Chlordane	Chlor-pyrifos	Dacthal	Total DDT	Dieldrin
723.10.01	Alamo R/Calipatria	CP	F	10/27/94		6122.4**	175000.0**	700185.3**	2494.3*
723.10.01	Alamo R/Calipatria	CCF	F	10/27/94		3390.0**	75330.0**		941.6*
723.10.02	New R/Westmorland	CP	F	10/27/94			104762.0**	67961.2*	
723.10.02	New R/Westmorland	CCF	F	10/27/95		10684.9**	58904.1**		1137.0*
723.10.28	Peach Drain	GAM	W	10/28/95			211538.5**	196384.6**	8461.5**
723.10.58	New R/Inter Boundary	CP	F	11/02/94			47399.0**		
728.00.90	Salton Sea/South	TLZ	F	10/27/95			1805.2*		
728.00.90	Salton Sea/South	TLZ	F	10/27/95			2736.8*		
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94					
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95			1889.5*		

Station Number	Total Endosulfan	Hexa-chloro-benzene	gamma-HCH (Lindane)	Total HCH	Oxadiazon	Total PCB	Toxaphene	Chemical Group A
723.10.01	1428.6*					15646.3*	27210.9*	32743.8*
723.10.01	602.6*	41.4*						
723.10.02								
723.10.02	767.1*						26027.4*	28657.5*
723.10.28							107692.3**	118246.2**
723.10.58		335.3**						
728.00.90								
728.00.90								
801.11.07					1320.8*			
801.11.07					5232.6**			

F = Filet. W = Whole Body. * = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95.

Species codes are listed in Table 3.

APPENDIX M

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Lipid Weight EDL 85 and EDL 95
(ppb, lipid weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Total Chlordane	Chlor-pyrifos	Dacthal	Total DDT	Dieldrin
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95			1988.6*		
801.11.96	Peters Canyon Channel	PRS	W	06/02/94					
801.11.96	Peters Canyon Channel	PRS	W	06/02/94					
801.11.96	Peters Canyon Channel	PRS	W	06/17/95					
801.26.03	Anza Channel	FHM	W	06/01/94					
901.12.00	Aliso Creek	PRS	W	07/29/95					
901.12.00	Aliso Creek	PRS	W	07/29/95					
901.20.00	San Juan Cr/Doheny State Park	PRS	W	06/12/94					
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95					
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95					

Station Number	Total Endosulfan	Hexa-chloro-benzene	gamma-HCH (Lindane)	Total HCH	Oxadiazon	Total PCB	Toxaphene	Chemical Group A
801.11.07					5965.9**			
801.11.96					1652.4*			
801.11.96					1406.8*			
801.11.96					1369.2*			
801.26.03					1961.2*			
901.12.00					529.7*			
901.12.00					515.7*			
901.20.00					5980.1**			
901.20.00					4091.5*			
901.20.00					4172.3*			

F = Filet. W = Whole Body. * = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95.

Species codes are listed in Table 3.

APPENDIX M

Toxic Substances Monitoring Program

Summary of 1994-95 Data: Organic Chemicals in Freshwater Fish Exceeding Lipid Weight EDL 85 and EDL 95
(ppb, lipid weight)

Station Number	Station Name	Species Code	Tissue	Sample Date	Total Chlordane	Chlorpyrifos	Dacthal	Total DDT	Dieldrin
901.20.03	San Juan Cr/La Novia Avenue	LMB	F	06/12/94					
901.20.04	Trabuco Cr/Oso Road	PRS	W	06/12/94					
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	F	06/11/94					
902.22.03	Rainbow Creek	AC	W	07/26/95					
902.22.03	Rainbow Creek	AC	W	07/26/95					
902.23.01	Rainbow Cr/HWY 15	BLB	F	06/09/94					
907.12.02	San Diego R/Old Mission Dam	LMB	F	06/10/94	14313.0**				
909.12.01	Sweetwater Marsh	LJM	W	07/26/95					
909.12.03	Sweetwater R/Interstate 805	CP	F	06/10/94	5643.3*				

Station Number	Total Endosulfan	Hexa-chloro-benzene	gamma-HCH (Lindane)	Total HCH	Oxadiazon	Total PCB	Toxaphene	Chemical Group A
901.20.03					55445.5**			
901.20.04					576.9*			
902.21.01					2293.6*			
902.22.03					2745.1*			
902.22.03					2497.4*			
902.23.01					9018.6**			
907.12.02								
909.12.01						13459.0*		
909.12.03								

F = Filet. W = Whole Body. * = Equals or exceeds the EDL 85. ** = Equals or exceeds the EDL 95.

Species codes are listed in Table 3.

APPENDIX N

Summary of 1994-95 Data

Organic Chemicals in Marine Fish

Exceeding Lipid Weight EDL 85 and EDL 95

(ppb, lipid weight)

APPENDIX N
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Marine Fish Exceeding Lipid Weight EDL 85 and EDL 95
 (ppb, lipid weight)

Station Number	Station Name	Species Code	Sample Date	Tissue Type	Total Chlor-dane	Total DDT	Total PCB	Chemical Group A
405.13.91	Marina del Rey/Basin D	YFC	06/28/95	F			9916.0*	
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	06/17/95	F	1686.4*			1686.4*
904.31.01	Agua Hedionda	BSB	07/28/95	F		55474.4*		

* = Exceeds EDL 85. F = Filet. Species codes are listed in Table 4.

APPENDIX O

Summary of 1994-95 Data Trace Elements in Fish and Crayfish (ppm, wet weight)

APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95	NA	NA	NA	NA	NA	0.43	NA	NA	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95	NA	NA	NA	NA	NA	1.80	NA	NA	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95	NA	NA	NA	NA	NA	0.57	NA	NA	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	LMB	F	07/12/95	NA	NA	NA	NA	NA	0.61	NA	NA	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	SQF	F	09/23/95	<0.05	<0.01	NA	NA	NA	0.46	<0.10	0.30	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	SQF	F	09/23/95	<0.05	<0.01	NA	NA	NA	0.25	<0.10	0.51	NA	NA
111.63.13	Lake Pillsbury/Eel River Arm	SQF	L	09/23/95	NA	NA	<0.02	47.00	<0.10	NA	NA	NA	0.26	18.00
111.63.14	Lake Pillsbury	LMB	F	09/23/95	<0.05	<0.01	NA	NA	NA	1.00	<0.10	0.34	NA	NA
111.63.14	Lake Pillsbury	LMB	L	09/23/95	NA	NA	<0.02	2.80	<0.10	NA	NA	NA	<0.02	15.00
111.63.14	Lake Pillsbury	SQF	F	09/23/95	<0.05	<0.01	NA	NA	NA	0.33	<0.10	0.27	NA	NA
111.63.14	Lake Pillsbury	SQF	L	09/23/95	NA	NA	<0.02	62.00	<0.10	NA	NA	NA	0.44	22.00
114.11.05	Russian R/Duncans Mills	SCP	W	10/13/94	0.25	0.04	0.14	0.78	<0.10	0.22	0.30	0.20	<0.02	16.00
114.11.23	Russian R/Wohler Brg	SKR	W	10/13/94	0.18	<0.01	0.74	0.73	<0.10	0.03	1.00	0.16	<0.02	19.00
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	W	10/13/94	0.29	0.01	0.58	0.73	0.10	0.06	0.41	0.24	<0.02	41.00
114.22.90	Santa Rosa Cr/Willowside Rd	SKR	F	10/13/94	0.06	<0.01	NA	NA	NA	0.13	<0.10	0.16	NA	NA
114.23.00	Mark West Creek	BG	F	10/13/94	0.05	<0.01	NA	NA	NA	0.26	<0.10	0.20	NA	NA
114.23.00	Mark West Creek	BG	L	10/13/94	NA	NA	<0.02	2.10	<0.10	NA	NA	NA	<0.02	21.00
114.24.12	Lake Sonoma	LMB	F	09/22/95	0.13	<0.01	NA	NA	NA	0.57	<0.10	0.30	NA	NA
114.24.12	Lake Sonoma	LMB	F	09/22/95	0.10	<0.01	NA	NA	NA	1.80	<0.10	0.23	NA	NA
114.24.12	Lake Sonoma	LMB	L	09/22/95	NA	NA	<0.02	2.70	<0.10	NA	NA	NA	<0.02	20.00
114.24.12	Lake Sonoma	LMB	L	09/22/95	NA	NA	<0.02	100.00	<0.10	NA	NA	NA	0.44	54.00
114.26.00	Big Sulfur Creek	SKR	F	10/12/94	0.08	<0.01	NA	NA	NA	0.26	<0.10	0.18	NA	NA
201.12.01	Walker Creek	STG	W	10/05/95	NA	NA	NA	NA	NA	0.23	NA	NA	NA	NA
201.12.10	Walker Cr/Walker Creek Ranch	RCH	W	02/03/94	NA	NA	NA	NA	NA	0.34	NA	NA	NA	NA
201.12.10	Walker Cr/Walker Creek Ranch	RCH	W	10/05/95	NA	NA	NA	NA	NA	0.37	NA	NA	NA	NA
203.13.04	Corte Madera Creek	RCH	F	10/06/95	<0.05	NA	NA	NA	NA	0.11	NA	0.18	NA	NA
204.10.00	San Francisco Bay	PHG	F	02/23/95	1.80	<0.01	NA	NA	NA	0.05	<0.10	0.23	NA	NA
204.10.00	San Francisco Bay	PHG	F	02/23/95	1.70	<0.01	NA	NA	NA	0.04	<0.10	0.25	NA	NA
204.10.00	San Francisco Bay	PHG	F	02/23/95	1.70	<0.01	NA	NA	NA	0.03	<0.10	0.31	NA	NA

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit. NA = Not Analyzed.
 Species codes are listed in Tables 3, 4, and 5.

APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
204.10.00	San Francisco Bay	PHG	O	02/03/95	0.42	<0.01	NA	NA	NA	<0.02	<0.10	0.88	NA	NA
204.10.00	San Francisco Bay	PHG	O	02/23/95	0.46	<0.01	NA	NA	NA	<0.02	<0.10	0.99	NA	NA
204.10.00	San Francisco Bay	PHG	O	02/23/95	0.54	0.01	NA	NA	NA	<0.02	<0.10	1.10	NA	NA
205.50.06	San Fransquito Creek	SKR	W	11/09/95	0.20	NA	NA	1.10	NA	0.04	NA	0.46	NA	NA
206.30.14	Petaluma R/Petaluma	GSF	F	10/05/95	<0.05	NA	NA	NA	NA	0.28	NA	0.13	NA	NA
206.30.14	Petaluma R/Petaluma	GSF	L	10/05/95	NA	NA	NA	2.40	NA	NA	NA	NA	NA	NA
206.40.08	Sonoma Creek	RCH	W	10/05/95	0.20	NA	NA	0.69	NA	0.15	NA	0.28	NA	NA
206.50.34	Napa R/d/s Sewage Treatment	RCH	W	10/04/95	0.48	NA	NA	0.84	NA	0.18	NA	0.20	NA	NA
206.50.36	Napa R/Pioneer Park	BG	F	10/04/95	<0.05	NA	NA	NA	NA	0.36	NA	0.28	NA	NA
206.50.36	Napa R/Pioneer Park	BG	L	10/04/95	NA	NA	NA	1.90	NA	NA	NA	NA	NA	NA
206.50.36	Napa R/Pioneer Park	BB	F	10/04/95	<0.05	NA	NA	NA	NA	0.32	NA	0.14	NA	NA
206.50.36	Napa R/Pioneer Park	BB	L	10/04/95	NA	NA	NA	19.00	NA	NA	NA	NA	NA	NA
207.32.06	Walnut Creek	GSF	F	11/09/95	<0.05	NA	NA	NA	NA	0.34	NA	0.29	NA	NA
207.32.06	Walnut Creek	GSF	L	11/09/95	NA	NA	NA	2.10	<0.10	NA	NA	NA	NA	19.00
305.50.60	Lake Hernandez/San Benito R	CCF	F	11/30/95	<0.05	<0.01	NA	NA	NA	0.69	<0.10	0.24	NA	NA
305.50.60	Lake Hernandez/San Benito R	CCF	L	11/30/95	NA	NA	0.10	2.40	<0.10	NA	NA	NA	<0.02	21.00
305.50.60	Lake Hernandez/San Benito R	LMB	F	11/30/95	<0.05	<0.01	NA	NA	NA	0.52	<0.10	0.39	NA	NA
305.50.60	Lake Hernandez/San Benito R	LMB	L	11/30/95	NA	NA	<0.02	2.30	<0.10	NA	NA	NA	<0.02	17.00
403.11.00	Santa Clara River Estuary	AC	F	06/24/94	0.13	0.20	0.02	1.80	<0.10	<0.02	<0.10	1.30	<0.02	26.00
403.11.00	Santa Clara River Estuary	SAKR	W	06/30/95	0.05	0.15	0.09	1.50	<0.10	0.02	<0.10	0.54	<0.02	15.00
403.21.10	Santa Paula Cr/Stekel Park	STB	W	06/24/94	0.08	0.06	0.06	9.40	<0.10	0.07	<0.10	0.86	<0.02	77.00
403.21.10	Santa Paula Cr/Stekel Park	AC	W	06/30/95	<0.05	0.04	<0.02	2.50	<0.10	0.06	<0.10	1.20	<0.02	43.00
404.21.04	Malibu Cr/Tapia Park	PROI	F	06/29/95	0.12	0.08	<0.02	12.00	<0.10	0.02	0.20	0.75	<0.02	14.00
404.21.05	Malibu Cr/u/s Tapia Discharge	PROI	F	06/29/95	0.16	0.40	<0.02	12.00	<0.10	0.02	0.20	0.93	<0.02	14.00
405.12.07	Madrona Marsh Preserve	GAM	W	06/27/95	<0.05	<0.01	<0.02	0.92	<0.10	<0.02	<0.10	0.11	<0.02	30.00
405.12.90	Harbor Park Lake	CP	F	06/14/94	<0.05	<0.01	NA	NA	NA	<0.02	<0.10	0.54	NA	NA
405.12.90	Harbor Park Lake	LMB	F	06/14/94	<0.05	<0.01	NA	NA	NA	0.09	<0.10	0.60	NA	NA
405.12.90	Harbor Park Lake	LMB	L	06/14/94	NA	NA	<0.02	10.00	<0.10	NA	NA	NA	<0.02	24.00
405.13.03	Ballona Wetlands	LJM	F	06/22/94	1.40	<0.01	NA	NA	NA	0.03	<0.10	0.32	NA	NA
405.13.03	Ballona Wetlands	LJM	L	06/22/94	NA	NA	<0.02	3.10	0.20	NA	NA	NA	0.06	16.00
405.13.90	Ballona Lagoon	STG	F	06/22/94	0.88	<0.01	NA	NA	NA	0.02	<0.10	0.38	NA	NA
405.13.90	Ballona Lagoon	STG	L	06/22/94	NA	NA	<0.02	15.00	0.40	NA	NA	NA	0.10	44.00

L = Liver. F = Filet. W = Whole Body. < = Below Indicated Detection Limit. NA = Not Analyzed.
 Species codes are listed in Tables 3, 4, and 5.

APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
405.13.90	Ballona Lagoon	STG	F	06/27/95	0.94	<0.01	NA	NA	NA	<0.02	<0.10	0.28	NA	NA
405.13.90	Ballona Lagoon	STG	L	06/27/95	NA	NA	<0.02	8.90	0.40	NA	NA	NA	0.05	34.00
405.13.91	Marina del Rey/Basin D	RSR	F	06/28/95	6.20	<0.01	NA	NA	NA	0.30	<0.10	0.56	NA	NA
405.13.91	Marina del Rey/Basin D	RSR	L	06/28/95	NA	NA	0.08	5.80	0.13	NA	NA	NA	0.19	16.00
405.13.91	Marina del Rey/Basin D	SAR	F	06/28/95	0.91	<0.01	NA	NA	NA	0.04	<0.10	0.32	NA	NA
405.13.91	Marina del Rey/Basin D	SAR	L	06/28/95	NA	NA	<0.02	4.60	0.48	NA	NA	NA	0.12	19.00
405.13.91	Marina del Rey/Basin D	YFC	F	06/28/95	1.20	<0.01	NA	NA	NA	0.05	<0.10	0.44	NA	NA
405.13.91	Marina del Rey/Basin D	YFC	L	06/28/95	NA	NA	<0.02	5.80	0.15	NA	NA	NA	<0.02	25.00
535.70.03	Merced R/Hatfield St Rec Area	BG	F	11/18/94	NA	NA	NA	NA	NA	NA	NA	1.00	NA	NA
535.70.03	Merced R/Hatfield St Rec Area	GSF	F	11/18/94	NA	NA	NA	NA	NA	NA	NA	0.38	NA	NA
541.10.91	San Joaquin R/Newman	GSF	F	11/22/94	NA	NA	NA	NA	NA	NA	NA	1.00	NA	NA
541.10.91	San Joaquin R/Newman	SMB	F	11/22/94	NA	NA	NA	NA	NA	NA	NA	1.10	NA	NA
541.10.92	San Joaquin R/Crows Landing	GSF	F	11/30/94	NA	NA	NA	NA	NA	NA	NA	1.20	NA	NA
541.10.92	San Joaquin R/Crows Landing	WCF	F	04/29/96	NA	NA	NA	NA	NA	NA	NA	0.21	NA	NA
541.10.93	San Joaquin R/Patterson Bridge	GSF	F	11/22/94	NA	NA	NA	NA	NA	NA	NA	0.93	NA	NA
541.20.07	Salt Slough	WCF	F	04/22/96	NA	NA	NA	NA	NA	NA	NA	0.52	NA	NA
541.20.90	San Joaquin R/Fremont Ford	GSF	F	11/30/94	NA	NA	NA	NA	NA	NA	NA	1.90	NA	NA
541.20.90	San Joaquin R/Fremont Ford	BB	F	04/22/96	NA	NA	NA	NA	NA	NA	NA	0.21	NA	NA
544.00.16	Old River	LMB	F	04/24/96	NA	NA	NA	NA	NA	NA	NA	0.57	NA	NA
544.00.16	Old River	LMB	F	04/25/96	NA	NA	NA	NA	NA	NA	NA	0.25	NA	NA
544.00.16	Old River	RSF	F	04/25/96	NA	NA	NA	NA	NA	NA	NA	0.37	NA	NA
544.00.32	Paradise Cut/Tracy	LMB	F	04/26/96	NA	NA	NA	NA	NA	NA	NA	0.54	NA	NA
544.00.32	Paradise Cut/Tracy	WCF	F	04/26/96	NA	NA	NA	NA	NA	NA	NA	0.24	NA	NA
544.00.90	San Joaquin R/Mosssdale	CP	F	11/17/94	NA	NA	NA	NA	NA	NA	NA	0.81	NA	NA
544.00.90	San Joaquin R/Mosssdale	LMB	F	11/17/94	NA	NA	NA	NA	NA	NA	NA	0.77	NA	NA
601.00.93	Silver Lake	BN	F	09/28/94	0.08	<0.01	NA	NA	NA	0.05	<0.10	0.88	NA	NA
601.00.93	Silver Lake	BN	L	09/28/94	NA	NA	0.04	220.00	<0.10	NA	NA	NA	2.30	21.00
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	F	09/05/95	0.55	<0.01	NA	NA	NA	0.28	<0.10	0.44	NA	NA
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	L	09/05/95	NA	NA	<0.02	41.00	<0.10	NA	NA	NA	2.20	23.00

