

California Regional Water Quality Control Board  
Los Angeles Region

Tissue, Sediment and Benthic Draft Fact Sheets  
2002 303(d) List of Impaired Waterbodies

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Arroyo Simi R1 (Moorpark Fwy (23) to Brea Cyn)**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist chromium in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist nickel in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist silver in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist selenium in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist zinc in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Arroyo Simi R1	<b>Pollutants/Stressors</b>	<b>Delete:</b> Cr(Tissue); Ni (Tissue); Ag (Tissue); Se (Tissue); Zn(Tissue)
<b>Hydrologic Unit</b>	403.62	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	7.58	<b>TMDL Priority</b>	6
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

Calleguas Creek and its major tributaries, Revolon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura County and a small portion of western Los Angeles County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space, however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

Mugu Lagoon, located at the mouth of the watershed, is one of the few remaining significant saltwater wetland habitats in southern California. The Point Mugu Naval Air Base is located in the immediate area and the surrounding Oxnard Plain supports a large variety of agricultural crops. These fields drain into ditches which either enter the lagoon directly or through Calleguas Creek and its tributaries. Other fields drain into tile drain systems which discharge to drains or creeks. Also in the area of the base are freshwater wetlands created on a seasonal basis to support duck hunting clubs. The lagoon borders on an Area of Special Biological Significance (ASBS) and supports a great diversity of wildlife including several endangered birds and one endangered plant species. Except for the military base, the lagoon area is relatively undeveloped.

### Water Quality Objectives Not Attained

EDLs have been determined to be an insufficient basis for impairment determination.

### Beneficial Uses Affected

Aquatic Life

### Data Assessment

Tissue (91,98): DDT, PCB (MTRL)

**Table 2. Summary of Tissue Data for Arroyo Simi Reach 1, a tributary to Calleguas Creek**

Dates of Sampling	6/25/98; 1991
Number of Samples (n)	2 (fish tissue)
Minimum Data Value	
Maximum Data Value	p,p'-DDE: 38 ppb total PCB: 29.1 ppb
Median Data Value	na
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### Potential Sources

### References

Toxic Substances Monitoring Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Ballona Creek Estuary**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist aroclor in sediments because we have a listing for PCBs.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ballona Creek Estuary	<b>Pollutants/Stressors</b>	<b>Delete:</b> aroclor
<b>Hydrologic Unit</b>	405.13	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	2.5	<b>TMDL Priority</b>	55
<b>Size Affected</b>	2.5	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire estuary	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The most recent Water Quality Assessment Report indicates impairment in this watershed due to coliform and its effects such as shellfish harvesting advisories; trash; PCBs and pesticides of historical origin such as DDT, chlordane, and dieldrin, as well as their effects such as sediment toxicity; metals such as lead, silver, arsenic, copper, cadmium, and zinc, as well as their effects such as water column toxicity; and tributyltin.

Ballona Creek is completely channelized to the ocean except for the estuarine portion which has a soft bottom. While at one time it drained into a large wetlands complex, it now has no direct connection to the few wetlands remaining in the area although tide gates exist in the channel which connect to Ballona Wetlands. However, Ballona Creek may more often affect the nearby wetlands due to wave action moving trash, suspended material and dissolved contaminants from the ocean to the nearby Ballona Wetlands and Marina del Rey Harbor within which complex Ballona Lagoon is located.

**Water Quality Objectives Not Attained**

Sediment Quality Guidelines

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Sed chem (95, 97, 99): lead, total chlordane, and DDT.

**Table 2. Summary of Tissue and Sediment Data for the Ballona Creek Estuary**

Dates of Sampling	January 1993 September 1995 October/December 1997 January 1999
Number of Samples (n)	1993: 1 (sediment); 1995: 16 (sediment) 1997: 16 (sediment); 1999: 16 (sediment)
Minimum Data Value	
Maximum Data Value	Lead: 470 ppm; Total chlordane: 562 ppb; p,p'-DDE: 148 ppm
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Lead: (15 %); Chlordane: (25%); DDE: (10%)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

N/A

**References**

U.S. Army Corps of Engineers Maintenance Dredging Sampling Program.  
Bay Protection and Toxic Cleanup Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Ballona Creek**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist arsenic in tissue because there is no longer a Maximum Tissue Residue Level (MTRL) for this compound.
- Delist copper in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist lead in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist silver in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist TBT in sediment because there is no valid assessment guideline for this compound.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ballona Creek	<b>Pollutants/Stressors</b>	<b>Delete:</b> As (Tissue); Cu (Tissue); Pb (Tissue); Ag (Tissue); TBT (Sediment)
<b>Hydrologic Unit</b>	405.13	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	4.3	<b>TMDL Priority</b>	Metals: 57 TBT: 70
<b>Size Affected</b>	4.3	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire reach.	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The most recent Water Quality Assessment Report indicates impairment in this watershed due to coliform and its effects such as shellfish harvesting advisories; trash; PCBs and pesticides of historical origin such as DDT, chlordane, and dieldrin, as well as their effects such as sediment toxicity; metals such as lead, silver, arsenic, copper, cadmium, and zinc, as well as their effects such as water column toxicity; and tributyltin.