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APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
603.20.36	Pleasant Valley Res	BN	F	09/28/94	0.06	<0.01	NA	NA	NA	0.34	<0.10	0.32	NA	NA
603.20.36	Pleasant Valley Res	BN	L	09/28/94	NA	NA	<0.02	210.00	<0.10	NA	NA	NA	0.82	26.00
603.30.05	Haiwee Reservoir	LMB	F	09/07/95	0.09	<0.01	NA	NA	NA	0.07	<0.10	0.31	NA	NA
603.30.05	Haiwee Reservoir	LMB	L	09/07/95	NA	NA	<0.02	6.00	<0.10	NA	NA	NA	<0.02	23.00
628.20.13	Mojave River	AC	W	10/28/94	0.12	0.02	<0.02	2.40	<0.10	0.07	<0.10	0.16	<0.02	42.00
628.20.40	Arrowbear Lake	BLB	F	10/24/95	<0.05	<0.01	NA	NA	NA	0.12	<0.10	<0.05	NA	NA
628.20.40	Arrowbear Lake	BLB	L	10/24/95	NA	NA	<0.02	6.70	0.14	NA	NA	NA	<0.02	18.00
632.20.00	Indian Creek Res	RBT	F	10/16/95	<0.05	<0.01	NA	NA	NA	0.19	<0.10	0.10	NA	NA
632.20.00	Indian Creek Res	RBT	L	10/16/95	NA	NA	<0.02	150.00	<0.10	NA	NA	NA	1.10	28.00
634.10.03	Upper Truckee River	BN	F	08/15/95	0.16	<0.01	NA	NA	NA	0.04	<0.10	0.12	NA	NA
634.10.03	Upper Truckee River	BN	L	08/15/95	NA	NA	<0.02	22.00	<0.10	NA	NA	NA	0.30	35.00
635.20.08	Prosser Reservoir	RBT	F	10/06/94	<0.05	<0.01	NA	NA	NA	0.10	<0.10	0.16	NA	NA
635.20.08	Prosser Reservoir	RBT	L	10/06/94	NA	NA	0.07	24.00	<0.10	NA	NA	NA	0.03	23.00
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	BK	F	09/14/95	<0.05	<0.01	NA	NA	NA	0.05	<0.10	<0.05	NA	NA
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	BK	L	09/14/95	NA	NA	<0.02	7.90	<0.10	NA	NA	NA	0.03	25.00
636.00.14	Little Truckee River	BN	F	10/06/94	<0.05	0.03	NA	NA	NA	0.06	<0.10	0.11	NA	NA
636.00.14	Little Truckee River	BN	L	10/06/94	NA	NA	0.03	71.00	<0.10	NA	NA	NA	0.41	24.00
715.40.08	Palo Verde Outfall Drain	CP	F	10/25/95	NA	NA	NA	NA	NA	NA	NA	0.94	NA	NA
715.40.08	Palo Verde Outfall Drain	LMB	F	10/25/95	NA	NA	NA	NA	NA	NA	NA	0.60	NA	NA
719.47.00	Coachella Valley Stormwater Ch	PRS	W	10/24/95	NA	NA	NA	NA	NA	NA	NA	0.46	NA	NA
719.47.00	Coachella Valley Stormwater Ch	TLZ	W	10/24/95	NA	NA	NA	NA	NA	NA	NA	0.56	NA	NA
723.10.01	Alamo R/Calipatria	CP	F	10/27/94	0.10	0.02	NA	NA	NA	0.10	<0.10	1.70	NA	NA
723.10.01	Alamo R/Calipatria	CCF	F	10/27/94	0.20	<0.01	NA	NA	NA	0.02	<0.10	0.74	NA	NA
723.10.01	Alamo R/Calipatria	CCF	L	10/27/94	NA	NA	<0.02	2.40	<0.10	NA	NA	NA	<0.02	24.00
723.10.02	New R/Westmorland	CP	F	10/27/94	0.08	<0.01	NA	NA	NA	0.27	<0.10	1.50	NA	NA
723.10.02	New R/Westmorland	CCF	F	10/27/95	NA	NA	NA	NA	NA	0.08	NA	0.67	NA	NA
723.10.28	Peach Drain	GAM	W	10/28/95	NA	NA	NA	NA	NA	NA	NA	1.90	NA	NA
723.10.45	Fig Lake	CP	F	10/28/95	NA	NA	NA	NA	NA	NA	NA	1.00	NA	NA
723.10.45	Fig Lake	CP	F	10/28/95	NA	NA	NA	NA	NA	NA	NA	0.93	NA	NA
723.10.58	New R/Inter Boundary	CP	F	11/02/94	0.10	<0.01	NA	NA	NA	0.50	<0.10	1.10	NA	NA

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APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
728.00.90	Salton Sea/South	TLZ	F	10/27/95	NA	NA	NA	NA	NA	NA	NA	2.90	NA	NA
728.00.90	Salton Sea/South	TLZ	F	10/27/95	NA	NA	NA	NA	NA	NA	NA	3.20	NA	NA
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94	0.08	0.07	<0.02	1.10	<0.10	0.03	<0.10	1.60	<0.02	49.00
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	0.15	0.12	0.07	1.30	<0.10	0.02	<0.10	1.10	<0.02	25.00
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	0.17	0.13	0.09	1.40	<0.10	0.02	<0.10	1.10	<0.02	29.00
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	0.09	0.13	0.02	0.85	<0.10	0.02	<0.10	1.30	<0.02	44.00
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	0.10	0.13	0.06	1.10	<0.10	0.02	<0.10	1.30	<0.02	46.00
801.11.96	Peters Canyon Channel	PRS	W	06/17/95	0.09	0.14	0.07	1.40	<0.10	0.02	<0.10	1.30	<0.02	38.00
801.11.97	Newport Bay	BCK	F	06/18/95	1.20	<0.01	NA	NA	NA	0.03	<0.10	0.34	NA	NA
801.11.97	Newport Bay	BCK	L	06/18/95	NA	NA	<0.02	3.10	<0.10	NA	NA	NA	<0.02	20.00
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	F	06/17/95	0.31	<0.01	NA	NA	NA	0.08	<0.10	0.41	NA	NA
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	L	06/17/95	NA	NA	<0.02	9.20	0.15	NA	NA	NA	0.03	22.00
801.13.00	Santa Ana R/Imperial HWY Brg	CCF	F	07/25/95	<0.05	<0.01	NA	NA	NA	0.18	<0.10	0.20	NA	NA
801.13.00	Santa Ana R/Imperial HWY Brg	CCF	L	07/25/95	NA	NA	<0.02	2.20	<0.10	NA	NA	NA	<0.02	21.00
801.25.00	Santa Ana R/Prado Dam	BB	F	06/01/94	<0.05	<0.01	NA	NA	NA	0.13	<0.10	0.24	NA	NA
801.25.00	Santa Ana R/Prado Dam	BB	L	06/01/94	NA	NA	<0.02	3.60	<0.10	NA	NA	NA	<0.02	17.00
801.25.00	Santa Ana R/Prado Dam	BH	F	07/25/95	<0.05	<0.01	NA	NA	NA	0.15	<0.10	0.14	NA	NA
801.25.00	Santa Ana R/Prado Dam	BH	L	07/25/95	NA	NA	<0.02	7.10	<0.10	NA	NA	NA	0.02	17.00
801.26.03	Anza Channel	FHM	W	06/01/94	0.14	0.02	0.12	1.60	<0.10	0.02	<0.10	0.53	<0.02	35.00
801.71.07	Big Bear Lk/Dam	LMB	F	06/08/94	<0.05	<0.01	NA	NA	NA	0.03	<0.10	0.13	NA	NA
801.71.07	Big Bear Lk/Dam	LMB	L	06/08/94	NA	NA	<0.02	3.00	<0.10	NA	NA	NA	<0.02	22.00
801.71.10	Big Bear Lake	LMB	F	06/20/95	0.08	<0.01	NA	NA	NA	0.28	<0.10	0.12	NA	NA
801.71.10	Big Bear Lake	LMB	L	06/20/95	NA	NA	<0.02	1.30	<0.10	NA	NA	NA	<0.02	19.00
801.71.12	Big Bear Lk/Rathbone Creek	LMB	F	06/08/94	<0.05	<0.01	NA	NA	NA	0.21	<0.10	0.12	NA	NA
801.71.12	Big Bear Lk/Rathbone Creek	LMB	L	06/08/94	NA	NA	<0.02	1.80	<0.10	NA	NA	NA	<0.02	20.00
802.31.00	Lake Elsinore	CP	F	06/09/94	0.19	<0.01	NA	NA	NA	0.18	<0.10	0.42	NA	NA
802.31.00	Lake Elsinore	CP	F	06/17/95	0.14	<0.01	NA	NA	NA	0.23	<0.10	0.31	NA	NA
901.12.00	Aliso Creek	PRS	W	07/29/95	0.08	0.50	0.05	1.20	<0.10	0.04	0.15	1.20	<0.02	48.00
901.12.00	Aliso Creek	PRS	W	07/29/95	0.08	0.43	0.04	1.10	<0.10	0.04	0.11	1.20	<0.02	47.00
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	0.08	0.72	0.05	1.00	<0.10	0.02	0.16	1.90	<0.02	30.00

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APPENDIX O
 Toxic Substances Monitoring Program
 Summary of 1994-95 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
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	0.07	0.79	0.04	0.97	<0.10	0.02	0.21	1.90	<0.02	30.00
904.21.02	Buena Vista Lagoon	LMB	F	07/28/95	0.08	<0.01	NA	NA	NA	0.07	<0.10	0.40	NA	NA
904.21.02	Buena Vista Lagoon	LMB	L	07/28/95	NA	NA	<0.02	28.00	<0.10	NA	NA	NA	0.27	39.00
904.31.01	Agua Hedionda	BSB	F	07/28/95	0.36	<0.01	NA	NA	NA	0.02	<0.10	0.19	NA	NA
904.31.01	Agua Hedionda	BSB	L	07/28/95	NA	NA	<0.02	1.70	<0.10	NA	NA	NA	<0.02	28.00
904.61.00	San Elijo Lagoon/Central Basin	CKF	W	07/29/95	0.30	<0.01	0.05	1.30	<0.10	<0.02	<0.10	0.33	<0.02	23.00
906.10.01	Penasquitos Lagoon	STG	F	07/28/95	0.47	<0.01	NA	NA	NA	0.05	<0.10	0.34	NA	NA
906.10.01	Penasquitos Lagoon	STG	L	07/28/95	NA	NA	<0.02	26.00	<0.10	NA	NA	NA	0.08	53.00
906.10.02	Los Penasquitos Cr	LMB	F	11/05/95	<0.05	<0.01	NA	NA	NA	0.22	<0.10	0.51	NA	NA
906.10.02	Los Penasquitos Cr	LMB	L	11/05/95	NA	NA	<0.02	27.00	<0.10	NA	NA	NA	0.38	26.00
906.10.10	Los Penasquitos Cr/u/s I-805	LMB	F	11/11/95	<0.05	<0.01	NA	NA	NA	0.23	<0.10	0.53	NA	NA
906.10.10	Los Penasquitos Cr/u/s I-805	LMB	L	11/11/95	NA	NA	<0.02	11.00	<0.10	NA	NA	NA	0.12	23.00
906.50.02	Tecolote Creek	GSF	F	07/28/95	<0.05	<0.01	NA	NA	NA	0.16	<0.10	0.45	NA	NA
906.50.02	Tecolote Creek	GSF	L	07/28/95	NA	NA	<0.02	1.70	0.22	NA	NA	NA	<0.02	16.00
907.12.02	San Diego R/Old Mission Dam	LMB	F	06/10/94	0.09	<0.01	NA	NA	NA	0.10	<0.10	0.63	NA	NA
907.12.02	San Diego R/Old Mission Dam	LMB	L	06/10/94	NA	NA	<0.02	9.20	<0.10	NA	NA	NA	<0.02	26.00
909.12.01	Sweetwater Marsh	LJM	W	07/26/95	1.10	<0.01	0.06	1.00	0.40	0.02	<0.10	0.24	<0.02	21.00

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APPENDIX P

**Summary of 1994-95 Data
Organic Chemicals in Fish
(ppb, wet weight)**

APPENDIX P
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
114.11.05	Russian R/Duncans Mills	SCP	W	10/13/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	<5.0	5.0	<10.0	<5.0
114.11.23	Russian R/Wohler Brg	SKR	W	10/13/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	W	10/13/94	<5.0	<5.0	6.6	<5.0	<5.0	<5.0	8.6	<5.0	15.2	<10.0	<5.0
114.22.90	Santa Rosa Cr/Willowside Rd	SKR	F	10/13/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
114.23.00	Mark West Creek	BG	F	10/13/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
114.24.12	Lake Sonoma	LMB	F	09/22/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
114.24.12	Lake Sonoma	LMB	F	09/22/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
114.26.00	Big Sulfur Creek	SKR	F	10/12/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
203.13.04	Corte Madera Creek	RCH	F	10/06/95	<5.0	<5.0	6.6	<5.0	<5.0	<5.0	6.5	<5.0	13.1	<10.0	<5.0
204.10.00	San Francisco Bay	PHG	F	02/03/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	9.4

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
114.11.05	<5.0	<10.0	<10.0	<10.0	10.0	<10.0	<10.0	<15.0	NA	10.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
114.11.23	<5.0	<10.0	<10.0	<10.0	7.0	<10.0	<10.0	<15.0	NA	7.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
114.21.10	<5.0	<10.0	<10.0	<10.0	11.0	<10.0	<10.0	<15.0	NA	11.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
114.22.90	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
114.23.00	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
114.24.12	<5.0	<10.0	<10.0	<10.0	10.0	<10.0	<10.0	<15.0	NA	10.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
114.24.12	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
114.26.00	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
203.13.04	<5.0	<10.0	<10.0	<10.0	22.0	<10.0	<10.0	<15.0	NA	22.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
204.10.00	<5.0	<10.0	<10.0	<10.0	69.0	<10.0	<10.0	<15.0	NA	69.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A		
114.11.05	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	9.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	5.0
114.11.23	<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
114.21.10	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	39.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	15.2
114.22.90	<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
114.23.00	<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
114.24.12	<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
114.24.12	<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
114.26.00	<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
203.13.04	<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	13.1
204.10.00	<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

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 = Fillet.

W = Whole Body.

Species codes are listed in Tables 3 and 4.

APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
204.10.00	San Francisco Bay	PHG	O	02/23/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
204.10.00	San Francisco Bay	PHG	F	02/23/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
204.10.00	San Francisco Bay	PHG	O	02/23/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
204.10.00	San Francisco Bay	PHG	F	02/23/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
204.10.00	San Francisco Bay	PHG	O	02/23/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
205.50.06	San Fransquito Creek	SKR	W	11/09/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
206.30.14	Petaluma R/Petaluma	GSF	F	10/05/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
206.40.08	Sonoma Creek	RCH	W	10/05/95	<5.0	<5.0	6.1	<5.0	<5.0	<5.0	9.4	<5.0	15.5	<10.0	<5.0
206.50.34	Napa R/d/s Sewage Treatment	RCH	W	10/04/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.7	<5.0	6.7	<10.0	<5.0
206.50.36	Napa R/Pioneer Park	BG	F	10/04/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0

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
204.10.00	<5.0	<10.0	<10.0	<10.0	8.8	<10.0	<10.0	<15.0	NA	8.8	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
204.10.00	<5.0	<10.0	<10.0	<10.0	41.0	<10.0	<10.0	<15.0	NA	41.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
204.10.00	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
204.10.00	<5.0	<10.0	<10.0	<10.0	36.0	<10.0	<10.0	<15.0	NA	36.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
204.10.00	<5.0	<10.0	<10.0	<10.0	6.6	<10.0	<10.0	<15.0	NA	6.6	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
205.50.06	<5.0	<10.0	<10.0	<10.0	8.2	<10.0	<10.0	<15.0	NA	8.2	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
206.30.14	<5.0	<10.0	<10.0	<10.0	7.5	<10.0	<10.0	<15.0	NA	7.5	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
206.40.08	<5.0	<10.0	<10.0	<10.0	24.0	<10.0	<10.0	<15.0	NA	24.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
206.50.34	<5.0	<10.0	<10.0	<10.0	19.0	<10.0	<10.0	<15.0	NA	19.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
206.50.36	<5.0	<10.0	<10.0	<10.0	14.0	<10.0	<10.0	<15.0	NA	14.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A		
204.10.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	3.9	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
204.10.00	<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
204.10.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	4.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
204.10.00	<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
204.10.00	<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
205.50.06	<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
206.30.14	<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
206.40.08	<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	15.5
206.50.34	<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	6.7
206.50.36	<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

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 Tables 3 and 4.

APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
206.50.36	Napa R/Pioneer Park	BB	F	10/04/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
207.32.06	Walnut Creek	GSF	F	11/09/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
403.11.00	Santa Clara River Estuary	AC	F	06/24/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	52.0
403.11.00	Santa Clara River Estuary	SAKR	W	06/30/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	19.0
403.21.10	Santa Paula Cr/Stekel Park	STB	W	06/24/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
403.64.02	Arroyo Conejo	BLB	F	06/23/94	<5.0	<5.0	6.0	<5.0	<5.0	<5.0	12.0	<5.0	18.0	<10.0	<5.0
403.64.03	Arroyo Conejo/d/s Forks	BLB	F	06/23/94	<5.0	<5.0	18.0	8.0	17.0	6.0	23.0	5.6	77.6	39.0	<5.0
405.12.07	Madrona Marsh Preserve	GAM	W	06/27/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	9.3	<5.0	9.3	<10.0	<5.0
405.12.90	Harbor Park Lake	CP	F	06/14/94	<5.0	12.0	55.0	9.2	39.0	27.0	66.0	5.5	213.7	<10.0	<5.0
405.12.90	Harbor Park Lake	LMB	F	06/14/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12.0	<5.0	12.0	<10.0	<5.0

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
206.50.36	<5.0	<10.0	<10.0	<10.0	17.0	<10.0	<10.0	<15.0	NA	17.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
207.32.06	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
403.11.00	<5.0	<10.0	13.0	<10.0	150.0	<10.0	<10.0	<15.0	NA	163.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
403.11.00	5.5	<10.0	23.0	<10.0	130.0	<10.0	39.0	<15.0	NA	192.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
403.21.10	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
403.64.02	<5.0	<10.0	<10.0	<10.0	32.0	<10.0	<10.0	<15.0	NA	32.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
403.64.03	<5.0	<10.0	<10.0	<10.0	11.0	<10.0	<10.0	<15.0	NA	11.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
405.12.07	<5.0	<10.0	<10.0	<10.0	12.0	<10.0	<10.0	<15.0	NA	12.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
405.12.90	7.2	14.0	78.0	<10.0	140.0	<10.0	<10.0	<15.0	NA	232.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
405.12.90	<5.0	<10.0	<10.0	<10.0	25.0	<10.0	<10.0	<15.0	NA	25.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical Group A			
206.50.36	<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
207.32.06	<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
403.11.00	<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	250.0	250.0
403.11.00	<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	570.0	575.5
403.21.10	<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
403.64.02	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	25.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	18.0
403.64.03	<2.0	<10.0	<5.0	2.9	2.9	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	80.5
405.12.07	<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	56.0	<50.0	56.0	<100.0	9.3
405.12.90	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	13.0	<10.0	<10.0	<50.0	99.0	120.0	219.0	<100.0	220.9
405.12.90	<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	12.0

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 = Fillet.

W = Whole Body.

Species codes are listed in Tables 3 and 4.

P-4

APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
405.13.03	Ballona Wetlands	LJM	F	06/22/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
405.13.90	Ballona Lagoon	STG	F	06/22/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
405.13.91	Marina del Rey/Basin D	RSR	F	06/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
405.13.91	Marina del Rey/Basin D	SAR	F	06/28/95	<5.0	<5.0	9.0	<5.0	<5.0	9.7	12.0	<5.0	30.7	<10.0	<5.0
405.13.91	Marina del Rey/Basin D	YFC	F	06/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	F	09/05/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
628.20.13	Mojave River	AC	W	10/28/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
628.20.40	Arrowbear Lake	BLB	F	10/24/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
632.20.00	Indian Creek Res	RBT	F	10/16/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
634.10.03	Upper Truckee River	BN	F	08/15/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0

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
405.13.03	<5.0	<10.0	<10.0	<10.0	6.2	<10.0	<10.0	<15.0	NA	6.2	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
405.13.90	<5.0	<10.0	<10.0	<10.0	9.3	<10.0	<10.0	<15.0	NA	9.3	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
405.13.91	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
405.13.91	5.3	<10.0	15.0	<10.0	86.0	<10.0	<10.0	<15.0	NA	101.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
405.13.91	<5.0	<10.0	<10.0	<10.0	60.0	<10.0	<10.0	<15.0	NA	60.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
603.10.16	<5.0	<10.0	<10.0	<10.0	12.0	<10.0	<10.0	<15.0	NA	12.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
628.20.13	<5.0	<10.0	<10.0	<10.0	6.1	<10.0	<10.0	<15.0	NA	6.1	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
628.20.40	<5.0	<10.0	<10.0	<10.0	6.5	<10.0	<10.0	<15.0	NA	6.5	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
632.20.00	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
634.10.03	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A		
405.13.03	<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
405.13.90	<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
405.13.91	<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
405.13.91	<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	190.0	65.0	255.0	<100.0	36.0
405.13.91	<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	59.0	<50.0	59.0	<100.0	ND
603.10.16	<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
628.20.13	<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
628.20.40	<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
632.20.00	<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
634.10.03	<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

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 Tables 3 and 4.

APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	BK	F	09/14/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
715.40.08	Palo Verde Outfall Drain	CP	F	10/25/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	17.0	10.0
715.40.08	Palo Verde Outfall Drain	LMB	F	10/25/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
719.47.00	Coachella Valley Stormwater Ch	PRS	W	10/24/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	900.0
719.47.00	Coachella Valley Stormwater Ch	TLZ	W	10/24/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	220.0
723.10.01	Alamo R/Calipatria	CP	F	10/27/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.1	<5.0	7.1	27.0	770.0
723.10.01	Alamo R/Calipatria	CCF	F	10/27/94	<5.0	<5.0	6.3	<5.0	<5.0	<5.0	6.5	<5.0	12.8	180.0	4000.0
723.10.02	New R/Westmorland	CP	F	10/27/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	220.0
723.10.02	New R/Westmorland	CCF	F	10/27/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.3	<5.0	5.3	78.0	430.0
723.10.28	Peach Drain	GAM	W	10/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	14.0	34.0	6.4	54.4	12.0	5500.0

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
635.20.09	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
715.40.08	<5.0	<10.0	12.0	<10.0	170.0	<10.0	<10.0	<15.0	NA	182.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
715.40.08	<5.0	<10.0	<10.0	<10.0	46.0	<10.0	<10.0	<15.0	NA	46.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
719.47.00	5.9	<10.0	18.0	<10.0	300.0	<10.0	<10.0	<15.0	NA	318.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
719.47.00	6.3	<10.0	11.0	<10.0	150.0	<10.0	<10.0	<15.0	NA	161.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
723.10.01	11.0	16.0	44.0	<10.0	3000.0	<10.0	<10.0	21.0	NA	3081.0	<100.0	<50.0	6.3	<70.0	<85.0	6.3	<15.0	<20.0
723.10.01	50.0	25.0	56.0	<10.0	580.0	<10.0	19.0	16.0	NA	696.0	<100.0	<50.0	32.0	<70.0	<85.0	32.0	<15.0	22.0
723.10.02	<5.0	<10.0	<10.0	<10.0	140.0	<10.0	<10.0	<15.0	NA	140.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
723.10.02	8.3	<10.0	18.0	<10.0	300.0	<10.0	<10.0	<15.0	NA	318.0	<100.0	<50.0	5.6	<70.0	<85.0	5.6	<15.0	<20.0
723.10.28	220.0	55.0	65.0	40.0	4800.0	12.0	87.0	47.0	NA	5106.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A		
635.20.09	<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	ND	<100.0	ND	
715.40.08	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	170.0	57.0	<50.0	<100.0	ND	
715.40.08	<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	ND	<100.0	ND	
719.47.00	<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	50.0	<100.0	5.9
719.47.00	<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	6.3
723.10.01	<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	69.0	69.0	120.0	144.4
723.10.01	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	2.2	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	220.0	314.8
723.10.02	<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
723.10.02	<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	190.0	209.2
723.10.28	<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	2800.0	3074.4

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 = Fillet.
 W = Whole Body.
 Species codes are listed in Tables 3 and 4.

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APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
723.10.45	Fig Lake	CP	F	10/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
723.10.45	Fig Lake	CP	F	10/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
723.10.58	New R/Inter Boundary	CP	F	11/02/94	<5.0	9.0	58.0	13.0	49.0	18.0	55.0	<5.0	202.0	130.0	4100.0
728.00.90	Salton Sea/South	TLZ	F	10/27/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	7.6
728.00.90	Salton Sea/South	TLZ	F	10/27/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	5.2
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94	<5.0	<5.0	5.8	<5.0	5.6	6.1	14.0	<5.0	31.5	<10.0	6.9
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	<5.0	<5.0	11.0	<5.0	6.6	7.2	12.0	<5.0	36.8	59.0	130.0
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	<5.0	<5.0	12.0	<5.0	6.9	7.4	13.0	<5.0	39.3	55.0	140.0
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	<5.0	<5.0	13.0	<5.0	8.1	12.0	21.0	<5.0	54.1	<10.0	5.6
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	<5.0	<5.0	10.0	<5.0	6.5	9.9	19.0	<5.0	45.4	<10.0	9.0

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
723.10.45	<5.0	<10.0	<10.0	<10.0	29.0	<10.0	<10.0	<15.0	NA	29.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
723.10.45	<5.0	<10.0	<10.0	<10.0	24.0	<10.0	<10.0	<15.0	NA	24.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
723.10.58	9.4	28.0	160.0	<10.0	380.0	<10.0	<10.0	26.0	NA	594.0	<100.0	140.0	6.1	<70.0	<85.0	6.1	<15.0	<20.0
728.00.90	<5.0	<10.0	<10.0	<10.0	5.0	<10.0	<10.0	<15.0	NA	5.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
728.00.90	<5.0	<10.0	<10.0	<10.0	5.8	<10.0	<10.0	<15.0	NA	5.8	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
801.11.07	<5.0	<10.0	44.0	<10.0	350.0	11.0	16.0	<15.0	NA	421.0	<100.0	440.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.11.07	8.8	11.0	58.0	<10.0	270.0	10.0	<10.0	18.0	NA	367.0	<100.0	87.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.11.07	8.8	13.0	62.0	<10.0	280.0	12.0	15.0	18.0	NA	400.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.11.96	8.4	<10.0	48.0	<10.0	790.0	32.0	40.0	20.0	NA	930.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.11.96	5.4	<10.0	40.0	<10.0	810.0	28.0	22.0	18.0	NA	918.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical Group A			
723.10.45	<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
723.10.45	<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
723.10.58	<2.0	<10.0	<5.0	8.1	8.1	<5.0	<5.0	29.0	<15.0	<5.0	<10.0	<10.0	220.0	110.0	99.0	429.0	<100.0	225.6
728.00.90	<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
728.00.90	<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
801.11.07	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	70.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	120.0	151.5
801.11.07	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	360.0	<10.0	<10.0	<50.0	58.0	<50.0	58.0	320.0	365.6
801.11.07	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	420.0	<10.0	<10.0	<50.0	58.0	<50.0	58.0	<100.0	48.1
801.11.96	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	120.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	390.0	452.5
801.11.96	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	77.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	300.0	350.8

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 = Fillet.
 W = Whole Body.
 Species codes are listed in Tables 3 and 4.

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APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
801.11.96	Peters Canyon Channel	PRS	W	06/17/95	<5.0	<5.0	7.6	<5.0	<5.0	8.3	12.0	<5.0	27.9	40.0	16.0
801.11.97	Newport Bay	BCK	F	06/18/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	F	06/17/95	<5.0	<5.0	7.1	<5.0	<5.0	7.4	14.0	<5.0	28.5	<10.0	<5.0
801.13.00	Santa Ana R/Imperial HWY Brg	CP	F	07/25/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.0	<5.0	6.0	<10.0	<5.0
801.25.00	Santa Ana R/Prado Dam	BB	F	06/01/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
801.25.00	Santa Ana R/Prado Dam	BH	F	07/25/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
801.26.03	Anza Channel	FHM	W	06/01/94	<5.0	<5.0	8.8	<5.0	8.3	6.6	20.0	<5.0	43.7	<10.0	<5.0
801.71.07	Big Bear Lk/Dam	LMB	F	06/08/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
801.71.10	Big Bear Lake	LMB	F	06/20/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
801.71.12	Big Bear Lk/Rathbone Creek	LMB	F	06/08/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0

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
801.11.96	7.0	<10.0	34.0	<10.0	600.0	18.0	36.0	19.0	NA	707.0	<100.0	74.0	<5.0	NA	NA	ND	<15.0	21.0
801.11.97	<5.0	<10.0	<10.0	<10.0	66.0	<10.0	<10.0	<15.0	NA	66.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.11.98	<5.0	<10.0	21.0	<10.0	200.0	<10.0	22.0	<15.0	NA	243.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.13.00	<5.0	<10.0	<10.0	<10.0	26.0	<10.0	<10.0	<15.0	NA	26.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
801.25.00	<5.0	<10.0	<10.0	<10.0	20.0	<10.0	<10.0	<15.0	NA	20.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.25.00	<5.0	<10.0	<10.0	<10.0	24.0	<10.0	<10.0	<15.0	NA	24.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
801.26.03	12.0	12.0	36.0	<10.0	410.0	<10.0	<10.0	<15.0	NA	458.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.71.07	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.71.10	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
801.71.12	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A	
801.11.96	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	79.0	<10.0	<10.0	<50.0	<50.0	<50.0	540.0	574.9
801.11.97	<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	<100.0	ND
801.11.98	<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	70.0	<50.0	<100.0	28.5
801.13.00	<2.0	<10.0	<5.0	3.3	3.3	<5.0	<5.0	<2.0	<15.0	9.4	<10.0	<10.0	<50.0	<50.0	<50.0	<100.0	9.3
801.25.00	<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	<100.0	ND
801.25.00	<2.0	<10.0	<5.0	2.4	2.4	<5.0	<5.0	<2.0	<15.0	<5.0	<10.0	<10.0	<50.0	<50.0	<50.0	<100.0	2.4
801.26.03	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	91.0	<10.0	<10.0	<50.0	150.0	73.0	<100.0	55.7
801.71.07	<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	<100.0	ND
801.71.10	<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	<100.0	ND
801.71.12	<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	<100.0	ND

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 = Fillet.

W = Whole Body.

Species codes are listed in Tables 3 and 4.

APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
802.31.00	Lake Elsinore	CP	F	06/09/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.9	<5.0	5.9	<10.0	6.8
802.31.00	Lake Elsinore	CP	F	06/17/95	<5.0	<5.0	5.6	<5.0	<5.0	<5.0	5.8	<5.0	11.4	<10.0	31.0
901.12.00	Aliso Creek	PRS	W	07/29/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.12.00	Aliso Creek	PRS	W	07/29/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.20.00	San Juan Cr/Doheny State Park	PRS	W	06/12/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.20.03	San Juan Cr/La Novia Avenue	LMB	F	06/12/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
901.20.04	Trabuco Cr/Oso Road	PRS	W	06/12/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	F	06/11/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0

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
802.31.00	<5.0	<10.0	<10.0	<10.0	73.0	<10.0	<10.0	<15.0	NA	73.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
802.31.00	<5.0	<10.0	<10.0	<10.0	100.0	<10.0	<10.0	<15.0	NA	100.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
901.12.00	<5.0	<10.0	<10.0	<10.0	9.6	<10.0	<10.0	<15.0	NA	9.6	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
901.12.00	<5.0	<10.0	<10.0	<10.0	13.0	<10.0	<10.0	<15.0	NA	13.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
901.20.00	<5.0	<10.0	<10.0	<10.0	50.0	<10.0	<10.0	<15.0	NA	50.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
901.20.00	<5.0	<10.0	<10.0	<10.0	45.0	<10.0	<10.0	<15.0	NA	45.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
901.20.00	<5.0	<10.0	<10.0	<10.0	40.0	<10.0	<10.0	<15.0	NA	40.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
901.20.03	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
901.20.04	<5.0	<10.0	<10.0	<10.0	16.0	<10.0	<10.0	<15.0	NA	16.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
902.21.01	<5.0	<10.0	<10.0	<10.0	77.0	<10.0	<10.0	<15.0	NA	77.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-chlor	Ethyl-diazon	Methyl Parathion	PCB Parathion	PCB 1248	PCB 1254	Total PCB 1260	Toxaphene PCB	Chemical	Group A
802.31.00	<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	5.9
802.31.00	<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	88.0	<50.0	88.0	<100.0	11.4
901.12.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	25.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.12.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	23.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.20.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	180.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.20.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	310.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.20.00	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	340.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.20.03	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	56.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
901.20.04	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	30.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
902.21.01	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	25.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND

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 = Fillet.

W = Whole Body.

Species codes are listed in Tables 3 and 4.

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APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
902.22.03	Rainbow Creek	AC	W	07/26/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.3	<5.0	6.3	<10.0	<5.0
902.22.03	Rainbow Creek	AC	W	07/26/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.3	<5.0	8.3	<10.0	<5.0
902.23.01	Rainbow Cr/HWY 15	BLB	F	06/09/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
903.12.02	Ostrich Farm Creek	GSF	F	06/11/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
904.21.02	Buena Vista Lagoon	LMB	F	07/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
904.31.01	Agua Hedionda	BSB	F	07/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
904.61.00	San Elijo Lagoon/Central Basin	CKF	W	07/29/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
906.10.01	Penasquitos Lagoon	STG	F	07/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
906.10.02	Los Penasquitos Cr	LMB	F	11/05/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
906.10.10	Los Penasquitos Cr/u/s I-805	LMB	F	11/11/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0

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
902.22.03	<5.0	<10.0	<10.0	<10.0	25.0	<10.0	<10.0	<15.0	NA	25.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
902.22.03	<5.0	<10.0	<10.0	<10.0	32.0	<10.0	<10.0	<15.0	NA	32.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
902.23.01	<5.0	<10.0	<10.0	<10.0	70.0	<10.0	<10.0	<15.0	NA	70.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
903.12.02	<5.0	<10.0	<10.0	<10.0	7.2	<10.0	<10.0	<15.0	NA	7.2	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
904.21.02	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
904.31.01	<5.0	<10.0	<10.0	<10.0	76.0	<10.0	<10.0	<15.0	NA	76.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
904.61.00	<5.0	<10.0	58.0	<10.0	91.0	<10.0	<10.0	22.0	NA	171.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
906.10.01	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
906.10.02	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
906.10.10	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	TotalToxaphene PCB	Chemical	Group A		
902.22.03	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	280.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	6.3
902.22.03	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	240.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	8.3
902.23.01	<2.0	<10.0	<5.0	<2.0	ND	<5.0	<5.0	<2.0	<15.0	34.0	<10.0	<10.0	<50.0	<50.0	<50.0	ND	<100.0	ND
903.12.02	<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
904.21.02	<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
904.31.01	<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
904.61.00	<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
906.10.01	<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
906.10.02	<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
906.10.10	<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

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 = Fillet.

W = Whole Body.

Species codes are listed in Tables 3 and 4.

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APPENDIX P (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Organic Chemicals in Fish (ppb, wet weight)

Station Number	Station Name	Sample Type	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
906.50.02	Tecolote Creek	GSF	F	07/28/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
907.12.02	San Diego R/Old Mission Dam	LMB	F	06/10/94	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.5	<5.0	7.5	<10.0	<5.0
909.12.01	Sweetwater Marsh	LJM	W	07/26/95	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	<10.0	<5.0
909.12.03	Sweetwater R/Interstate 805	CP	F	06/10/94	<5.0	<5.0	7.6	<5.0	<5.0	5.4	12.0	<5.0	25.0	<10.0	<5.0

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
906.50.02	<5.0	<10.0	<10.0	<10.0	<5.0	<10.0	<10.0	<15.0	NA	ND	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
907.12.02	<5.0	<10.0	<10.0	<10.0	6.8	<10.0	<10.0	<15.0	NA	6.8	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0
909.12.01	<5.0	<10.0	<10.0	<10.0	25.0	<10.0	<10.0	<15.0	NA	25.0	<100.0	<50.0	<5.0	NA	NA	ND	<15.0	<20.0
909.12.03	<5.0	<10.0	<10.0	<10.0	63.0	<10.0	<10.0	<15.0	NA	63.0	<100.0	<50.0	<5.0	<70.0	<85.0	ND	<15.0	<20.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-Oxa-Ethyl-chlor	Ethyl-diazon	Methyl Para-thion	PCB 1248	PCB 1254	TotalToxaphene 1260	Chemical PCB	Group A		
906.50.02	<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
907.12.02	<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	7.5
909.12.01	<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	100.0	<50.0	100.0	<100.0	ND
909.12.03	<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	25.0

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 Tables 3 and 4.

APPENDIX Q

**Summary of 1994-95 Data
Lipid Data in Fish
(ppb, lipid weight)**

APPENDIX Q

Toxic Substances Monitoring Program Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
114.11.05	Russian R/Duncans Mills	SCP	W	10/13/94	ND	ND	ND	ND	ND	ND	133.0	ND	133.0	ND	ND
114.11.23	Russian R/Wohler Brg	SKR	W	10/13/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.21.10	Laguna de Santa Rosa/Stony Pt	FHM	W	10/13/94	ND	ND	253.8	ND	ND	ND	330.8	ND	584.6	ND	ND
114.22.90	Santa Rosa Cr/Willowside Rd	SKR	F	10/13/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.23.00	Mark West Creek	BG	F	10/13/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.24.12	Lake Sonoma	LMB	F	09/22/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.24.12	Lake Sonoma	LMB	F	09/22/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.26.00	Big Sulfur Creek	SKR	F	10/12/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
203.13.04	Corte Madera Creek	RCH	F	10/06/95	ND	ND	402.4	ND	ND	ND	396.3	ND	798.8	ND	ND
204.10.00	San Francisco Bay	PHG	F	02/03/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	139.5

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	
114.11.05	ND	ND	ND	ND	266.0	ND	ND	ND	NA	266.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.11.23	ND	ND	ND	ND	275.6	ND	ND	ND	NA	275.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.21.10	ND	ND	ND	ND	423.1	ND	ND	ND	NA	423.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.22.90	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.23.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.24.12	ND	ND	ND	ND	1647.4	ND	ND	ND	NA	1647.4	ND	ND	ND	NA	NA	ND	ND	ND	ND
114.24.12	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND
114.26.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
203.13.04	ND	ND	ND	ND	1341.5	ND	ND	ND	NA	1341.5	ND	ND	ND	NA	NA	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	1023.7	ND	ND	ND	NA	1023.7	ND	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Parathion	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
114.11.05	ND	ND	ND	ND	ND	ND	ND	ND	239.4	266.0	ND	ND	ND	ND	ND	ND	133.0
114.11.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.21.10	ND	ND	ND	ND	ND	ND	ND	ND	1500.0	ND	ND	ND	ND	ND	ND	ND	584.6
114.22.90	ND	ND	ND	ND	ND	ND	ND	ND	1282.1	ND	ND	ND	ND	ND	ND	ND	ND
114.23.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.24.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.24.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
114.26.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
203.13.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	798.8
204.10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
204.10.00	San Francisco Bay	PHG	O	02/23/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	San Francisco Bay	PHG	F	02/23/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	San Francisco Bay	PHG	O	02/23/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	San Francisco Bay	PHG	F	02/23/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	San Francisco Bay	PHG	O	02/23/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
205.50.06	San Fransquito Creek	SKR	W	11/09/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
206.30.14	Petaluma R/Petaluma	GSF	F	10/05/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
206.40.08	Sonoma Creek	RCH	W	10/05/95	ND	ND	92.1	ND	ND	ND	142.0	ND	234.1	ND	ND
206.50.34	Napa R/d/s Sewage Treatment	RCH	W	10/04/95	ND	ND	ND	ND	ND	ND	358.3	ND	358.3	ND	ND
206.50.36	Napa R/Pioneer Park	BG	F	10/04/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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	
204.10.00	ND	ND	ND	ND	369.7	ND	ND	ND	NA	369.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	1014.9	ND	ND	ND	NA	1014.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	660.6	ND	ND	ND	NA	660.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	287.0	ND	ND	ND	NA	287.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
205.50.06	ND	ND	ND	ND	626.0	ND	ND	ND	NA	626.0	ND	ND	ND	NA	NA	ND	ND	ND	ND
206.30.14	ND	ND	ND	ND	3440.4	ND	ND	ND	NA	3440.4	ND	ND	ND	NA	NA	ND	ND	ND	ND
206.40.08	ND	ND	ND	ND	362.5	ND	ND	ND	NA	362.5	ND	ND	ND	NA	NA	ND	ND	ND	ND
206.50.34	ND	ND	ND	ND	1016.0	ND	ND	ND	NA	1016.0	ND	ND	ND	NA	NA	ND	ND	ND	ND
206.50.36	ND	ND	ND	ND	11111.1	ND	ND	ND	NA	11111.1	ND	ND	ND	NA	NA	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
204.10.00	ND	ND	ND	ND	ND	ND	163.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	ND	ND	215.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
204.10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
205.50.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
206.30.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
206.40.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	234.1
206.50.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	358.3
206.50.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

O = Ova.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
206.50.36	Napa R/Pioneer Park	BB	F	10/04/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
207.32.06	Walnut Creek	GSF	F	11/09/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
403.11.00	Santa Clara River Estuary	AC	F	06/24/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2000.0
403.11.00	Santa Clara River Estuary	SAKR	W	06/30/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	281.9
403.21.10	Santa Paula Cr/Stekel Park	STB	W	06/24/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
403.64.02	Arroyo Conejo	BLB	F	06/23/94	ND	ND	434.8	ND	ND	ND	869.6	ND	1304.3	ND	ND
403.64.03	Arroyo Conejo/d/s Forks	BLB	F	06/23/94	ND	ND	932.6	414.5	880.8	310.9	1191.7	290.2	4020.7	2020.7	ND
405.12.07	Madrona Marsh Preserve	GAM	W	06/27/95	ND	ND	ND	ND	ND	ND	382.7	ND	382.7	ND	ND
405.12.90	Harbor Park Lake	CP	F	06/14/94	ND	192.6	882.8	147.7	626.0	433.4	1059.4	88.3	3430.2	ND	ND
405.12.90	Harbor Park Lake	LMB	F	06/14/94	ND	ND	ND	ND	ND	ND	7185.6	ND	7185.6	ND	ND