Ballona Creek is completely channelized to the ocean except for the estuarine portion which has a soft bottom. While at one time it drained into a large wetlands complex, it now has no direct connection to the few wetlands remaining in the area although tide gates exist in the channel which connect to Ballona Wetlands. However, Ballona Creek may more often affect the nearby wetlands due to wave action moving trash, suspended material and dissolved contaminants from the ocean to the nearby Ballona Wetlands and Marina del Rey Harbor within which complex Ballona Lagoon is located.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

No new data.

**Potential Sources**

N/A

**References**

N/A

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Ballona Wetland**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist arsenic in tissue because there is no longer a Maximum Tissue Residue Level (MTRL) for this compound.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ballona Wetland	<b>Pollutants/Stressors</b>	<b>Delete:</b> As (Tissue)
<b>Hydrologic Unit</b>	405.13	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	151	<b>TMDL Priority</b>	57
<b>Size Affected</b>	151	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire reach.	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The most recent Water Quality Assessment Report indicates impairment in this watershed due to coliform and its effects such as shellfish harvesting advisories; trash; PCBs and pesticides of historical origin such as DDT, chlordane, and dieldrin, as well as their effects such as sediment toxicity; metals such as lead, silver, arsenic, copper, cadmium, and zinc, as well as their effects such as water column toxicity; and tributyltin.

Ballona Creek is completely channelized to the ocean except for the estuarine portion which has a soft bottom. While at one time it drained into a large wetlands complex, it now has no direct connection to the few wetlands remaining in the area although tide gates exist in the channel which connect to Ballona Wetlands. However, Ballona Creek may more often affect the nearby wetlands due to wave action moving trash, suspended material and dissolved contaminants from the ocean to the nearby Ballona Wetlands and Marina del Rey Harbor within which complex Ballona Lagoon is located.

**Water Quality Objectives Not Attained**

There is no longer a tissue MTRL for this compound.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Tissue (94): metals and organics levels low



**Table 2. Summary of Tissue Data for the Ballona Wetland**

Dates of Sampling	6/22/94
Number of Samples (n)	1 (fish tissue)
Minimum Data Value	
Maximum Data Value	
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### **Potential Sources**

N/A

### **References**

Toxic Substances Monitoring Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Colorado Lagoon**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist lead in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Colorado Lagoon	<b>Pollutants/Stressors</b>	<b>Delete:</b> Pb (Tissue)
<b>Hydrologic Unit</b>	405.12	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	13.6	<b>TMDL Priority</b>	83
<b>Size Affected</b>	13.6	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire reach.	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

Alamitos Bay is composed of the Marine Stadium, a recreation facility built in 1932 and used for boating, water skiing, and jet skiing; Long Beach Marina, which contains five smaller basins for recreational craft and a boatyard; a variety of public and private berths; and the Bay proper which includes several small canals, a bathing beach, and several popular clamming areas. A small bathing lagoon, Colorado Lagoon in Long Beach, has a tidal connection with the Bay and a small wildlife pond, Sims Pond, also has a tidal connection. The latter is heavily used by overwintering migratory birds.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

No new data.

**Potential Sources**

N/A

**References**

N/A

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data**  
**Conejo Creek R1 (confl Call to Santa Rosa Rd) and R2 (Santa Rosa Rd to Thousand Oaks city limit) and R3 (Thousand Oaks city limit to Lynn Rd) and R4 (abv Lynn Rd)**

**Summary of Proposed Action**

**Proposed New Listings**

- “Not Supporting” (Impaired) for chlordane in tissue due to exceedances of Maximum Tissue Residue Levels (MTRs) in new Calleguas Creek Reach 13 only.
- “Not Supporting” (Impaired) for dieldrin in tissue due to exceedances of MTRs in new Calleguas Creek Reach 13 only.
- “Not Supporting” (Impaired) for HCH in tissue due to exceedances of MTRs in new Calleguas Creek Reach 13 only.
- “Not Supporting” (Impaired) for PCBs in tissue due to exceedances of MTRs in new Calleguas Creek Reach 13 only.