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
206.50.36	ND	ND	ND	ND	3541.7	ND	ND	ND	NA	3541.7	ND	ND	ND	NA	NA	ND	ND	ND
207.32.06	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
403.11.00	ND	ND	500.0	ND	5769.2	ND	ND	ND	NA	6269.2	ND	ND	ND	ND	ND	ND	ND	ND
403.11.00	81.6	ND	341.2	ND	1928.8	ND	578.6	ND	NA	2848.7	ND	ND	ND	NA	NA	ND	ND	ND
403.21.10	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
403.64.02	ND	ND	ND	ND	2318.8	ND	ND	ND	NA	2318.8	ND	ND	ND	ND	ND	ND	ND	ND
403.64.03	ND	ND	ND	ND	569.9	ND	ND	ND	NA	569.9	ND	ND	ND	ND	ND	ND	ND	ND
405.12.07	ND	ND	ND	ND	493.8	ND	ND	ND	NA	493.8	ND	ND	ND	NA	NA	ND	ND	ND
405.12.90	115.6	224.7	1252.0	ND	2247.2	ND	ND	ND	NA	3723.9	ND	ND	ND	ND	ND	ND	ND	ND
405.12.90	ND	ND	ND	ND	14970.1	ND	ND	ND	NA	14970.1	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Parathion	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
206.50.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
207.32.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
403.11.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9615.4	9615.4
403.11.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8457.0	8538.6
403.21.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
403.64.02	ND	ND	ND	ND	ND	ND	ND	ND	1811.6	ND	ND	ND	ND	ND	ND	ND	1304.3
403.64.03	ND	ND	ND	150.3	150.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4171.0
405.12.07	ND	ND	ND	ND	ND	ND	ND	ND	205.8	ND	ND	ND	2304.5	ND	2304.5	ND	382.7
405.12.90	ND	ND	ND	ND	ND	ND	ND	ND	208.7	ND	ND	ND	1589.1	1926.2	3515.2	ND	3545.7
405.12.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7185.6

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
405.13.03	Ballona Wetlands	LJM	F	06/22/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.90	Ballona Lagoon	STG	F	06/22/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.91	Marina del Rey/Basin D	RSR	F	06/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.91	Marina del Rey/Basin D	SAR	F	06/28/95	ND	ND	294.1	ND	ND	317.0	392.2	ND	1003.3	ND	ND
405.13.91	Marina del Rey/Basin D	YFC	F	06/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
603.10.16	Mammoth Cr/d/s Murphy's Gulch	BN	F	09/05/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
628.20.13	Mojave River	AC	W	10/28/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
628.20.40	Arrowbear Lake	BLB	F	10/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
632.20.00	Indian Creek Res	RBT	F	10/16/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
634.10.03	Upper Truckee River	BN	F	08/15/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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	
405.13.03	ND	ND	ND	ND	6078.4	ND	ND	ND	NA	6078.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.90	ND	ND	ND	ND	3522.7	ND	ND	ND	NA	3522.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.91	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND
405.13.91	173.2	ND	490.2	ND	2810.5	ND	ND	ND	NA	3300.7	ND	ND	ND	NA	NA	ND	ND	ND	ND
405.13.91	ND	ND	ND	ND	10084.0	ND	ND	ND	NA	10084.0	ND	ND	ND	NA	NA	ND	ND	ND	ND
603.10.16	ND	ND	ND	ND	718.6	ND	ND	ND	NA	718.6	ND	ND	ND	NA	NA	ND	ND	ND	ND
628.20.13	ND	ND	ND	ND	1480.6	ND	ND	ND	NA	1480.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
628.20.40	ND	ND	ND	ND	974.5	ND	ND	ND	NA	974.5	ND	ND	ND	NA	NA	ND	ND	ND	ND
632.20.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND
634.10.03	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
405.13.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
405.13.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6209.1	2124.2	8333.3	ND	1176.5
405.13.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9916.0	ND	9916.0	ND	ND
603.10.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
628.20.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
628.20.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
632.20.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
634.10.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
635.20.09	Trout Cr/Truckee/d/s Meeks Lumb	BK	F	09/14/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
715.40.08	Palo Verde Outfall Drain	CP	F	10/25/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	702.5	413.2
715.40.08	Palo Verde Outfall Drain	LMB	F	10/25/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
719.47.00	Coachella Valley Stormwater Ch	PRS	W	10/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16822.4
719.47.00	Coachella Valley Stormwater Ch	TLZ	W	10/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6896.6
723.10.01	Alamo R/Calipatria	CP	F	10/27/94	ND	ND	ND	ND	ND	ND	1610.0	ND	1610.0	6122.4	75000.0
723.10.01	Alamo R/Calipatria	CCF	F	10/27/94	ND	ND	118.6	ND	ND	ND	122.4	ND	241.1	3390.0	75330.0
723.10.02	New R/Westmorland	CP	F	10/27/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	104762.0
723.10.02	New R/Westmorland	CCF	F	10/27/95	ND	ND	ND	ND	ND	ND	726.0	ND	726.0	10684.9	58904.1
723.10.28	Peach Drain	GAM	W	10/28/95	ND	ND	ND	ND	ND	538.5	1307.7	246.2	2092.3	461.5	211538.5

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
635.20.09	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
715.40.08	ND	ND	495.9	ND	7024.8	ND	ND	ND	NA	7520.7	ND	ND	ND	NA	NA	ND	ND	ND
715.40.08	ND	ND	ND	ND	45544.6	ND	ND	ND	NA	45544.6	ND	ND	ND	NA	NA	ND	ND	ND
719.47.00	110.3	ND	336.4	ND	5607.5	ND	ND	ND	NA	5943.9	ND	ND	ND	NA	NA	ND	ND	ND
719.47.00	197.5	ND	344.8	ND	4702.2	ND	ND	ND	NA	5047.0	ND	ND	ND	NA	NA	ND	ND	ND
723.10.01	2494.3	3628.1	9977.3	ND	681818.0	ND	ND	4761.9	NA	700185.3	ND	ND	1428.6	ND	ND	1428.6	ND	ND
723.10.01	941.6	470.8	1054.6	ND	10922.8	ND	357.8	301.3	NA	13107.3	ND	ND	602.6	ND	ND	602.6	ND	414.3
723.10.02	ND	ND	ND	ND	67961.2	ND	ND	ND	NA	67961.2	ND	ND	ND	ND	ND	ND	ND	ND
723.10.02	1137.0	ND	2465.8	ND	41095.9	ND	ND	ND	NA	43561.6	ND	ND	767.1	ND	ND	767.1	ND	ND
723.10.28	8461.5	2115.4	2500.0	1538.5	184615.4	461.5	3346.2	1807.7	NA	196384.6	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Parathion	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
635.20.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
715.40.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7024.8	2355.4	ND	9380.2	ND	ND
715.40.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
719.47.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	934.6	ND	934.6	ND	110.3
719.47.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	197.5
723.10.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15646.3	15646.3	27210.9	32743.8
723.10.01	ND	ND	ND	ND	ND	ND	41.4	ND	ND	ND	ND	ND	ND	ND	ND	4143.1	5928.4
723.10.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
723.10.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26027.4	28657.5
723.10.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	107692.3	118246.2

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
723.10.45	Fig Lake	CP	F	10/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
723.10.45	Fig Lake	CP	F	10/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
723.10.58	New R/Inter Boundary	CP	F	11/02/94	ND	104.0	670.5	150.3	566.5	208.1	635.8	ND	2335.3	1502.9	47399.0
728.00.90	Salton Sea/South	TLZ	F	10/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1805.2
728.00.90	Salton Sea/South	TLZ	F	10/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2736.8
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/02/94	ND	ND	109.4	ND	105.7	115.1	264.2	ND	594.3	ND	130.2
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	ND	ND	159.9	ND	95.9	104.7	174.4	ND	534.9	857.6	1889.5
801.11.07	San Diego Cr/Michelson Dr	PRS	W	06/17/95	ND	ND	170.5	ND	98.0	105.1	184.7	ND	558.2	781.3	1988.6
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	ND	ND	152.4	ND	95.0	140.7	246.2	ND	634.2	ND	65.7
801.11.96	Peters Canyon Channel	PRS	W	06/02/94	ND	ND	214.6	ND	139.5	212.4	407.7	ND	974.2	ND	193.1

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
723.10.45	ND	ND	ND	ND	9206.3	ND	ND	ND	NA	9206.3	ND	ND	ND	NA	NA	ND	ND	ND
723.10.45	ND	ND	ND	ND	12307.7	ND	ND	ND	NA	12307.7	ND	ND	ND	NA	NA	ND	ND	ND
723.10.58	108.7	323.7	1849.7	ND	4393.1	ND	ND	300.6	NA	6867.1	ND	1618.5	70.5	ND	ND	70.5	ND	ND
728.00.90	ND	ND	ND	ND	1187.6	ND	ND	ND	NA	1187.6	ND	ND	ND	NA	NA	ND	ND	ND
728.00.90	ND	ND	ND	ND	3052.6	ND	ND	ND	NA	3052.6	ND	ND	ND	NA	NA	ND	ND	ND
801.11.07	ND	ND	830.2	ND	6603.8	207.5	301.9	ND	NA	7943.4	ND	8301.9	ND	ND	ND	ND	ND	ND
801.11.07	127.9	159.9	843.0	ND	3924.4	145.3	ND	261.6	NA	5334.3	ND	1264.5	ND	ND	ND	ND	ND	ND
801.11.07	125.0	184.7	880.7	ND	3977.3	170.5	213.1	255.7	NA	5681.8	ND	ND	ND	ND	ND	ND	ND	ND
801.11.96	98.5	ND	562.7	ND	9261.4	375.1	468.9	234.5	NA	10902.7	ND	ND	ND	ND	ND	ND	ND	ND
801.11.96	115.9	ND	858.4	ND	17382.0	600.9	472.1	386.3	NA	19699.6	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Parathion	Methyl Parathion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
723.10.45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
723.10.45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
723.10.58	ND	ND	ND	93.6	93.6	ND	335.3	ND	ND	ND	ND	2543.4	1271.7	1144.5	4959.5	ND	2608.1
728.00.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
728.00.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.11.07	ND	ND	ND	ND	ND	ND	ND	ND	1320.8	ND	ND	ND	ND	ND	ND	2264.2	2858.5
801.11.07	ND	ND	ND	ND	ND	ND	ND	ND	5232.6	ND	ND	ND	843.0	ND	843.0	4651.2	5314.0
801.11.07	ND	ND	ND	ND	ND	ND	ND	ND	5965.9	ND	ND	ND	823.9	ND	823.9	ND	683.2
801.11.96	ND	ND	ND	ND	ND	ND	ND	ND	1406.8	ND	ND	ND	ND	ND	ND	4572.1	5304.8
801.11.96	ND	ND	ND	ND	ND	ND	ND	ND	1652.4	ND	ND	ND	ND	ND	ND	6437.8	7527.9

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F = Fillet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
801.11.96	Peters Canyon Channel	PRS	W	06/17/95	ND	ND	131.7	ND	ND	143.8	208.0	ND	483.5	693.2	277.3
801.11.97	Newport Bay	BCK	F	06/18/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.11.98	Anaheim Bay/Sunset Boatworks	YFC	F	06/17/95	ND	ND	420.1	ND	ND	437.9	828.4	ND	1686.4	ND	ND
801.13.00	Santa Ana R/Imperial HWY Brg	CP	F	07/25/95	ND	ND	ND	ND	ND	ND	188.7	ND	188.7	ND	ND
801.25.00	Santa Ana R/Prado Dam	BB	F	06/01/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.25.00	Santa Ana R/Prado Dam	BH	F	07/25/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.26.03	Anza Channel	FHM	W	06/01/94	ND	ND	189.7	ND	178.9	142.2	431.0	ND	941.8	ND	ND
801.71.07	Big Bear Lk/Dam	LMB	F	06/08/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.10	Big Bear Lake	LMB	F	06/20/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.12	Big Bear Lk/Rathbone Creek	LMB	F	06/08/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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
801.11.96	121.3	ND	589.3	ND	10398.6	312.0	623.9	329.3	NA	12253.0	ND	1282.5	ND	NA	NA	ND	ND	364.0
801.11.97	ND	ND	ND	ND	5076.9	ND	ND	ND	NA	5076.9	ND	ND	ND	ND	ND	ND	ND	ND
801.11.98	ND	ND	1242.6	ND	11834.3	ND	1301.8	ND	NA	14378.7	ND	ND	ND	ND	ND	ND	ND	ND
801.13.00	ND	ND	ND	ND	817.6	ND	ND	ND	NA	817.6	ND	ND	ND	NA	NA	ND	ND	ND
801.25.00	ND	ND	ND	ND	7751.9	ND	ND	ND	NA	7751.9	ND	ND	ND	ND	ND	ND	ND	ND
801.25.00	ND	ND	ND	ND	1428.6	ND	ND	ND	NA	1428.6	ND	ND	ND	NA	NA	ND	ND	ND
801.26.03	258.6	258.6	775.9	ND	8836.2	ND	ND	ND	NA	9870.7	ND	ND	ND	ND	ND	ND	ND	ND
801.71.07	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.10	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.12	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
801.11.96	ND	ND	ND	ND	ND	ND	ND	ND	1369.2	ND	ND	ND	ND	ND	ND	9358.8	9963.6
801.11.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.11.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4142.0	ND	4142.0	ND	1686.4
801.13.00	ND	ND	ND	103.8	103.8	ND	ND	ND	295.6	ND	ND	ND	ND	ND	ND	ND	292.5
801.25.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.25.00	ND	ND	ND	142.9	142.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	142.9
801.26.03	ND	ND	ND	ND	ND	ND	ND	ND	1961.2	ND	ND	ND	3232.8	1573.3	4806.0	ND	1200.4
801.71.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
801.71.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
802.31.00	Lake Elsinore	CP	F	06/09/94	ND	ND	ND	ND	ND	ND	81.3	ND	81.3	ND	93.7
802.31.00	Lake Elsinore	CP	F	06/17/95	ND	ND	99.8	ND	ND	ND	103.4	ND	203.2	ND	552.6
901.12.00	Aliso Creek	PRS	W	07/29/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.12.00	Aliso Creek	PRS	W	07/29/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	San Juan Cr/Doheny State Park	PRS	W	06/12/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	San Juan Cr/Doheny State Park	PRS	W	07/29/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.03	San Juan Cr/La Novia Avenue	LMB	F	06/12/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.04	Trabuco Cr/Oso Road	PRS	W	06/12/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
902.21.01	Santa Margarita R/Sandia Cr Dr	BLB	F	06/11/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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
802.31.00	ND	ND	ND	ND	1005.5	ND	ND	ND	NA	1005.5	ND	ND	ND	ND	ND	ND	ND	ND
802.31.00	ND	ND	ND	ND	1782.5	ND	ND	ND	NA	1782.5	ND	ND	ND	NA	NA	ND	ND	ND
901.12.00	ND	ND	ND	ND	203.4	ND	ND	ND	NA	203.4	ND	ND	ND	NA	NA	ND	ND	ND
901.12.00	ND	ND	ND	ND	291.5	ND	ND	ND	NA	291.5	ND	ND	ND	NA	NA	ND	ND	ND
901.20.00	ND	ND	ND	ND	1661.1	ND	ND	ND	NA	1661.1	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	ND	ND	ND	ND	605.7	ND	ND	ND	NA	605.7	ND	ND	ND	NA	NA	ND	ND	ND
901.20.00	ND	ND	ND	ND	481.3	ND	ND	ND	NA	481.3	ND	ND	ND	NA	NA	ND	ND	ND
901.20.03	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
901.20.04	ND	ND	ND	ND	307.7	ND	ND	ND	NA	307.7	ND	ND	ND	ND	ND	ND	ND	ND
902.21.01	ND	ND	ND	ND	7064.2	ND	ND	ND	NA	7064.2	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
802.31.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	81.3
802.31.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1568.6	ND	1568.6	ND	203.2
901.12.00	ND	ND	ND	ND	ND	ND	ND	ND	529.7	ND	ND	ND	ND	ND	ND	ND	ND
901.12.00	ND	ND	ND	ND	ND	ND	ND	ND	515.7	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	ND	ND	ND	ND	ND	ND	ND	ND	5980.1	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	ND	ND	ND	ND	ND	ND	ND	ND	4172.3	ND	ND	ND	ND	ND	ND	ND	ND
901.20.00	ND	ND	ND	ND	ND	ND	ND	ND	4091.5	ND	ND	ND	ND	ND	ND	ND	ND
901.20.03	ND	ND	ND	ND	ND	ND	ND	ND	55445.5	ND	ND	ND	ND	ND	ND	ND	ND
901.20.04	ND	ND	ND	ND	ND	ND	ND	ND	576.9	ND	ND	ND	ND	ND	ND	ND	ND
902.21.01	ND	ND	ND	ND	ND	ND	ND	ND	2293.6	ND	ND	ND	ND	ND	ND	ND	ND

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 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
902.22.03	Rainbow Creek	AC	W	07/26/95	ND	ND	ND	ND	ND	ND	61.8	ND	61.8	ND	ND
902.22.03	Rainbow Creek	AC	W	07/26/95	ND	ND	ND	ND	ND	ND	86.4	ND	86.4	ND	ND
902.23.01	Rainbow Cr/HWY 15	BLB	F	06/09/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
903.12.02	Ostrich Farm Creek	GSF	F	06/11/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.21.02	Buena Vista Lagoon	LMB	F	07/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.31.01	Agua Hedionda	BSB	F	07/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.61.00	San Elijo Lagoon/Central Basin	CKF	W	07/29/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.01	Penasquitos Lagoon	STG	F	07/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.02	Los Penasquitos Cr	LMB	F	11/05/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.10	Los Penasquitos Cr/u/s I-805	LMB	F	11/11/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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
902.22.03	ND	ND	ND	ND	245.1	ND	ND	ND	NA	245.1	ND	ND	ND	NA	NA	ND	ND	ND
902.22.03	ND	ND	ND	ND	333.0	ND	ND	ND	NA	333.0	ND	ND	ND	NA	NA	ND	ND	ND
902.23.01	ND	ND	ND	ND	18567.6	ND	ND	ND	NA	18567.6	ND	ND	ND	ND	ND	ND	ND	ND
903.12.02	ND	ND	ND	ND	9436.4	ND	ND	ND	NA	9436.4	ND	ND	ND	ND	ND	ND	ND	ND
904.21.02	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
904.31.01	ND	ND	ND	ND	55474.4	ND	ND	ND	NA	55474.4	ND	ND	ND	NA	NA	ND	ND	ND
904.61.00	ND	ND	3892.6	ND	6107.4	ND	ND	1476.5	NA	11476.5	ND	ND	ND	NA	NA	ND	ND	ND
906.10.01	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
906.10.02	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
906.10.10	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
902.22.03	ND	ND	ND	ND	ND	ND	ND	ND	2745.1	ND	ND	ND	ND	ND	ND	ND	61.8
902.22.03	ND	ND	ND	ND	ND	ND	ND	ND	2497.4	ND	ND	ND	ND	ND	ND	ND	86.4
902.23.01	ND	ND	ND	ND	ND	ND	ND	ND	9018.6	ND	ND	ND	ND	ND	ND	ND	ND
903.12.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.21.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.31.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
904.61.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
906.10.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX Q (continued)
 Toxic Substances Monitoring Program
 Summary of 1994-95 Data: Lipid Data in Fish (ppb, lipid 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
906.50.02	Tecolote Creek	GSF	F	07/28/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
907.12.02	San Diego R/Old Mission Dam	LMB	F	06/10/94	ND	ND	ND	ND	ND	ND	14313.0	ND	14313.0	ND	ND
909.12.01	Sweetwater Marsh	LJM	W	07/26/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
909.12.03	Sweetwater R/Interstate 805	CP	F	06/10/94	ND	ND	1715.6	ND	ND	1219.0	2708.8	ND	5643.3	ND	ND

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
906.50.02	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND
907.12.02	ND	ND	ND	ND	12977.1	ND	ND	ND	NA	12977.1	ND	ND	ND	ND	ND	ND	ND	ND
909.12.01	ND	ND	ND	ND	3364.7	ND	ND	ND	NA	3364.7	ND	ND	ND	NA	NA	ND	ND	ND
909.12.03	ND	ND	ND	ND	14221.2	ND	ND	ND	NA	14221.2	ND	ND	ND	ND	ND	ND	ND	ND

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma HCH (Lindane)	Total HCH	Hepta-chlor-	Hexa-chloro-epoxide	Methoxy-chlor-benzene	Oxa-diazon	Ethyl-Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	PCB 1260	Total PCB	Toxaphene	Chemical Group A
906.50.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
907.12.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14313.0
909.12.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13459.0	ND	13459.0	ND	ND
909.12.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5643.3

NA means that the sample was not analyzed for the chemical.
 ND means that the chemical was not detected.
 Species codes are listed in Tables 3 and 4.

F = Filet.
 W = Whole Body.