**Proposed New Delistings**

- Delist dacthal in tissue in old Calleguas Creek Reaches 1, 2, 3 and 4 because the listings were based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist silver in tissue in old Calleguas Creek Reaches 1, 2 and 3 because the listings were based on EDLs which no longer represent valid assessment guidelines.
- Delist cadmium in tissue in old Calleguas Creek Reaches 1, 2 and 3 because the listings were based on EDLs which no longer represent valid assessment guidelines.
- Delist chromium in tissue in old Calleguas Creek Reaches 1, 2 and 3 because the listings were based on EDLs which no longer represent valid assessment guidelines.
- Delist nickel in tissue in old Calleguas Creek Reaches 1, 2 and 3 because the listings were based on EDLs which no longer represent valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Conejo Creek, a tributary to Calleguas Creek	<b>Pollutants/Stressors</b>	<p><b>Add:</b> Chlordane (Tissue) [R1]; Dieldrin (Tissue) [R1]; HCH (Tissue) [R1]; PCB (Tissue) [R1]</p> <p><b>Delete:</b> Dacthal (Tissue) [R1, R2, R3, R4]; Silver (Tissue) [R1, R2, R3]; Cadmium (Tissue) [R1, R2, R3]; Chromium (Tissue) [R1, R2, R3]; Nickel (Tissue) [R1, R2, R3];</p>
<b>Hydrologic Unit</b>	403.64	<b>Source(s)</b>	Historic use of pesticides and lubricants.

<b>Total Waterbody Size</b>	6.51	<b>TMDL Priority</b>	Chlordane, Dieldrin, HCH, PCB, Chem A, Dacthal: 5  Silver, Cadmium, Chromium, Nickel: 6
<b>Size Affected</b>	Reach 1 only	<b>TMDL Start Date (Mo/Yr)</b>	2002
<b>Extent of Impairment</b>	R1	<b>TMDL End Date (Mo/Yr)</b>	2005

### **Watershed Characteristics**

Calleguas Creek and its major tributaries, Revolon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura County and a small portion of western Los Angeles County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space, however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

Mugu Lagoon, located at the mouth of the watershed, is one of the few remaining significant saltwater wetland habitats in southern California. The Point Mugu Naval Air Base is located in the immediate area and the surrounding Oxnard Plain supports a large variety of agricultural crops. These fields drain into ditches which either enter the lagoon directly or through Calleguas Creek and its tributaries. Other fields drain into tile drain systems which discharge to drains or creeks. Also in the area of the base are freshwater wetlands created on a seasonal basis to support duck hunting clubs. The lagoon borders on an Area of Special Biological Significance (ASBS) and supports a great diversity of wildlife including several endangered birds and one endangered plant species. Except for the military base, the lagoon area is relatively undeveloped.

### **Water Quality Objectives Not Attained**

Tissue MTRLS

EDLs have been determined to be an insufficient basis for impairment determination.

### **Beneficial Uses Affected**

Aquatic Life

### **Data Assessment**

Tissue (98): chlordane, DDT, dieldrin, HCH, PCB, toxaphene (MTRL)

**Table 2. Summary of Tissue Data for Conejo Creek, a tributary to Calleguas Creek**

Dates of Sampling	6/25/98
Number of Samples (n)	2 (fish tissue)
Minimum Data Value	Total chlordane: 39.7 ppb p,p'-DDD: 34.6 ppb p,p'-DDE: 844 ppb p,p'-DDT: 94 ppb dieldrin: 16.5 ppb gamma-HCH: 4.0 ppb total PCB: 20.3 ppb toxaphene: 819 ppb
Maximum Data Value	Total chlordane: 42.1 ppb p,p'-DDD: 33.9 ppb p,p'-DDE: 932 ppb p,p'-DDT: 100 ppb dieldrin: 17.2 ppb gamma-HCH: 4.0 ppb total PCB: 22.0 ppb toxaphene: 874 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Chlordane: 2 (100 %) DDTs: 4 (67 %) Dieldrin: 2 (100 %) HCH: 2 (100 %) PCB: 2 (100 %) Toxaphene: 2 (100 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants.

**References**

Toxic Substances Monitoring Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
LA Harbor-Consolidated Slip**

**Summary of Proposed Action**

**Proposed New Listings**

- “Not Supporting” (Impaired) for arsenic in sediments due to exceedances of Effects Range-Median (ERM) and/or Probable Effects Level (PEL).
- “Not Supporting” (Impaired) for cadmium in sediments due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for copper in sediments due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for mercury in sediments due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for nickel in sediments due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for dieldrin in tissue due to exceedances of Maximum Tissue Residue Levels (MTRLs).
- “Not Supporting” (Impaired) for toxaphene in tissue due to exceedances of MTRLs.

**Proposed New Delistings**

- Delist TBT in tissue and sediment because the listing was based on exceeding background levels rather than valid assessment guidelines. Delisting applies to LA Harbor Consolidated Slip (tissue only), Fish Harbor (sediment only), Inner Breakwater (sediment only) and Main Channel (sediment only).
- Delist zinc in tissue because the listing was based on exceeding background levels rather than valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

Waterbody Name	Consolidated Slip – LA Harbor	Pollutants/Stressors	See Above
Hydrologic Unit		Source(s)	Historical use for pesticides and lubricants. Stormwater runoff, aerial deposition, and historical discharges for metals.
Total Waterbody Size		TMDL Priority	Dieldrin & toxaphene: 73 TBT: 79 Others: 75
Size Affected		TMDL Start Date (Mo/Yr)	Dieldrin & Toxaphene: 2005 Others: 2004
Extent of Impairment		TMDL End Date (Mo/Yr)	Dieldrin & Toxaphene: 2008

## Watershed Characteristics

The Los Angeles and Long Beach Harbors are located in the southern portion of the Los Angeles Basin. Along the northern portion of San Pedro Bay is a natural embayment formed by a westerly extension of the coastline which contains both harbors, with the Palos Verdes Hills the dominant onshore feature.

Historically, the area consisted of marshes and mudflats with a large marshy area, Dominguez Slough, to the north, and flow from the Los Angeles River entering where Dominguez Channel now drains. Near the end of last century and during the beginning of this one, channels were dredged, marshes were filled, wharves were constructed, the Los Angeles River was diverted, and a breakwater was constructed in order to allow deep draft ships to be directly offloaded and products be swiftly moved. The Dominguez Slough was completely channelized and became the drainage endpoint for runoff from a highly industrialized area. Eventually, the greater San Pedro Bay was enclosed by two more breakwaters and deep entrance channels were dredged to allow for entry of ships with need of 70 feet of clearance. The LA/LB Harbor complex together is now one of the largest ports in the country.

Both harbors are considered to be one oceanographic unit. Despite its industrial nature, contaminant sources, and low flushing ability, the inner harbor area supports fairly diverse fish and benthic populations and provides a protected nursery area for juvenile fish. The California least tern, an endangered species, nests in one part of the harbor complex.

Similar to LA Inner Harbor in many respects, LB Inner Harbor is dissimilar to the other Port in the higher number of privately-owned waterfront parcels which the Port has recently been in the process of the buying up and converting to Port-related uses, generally container terminals. Also, basins and slips in LB Inner Harbor are somewhat more separated from each other than in LA Inner Harbor which may possibly prevent contamination from spreading easily.

The outer part of both harbors (the greater San Pedro Bay) has been less disrupted and supports a great diversity of marine life. It is also open to the ocean at its eastern end and receives much greater flushing than the inner harbors.

## Water Quality Objectives Not Attained

MTRLS  
ERM/PEL

## Beneficial Uses Affected

Aquatic Life  
Fish Consumption

## Data Assessment

Tissue (93): chlordan, DDT, PCB, toxaphene

Tissue (94): DDT, PCB

Tissue (95): dieldrin, PCB, toxaphene

Tissue (96): DDT, PCB

Tissue (98): dieldrin, DDT, PCB

Sediment toxicity (92, 94, 96)

Benthic community degradation (96)

Sediment Chemistry (92): copper, lead, mercury, nickel, zinc, chlordan, DDT, PCB

Sediment Chemistry (93): chlordan, DDT, PCB

Sediment Chemistry (94): copper, mercury, nickel, zinc, chlordan, DDT, PCB

Sediment Chemistry (96): cadmium, copper, chromium, lead, mercury, silver, zinc, chlordan, DDT, PCB

Table 2. Summary of Tissue and Sediment Data for Consolidated Slip, LA Harbor

Dates of Sampling	7/31/92 1/6/93; 11/9/93 2/1/94; 2/8/94 1/31/95 1/18/96; 7/17/96 3/24/98
Number of Samples (n)	1992: 2 (sediment) 1993: 1 (sediment) + 1 (tissue) 1994: 3 (sediment) + 1 (tissue) 1995: 1 (tissue) 1996: 14 (sediment) + 1 (tissue) 1998: 2 (tissue) 19 (sediment toxicity) 8 (benthic infauna)
Minimum Data Value	Copper (sed): 58 ppm Chromium (sed): 47 ppm Cadmium (sed): 1.0 ppm Lead (sed): 40 ppm Mercury (sed): 0.115 ppm Nickel (sed): 23 ppm Zinc (sed): 140 ppm Total chlordane (sed): nd Total DDT (sed): 63.3 ppb Total PCB (sed): 91.8 ppb Total chlordane (tis): 5.0 ppb Dieldrin (tis): 0.6 ppb p,p'-DDD (tis): 5.9 ppb p,p'-DDE (tis): 24.0 ppb p,p'-DDT (tis): 1.9 ppb Total PCB (tis): 48.3 ppb
Maximum Data Value	Copper (sed): 1740 ppm Chromium (sed): 552 ppm Cadmium (sed): 14.5 ppm Lead (sed): 1590 ppm Mercury (sed): 3.28 ppm Nickel (sed): 53.6 ppm Zinc (sed): 1010 ppm Total chlordane (sed): 246 ppb Total DDT (sed): 1317 ppb Total PCB (sed): 2118 ppb Total chlordane (tis): 8.8 ppb Dieldrin (tis): 1.5 ppb p,p'-DDD (tis): 9.8 ppb p,p'-DDE (tis): 48.0 ppb p,p'-DDT (tis): 15.0 ppb Total PCB (tis): 150.0 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 16 (84 %) Benthos: 3 (38 %) Copper (sed): 19 (95 %)