APPENDIX R

Station Sampling History

APPENDIX R
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
REGION 1																				
Beaughton Creek	105.50.36	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Beaughton Cr/d/s HWY 97 Brg	105.50.35	--	--	--	--	--	--	--	--	--	TO	TOTM	TM	TOTM	TOTM	--	--	--	--	
Big Lagoon	108.10.00	--	--	--	--	--	--	--	--	TOTM	--	TM	TM	--	--	--	--	--	--	
Big Sulfur Creek	114.26.00	--	--	--	--	--	--	--	--	--	--	TM	--	--	TOTM	--	TOTM	--	--	
Carrville Pond	106.40.12	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	
Clair Engle Lake	106.40.06	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	
Eel R/Scotia	111.12.01	TOTM	TOTM	TM	TOTM	--	--	TOTM	--	TM	TO	--	--	--	--	--	--	--	--	
Estero Americano	115.30.04	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	
Estero de San Antonio	115.30.02	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	
Hardscrabble Creek	103.30.05	--	--	--	--	--	--	TM	--	--	--	TM	--	--	--	--	--	--	--	
Indian Creek	105.32.00	--	--	--	--	TOTM	TOTM	TM	--	--	--	TM	--	--	--	--	--	--	--	
Indian Tom Lake	105.91.90	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Iron Gate Res	105.37.02	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Janes Creek	110.00.91	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--	--	--	--	--	--	
Klamath R/Copco Res	105.38.03	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Klamath R/d/s Iron Gate Res	105.36.10	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Klamath R/Klamath Glen	105.11.08	TOTM	TOTM	TM	TOTM	--	TM	TM	--	--	--	--	TM	--	--	--	--	--	--	
Klamath R/Straits Drain	105.91.91	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	
Klamath R/u/s Copco Reservoir	105.38.29	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Laguna de Santa Rosa/Stony Pt	114.21.10	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	TOTM	--	
Lake Mendocino	114.32.00	--	--	--	--	--	--	--	--	--	--	TM	TM	TM	TOTM	TM	--	--	--	
Lake Pillsbury	111.63.14	--	--	--	TOTM	--	--	--	--	--	TM	TM	--	TM	TM	TM	--	TM	--	
Lake Pillsbury/Eel River Arm	111.63.13	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	TM	TM	TM	
Lake Sonoma	114.24.12	--	--	--	--	--	--	--	--	--	--	TOTM	TM	TM	TM	TM	--	TOTM	--	
Lost R/Canal D	105.92.90	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Lost R/Canal N	105.92.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Lost R/Tule Lake	105.92.01	--	--	--	--	--	--	--	--	--	TO	--	--	--	TOTM	TOTM	TOTM	--	--	
Mad River	109.10.06	--	--	--	TOTM	TOTM	--	TO	TOTM	--	--	--	--	--	--	--	--	--	--	
Mark West Creek	114.23.00	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--	TOTM	TM	TOTM	--	--	
McDaniel Slough	110.00.90	--	--	--	--	--	--	--	--	--	--	TOTM	TM	TM	--	--	--	--	--	
Rowdy Creek	103.12.00	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
Russian R/Duncans Mills	114.11.05	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	TOTM	--	
Russian R/Hacienda Brg	114.11.12	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Russian R/Odd Fellows Pk Brg	114.11.16	TOTM	TOTM	TM	TOTM	--	--	--	TOTM	--	--	TOTM	TM	--	TOTM	--	--	--	--	
Russian R/Russian R Estates	114.31.10	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-2

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Russian R/Wohler Brg	114.11.23	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	TOTM	--	TOTM	--	
Santa Rosa Cr/Willowside Rd	114.22.90	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	TOTM	--	
Shasta River	105.50.04	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	TM	TM	--	--	--	
Smith River	103.11.12	--	--	TOTM	--	--	TM	TM	--	--	--	--	TM	--	--	--	--	--	--	
Trinity R/d/s Burnt Ranch	106.13.06	--	--	--	--	--	--	--	--	--	TO	TO	--	--	TO	--	--	--	--	
Trinity R/East Fork	106.40.16	--	--	--	--	--	--	--	--	--	--	--	TM	TOTM	--	--	--	--	--	
Trinity R/Willow Creek	106.12.03	TOTM	TOTM	TM	TOTM	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Van Duzen R/Mouth	111.21.01	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	
Yager Cr/Mouth	111.21.02	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	
REGION 2																				
Alameda Cr/Niles Canyon Rd	204.30.11	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	
Alameda Cr/Shinn Pit	204.30.00	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Alamitos Cr/d/s Almaden Res	205.40.17	--	--	--	--	--	--	--	--	TM	TM	TM	--	--	--	--	--	--	--	
Almaden Reservoir	205.40.18	--	--	--	--	--	--	--	--	--	--	TM	TM	TM	--	--	--	--	--	
Anderson Reservoir	205.30.30	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Bear Gulch Res	205.50.08	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Calabazas Cr/d/s Tasman Dr	205.50.07	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	--	--	--	--	--	--	
Calero Reservoir	205.40.16	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Corte Madera Creek	203.13.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Coyote Cr/Brokaw Rd	205.30.08	--	--	--	--	--	--	--	--	TO	TOTM	TOTM	TOTM	--	--	--	--	--	--	
Coyote Cr/Percolation Pond	205.30.18	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	
Coyote Cr/u/s Montague Expway	205.30.07	--	--	--	TOTM	TOTM	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Coyote Reservoir	205.30.37	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Dry Creek	206.50.24	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	
Elmhurst Cr/Mouth	204.20.00	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Guadalupe Cr/d/s Guadalupe Res	205.40.13	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Guadalupe Reservoir	205.40.14	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Guadalupe R/Howard St	205.50.09	--	--	--	TOTM	TOTM	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Guadalupe R/Percolation Pond	205.40.08	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Lake Chabot	206.50.03	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Lake Herman	207.21.03	--	--	--	--	--	--	--	TOTM	TM	--	--	--	--	--	--	--	--	--	
Lake Merced	202.10.01	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Los Gatos Creek	205.40.02	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	
Napa R/d/s Sewage Treatment	206.50.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Napa R/Napa	206.50.14	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	TM	--	--	
Napa R/Pioneer Park	206.50.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	

* -- = Not Sampled.

TO = Trace Organics Only.

TM = Trace Metals Only.

TOTM = Trace Organics and Trace Metals.

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
New York Slough	207.10.12	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Petaluma R/Lakeville	206.30.07	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Petaluma R/Petaluma	206.30.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	TOTM	--	
San Francisco Bay	204.10.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
San Fransquito Creek	205.50.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
San Leandro Cr/HWY 17 Bridge	204.20.01	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	--	--	
San Pablo Creek	206.60.01	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Sonoma Creek	206.40.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	TOTM	--	
Stevens Creek	205.50.94	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	--	--	--	--	
Stevens Creek Res	205.50.10	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Suisun Bay	207.10.90	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	--	TM	--	--	
Suisun Sl/d/s Cordelia Slough	207.23.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Vasona Lake	205.40.01	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	
Walker Creek	201.12.01	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TM	--	TM	--	
Walker Cr/Walker Creek Ranch	201.12.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	
Walnut Creek	207.32.06	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TM	--	TOTM	--	
REGION 3																				
Alisal Sl/u/s Tembladero Sl	309.10.91	--	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	
Alisal Sl/West Salinas	309.10.10	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Aptos Creek	304.13.92	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Bean Cr/Conference Dr	304.12.11	--	--	TM	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Bean Cr/Graham Hill Rd	304.12.08	--	--	TM	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	
Big Sur River	308.00.01	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	
Bixby Creek	308.00.03	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	
Blanco Drain/Hitchcock Rd	309.10.15	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	
Blanco Drain/Salinas R	309.10.09	--	--	--	--	--	--	TO	--	--	--	--	--	--	TO	--	--	--	--	
Blanco East/Pump Station	309.10.11	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	
Blanco Rd Tributary/Armstrong Rd	309.10.40	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	
Blanco West/Pump Station	309.10.92	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	
BLM Res/Buena Vista Mine	309.81.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	
Calcagno No. 4	306.00.90	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	
Carbonera Creek	304.12.03	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Carmel Lagoon	307.00.01	--	--	--	--	--	--	--	--	--	TM	--	--	TOTM	--	--	--	--	--	
Carpinteria Marsh	315.34.00	--	--	--	--	--	TO	TO	--	--	TO	--	--	--	--	--	--	--	--	
Chorro Creek	310.22.01	--	--	--	--	--	--	--	--	TM	--	--	TOTM	--	--	--	--	--	--	
Chorro Cr/d/s Water Treat Plant	310.22.09	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-4

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Chorro Cr/Lower	310.22.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Chorro Cr/u/s Chorro Reservoir	310.22.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Corcoran Lagoon	304.13.90	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
El Estero	309.50.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
Elkhorn Slough	306.00.06	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--		
Espinosa Slough	309.10.08	--	--	--	--	--	--	TO	--	--	TO	--	--	--	--	--	--	--		
F Dolan No. 4	306.00.91	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--		
Goleta Slough E/Atascadero Cr	315.31.90	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--		
Goleta Slough W/Tecolotico Cr	315.31.01	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	--	--		
Harkins Sl/u/s Watsonville Sl	305.10.04	--	--	--	--	--	--	--	TO	--	TO	--	--	--	--	--	--	--		
Jameson Lake	314.51.22	--	--	--	--	TM	--	--	--	--	--	TOTM	--	--	--	--	--	--		
Klau Mine Pond	309.81.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--		
Lake Cachuma	314.52.02	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--		
Lake Gibralter	314.51.10	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--		
Lake Hernandez/d/s Dam	305.50.59	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--		
Lake Hernandez/San Benito R	305.50.60	--	--	--	--	--	TM	TM	--	--	--	--	--	--	--	--	--	TM		
Lake Nacimiento/Bee Rock Cove	309.82.05	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--		
Lake Nacimiento/Cantinas Cr	309.82.11	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--		
Lake Nacimiento/Dip Cr	309.82.04	--	--	--	--	--	--	TM	--	--	--	--	--	TM	TM	--	--	--		
Lake Nacimiento/Inlet	309.82.13	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--		
Lake Nacimiento/Las Tablas	309.82.08	--	--	--	TOTM	TM	TM	TM	TM	--	--	--	--	--	TM	--	TM	--		
Lake Nacimiento/Snake Cr	309.82.03	--	--	--	--	TM	TM	--	--	--	--	--	--	--	--	--	--	--		
Lake Nacimiento/Tobacco Cr	309.82.18	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--		
Lake San Antonio/Harris Cr	309.83.10	--	--	--	--	TM	TM	TM	TOTM	--	--	--	--	--	--	--	--	--		
Lake San Antonio/San Antonio R	309.83.12	--	--	--	--	--	--	TM	--	--	TM	TM	--	--	--	--	--	--		
Little Sur River	308.00.00	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--		
Loch Lomond	304.12.16	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--		
Los Osos Cr/d/s Los Osos	310.23.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--		
Los Osos Cr/u/s Los Osos	310.23.06	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
Lower Tembladero Slough	309.10.02	--	--	--	--	--	TO	TO	--	--	--	--	--	--	--	--	--	--		
Mission Cr/HWY 101	315.32.01	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--		
Monterey Harbor	309.50.90	--	--	--	--	--	--	--	--	TM	TM	TM	TOTM	--	--	--	--	--		
Moran Lake	304.13.91	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
Moss Landing Harbor	306.00.00	--	--	--	--	--	--	--	--	TO	TOTM	TOTM	TOTM	--	--	--	--	--		
Neary's Lake	304.12.91	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-5

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																	
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Newell Creek	304.12.12	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Old Salinas R/Molera Rd	309.10.03	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	
Old Salinas R/Monterey Dunes Brg	309.10.04	--	--	--	--	--	TO	TO	--	--	--	--	--	--	--	--	--	--	
Oso Flaco Lake	310.32.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Pajaro R/d/s HWY 1 Brg	305.10.03	--	--	TOTM	TO	TOTM	TO	--	--	--	--	--	--	--	--	--	--	--	
Pajaro R/HWY 129 Brg	305.20.00	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Roberts Lake	309.10.01	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Salinas Rec Cl/u/s Tembladero Sl	309.10.06	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	
Salinas Rec Canal/Airport Rd	309.10.17	--	--	--	--	--	--	--	TO	TO	--	--	--	--	--	--	--	--	
Salinas Rec Canal/Davis Rd	309.10.13	--	--	--	--	--	--	TO	TO	TO	TO	--	--	--	--	--	--	--	
Salinas R Lagoon	309.10.00	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	
Salinas R No. 2	309.10.90	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	
Salinas R/Blanco Drain	309.10.05	--	--	--	--	--	TO	TO	--	--	--	--	--	--	TOTM	--	--	--	
Salinas R/Blanco Rd	309.10.07	--	--	--	--	--	TO	TO	--	--	--	--	--	--	--	--	--	--	
Salinas R/Gonzales	309.30.00	TOTM	TOTM	TOTM	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	
Salinas R/Mouth	309.10.18	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	
Salmon Creek	308.00.02	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
San Antonio R/HWY G19	309.81.14	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
San Clemente Res	307.00.19	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
San Lorenzo R/Big Trees	304.12.06	TOTM	TOTM	TM	TOTM	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
San Lorenzo R/Graham Hill Rd	304.12.09	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Lorenzo R/Zayante Cr	304.12.10	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Luis Obispo Cr/d/s SLO	310.24.02	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	
San Luis Obispo Cr/u/s SLO	310.24.32	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	
Santa Maria R/Mouth	312.10.00	--	--	--	--	--	--	--	--	--	--	--	--	TO	TO	--	--	--	
Santa Rosa Cr	310.14.03	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
Schwann Lake	304.12.90	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Small Twin Lake	310.32.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Soquel Creek	304.13.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Sweet Springs Marsh/Los Osos	310.23.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Waddel Creek	304.10.02	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Watsonville Sl/Estuary	305.10.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Watsonville Sl/Harkins Sl Rd	305.10.06	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	
Watsonville Sl/Lee Rd	305.10.07	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	
Watsonville Sl/San Andreas Rd	305.10.02	--	--	--	--	--	--	TO	TOTM	--	--	--	--	--	--	--	--	--	

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R-6

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																	
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Watsonville Sl/u/s Harkins Sl	305.10.05	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--
Whale Rock Res	310.17.01	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--
REGION 4																			
Alamitos Bay	405.12.00	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--
Arroyo Conejo	403.64.02	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	TO	--	--
Arroyo Conejo/d/s Forks	403.64.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TO	--	--
Arroyo Simi	403.67.04	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--
Ballona Creek	405.13.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--
Ballona Lagoon	405.13.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--
Ballona Wetlands	405.13.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--
Belvedere Park Lake	405.15.97	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Calabasas Lake	405.21.03	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Calleguas Creek	403.12.06	--	--	--	--	--	--	--	TOTM	TOTM	TO	TOTM	TOTM	TOTM	TO	TO	TO	--	--
Casitas Lake	402.20.02	--	--	--	--	--	--	--	--	--	TO	--	--	--	TOTM	--	--	--	--
Colorado Lagoon	405.12.04	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--
Conejo Creek	403.12.07	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Dominguez Channel	405.12.02	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--
Echo Park Lake	405.15.24	--	--	--	--	--	--	--	--	TO	--	--	--	TOTM	TOTM	--	--	--	--
El Dorado Park Lake	405.15.02	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Eleanor Lake	404.26.00	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--
Hansen Dam Lake	405.21.11	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--
Harbor Park Lake	405.12.90	--	--	--	--	--	TOTM	TOTM	TOTM	TO	TO	TO	TOTM	TOTM	TO	TOTM	TO	TOTM	--
Hollenbeck Park Lake	405.15.98	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--
Legg Lake	405.41.01	--	--	--	--	--	--	TOTM	--	--	--	TOTM	--	--	TOTM	TOTM	--	--	--
Lincoln Park Lake	405.15.99	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--
Lindero Lake	404.23.04	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--
Los Angeles River	405.12.03	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--
Los Angeles R/Los Feliz Rd	405.21.06	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--
Los Angeles R/Sepulveda Basin	405.21.16	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Madrona Marsh Preserve	405.12.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM
Malibou Lake	404.21.07	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--
Malibu Creek	404.21.01	--	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	TOTM	--	--	--	--
Malibu Cr/Tapia Park	404.21.04	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	TM	--
Malibu Cr/u/s Tapia Discharge	404.21.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--
Malibu Lagoon	404.21.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--
Marina del Rey	405.13.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-7

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Marina del Rey/Basin D	405.13.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Mugu Lagoon	403.11.91	--	--	--	--	--	--	--	--	--	TO	TOTM	TOTM	TOTM	TM	TOTM	TOTM	--	--	
Oxnard Drainage Ditch 2	403.11.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--	--	--	
Peck Road Lake	405.41.08	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	TOTM	TOTM	--	--	--	
Puddingstone Res	405.52.01	--	--	--	--	--	--	--	--	TOTM	TO	TO	--	--	TOTM	TOTM	--	--	--	
Revolon Slough	403.11.04	--	--	--	--	--	--	--	TO	TOTM	TOTM	--	TOTM	TOTM	--	TO	TO	--	--	
Rio de Santa Clara/Oxnard Drain	403.11.02	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TO	--	TO	--	--	
San Gabriel River	405.15.04	--	--	--	--	--	TOTM	--	TM	--	--	TOTM	TOTM	TOTM	TM	TOTM	TOTM	--	--	
San Gabriel R/Coyote Cr	405.15.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Santa Clara River Estuary	403.11.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	
Santa Clara R/Santa Paula	403.21.05	--	--	--	TOTM	--	--	TO	--	--	--	--	--	--	TM	TO	--	--	--	
Santa Clara R/Valencia	403.51.05	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	TOTM	--	--	--	
Santa Fe Dam Park	405.41.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Santa Paula Cr/Stekel Park	403.21.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	
Sherwood Lake	404.26.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	
Simms Pond	405.12.91	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Venice Canals/Sherman Ave	405.13.02	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Ventura River	402.10.02	--	--	--	--	TOTM	TOTM	TO	--	--	--	--	TOTM	TOTM	TOTM	--	--	--	--	
Ventura River Estuary	402.10.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	
Ventura R/Ojai	402.20.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Westlake Lake	404.25.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	
REGION 5																				
American R/d/s Folsom Res	519.21.19	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
American R/d/s HWY 160 Brg	519.21.01	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	
American R/d/s Watt Ave Brg	519.21.09	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	--	--	--	--	--	--	TOTM	TM	--	TM	--	--	
American R/N.F./HWY 49	514.51.00	--	--	--	TOTM	TM	--	--	--	--	--	TM	--	--	--	--	--	--	--	
American R/S.F./HWY 49	514.32.14	--	--	--	TOTM	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Arcade Cr/u/s Marysville Blvd	519.21.03	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	
Beach Lake	510.00.90	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	--	--	--	--	--	--	--	--	
Bear River	515.10.12	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Black Butte Res	522.12.01	--	--	--	--	--	--	TM	TM	--	--	--	--	--	--	--	--	--	--	
Bounde Cr/Norman-Princeton Rd	520.21.96	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Bullards Bar Res/Willow Cr	517.51.06	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--	--	--	--	--	
Butte Cr/Colusa HWY	520.10.90	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Cache Creek	511.30.18	TOTM	TOTM	TOTM	TOTM	TM	--	--	--	--	--	TM	--	--	--	--	--	--	--	
Cache Cr/d/s Davis Cr	513.32.00	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

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APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Camp Far West	516.31.01	--	--	--	--	--	--	--	--	--	TM	--	--	TM	--	--	--	--	--	
Camp Far West/Rock Cr Arm	516.31.02	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Central Dr/Norman-Princeton Rd	520.21.94	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Clear Lk/Lower Lake	513.52.01	--	--	TM	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Clear Lk/Rattlesnake Isle	513.52.16	--	--	TM	TOTM	TM	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Clear Lk/Rodman Slough	513.52.19	--	--	TM	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Colusa Dr/Abel Rd	520.21.91	--	--	TOTM	TOTM	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Colusa Dr/Knights Landing	520.21.90	--	--	--	TOTM	--	--	TO	TO	--	TOTM	--	--	--	--	--	--	--	--	
Colusa Dr/Yolo-Colusa Co Line	520.21.92	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Cosumnes River	532.21.01	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Courtright Res/Dusy Cr	552.33.17	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Cross Canal	519.22.01	--	--	--	--	--	--	--	--	TOTM	TOTM	TM	--	TM	--	--	--	--	--	
Dallas Warner Res	535.40.02	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	
Davis Creek Res	513.32.09	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Don Pedro Res/Moccasin Cr	536.31.16	--	--	--	--	--	--	TM	TM	TM	TM	--	--	--	--	--	--	--	--	
Don Pedro Res/Tuolumne R	536.31.15	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	--	--	--	--	
Don Pedro Res/Woods Cr	536.31.08	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Dry Cr/Spenceville	516.20.01	--	--	--	--	--	--	--	--	--	TM	--	--	TM	--	--	--	--	--	
East Park Res	522.33.00	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Fall River	526.41.06	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Feather R/d/s HWY 99 Brg	519.22.90	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	--	--	TOTM	TM	--	TO	TM	--	TM	--	--	
Feather R/d/s Oroville Res	515.40.31	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Feather R/Gridley	515.40.21	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Feather R/N.F./Belden	518.43.05	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Feather R/N.F./Pulga	518.42.02	--	--	TO	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	
Feather R/N.F./Rich Bar	518.51.04	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Feather R/S.F./Forbestown	518.22.10	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Feather R/S.F./Golden	518.22.06	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Feather R/S.F./Woodleaf	518.22.16	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Folsom Lake	514.23.01	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Franks Tract	544.00.11	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Glenn-Colusa Canal	520.22.00	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Granite Creek/W.F.	540.40.28	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Huntington Lake/Rancherio Cr	540.26.07	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Indian Valley Res	513.40.22	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-9