	Chromium (sed): 4 (20 %) Cadmium (sed): 6 (30 %) Lead (sed): 13 (65 %) Mercury (sed): 5 (25 %) Nickel (sed): 5 (25 %) Zinc (sed): 18 (90 %) Total chlordanes (sed): 17 (85 %) Total DDT (sed): 20 (100 %) Total PCB (sed): 20 (100 %) Total chlordanes (tis): 1 (17 %) Dieldrin (tis): 3 (50 %) DDTs (tis): 4 (22 %) Total PCB (tis): 6 (100 %)
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This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### Potential Sources

Historical use for pesticides and lubricants. Stormwater runoff, aerial deposition and historical discharges for metals.

### References

State Mussel Watch Program database  
 Bay Protection and Toxic Cleanup Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Coyote Creek**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist silver in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Coyote Creek	<b>Pollutants/Stressors</b>	Delete: Ag (Tissue)
<b>Hydrologic Unit</b>	405.15	<b>Source(s)</b>	Historical use of pesticides
<b>Total Waterbody Size</b>	13.45	<b>TMDL Priority</b>	39
<b>Size Affected</b>	13.45	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire reach.	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The San Gabriel River receives drainage from a large area of eastern Los Angeles County; its headwaters originate in the San Gabriel Mountains. The watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area; other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams. Further downstream, towards the middle of the watershed, are large spreading grounds utilized for groundwater recharge. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir (normally only during high storm flows). The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming an soft bottom channel once again near the ocean in the city of Long Beach. Large electrical power poles line the river along the channelized portion and nurseries, small stable areas, and a large poultry farm are located in these areas.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Tissue (97): metals and organics were low, except for gamma-HCH, which exceeded MTRL.

**Table 2. Summary of Tissue Data for Coyote Creek**

Dates of Sampling	7/18/97
Number of Samples (n)	1 (fish tissue)
Minimum Data Value	
Maximum Data Value	Gamma-HCH: 6.5 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### **Potential Sources**

Historical use of pesticides.

### **References**

Toxic Substances Monitoring Program database.

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Dominguez Channel estuary (to Vermont)**

**Summary of Proposed Action**

**New Proposed Listings**

- “Not Supporting” (Impaired) for sediment toxicity due to exceedances in toxicity tests.
- “Not Supporting” (Impaired) for copper in sediment due to exceedances of Effects Range-Median (ERM) and/or Probable Effects Level (PEL).
- “Not Supporting” (Impaired) for chlordane in sediment due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for PCBs in sediment due to exceedances of ERM and/or PEL.

These actions all affect the aquatic life beneficial uses and some may affect fish consumption.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Dominguez Channel Estuary and Dominguez Channel	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	405.12	<b>Source(s)</b>	Historical use of pesticides and lubricants for DDT, chlordane, and PCBs. Stormwater runoff, aerial deposition and historical discharges for copper.
<b>Total Waterbody Size</b>	8.4 and 9	<b>TMDL Priority</b>	Copper: 75 Others: 73
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	Copper: 2004 Others: 2005
<b>Extent of Impairment</b>	Estuary (not DC above Vermont)	<b>TMDL End Date (Mo/Yr)</b>	Copper: 2007 Others: 2008

**Watershed Characteristics**

The Los Angeles and Long Beach Harbors are located in the southern portion of the Los Angeles Basin. Along the northern portion of San Pedro Bay is a natural embayment formed by a westerly extension of the coastline which contains both harbors, with the Palos Verdes Hills the dominant onshore feature. Historically, the area consisted of marshes and mudflats with a large marshy area, Dominguez Slough, to the north, and flow from the Los Angeles River entering where Dominguez Channel now drains. Near the end of last century and during the beginning of this one, channels were dredged, marshes were filled, wharves were constructed, the Los Angeles River was diverted, and a breakwater was constructed in order to allow deep draft ships to be directly offloaded and products be swiftly moved. The Dominguez Slough

was completely channelized and became the drainage endpoint for runoff from a highly industrialized area. Eventually, the greater San Pedro Bay was enclosed by two more breakwaters and deep entrance channels were dredged to allow for entry of ships with need of 70 feet of clearance. The LA/LB Harbor complex together is now one of the largest ports in the country.

Both harbors are considered to be one oceanographic unit. Despite its industrial nature, contaminant sources, and low flushing ability, the inner harbor area supports fairly diverse fish and benthic populations and provides a protected nursery area for juvenile fish. The California least tern, an endangered species, nests in one part of the harbor complex.

Similar to LA Inner Harbor in many respects, LB Inner Harbor is dissimilar to the other Port in the higher number of privately-owned waterfront parcels which the Port has recently been in the process of the buying up and converting to Port-related uses, generally container terminals. Also, basins and slips in LB Inner Harbor are somewhat more separated from each other than in LA Inner Harbor which may possibly prevent contamination from spreading easily.

The outer part of both harbors (the greater San Pedro Bay) has been less disrupted and supports a great diversity of marine life. It is also open to the ocean at its eastern end and receives much greater flushing than the inner harbors.

### Water Quality Objectives Not Attained

ERM/PEL  
Sediment toxicity

### Beneficial Uses Affected

Aquatic Life  
Fish Consumption

### Data Assessment

Sediment toxicity (96)  
Benthic community degradation (96)  
Sediment Chemistry (96): copper, chlordane, DDT, PCB

**Table 2. Summary of Sediment Data for Dominguez Channel Estuary and Dominguez Channel**

Dates of Sampling	7/18/96
Number of Samples (n)	1 (sediment)
Minimum Data Value	
Maximum Data Value	Copper: 144 ppm Total chlordane: 32.4 ppb Total DDT: 204.5 ppb Total PCB: 361.5 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 1 (100 %) Benthos: 1 (100 %) Copper: 1 (100 %) Total chlordane: 1 (100 %) Total DDT: 1 (100 %) Total PCB: 1 (100 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants for DDT, chlordane and PCBs. Stormwater runoff, aerial deposition and historical discharges for copper.

**References**

State Mussel Watch Program database  
Bay Protection and Toxic Cleanup Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Lake Calabasas**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist copper in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist zinc in tissue because the listing was based on EDLs which no longer represent valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Lake Calabasas	<b>Pollutants/Stressors</b>	Delete: Cu (Tissue); Zn (Tissue)
<b>Hydrologic Unit</b>	405.21	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	28	<b>TMDL Priority</b>	68
<b>Size Affected</b>	28	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire lake	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

A number of lakes are part of the Los Angeles River watershed, including Peck Road Park, Belvedere Park, Hollenbeck Park, Lincoln Park, and Echo Park Lakes, as well as Lake Calabasas. These lakes are heavily used for recreational purposes.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

No new data.

**Potential Sources**

N/A

**References**

N/A

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Lake Lindero**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist selenium in tissue because the listing was based on Median International Standards (MIS) for trace elements, which are outdated and no longer represent valid assessment guidelines.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Lake Lindero	<b>Pollutants/Stressors</b>	<b>Delete: Se (Tissue)</b>
<b>Hydrologic Unit</b>	404.23	<b>Source(s)</b>	Historical use of pesticides
<b>Total Waterbody Size</b>	13.56	<b>TMDL Priority</b>	68
<b>Size Affected</b>	13.56	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire lake	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Santa Monica Bay Watershed Management Area (WMA), which encompasses an area of 414 square miles, is quite diverse. Its borders reach from the crest of the Santa Monica Mountains on the north and from the Ventura-Los Angeles County line to downtown Los Angeles. From there it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. South of Ballona Creek the natural drainage area is a narrow strip of wetlands between Playa del Rey and Palos Verdes. The WMA includes several watersheds the two largest being Malibu Creek to the north and Ballona Creek to the south. While the Malibu Creek area contains mostly undeveloped mountain areas, large acreage residential properties and many natural stream reaches; Ballona Creek is predominantly channelized, and highly developed with both residential and commercial properties.

**Water Quality Objectives Not Attained**

Median International Standards are outdated and have been determined to no longer represent valid assessment guidelines.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Tissue (98): chlordane, toxaphene



**Table 2. Summary of Tissue Data for Lake Lindero**

Dates of Sampling	6/24/98
Number of Samples (n)	1 (fish tissue)
Minimum Data Value	
Maximum Data Value	Total chlordane: 15.1 ppb Toxaphene: 26.2 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Chlordane: 1 (100 %) Toxaphene: 1 (100 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides.

**References**

Toxic Substances Monitoring Program database.