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Kern R/Bakersfield	558.90.08	TO	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	
Kesterson N.W.R./Pond 2	541.20.93	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Kesterson N.W.R./Pond 5	541.20.92	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Kings River	551.60.02	TOTM	TOTM	TOTM	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Kings R/S.F./Tulare Lake Basin	551.90.06	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Lake Almanor/Hamilton Branch	518.41.07	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	
Lake Amador	532.40.00	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Lake Berryessa/Capell Cr	512.21.12	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
Lake Berryessa/Pope Cr	512.21.16	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Lake Berryessa/Putah Cr	512.21.18	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
Lake Kaweah	553.44.01	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	TM	--	--	
Lake McClure/Main Body	537.22.00	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Lake McClure/Merced R Arm	537.22.13	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	
Lake Wildwood	517.20.14	--	--	--	--	--	--	--	--	--	TM	--	TM	--	--	--	--	--	--	
Logan Cr/Norman-Princeton Rd	520.21.93	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
McCloud R/McCloud R Brg	506.10.00	TOTM	TOTM	TM	--	--	--	TOTM	TM	--	TM	--	--	--	--	--	--	--	--	
Mendota Pool	551.20.00	--	--	--	--	--	--	--	--	TOTM	--	TOTM	--	--	--	--	--	--	--	
Merced R/Briceburg	537.30.12	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Merced R/E. Side Drain	535.70.90	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Merced R/Hagaman County Park	535.80.00	TOTM	TOTM	TOTM	TOTM	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	
Merced R/Hatfield St Rec Area	535.70.03	--	--	--	--	--	--	TOTM	TO	--	--	--	TM	--	--	--	--	TM	--	
Merced R/McConnell St Park	535.80.09	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mokelumne R/Lodi Lake	531.20.15	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Mokelumne R/Woodbridge	531.20.14	TOTM	TOTM	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mud Slough	541.20.16	--	--	TO	--	--	--	--	TOTM	--	TOTM	--	TM	TM	--	--	TM	--	--	
Natomas E Main Dr/d/s W El Camin	519.21.90	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Natomas E Main Dr/Arcade Cr	519.21.02	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
New Hogan Res	533.10.05	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	
New Melones Res/Angel Cr	534.21.06	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
O'Neill Forebay/Calif Aqueduct	541.20.40	--	--	TOTM	TOTM	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Old River	544.00.16	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	--	--	--	--	--	TM	
Paradise Cut/Tracy	544.00.32	--	--	--	--	--	--	--	--	TOTM	TOTM	TO	TO	TO	--	--	--	--	TM	
Pardee Res	532.60.06	--	--	--	--	--	--	TM	TM	--	--	--	TM	--	--	--	--	--	--	
Pit R/d/s HWY 299 Brg	526.63.10	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	
Pit R/Pit 7 Powerhouse	526.14.00	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-10

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Putah Creek	511.20.30	TOTM	TOTM	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Reclamation Slough	520.10.03	--	--	TOTM	TOTM	TOTM	--	--	--	--	--	--	TO	--	--	--	--	--	--	
Rollins Reservoir	516.34.03	--	--	--	--	--	--	TM	TM	--	--	--	TM	--	--	--	--	--	--	
Sacramento R/d/s Shasta Dam	524.40.06	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
Sacramento R/Hamilton City	504.20.03	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sacramento R/Hood	510.00.30	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TM	TOTM	TOTM	--	--	
Sacramento R/Keswick	508.10.42	--	--	TOTM	TOTM	--	TM	TOTM	TM	TM	TOTM	TM	TM	TM	--	TM	TM	--	--	
Sacramento R/Keswick Dam	508.10.45	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sacramento R/Rio Vista	510.00.12	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Sacramento R/u/s I-5 Overcross	519.22.04	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Sacramento Slough	520.30.01	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	
Salt Slough	541.20.07	--	--	TO	--	--	--	--	TO	--	TOTM	--	TM	TOTM	--	--	TM	--	TM	
San Joaquin R/Crows Landing	541.10.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	
San Joaquin R/Fremont Ford	541.20.90	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	TM	TM	
San Joaquin R/French Camp Sl	544.00.92	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
San Joaquin R/HWY 152 Brg	541.20.91	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Joaquin R/Mossdale	544.00.90	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	TOTM	TM	--	--	
San Joaquin R/Newman	541.10.91	--	--	--	--	--	--	--	TO	--	--	--	TM	--	--	--	--	TM	--	
San Joaquin R/Orestimba Cr/B.Rd	541.10.09	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
San Joaquin R/Orestimba Cr	541.10.01	--	--	TO	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	
San Joaquin R/Patterson Bridge	541.10.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	
San Joaquin R/Skaggs Bridge	551.30.04	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
San Joaquin R/Twitchell Is	544.00.91	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
San Joaquin R/Vernalis	541.10.90	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	--	TOTM	TM	--	--	--	--	
Shasta Lk/Squaw Cr Arm	506.10.03	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Stanislaus River	535.10.91	TOTM	TOTM	TOTM	TOTM	TOTM	TO	TOTM	--	--	--	--	--	TO	--	--	--	--	--	
Stockton Deep Water Ch	531.30.91	--	--	--	--	--	--	--	--	TOTM	--	--	--	TO	--	--	--	--	--	
Stony Gorge Res	522.22.02	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	
Sutter Bypass	520.10.04	--	--	--	TOTM	TOTM	TO	TO	--	--	--	--	--	--	--	--	--	--	--	
Sycamore Sl/Knights Landing	520.10.00	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Sycamore Sl/Yolo-Colusa Co Line	520.10.14	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Tuolumne R/Modesto	535.30.91	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	
Tuolumne R/San Joaquin R	535.30.90	TOTM	TOTM	TOTM	TOTM	TOTM	TO	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Walker Slough	544.00.20	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
White Slough/Lodi	544.00.09	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-11

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Willow Cr/Norman-Princeton Rd	520.21.95	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Wishon Res/N.F./Kings River	552.33.13	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Woods Creek	536.31.14	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	
Yuba R/M.F./HWY 49	517.41.00	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Yuba R/Marysville	515.30.02	TOTM	TOTM	TM	TOTM	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Yuba R/N.F./d/s Bullards Bar Res	517.51.02	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Yuba R/N.F./d/s HWY 49	517.53.01	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Yuba R/N.F./Sawmill Creek	517.54.02	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Yuba R/S.F./Bridgeport	517.31.01	--	--	TM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
REGION 6																				
Arrowbear Lake	628.20.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Bishop Creek Canal/d/s Bishop	603.20.24	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Boca Reservoir	636.00.90	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Bodie Cr/Flying M Club	630.20.90	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Carson R/E.F./Markleeville	632.10.12	--	--	--	--	TOTM	TOTM	--	--	TM	--	--	--	--	--	--	--	--	--	
Carson R/W.F./d/s Paynesville	633.10.03	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Convict Lake	603.10.10	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Crowley Lake	603.10.06	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Deep Cr/u/s Mojave River	628.20.29	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Donner Lake	635.20.04	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	TO	--	--	--	
Eagle Lake	637.32.09	--	--	--	--	--	--	--	--	TM	--	TM	TM	--	--	--	--	--	--	
East Walker R/Bridgeport	630.10.07	--	--	TOTM	--	--	TOTM	TOTM	TM	TM	TOTM	TOTM	TM	--	--	--	--	--	--	
Grant Lake	601.00.91	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Grass Valley Lake	628.20.36	--	--	--	--	--	--	--	--	TOTM	TM	TOTM	TOTM	--	--	--	--	--	--	
Gull Lake	601.00.02	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Haiwee Reservoir	603.30.05	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	TM	--	TM	TM	
Hot Creek	603.10.22	--	--	--	--	--	--	--	TM	--	--	TM	--	--	--	--	--	--	--	
Hot Cr/d/s Hatchery	603.10.17	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Indian Creek Res	632.20.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
June Lake	601.00.92	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	
Lake Tahoe/Homewood	634.30.00	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	
Little Rock Creek Res	626.80.03	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	
Little Truckee River	636.00.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	
Long Valley Cr/Honey Lake	637.10.90	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Lundy Lake	601.00.90	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	
Mammoth Creek	603.10.21	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

R-12

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																	
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Mammoth Cr/d/s Murphy's Gulch	603.10.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM
Martis Cr/d/s Martis Cr Res	635.20.12	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--
McGee Creek	603.20.35	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--
Mojave River	628.20.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--
Monitor Creek	632.10.13	--	--	--	--	--	--	--	--	--	TM	TM	--	--	--	--	--	--	--
Mono Lake	601.00.00	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--
Owens River	603.30.01	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--
Owens River Gorge	603.20.52	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--
Pine Cr/Bishop	603.20.43	--	--	--	--	--	--	--	--	TM	--	TM	TM	--	--	--	--	--	--
Pleasant Valley Res	603.20.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--
Prosser Reservoir	635.20.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--
Robinson Creek	630.30.13	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--
Sabrina Lake	603.20.41	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--
Silver Creek	632.10.15	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--
Silver Lake	601.00.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--
Silverwood Lake	628.20.02	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--
Slinkard Creek	631.20.01	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--
Squaw Creek	635.20.28	--	--	--	--	--	--	--	--	--	--	--	TM	TOTM	TOTM	--	--	--	--
Stampede Res	636.00.06	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--
Susan R/d/s Piute Creek	637.20.25	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--
Susan R/Honey Lake	637.20.01	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--
Susan R/Litchfield	637.20.22	--	--	--	TOTM	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	--
Topaz Lake	631.10.00	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--
Trout Cr/Tahoe/d/s Meeks Lumber	634.10.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--
Trout Cr/Tahoe/u/s Meeks Lumber	634.10.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--
Trout Cr/Truckee/d/s Meeks Lumb	635.20.09	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--	TOTM	--
Trout Cr/Truckee/u/s Meeks Lumb	635.20.10	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TM	--	--	--
Truckee R/Gray Cr	635.20.05	--	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Truckee R/Hirschdale	635.20.06	--	--	TO	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--
Truckee R/u/s Farad Powerhouse	635.10.00	TOTM	TOTM	TOTM	TOTM	--	TM	TOTM	--	--	--	--	--	--	--	--	--	--	--
Twin Lakes	630.40.12	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--
Upper Truckee River	634.10.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM
Virginia Cr/Dog Town	630.30.10	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	--	--	--	--
West Walker River	631.40.02	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--
Willow Cr/HWY 139	637.40.14	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
REGION 7																				
Alamo R/Brawley	723.10.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Alamo R/Calipatria	723.10.01	TOTM	TOTM	TOTM	TOTM	TOTM	TO	TO	TOTM	--	TOTM	TOTM	TO	TOTM	--	TOTM	TOTM	TOTM	--	
Alamo R/Holtville	723.10.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	
Alamo R/Inter Boundary	723.10.47	--	--	--	--	--	--	--	TOTM	--	TOTM	TO	--	--	--	--	--	--	--	
Barbara Worth Drain	723.10.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Central Drain	723.10.30	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Coachella Canal	723.10.90	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
Coachella Valley Stormwater Ch	719.47.00	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	TOTM	--	--	TOTM	
Colorado R/Cibola	715.50.34	TOTM	TOTM	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Colorado R/Inter Boundary	727.00.00	--	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	--	--	--	--	--	
Colorado R/Needles	713.30.90	--	--	--	--	--	--	--	--	--	TM	TOTM	--	--	TOTM	TOTM	--	--	--	
Colorado R/Picacho	715.50.20	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Colorado R/u/s Imperial Dam	715.50.90	--	--	--	--	--	--	--	--	--	TM	--	TOTM	--	TOTM	TOTM	--	--	--	
Dixie Drain No. 1	723.10.46	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Dixie Drain No. 3	723.10.52	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Dixie Drain No. 5	723.10.49	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Fig Drain	723.10.91	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	--	--	--	--	
Fig Lake	723.10.45	--	--	--	--	--	--	--	TOTM	--	--	--	TOTM	TOTM	--	--	--	--	TOTM	
Fig Lake Outlet	723.10.43	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Forgetmenot Drain	723.10.50	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Greeson Drain	723.10.48	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	TOTM	--	--	--	
Holtville Main Drain	723.10.21	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	
Lake Cahuilla	719.47.90	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
Lake Havasu	714.00.90	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Mayflower Drain	723.10.15	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
New R/Inter Boundary	723.10.58	--	--	--	--	--	--	TO	TOTM	--	TOTM	--	TOTM	TOTM	TOTM	--	TOTM	TOTM	--	
New R/Westmorland	723.10.02	TOTM	TOTM	TOTM	TO	TOTM	TO	TO	TOTM	TOTM	TOTM	TO	TO	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	
Orange Drain	723.10.22	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Palo Verde Outfall Drain	715.40.08	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	TOTM	TOTM	--	--	TOTM	
Peach Drain	723.10.28	--	--	--	--	--	--	--	--	--	--	--	--	--	TM	TOTM	TO	--	TOTM	
Pumice Drain	723.10.92	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Reservation Main Drain	727.00.03	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	TOTM	TOTM	--	--	--	
Rice Drain 3	723.10.35	--	--	--	--	--	--	--	TO	TO	--	--	--	--	--	--	--	--	--	
Rose Drain	723.10.20	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	--	--	
Salt Creek Slough	723.10.44	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

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APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Salt Cr/Mouth	725.00.00	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
Salton Sea/North	728.00.92	--	--	--	TO	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Salton Sea/South	728.00.90	--	--	TO	TO	--	--	--	TOTM	--	TOTM	--	TOTM	--	TOTM	--	--	--	TOTM	
Salton Sea/West Shore	728.00.91	--	--	--	--	--	--	TOTM	--	TOTM	--	--	--	--	--	--	--	--	--	
San Felipe Cr/d/s HWY 86 Brg	722.20.04	--	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	
San Felipe Cr/San Sebastian	722.20.07	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
South Central Drain	723.10.31	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	TOTM	--	--	--	--	
Trifolium Drain 7	723.10.29	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
Verde Drain	723.10.36	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Warren Drain	723.10.33	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	
West Side Drain	723.10.51	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	--	--	
Wiest Lake	723.10.12	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
REGION 8																				
Anaheim Bay/Sunset Boatworks	801.11.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Anza Channel	801.26.03	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	TOTM	TM	TOTM	--	
Big Bear Lake	801.71.10	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	TM	--	--	TOTM	
Big Bear Lk/Boulder Bay	801.71.08	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Big Bear Lk/Dam	801.71.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	
Big Bear Lk/Rathbone Creek	801.71.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	
Bolsa Chica Ch/Westminster Ave	801.11.08	--	--	--	--	--	--	--	--	TO	TM	TO	--	--	--	--	--	--	--	
Canyon Lake	802.12.01	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Carbon Canyon Park Lake	801.13.90	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Chino Cr/d/s Euclid Ave	801.21.02	--	--	--	--	--	--	TOTM	TOTM	TO	--	TOTM	--	--	--	--	--	--	--	
Chino Cr/u/s Pine Ave	801.21.03	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	
Craig Park Lake	845.61.91	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Cucamonga-Mill Cr/McCarty Rd	801.21.04	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Delhi Channel	801.11.05	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	
E.G.G. Wintersburg Ch/Beach Blvd	801.11.90	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
E.G.G. Wintersburg Ch/Gothard St	801.11.02	--	--	--	--	--	--	--	--	TO	--	TO	--	--	--	--	--	--	--	
El Modena Ch/u/s Walnut Ave Brg	801.11.16	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Huntington Harbour/Anaheim Bay	801.11.00	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	TOTM	--	--	
Irvine Park Lake	801.12.01	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Lake Elsinore	802.31.00	--	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	--	--	--	TOTM	TOTM	
Lake Evans	801.26.01	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Lake Mathews	801.33.00	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	
Los Coyotes Park Lake	845.61.90	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

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APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Mason Park Lake	801.11.93	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Mile Square Park Lake No. 1	801.11.94	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Mile Square Park Lake No. 2	801.11.95	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Newport Bay	801.11.97	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	--	--	TOTM		
Ocean View Ch/Beach Blvd	801.11.03	--	--	--	--	--	--	--	--	TO	TOTM	--	--	--	--	--	--	--	--	
Ocean View Ch/Brookhurst St	801.11.91	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Ocean View Ch/Newhope St	801.11.92	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
Peters Canyon Channel	801.11.96	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	
Prado Lake	801.21.90	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
San Diego Cr/Barranca Pkwy	801.11.09	--	--	--	--	--	--	--	--	--	TOTM	--	--	TOTM	TOTM	TOTM	TO	--	--	
San Diego Cr/Laguna Rd	801.11.13	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
San Diego Cr/Michelson Dr	801.11.07	--	--	--	--	--	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	
San Diego Cr/Upper Newport Bay	801.11.04	--	--	--	--	--	--	TOTM	TOTM	TO	--	--	--	--	--	--	TO	--	--	
Santa Ana R/Featherly Park	801.13.03	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	--	--	--	
Santa Ana R/Hamner Ave	801.21.05	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Santa Ana R/Imperial HWY Brg	801.13.00	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--	TOTM	--	TOTM	
Santa Ana R/Prado Dam	801.25.00	TOTM	TOTM	TOTM	TOTM	TO	TOTM	TOTM	TOTM	TOTM	--	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	
Santa Ana R/USGS Gage	801.21.09	--	--	--	--	--	--	--	TO	--	--	TO	--	--	TM	--	--	--	--	
Westminster Ch/Graham St	801.11.01	--	--	--	--	--	--	--	--	TO	TM	--	--	--	--	--	--	--	--	
Yorba Park Lake	801.13.91	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	
REGION 9																				
Agua Hedionda	904.31.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Aliso Creek	901.12.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	
Alvarado Creek	907.11.09	--	--	--	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	--	--	--	
Buena Vista Lagoon	904.21.02	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	TOTM	
Cannon Lk/Carlsbad	904.40.01	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	
Chollas Creek/Main Street	908.22.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Escondido Cr	904.61.02	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--	--	
Escondido Cr/Camino Del Norte	904.61.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Escondido Cr/Country Club Dr	904.62.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Escondido Cr/Elfin Forest Park	904.61.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Famosa Slough	907.11.00	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	TOTM	--	--	
Forester Cr/Billy Mitchel Rd	907.13.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	
Guajome Lake	903.11.08	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	
Keys Creek	903.12.06	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	
Laguna Niguel Park Lake	901.13.01	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	

* -- = Not Sampled.

TO = Trace Organics Only.

TM = Trace Metals Only.

TOTM = Trace Organics and Trace Metals.

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APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Lake Hodges	905.21.02	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--		
Lake Mission Viejo	901.20.12	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--		
Lake San Marcos	904.52.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--		
Lindo Lake	907.12.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--		
Los Penasquitos Cr	906.10.02	--	--	--	--	--	--	--	--	TM	--	--	--	--	--	--	--	TOTM		
Los Penasquitos Cr/HWY 15	906.20.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--		
Los Penasquitos Cr/u/s I-805	906.10.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM		
O'Neill Lake	902.13.02	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--		
Oso Reservoir	901.20.14	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--		
Ostrich Farm Creek	903.12.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--		
Otay River	910.20.01	--	--	--	--	TOTM	TOTM	--	--	--	--	--	--	--	--	--	--	--		
Otay R/Apache Service Pond	910.20.05	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--		
Penasquitos Lagoon	906.10.01	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	TOTM		
Rainbow Creek	902.22.03	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	TO		
Rainbow Cr/HWY 15	902.23.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	TO	--		
Rose Creek	906.40.02	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--		
San Diego R/Fashion Valley	907.11.04	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--	--		
San Diego R/Mission Center Dr	907.11.05	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
San Diego R/Old Mission Dam	907.12.02	--	TOTM	TOTM	--	--	TOTM	--	--	TOTM	--	TOTM	--	--	--	--	TOTM	--		
San Diego R/Riverford Rd	907.12.08	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	--		
San Diego R/Stadium Way	907.11.07	--	--	--	--	--	--	--	--	--	TO	--	--	--	--	--	--	--		
San Dieguito Lagoon	905.11.00	--	--	--	--	--	--	--	--	--	TOTM	TOTM	TM	--	--	--	TM	--		
San Elijo Lagoon/Central Basin	904.61.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM		
San Juan Cr/Doheny State Park	901.20.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TO	TOTM		
San Juan Cr/La Novia Avenue	901.20.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--		
San Luis Rey R/Foussat Rd	903.11.05	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--		
San Luis Rey R/HWY 15	903.12.07	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	--		
San Luis Rey R/HWY 76	903.11.11	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--		
San Luis Rey R/Pankey Rd	903.21.01	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--		
San Marcos Cr	904.51.03	--	--	--	--	--	--	--	--	TOTM	--	--	--	TO	--	--	--	--		
San Marcos Cr/Gibraltar	904.51.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--		
Santa Margarita R/Oceanside	902.11.02	--	TO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Santa Margarita R/Sandia Cr Dr	902.21.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--		
Santa Margarita R/Willow Glen Rd	902.22.04	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--		
Santee Lake No. 5	907.12.01	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--		

* -- = Not Sampled. TO = Trace Organics Only. TM = Trace Metals Only. TOTM = Trace Organics and Trace Metals.