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Los Angeles River Estuary (Queensway Bay)**

**Summary of Proposed Action**

**Proposed New Listings**

- “Not Supporting” (Impaired) for lead in sediments due to exceedances of sediment quality guidelines (Effects Range Median and/or Probable Effects Level) (ERM and/or PEL).
- “Not Supporting” (Impaired) for zinc in sediments due to exceedances of sediment quality guidelines (ERM and/or PEL).
- “Not Supporting” (Impaired) for chlordane in sediments due to exceedances of sediment quality guidelines (ERM and/or PEL).
- “Not Supporting” (Impaired) for DDT in sediments due to exceedances of sediment quality guidelines (ERM and/or PEL).
- “Not Supporting” (Impaired) for PCB in sediments due to exceedances of sediment quality guidelines (ERM and/or PEL).

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Los Angeles River Estuary (Queensway Bay)	<b>Pollutants/Stressors</b>	<b>Add:</b> Pb (Sediment); Zn (Sediment) chlordane (Sediment); DDT (Sediment); PCB (Sediment)
<b>Hydrologic Unit</b>	405.12	<b>Source(s)</b>	Historical use of pesticides and lubricants
<b>Total Waterbody Size</b>	3.71	<b>TMDL Priority</b>	Unit 73 (chlordane, DDT, PCB) Unit 75 (lead)
<b>Size Affected</b>	3.71	<b>TMDL Start Date (Mo/Yr)</b>	2004 (lead) 2005 (chlordane, DDT, PCB)
<b>Extent of Impairment</b>	Entire estuary	<b>TMDL End Date (Mo/Yr)</b>	2005 (lead) 2006 (chlordane, DDT, PCB)

**Watershed Characteristics**

The LA River tidal prism/estuary begins in Long Beach at Willow Street and runs approximately three miles before joining with Queensway Bay located between the Port of Long Beach and the city of Long Beach. The channel has a soft bottom in this reach with concrete-lined sides. Queensway Bay is heavily

water recreation-oriented; however, major pollutant inputs are likely more related to flows from the LA River which carries the largest storm flow of any river in southern California.

**Water Quality Objectives Not Attained**

Sediment Quality Guidelines (ERM and/or PEL)

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Sediment (92, 94): chlordanes, DDT

Sediment (97, 98): lead, zinc, PCB

**Table 2. Summary of Sediment Data for Los Angeles River Estuary (Queensway Bay)**

Dates of Sampling	9/2/92; 2/1/94; 10/15/94 1/6/97; 7/14/98; 2/5/01
Number of Samples (n)	1992: 6 samples (sediment); 1994: 3 samples (sediment) 1997: 13 samples (sediment); 1998: 5 samples (sediment) 2001: 9 samples (sediment)
Minimum Data Value	Lead: 35 ppm; Zinc: 37.8 ppm; Total PCB: 29 ppb Total chlordanes: 12.3 ppb; Total DDT: 16.1 ppb
Maximum Data Value	Lead: 213 ppm; Zinc: 510 ppm; Total PCB: 397 ppb Total chlordanes: 24.9 ppb; Total DDT: 75.8 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Lead: 9 (19 %); Zinc: 5 (10 %); Total PCB: 5 (10 %) Total chlordanes: 24 (49 %); Total DDT: 10 (21 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants.

**References**

Bay Protection and Toxic Cleanup Program database.

U.S. Army Corps of Engineers EIS for Maintenance Dredging of Los Angeles River Estuary.

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Los Angeles River R5 (within Sepulveda Basin)**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist chlorpyrifos in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist Chem A in tissue because it does not exceed the NAS guidelines.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Los Angeles River R5	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	405.21	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	1.93	<b>TMDL Priority</b>	Chlorpyrifos: 14 Chem A: 18
<b>Size Affected</b>	1.93	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire reach.	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Los Angeles (LA) River watershed is one of the largest in the Region. It is also one of the most diverse in terms of land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed. The river flows through the San Fernando Valley past heavily developed residential and commercial areas. From the Arroyo Seco, north of downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by railyards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach.

Major tributaries to the river in the San Fernando Valley are the Pacoima Wash, Tujunga Wash (both drain portions of the Angeles National Forest in the San Gabriel Mountains), Burbank Western Channel and Verdugo Wash (both drain the Verdugo Mountains). Due to major flood events at the beginning of the century, by the 1950's most of the river was lined with concrete. In the San Fernando Valley, there is a section of the river with a soft bottom at the Sepulveda Flood Control Basin. The Basin is a 2,150-acre open space upstream of the Sepulveda Dam designed to collect flood waters during major storms. Because the area is periodically inundated, it remains in a semi-natural condition and supports a variety of low-intensity uses as well as supplying habitat. At the eastern end of the San Fernando Valley, the river bends around the Hollywood Hills and flows through Griffith and Elysian Parks, in an area known as the Glendale Narrows. Since the water table was too high to allow laying of concrete, the river in this area has

a rocky, unlined bottom with concrete-lined or rip-rap sides. This stretch of the river is fed by natural springs and supports stands of willows, sycamores, and cottonwoods. The many trails and paths along the river in this area are heavily used by the public for hiking, horseback riding, and bird watching.