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APPENDIX R (continued)
 Toxic Substances Monitoring Program
 Station Sampling History

Station Name	Station Number	SAMPLE YEAR*																		
		1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Sweetwater Marsh	909.12.01	--	--	--	--	--	--	--	--	TOTM	TOTM	--	--	TOTM	--	TOTM	--	--	TOTM	
Sweetwater Reservoir	909.21.09	--	--	--	--	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	
Sweetwater R/Interstate 805	909.12.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--	
Tecolote Creek	906.50.02	--	--	--	--	--	--	--	--	TOTM	--	--	--	--	--	--	--	--	TOTM	
Tijuana Estuary	911.11.00	--	--	--	--	--	--	--	TOTM	TOTM	TOTM	TOTM	TOTM	TOTM	--	--	TOTM	--	--	
Trabuco Cr/Oso Road	901.20.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	TO	--	

* -- = Not Sampled.

TO = Trace Organics Only.

TM = Trace Metals Only.

TOTM = Trace Organics and Trace Metals.

APPENDIX S

Field and Laboratory Operations

FIELD AND LABORATORY OPERATIONS

Sample Collection

Sample collections were obtained using a Smith-Root Model VII and Model XIA Portable Electrofishers; a Smith-Root SR-16E electrofishing boat; variable mesh, woven, and monofilament gill nets; baited hoop nets measuring three feet in diameter with one inch square mesh; or beach seines of varying lengths, widths, and material. Collected fish were kept in clean stainless steel buckets until they could be double-wrapped in extra-heavy duty aluminum foil (dull side inward), labeled, and packed in dry ice where they were frozen.

Laboratory Analysis

A detailed description of procedures and techniques discussed below can be found in the Department of Fish and Game's (DFG) Laboratory Quality Assurance Program Plan (DFG 1990). The following is a summary of the 1994-95 Quality Assurance/Quality Control (QA/QC) results provided by the DFG's Water Pollution Control Laboratory. Copies of the Laboratory Quality Assurance Program Plan and QA/QC results are available upon request.

Trace Elements Analytical Techniques in Tissues

A Varian Model Spectra 300 atomic absorption spectrophotometer was used for techniques employing conventional (flame) atomic absorption spectrophotometry (copper and zinc). A Varian Model VGA-76 Hydride Generator was used for hydride generation atomic absorption spectrophotometry (arsenic and selenium), and cold vapor technique for mercury (Adrian 1971; Uthe et al. 1974; and Evans et al. 1986). A Perkin-Elmer Model 3030 Zeeman atomic absorption spectrophotometer equipped with a HGA-600 graphite furnace and an AS-60 autosampler was used for techniques requiring a graphite furnace (cadmium, chromium, nickel, lead, and silver). All analytical values were corrected using procedural blanks. Trace element analytical and digestion techniques along with their detection limits are presented in Table S-1. All digestion techniques, except for mercury, are the same as those used since 1988.

Samples were weighed into pre-cleaned 200mm x 25mm glass tubes which had been checked for trace element contamination. Digestion of the sample was accomplished by adding concentrated nitric acid and heating the tube in an aluminum block to reflux the acid. The acid was allowed to reflux until the evolution of NO_x (brown fumes) was no longer apparent (about 2 hours). The block temperature was increased to reduce the volume in the tube by evaporation. When the volume in the tube reached about 0.5 ml the tube was removed and allowed to cool. The digestate was diluted to 40.0 ml with 1% nitric acid solution. The digestate was mixed on a vortex mixer and transferred to a clean polyethylene bottle.

In addition to routine trace element analyses, 10 percent of the samples were analyzed in duplicate to determine precision. The results of duplicate laboratory sample analyses are presented in Table S-2. To protect sample integrity, all materials contacting samples during laboratory operations were analyzed for trace element content. To ensure accuracy, reference materials from the National Institute of Standards and Technology (NIST) and the National Research Council of Canada were analyzed (Table S-3).

Synthetic Organic Compounds Analytical Techniques in Tissues

A 10 gram sample of the flesh-water (1:1) paste was spiked with a mixture of 4,4'dibromo-octafluorobiphenyl, decachlorobiphenyl and dibutylchloroendate (DBOB, DCB, and DBCE) and extracted twice with acetonitrile by shaking for two minutes. The decachlorobiphenyl (DCB) was used as an internal standard to determine relative retention times and as a surrogate to determine analyte recovery of the Florisil[®] F1 compounds. DBOB was used to check the analyte recovery of the F2 compounds but was found to elute with the F1 compounds. DBCE was used to check the analyte recovery of the F3 compounds. The sample extracts were combined, filtered, and partitioned with petroleum ether. An aliquot of the petroleum ether extract was eluted through a Florisil[®] column. The Florisil[®] columns were eluted with petroleum ether (Fraction 1), six percent ethyl ether (Fraction 2), and 15 percent ethyl ether (Fraction 3). Fractions 2 and 3 were spiked with DCB and all of the fractions were concentrated to an appropriate volume in a Zymark[®] Turbovap concentrator prior to analysis by gas chromatography. The DCB was used as an internal standard to determine relative retention times and gas chromatograph operation. A mixture of synthetic standards was eluted through the Florisil[®] column to determine the recovery and separation characteristics of the column. The distribution of synthetic organic compounds in the fractions are listed in Table S-4.

At stations where the TSMP had previously detected endosulfan, samples were analyzed for endosulfan I, endosulfan II, and endosulfan sulfate. This required an additional elution through Florisil[®] with 50 percent ethyl ether in petroleum ether (Fraction 4, Table S-4). All other stations were initially analyzed for endosulfan I only. This fraction was also spiked with DCB prior to the concentration step. Due to the high lipid content of the fraction all of the 50 percent extracts were diluted with iso-octane by a factor of ten prior to analysis by gas chromatography. The detection levels for synthetic organics in flesh are presented in Table S-5.

In 1994, a solution containing known concentrations of target analytes was added to a fish sample to assess accuracy and matrix effects. In 1995, a matrix spike and matrix spike duplicate were analyzed. Percent recoveries of the target analytes are listed in Table S-6.

Ten percent of the samples were analyzed in duplicate (Table S-7). All materials and solutions contacting the sample were analyzed for organic contamination. To preclude errors due to contamination, a vertical solvent blank analyzed for each set of glassware before introducing a new sample.

Synthetic Organic Compounds Analytical Techniques in Sediment

The sediment sample was spiked with the DBOB, DCB and DBCE solution. After adding approximately 200 ml of a 1:1 solution of acetone in dichloromethane, the sample was placed on a Lab-Line Orbit Shaker and shaken for two hours at 400 rpm. This step was repeated after the sample was filtered. After evaporating and exchanging solvents, the sample extract was eluted through a Florisil[®] column as was done with tissue samples.

Synthetic organic compound concentrations in sediments are reported on a dry weight basis. The moisture content of sediments can widely vary. The detection limit is dependent on sample size, therefore, the detection limit varies with moisture content. Table S-8 lists the detection limits for the sediment sample analyzed in 1994. Sediments were not analyzed in 1995.

Instrument and Analytical Conditions for Chlorinated Hydrocarbons

Chlorinated hydrocarbons were determined with a Varian Model 3500 gas chromatograph equipped with a model 8035 autosampler, temperature programmable on-column injector, and dual Ni⁶³ electron capture detectors. A 5 meter J&W DB5 fused silica capillary pre-column is connected to the temperature programmable injector, the column effluent is split using a press-fit "Y" connector to a 60 meter J&W DB5 and a 60 meter J&W DB17 column. The DB5 and DB17 columns are connected to the electron capture detectors. All three columns have a 0.25 mm ID and a 25 um liquid phase thickness. Helium was used as the carrier gas at a linear velocity of 35 cm/sec and nitrogen was used as the detector makeup gas at a flow of 25 ml/min. Chromatographic data were acquired and processed with a Hewlett-Packard Chem-Station, version A.03.02.

All samples were analyzed using a single injection for each extract under the following conditions:

Injector temperature program:	Initial temperature - 70 °C Program rate - 300 °C/min Final temperature - 280°C Final temperature hold time - 70 min
Column temperature program:	Initial temperature - 70°C Program rate 1 - 15°C/min to 210° Program 1 hold time - 10 min Program rate 2 - 2°C/min to 280°C Final temperature hold time - 11 min
Detector temperature:	330°C

Analytical Techniques for Polynuclear Aromatic Hydrocarbon Compounds (PAHs) in Flesh

A 20 gram tissue sample was dried with sodium sulfate, spiked with deuterated PAH compounds and extracted with dichloromethane. Sample extracts were cleaned up using gel permeation chromatography followed by alumina and silica gel chromatography.

Sample extracts were analyzed using a Varian Saturn II Ion Trap GC-MS. One microliter of sample extract was injected into a J&W Scientific DB-5MS, 30 meter x 0.25 mm I.D. fused silica capillary column having a 0.25 um film thickness. The GC oven temperature was initially held at 70°C for two minutes.

The temperature ramp was 15°C per minute until the oven reached 150°C. The second temperature ramp was 2°C per minute to a final temperature of 280°C and held for 5 minutes. Initial injector temperature was 70° and was programmed to 280° at 300°/min immediately after injection. The GC carrier gas was helium at a linear velocity of 37 cm/sec. Detection limits of the PAHs are reported in Table S-9.

Procedure for Lipid Determination

As synthetic organic concentrations in organisms may vary with lipid content, it is customary to provide lipid data when reporting tissue concentrations. A thoroughly homogenized sample weighing approximately 5 g (wet weight) is macerated and dried with anhydrous granular Na₂SO₄. The dried sample is transferred to a blender with 150 ml of petroleum ether and blended for two minutes at high speed. The liquid is vacuum-filtered into a 250 ml filter flask through a 10 cm Buchner funnel containing Whatman #1 filter paper. The sample is blended once more with an additional 150 ml of petroleum ether and filtered. The filtrate is concentrated to approximately 25 ml with heat (steam bath) and nitrogen steam. The remaining filtrate is then quantitatively transferred into a 50 ml pre-weighed planchet. The petroleum ether is evaporated, the planchet containing the residue is reweighed, and the percent lipid is calculated.

TABLE S-1
 Toxic Substances Monitoring Program
 1994-95 Digestion Techniques and Detection Limits in Fish Tissue

Element	Detection Limits Digestion Techniques	Instrumental Analysis	(ug/g wet weight)
Arsenic	Dry Ash w/Mg(NO ₃) ₂ ·6H ₂ O	NaBH ₄ Reduction A.A.	0.05
Mercury	HNO ₃ reflux	Cold Vapor A.A.	0.02
Copper	HNO ₃ reflux	Flame A.A. or Graphite Furnace	0.02
Zinc	HNO ₃ reflux	Flame A.A.	0.05
Cadmium	HNO ₃ reflux	Graphite Furnace (Ammonium phosphate/magnesium nitrate)	0.01
Chromium	HNO ₃ reflux	Graphite Furnace	0.02
Lead	HNO ₃ reflux	Graphite Furnace (Ammonium phosphate/magnesium nitrate)	0.1
Nickel	HNO ₃ reflux	Graphite Furnace	0.1
Selenium	Dry Ash w/Mg(NO ₃) ₂ ·6H ₂ O	NaBH ₄ Reduction A.A.	0.05
Silver	HNO ₃ reflux	Graphite Furnace	0.02

TABLE S-2
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1994 Trace Metal Quality Control
 (ug/g wet weight)

Station Number	Station Name	Species Code*	Tissue	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
204.10.00	San Francisco Bay	PHG	O	0.42					<0.02		0.88		
204.10.00	San Francisco Bay	PHG	O	0.43					<0.02		0.88		
603.20.36	Pleasant Valley Reservoir	BN	L			<0.02	210	<0.1				0.82	26
603.20.36	Pleasant Valley Reservoir	BN	L			<0.02	200	<0.1				0.83	26
603.20.36	Pleasant Valley Reservoir	BN	F	0.06	<0.01				0.34	<0.1	0.32		
603.20.36	Pleasant Valley Reservoir	BN	F	0.05	<0.01				0.34	<0.1	0.30		
628.20.13	Mojave River	AC	W	0.12					0.07		0.16		
628.20.13	Mojave River	AC	W	0.11					0.06		0.17		
114.22.90	Santa Rosa Cr/Willowside Rd.	SKR	F	0.06	<0.01				0.13	<0.1	0.16		
114.22.90	Santa Rosa Cr/Willowside Rd.	SKR	F	0.05	<0.01				0.14	<0.1	0.16		
723.10.01	Alamo River/Calipatria	CCF	F		<0.01					<0.1			
723.10.01	Alamo River/Calipatria	CCF	F		<0.01					<0.1			
544.00.90	San Joaquin River/Mosssdale	CP	F								0.81		
544.00.90	San Joaquin River/Mosssdale	CP	F								0.84		
114.11.23	Russian River/Wohler Bridge	SKR	W		<0.01	0.74	0.73	<0.1		1.0		<0.02	19
114.11.23	Russian River/Wohler Bridge	SKR	W		0.01	0.90	0.67	<0.1		1.0		<0.02	18
801.26.03	Anza Channel	FHM	W	0.14	0.02	0.12	1.6	<0.1	0.02	<0.1	0.53	<0.02	35
801.26.03	Anza Channel	FHM	W	0.14	0.02	0.14	1.6	<0.1	0.02	<0.1	0.55	<0.02	34
801.71.12	Big Bear Lake/Rathbone Creek	LMB	F	<0.05	<0.01				0.21	<0.1	0.12		
801.71.12	Big Bear Lake/Rathbone Creek	LMB	F	<0.05	<0.01				0.20	<0.1	0.10		
801.11.07	San Diego Creek/Michelson Drive	PRS	W	0.08	0.07	<0.02	1.1	<0.1	0.03	<0.1	1.6	<0.02	49
801.11.07	San Diego Creek/Michelson Drive	PRS	W	0.07	0.08	0.02	1.1	<0.1	0.03	<0.1	1.6	<0.02	51
801.25.00	Santa Ana River/Prado Dam	BB	L			<0.02	3.6	<0.1				<0.02	17
801.25.00	Santa Ana River/Prado Dam	BB	L			<0.02	3.8	<0.1				<0.02	17

* Tables 3, 4, and 5 list code names for species.

L = Liver.

F = Filet.

W = Whole Body.

TABLE S-2
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1994 Trace Metal Quality Control
 (ug/g wet weight)

Station Number	Station Name	Species Code*	Tissue	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
904.61.00	San Elijo Lagoon/Central Basin	CKF	W	0.30	<0.01	0.05	1.3	<0.1	<0.02	<0.1	0.33	<0.02	23
904.61.00	San Elijo Lagoon/Central Basin	CKF	W	0.31	<0.01	0.05	1.3	<0.1	<0.02	<0.1	0.35	<0.02	24
904.21.02	Buena Vista Lagoon	LMB	F	0.08	<0.01				0.07	<0.1	0.40		
904.21.02	Buena Vista Lagoon	LMB	F	0.11	<0.01				0.07	<0.1	0.40		
801.25.00	Santa Ana River/Prado Dam	BH	F	<0.05	<0.01				0.15	<0.1	0.14		
801.25.00	Santa Ana River/Prado Dam	BH	F	<0.05	<0.01				0.16	<0.1	0.15		
728.00.90	Salton Sea/South	TLZ	F								2.9		
728.00.90	Salton Sea/South	TLZ	F								3.0		
632.20.00	Indian Creek Reservoir	RBT	L			<0.02	150	<0.1				1.1	28
632.20.00	Indian Creek Reservoir	RBT	L			<0.02	150	<0.1				1.0	28
632.20.00	Indian Creek Reservoir	RBT	F	<0.05							0.10		
632.20.00	Indian Creek Reservoir	RBT	F	<0.05							0.11		
603.30.05	Haiwee Reservoir	LMB	F	0.09					0.07		0.31		
603.30.05	Haiwee Reservoir	LMB	F	0.11					0.06		0.31		
603.10.16	Mammoth Creek/d/s Murphy's Gulch	BN	L			<0.02	41	<0.1				2.2	23
603.10.16	Mammoth Creek/d/s Murphy's Gulch	BN	L			<0.02	42	<0.1				2.2	23
603.10.16	Mammoth Creek/d/s Murphy's Gulch	BN	F	0.55							0.44		
603.10.16	Mammoth Creek/d/s Murphy's Gulch	BN	F	0.54							0.44		

* Tables 3, 4, and 5 list code names for species.

L = Liver.

F = Filet.

W = Whole Body.

TABLE S-2
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1994 Trace Metal Quality Control
 (ug/g wet weight)

Station Number	Station Name	Species Code*	Tissue	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Zinc
544.00.16	Old River	RSF	F								0.37		
544.00.16	Old River	RSF	F								0.37		
405.13.91	Marina del Rey/Basin D	RSR	L			0.08	5.8	0.13				0.19	16
405.13.91	Marina del Rey/Basin D	RSR	L			0.08	6.2	0.14				0.18	17
205.50.06	San Fransquito Creek	SKR	W				1.1						
205.50.06	San Fransquito Creek	SKR	W				1.0						

* Tables 3, 4, and 5 list code names for species.

L = Liver.

F = Filet.

W = Whole Body.

TABLE S-3
 Toxic Substances Monitoring Program
 1994-95 Trace Metal Analysis of Reference Materials (ug/g dry weight)*

REFERENCE MATERIAL**	AG	AS	CD	CR	CU	HG	NI	PB	SE	ZN
NBS-1577a (Bovine Liver)		0.059±0.022 (0.047±0.006)							0.71±0.05 (0.71±0.07)	
DOLT-1 (Dogfish Liver)		11.1±1.4 (10.1±1.4)	4.33±0.41 (4.18±0.28)	0.43±0.11 (0.40±0.07)	19.8±1.2 (20.8±1.2)	0.277±0.08 (0.225±0.04)	0.28±0.19 (0.26±0.06)	1.32±0.72 (1.36±0.29)	6.39±0.41 (7.34±0.42)	91.9±11 (92.5±2.3)
DOLT-2 (Dogfish Liver)		14.6±0.31 (16.6±1.1)	19.6±1.2 (20.8±0.5)	0.43±0.14 (0.37±0.08)	27.2±1.3 (25.8±1.1)	2.05±0.07 (1.99±0.10)	0.21±0.04 (0.20±0.02)	0.26±0.08 (0.22±0.02)	5.40±0.16 (6.06±0.49)	87.1±2.5 (85.5±2.5)
DORM-1 (Dogfish Muscle)		17.2±1.8 (17.7±2.1)	0.093±0.017 (0.086±0.012)	3.72±0.49 (3.60±0.40)	4.98±0.62 (5.22±0.33)	0.746±0.10 (0.798±0.07)	1.20±0.17 (1.20±0.30)	0.42±0.14 (0.40±0.12)	1.52±0.10 (1.62±0.12)	18.9±2.3 (21.3±1.0)
NBS-1566a (Oyster)	1.54±0.12 (1.63±0.15)	13.1±0.67 (14.0±1.2)	4.16±0.33 (4.15±0.38)	1.22±0.35 (1.43±0.46)	64.4±2.8 (66.3±4.3)		2.34±0.60 (2.25±0.44)	0.359±0.067 (0.371±0.014)		840±40 (830±57)

* Sample values are given first, followed by reference values in parentheses, both values include 95% confidence interval.

** NBS refers to the National Bureau of Standards; DOLT-1, DOLT-2, and DORM-1 are from the National Research Council of Canada.

TABLE S-4
 Toxic Substances Monitoring Program
 Distribution of Synthetic Organic Compounds Among
 Four Fractions of a Standard Florisil^R Column

(0%) Fraction 1	(6%) Fraction 2	(15%) Fraction 3
HCH, alpha*	HCH, alpha*	dacthal
aldrin	HCH, beta	diazinon
chlordene, alpha	HCH, gamma	dichlorobenzophenone, p,p'
chlordene, gamma	HCH, delta	dieldrin
DDE, o,p'	cis-chlordane	endosulfan I
DDE, p,p'	oxychlordane	endrin
DDMU, p,p'*	trans-chlordane	malathion
DDT, o,p'	chlorpyrifos	oxadiazon
DDT, p,p'*	DDD, o,p'	parathion, ethyl
heptachlor	DDD, p,p'	parathion, methyl
hexachlorobenzene	DDMU p,p'*	tetradifon (tedion)
trans-nonachlor	DDT, p,p'*	
PCB 1248	dicofol (kelthane)	
PCB 1254	ethion	
PCB 1260	heptachlor epoxide	
methoxychlor	<u>(50%) Fraction 4</u>	
cis-nonachlor		
toxaphene	endosulfan II	
endosulfan sulfate		

* Found in both 0% and 6% fractions.

TABLE S-5
 Toxic Substances Monitoring Program
 Synthetic Organic Compounds Analyzed
 and Their Detection Limits in Flesh

Compound (ng/g, ppb wet weight)	Detection Limit
aldrin	5
cis-chlordane	5
trans-chlordane	5
chlordene, alpha	5
chlordene, gamma	5
chlorpyrifos	10
dacthal	5
DDD, o,p	10
DDD, p,p'	10
DDE, o,p'	10
DDE, p,p'	5
DDMS, p,p'	30
DDMU,p,p'	15
DDT, o,p'	10
DDT, p,p'	10
diazinon	50
dichlorobenzophenone-p,p'	30
dicofol (Kelthane)	100
dieldrin	5
endosulfan I	5
endosulfan II	70
endosulfan sulfate	85
endrin	15
ethion	20
HCH, alpha	2
HCH, beta	10
HCH, gamma	2
HCH, delta	5
heptachlor	5
heptachlor epoxide	5
HCB	2
methoxychlor	15
cis-nonachlor	5
trans-nonachlor	5
oxadiazon	5
oxychlordane	5
parathion, ethyl	10
parathion, methyl	10
PCB 1248	50
PCB 1254	50
PCB 1260	50
pentachlorophenol*	2
2,3,5,6-tetrachlorophenol*	2
tetradifon (Tedion)	10
toxaphene	100

* Analyzed only when requested.

TABLE S-6
 Toxic Substances Monitoring Program
 Results of Matrix Spike Analyses: 1994-95 Organic Chemicals in Fish Tissue

Compound	1994 Percent Recovery	1995 Percent Recovery	1995 Percent Recovery (duplicate)
aldrin	67	59	70
cis-chlordane	92	73	95
trans-chlordane	81	72	94
chlordene, alpha	69	62	71
chlordene, gamma	65	62	63
chlorpyrifos	58	55	68
dacthal	99	100	110
DDD, o,p'	94	83	99
DDD, p,p'	100	82	96
DDE, o,p'	69	71	62
DDE, p,p'	83	68	71
DDMU,p,p'	80	63	76
DDT, o,p'	65	55	46
DDT, p,p'	98	82	95
diazinon	96	84	96
dichlorobenzophenone-p,p'	na	96	110
dicofol (Kelthane)	na	48	51
dieldrin	110	100	110
endosulfan I	99	96	100
endosulfan II	110	120	120
endosulfan sulfate	110	120	120
endrin	120	100	120
ethion	49	37	46
HCH, alpha	64	63	74
HCH, beta	64	61	81
HCH, gamma	67	64	81
HCH, delta	46	65	80
heptachlor	50	38	42
heptachlor epoxide	70	74	94
HCB	66	50	50
methoxychlor	100	92	100
cis-nonachlor	100	82	98
trans-nonachlor	94	74	81
oxadiazon	62	100	110
oxychlordane	64	68	92
parathion, ethyl	88	82	95
parathion, methyl	73	59	67
tetradifon (Tedion)	110	100	120

na = Not analyzed.

TABLE S-7
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1994 Synthetic Organic Compounds Quality Control
 (ng/g wet weight)

Station Name	San Diego Creek/ Michelson Drive 801.11.07 PRS		Anza Channel 801.26.03 FHM		Trabuco Creek/Oso Road 901.20.04 PRS		Santa Rosa Creek/ Willowside 114.22.90 SKR	
Station No.	1	2	1	2	1	2	1	2
Species*								
REPLICATE								
<u>COMPOUNDS</u>								
cis-chlordane	5.8	6.0	8.8	8.8				
cis-nonachlor	6.1	5.0	6.6	6.6				
gamma-chlordene								
oxychlordane								
trans-chlordane	5.6	<5.0	8.3	8.5				
trans-nonachlor	14.	11.	20.	18.				
chlorpyrifos								
dacthal	6.9	6.7						
DDD, o,p'			12.	11.				
DDD, p,p'	44.	43.	36.	34.				
DDE, o,p'								
DDE, p,p' 350.	320.	410.	360.	16.	16.			
DDT, o,p' 11.	10.							
DDT, p,p' 16.	14.							
DDMU,p,p'								
diazinon 440.	420.							
dieldrin <5.0	7.6	12.	12.					
endosulfan I								
endosulfan II								
endosulfan sulfate								
hexachlorobenzene								
alpha-HCH								
gamma-HCH								
heptachlor epoxide								
oxadiazon	70.	65.	91.	98.	30.	31.	5.0	6.1
PCB 1248								
PCB 1254			150.	140.				
PCB 1260			73.	70.				
toxaphene	120.	110.						
percent moisture	74.4	74.6	76.4	76.7	74.5	74.5	80.7	80.4
percent lipid	5.30	5.29	4.64	4.77	5.20	5.20	0.390	0.398

* Tables 3, 4, and 5 list code names for species.
 < Below detection limit.

TABLE S-7 (continued)
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1994 Synthetic Organic Compounds Quality Control
 (ng/g wet weight)

Station Name	San Francisco Bay	
Station No.	204.10.00	
Species* PHG		
REPLICATE	1	2
<u>COMPOUNDS</u>		
aldrin		
cis-chlordane		
cis-nonachlor		
gamma-chlordene		
oxychlordane		
trans-chlordane		
trans-nonachlor		
chlorpyrifos		
dacthal		
DDD, o,p'		
DDD, p,p'		
DDE, o,p'		
DDE, p,p' 8.8	8.5	
DDT, o,p'		
DDT, p,p'		
DDMU,p,p'		
diazinon		
dieldrin		
endosulfan I		
endosulfan II		
endosulfan sulfate		
hexachlorobenzene	3.9	3.1
alpha-HCH		
gamma-HCH		
heptachlor epoxide		
oxadiazon		
PCB 1254		
PCB 1260		
toxaphene		
percent moisture	76.3	76.3
percent lipid	2.38	2.11

* Tables 3, 4, and 5 list code names for species.
 < Below detection limit.

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TABLE S-7 (continued)
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1995 Synthetic Organic Compounds Quality Control
 (ng/g wet weight)

Station Name	New River/ Westmorland 723.10.02 CCF		Santa Ana River/ Prado Dam 801.25.00 BLB		Buena Vista Lagoon 904.21.02 LMB				San Elijo Lagoon/ Central Basin 904.61.00 CKF	
Station No. Species* REPLICATE	1	2	1	2	1	2	1	2	1	2
<u>COMPOUNDS</u>										
aldrin										
cis-chlordane										
cis-nonachlor										
gamma-chlordene										
oxychlordane										
trans-chlordane										
trans-nonachlor		5.3		5.4						
chlorpyrifos		78.		80.						
dacthal 430.		410.								
DDD, o,p'										
DDD, p,p'		18.		16.	58.	48.				
DDE, o,p'										
DDE, p,p'		330.		310.	24.	27.	91.	76.		
DDT, o,p'										
DDT, p,p'										
DDMU,p,p'		22.		17.						
diazinon										
dieldrin 8.3		7.9								
endosulfan I		5.6		<5.0						
endosulfan II										
endosulfan sulfate										
hexachlorobenzene										
alpha-HCH										
gamma-HCH		2.4		<2.0						
heptachlor epoxide										
oxadiazon		<5.0		6.4						
PCB 1248										
PCB 1254										
PCB 1260										
toxaphene		190.		190.						
percent moisture		80.3		80.7	79.7	79.7	78.7	79.7	77.0	77.2
percent lipid		0.730		0.757	1.68	1.78	0.05	0.056	1.49	1.49

* Tables 3, 4, and 5 list code names for species.
 < Below detection limit.

TABLE S-7 (continued)
 Toxic Substances Monitoring Program
 Results of Duplicate Sample Analysis: 1995 Synthetic Organic Compounds Quality Control
 (ng/g wet weight)

Station Name	Los Penasquitos Creek/u/s Highway I-805		Los Penasquitos Creek	
Station No.	906.10.10		906.10.10	
Species*	LMB		LMB	
REPLICATE	1	2	1	2
<u>COMPOUNDS</u>				
cis-chlordane				
cis-nonachlor				
gamma-chlordene				
oxychlordane				
trans-chlordane				
trans-nonachlor				
chlorpyrifos				
dacthal				
DDD, o,p'				
DDD, p,p'				
DDE, o,p'				
DDE, p,p'				
DDT, o,p'				
DDT, p,p'				
DDMU,p,p'				
diazinon				
dieldrin				
endosulfan I				
endosulfan II				
endosulfan sulfate				
hexachlorobenzene				
alpha-HCH				
gamma-HCH				
heptachlor epoxide				
hexachlorobenzene				
oxadiazon				
PCB 1248				
PCB 1254				
PCB 1260				
toxaphene				
percent moisture	78.6	78.5	78.3	78.6
percent lipid	0.240	0.157	0.296	0.133

* Tables 3, 4, and 5 list code names for species.
 < Below detection limit.

TABLE S-8
 Toxic Substances Monitoring Program
 Sediment Detection Limits: 1994 Synthetic Organic Compounds

Compound (ng/g, ppb dry weight)	Detection Limit
aldrin	0.70
cis-chlordane	1.2
cis-nonachlor	1.8
gamma-chlordene	0.81
oxychlordane	1.1
trans-chlordane	1.1
trans-nonachlor	0.70
chlorpyrifos	3.1
dacthal	1.5
DDD, o,p'	3.0
DDD, p,p'	3.1
DDE, o,p'	1.4
DDE, p,p'	1.4
DDT, o,p'	1.5
DDT, p,p'	1.8
DDMU,p,p'	2.7
diazinon	6.2
dieldrin	0.31
endosulfan I	0.27
endosulfan II	0.29
endosulfan sulfate	0.51
ethion	7.6
hexachlorobenzene	0.43
alpha-HCH	0.57
beta-HCH	1.8
gamma-HCH	0.84
heptachlor	0.66
heptachlor epoxide	1.2
oxadiazon	0.55
PCB 1248	14.0
PCB 1254	14.0
PCB 1260	14.0
toxaphene	70.0
percent moisture	43.6

TABLE S-9
 Toxic Substances Monitoring Program
 Polynuclear Aromatic Hydrocarbons (PAHs) Analyzed
 and Their Detection Limits in Flesh

Compound	Detection Limit (ng/g, ppb wet weight) 1991
naphthalene	100
1-methylnaphthalene	100
2-methylnaphthalene	100
biphenyl	100
2,6-dimethylnaphthalene	100
acenaphthylene	100
acenaphthene	100
2,3,5-trimethylnaphthalene	100
fluorene	100
phenanthrene	100
anthracene	100
1-methylphenanthrene	100
fluoranthene	100
pyrene	100
benz[a]anthracene	100
chrysene	100
benzo[b]fluoranthene	100
benzo[k]fluoranthene	100
benzo[e]pyrene	100
benzo[a]pyrene	100
perylene	100
indeno[1,2,3-cd]pyrene	100
dibenz[a,h]anthracene	100
benzo[ghi]perylene	100

APPENDIX T

Median International Standards

Median International Standards

In 1982, the Food and Agricultural Organization (FAO) of the United Nations conducted a survey of standards and legal limits for metals including mercury, pesticides, and other contaminants in fishery products. This was in response to frequent inquiries from institutions and companies active in international commerce that found it difficult finding such information.

The FAO surveyed nations that were members of the FAO as well as those who were not. Most nations cooperated with the survey and, in certain other cases, the standards were drawn from other sources. The FAO took all of the responses and presented them in a report entitled "Compilation of Legal Limits for Hazardous Substances in Fish and Fishery Products" (Nauen 1983). Most of the limits were presented in a standard format and in standard units of fresh or live weight. Exceptions are clearly noted.

Nearly all of the standards for pesticides were from the United States (FDA standards). However, with the exception of mercury, the United States has no standards for trace metals in fishery products. It is this very lack of standards that makes interpretation of some of the TSMP findings difficult.

Table T-1 summarizes the standards and guidelines for metals from the FAO report. The table notes whether the standards are for freshwater fish, marine fish, shellfish, or a combination of these. When more than one standard was listed by the FAO report, those values closest to a standard for "fresh weight, edible portion" were chosen. Exceptions are clearly noted in the table. Standards for each element are arranged in ascending order. The country of origin and the approximate date of adoption are also noted.

As can be seen in Table T-1, some of the standards are not truly for edible portion, fresh weight. For example, some standards refer to canned products or protein. In the case of India, the standards are on a dry weight basis. If the Indian standards were stated in fresh weight terms, they would be approximately one fifth or one sixth of the stated standard.

Table T-1 has many striking features. One feature is that most of the standards are surprisingly similar. Another feature is the large number of countries that have standards for metals. Also, although many of these countries are less developed nations, the standards adopted by these nations do not differ from those of the more developed nations.

The standards were not summarized for mercury because there is a USFDA standard of 1.0 ppm for methyl mercury in the edible portions of fish and shellfish. This was, incidentally, the highest limit set by any nation in the FAO study. The great majority of nations have set a mercury standard of 0.5 ppm.

Median International Standards developed by SWRCB staff and presented in Table 9 were calculated from the standards listed in Table T-1. The median standard was chosen for use for several reasons. The median is less influenced than the mean by outliers in the data. Also, direct comparisons of standards for fresh versus canned versus dry can be misleading. By using median standards, these misleading comparisons can be more easily avoided. In most cases, the Median International Standard

TABLE T-1

International Standards for Trace Elements in Fish and Molluscs

Element	Standard	Freshwater Fish	Marine Fish	Molluscs/ Shellfish	Country	Approximate Date of Adoption
Antimony	1.0 ppm	x	x	x	Hong Kong	1983
	1.0 ppm	x	x	x	New Zealand	1971
	1.5 ppm	x	x	x	Australia	1982
Arsenic	0.1 ppm	x	x	x	Venezuela	-
	1.0 ppm	x	x	x	Chile	-
	1.0 ppm	d	d	x	India	-
	1.0 ppm	x	x	x	New Zealand	1971
	1.0 ppm	e	e	e	United Kingdom	1959
	1.4 ppm	x			Hong Kong	1983
	1.5 ppm	x	x	x	Australia	1982
	1.5 ppm	c	c	c	Thailand	1982
	3.5 ppm	p	p		Canada	1976
	5.0 ppm	x	x	x	Finland	1980
5.0 ppm	x	x	x	Zambia	1976	
Cadmium	0.05 ppm	x	x		Netherlands	-
	0.1 ppm	c	c	c	Switzerland	1982
	0.1 ppm	r	x		Venezuela	-
	0.2 ppm	x	x		Australia	1982
	0.3 ppm	r	r		Finland	-
	0.5 ppm	x			W. Germany	1979
	1.0 ppm	x			Netherlands	-
	1.0 ppm	x	x		New Zealand	1971
	2.0 ppm	x			Australia	1982
2.0 ppm	x	x	x	Hong Kong	1983	
Chromium	1.0 ppm	x	x	x	Hong Kong	1983
Copper	10.0 ppm	x	x	x	Chile	-
	10.0 ppm	d	d		India	-
	10.0 ppm	x	x		Venezuela	-
	20.0 ppm	c	c	c	Thailand	1982
	20.0 ppm	g	g	g	United Kingdom	1956
	30.0 ppm	x	x	x	Australia	1982
	30.0 ppm	x	x	x	New Zealand	1971
	100.0 ppm	x	x		Zambia	1976
Fluoride	150.0 ppm	p	p		Canada	1979
Fluorine	10.0 ppm	x	x		New Zealand	1971
	25.0 ppm	x	x		Zambia	1976

p - in protein
e - except where natural levels are higher
c - in metal containers

g - recommended guideline
d - dry weight basis
r - revised limit (proposed)

TABLE T-1 (continued)

International Standards for Trace Elements in Fish and Molluscs

Element	Standard	Freshwater Fish	Marine Fish	Molluscs/ Shellfish	Country	Approximate Date of Adoption
Lead	0.5 ppm	p	p		Canada	1979
	0.5 ppm	x			W. Germany	1979
	0.5 ppm	x	x		Netherlands	-
	1.0 ppm	x	x	x	Sweden	1979
	1.0 ppm	c	c	c	Switzerland	1982
	1.0 ppm	c	c	c	Thailand	1982
	2.0 ppm	x	x		Australia	1982
	2.0 ppm	x	x	x	Chile	1982
	2.0 ppm	x			Finland	1980
	2.0 ppm	x			Italy	1978
	2.0 ppm	x			Netherlands	-
	2.0 ppm	x	x		New Zealand	-
	2.0 ppm	l	l		Sweden	1979
	2.0 ppm	x	x		United Kingdom	1980
	2.0 ppm	x	x		Venezuela	-
	2.5 ppm	x			Australia	1982
	5.0 ppm	d	d		India	-
6.0 ppm	x	x	x	Hong Kong	1983	
10.0 ppm	x	x		Zambia	1976	
Mercury	International Standards for Mercury range from 0.1 ppm to 1.0 ppm. Twenty-eight countries have established standards for Mercury. The U. S. Food and Drug Administration has set an action level of 1.0 ppm in the edible portion of fish and molluscs. The median international standard is 0.5 ppm.					
Selenium	0.3 ppm	x	x	x	Chile	1982
	2.0 ppm	x	x		Australia	1982
	2.0 ppm	x	x		New Zealand	1971
Tin	50.0 ppm	x	x		Australia	1982
	100.0 ppm	x	x		Venezuela	-
	150.0 ppm	c	c	c	Finland	1979
	150.0 ppm	x	x		New Zealand	1977
	230.0 ppm	x	x	x	Hong Kong	1983
	250.0 ppm	d	d		India	-
	250.0 ppm	x	x		Thailand	1982
	250.0 ppm	g,c	g,c	g,c	United Kingdom	1973
Zinc	40.0 ppm	x	x	x	Australia	1982
	40.0 ppm	x	x		New Zealand	1971
	50.0 ppm	d	d		India	-
	50.0 ppm	g	g		United Kingdom	1953
	100.0 ppm	x	x	x	Chile	1982
	100.0 ppm	x	x		Zambia	1976

p - in protein
e - except where natural levels are higher
c - in metal containers
l - in liver

g - recommended guideline
d - dry weight basis
r - revised limit (proposed)

is actually a standard set by one or more nations rather than an average value not actually set by any country. The median was calculated as follows. All standards or guidelines (with the exception of the Indian standards which are based on dry weight) were considered to be more-or-less equivalent. For the purposes of calculating the median, the Indian standards were divided by five. The median was calculated as the middle value of all of the standards (e.g., the fourth of seven values arranged in ascending order). In a few cases, the number of standards was even. In this event, the two mid-values were averaged (most were not different). None of the adjusted dry-weight standards from India ended up as a median or as part of a mid-value pair.

For obvious reasons, the Median International Standards can only be used to provide a general idea of what other nations have chosen to use as a standard. The range of all values is listed in Table 9 as a reminder of this. However, with the lack of American standards, Median International Standards can provide a guidepost for those responsible for interpreting trace metal findings in fish and shellfish tissue.

APPENDIX U

Elevated Data Levels

Elevated Data Levels (EDL)

An EDL is defined for the purposes of the TSMP as that concentration of a toxic substance in a fish tissue that equals or exceeds a specified percentile (such as 85 percent) of all TSMP measurements of the toxic substance in the same fish and tissue type between 1978 and 1995. EDLs were determined as follows:

(1) All TSMP data from 1978 through 1995 were pooled by fish and tissue type, (2) The concentrations of each toxicant were ranked from highest to lowest concentration down to, and including, instances when a chemical was not detected, (3) The cumulative frequency of occurrence and percentile ranking for all concentrations were calculated, (4) The concentration of the toxic substance representing the 85th percentile was identified and designated the 85 percent EDL or EDL 85, and (5) The concentration of the toxic substance representing the 95th percentile was identified and designated the 95 percent EDL or EDL 95. The EDL 85 is that concentration of a toxic substance that equals or exceeds 85 percent of all TSMP measurements of the toxic substance in the same fish and tissue type between 1978 and 1995. The EDL 95 is that concentration of a toxic substance that equals or exceeds 95 percent of all TSMP measurements of the toxic substance in the same fish and tissue type between 1978 and 1995. EDLs for trace metals are summarized in Tables 10 through 12. EDLs for synthetic organic substances are summarized in Tables 13 through 18.

Because EDLs are based on the relative ranking of each measurement, rather than a percentage of the highest concentration obtained, they are not influenced by unusually high (anomalous) toxicant values. This characteristic of EDLs is especially desirable in the evaluation of synthetic organic toxicants where the highest concentration may be as much as ten times the next highest concentration. EDLs do, however, reflect the biases of the data upon which they have been based. For instance, EDLs for mercury and selenium in California fish show that a large number of samples for each exceed criteria. However, much of the mercury and selenium data collected by TSMP were in locations known to have elevated mercury and selenium levels, and often large numbers of fish were analyzed from those locations to determine the extent of the problem.

Because they are based on TSMP data rather than an absolute number external to the TSMP, EDLs, when exceeded, can provide a sensitive first indication of elevated toxicant levels in California waters. As such, EDLs fulfill the monitoring function of the TSMP effectively. In addition, EDLs may be expressed in wet weight or lipid weight to eliminate data variability due to lipid content and to conform to scientific literature relevant to fish monitoring programs worldwide. However, EDLs do not assess adverse impacts, nor do they necessarily represent concentrations that may be damaging to the fish or to a human consuming the fish. They do not directly relate to Maximum Tissue Residue levels (MTRLs), FDA action levels, NAS guidelines, or Median International Standards (MIS).