### **Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

### **Beneficial Uses Affected**

Aquatic Life

### **Data Assessment**

The 1992 data did not exceed the NAS guidelines for Chem A.

### **Potential Sources**

N/A

### **References**

N/A

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Los Cerritos Channel**

**Summary of Proposed Action**

**New Proposed Listings**

- “Not Supporting” (Impaired) for sediment toxicity due to exceedances in toxicity tests.
- “Not Supporting” (Impaired) for chordane in sediments due to exceedances of Effects Range-Median (ERM) and/or Probable Effects Level (PEL).

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Los Cerritos Channel	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>		<b>Source(s)</b>	unknown
<b>Total Waterbody Size</b>	16	<b>TMDL Priority</b>	Low
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	2012
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	2014

**Watershed Characteristics**

The Los Cerritos Channel is concrete-lined above the tidal prism and drains a relatively small area of east Long Beach, albeit a densely urbanized one. The channel’s tidal prism starts at Anaheim Road and connects with Alamitos Bay through the Marine Stadium; the wetlands connects to the Channel a short distance from the lower end of the Channel. The wetlands, and portion of the channel near the wetlands, is an overwintering site for a great diversity of birds (up to 50 species) despite its small size. An endangered bird species, the Belding’s Savannah Sparrow, may nest there and an area adjacent to the wetlands is a historic least tern colony site. One small marina is located in the channel which is also used by rowing teams and is a popular fishing area.

*Alamitos Bay:* Alamitos Bay is composed of the Marine Stadium, a recreation facility built in 1932 and used for boating, water skiing, and jet skiing; Long Beach Marina, which contains five smaller basins for recreational craft and a boatyard; a variety of public and private berths; and the Bay proper which includes several small canals, a bathing beach, and several popular clamming areas. A small bathing lagoon, Colorado Lagoon in Long Beach, has a tidal connection with the Bay and a small wildlife pond, Sims Pond, also has a tidal connection. The latter is heavily used by overwintering migratory birds.

**Water Quality Objectives Not Attained**

ERM/PEL  
Sediment Toxicity

## Beneficial Uses Affected

Aquatic Life

## Data Assessment

Sediment chemistry (94): chlordane

Sediment toxicity (93, 94)

**Table 2. Summary of Sediment Data for Los Cerritos Channel**

Dates of Sampling	1/14/93 2/16/94
Number of Samples (n)	4 (sediment)
Minimum Data Value	Total chlordane: nd
Maximum Data Value	Total chlordane: 10.94 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Chlordane: 3 (75 %) Sediment toxicity: 3 (75 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

## Potential Sources

Unknown

## References

Bay Protection and Toxic Cleanup Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Malibou Lake**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist copper in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist chlordane in tissue since the listing was based on a level which is now below the Maximum Tissue Residue Level (MTRL) and the compound was not detected in 1997.
- Delist PCB in tissue since these were not detected in 1992 or 1997.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Malibou Lake	<b>Pollutants/Stressors</b>	<b>Delete:</b> Cu (Tissue); chlordane (Tissue); PCB (Tissue)
<b>Hydrologic Unit</b>	404.24	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	69	<b>TMDL Priority</b>	Copper: 68 Chlordane & PCBs: 61
<b>Size Affected</b>	69	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire lake	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Santa Monica Bay Watershed Management Area (WMA), which encompasses an area of 414 square miles, is quite diverse. Its borders reach from the crest of the Santa Monica Mountains on the north and from the Ventura-Los Angeles County line to downtown Los Angeles. From there it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. South of Ballona Creek the natural drainage area is a narrow strip of wetlands between Playa del Rey and Palos Verdes. The WMA includes several watersheds the two largest being Malibu Creek to the north and Ballona Creek to the south. While the Malibu Creek area contains mostly undeveloped mountain areas, large acreage residential properties and many natural stream reaches; Ballona Creek is predominantly channelized, and highly developed with both residential and commercial properties.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life



**Data Assessment**

Tissue (97): metals and organics levels low.

**Table 2. Summary of Tissue Data for Malibou Lake**

Dates of Sampling	7/17/97
Number of Samples (n)	1 (fish tissue)
Minimum Data Value	
Maximum Data Value	
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

N/A

**References**

Toxic Substances Monitoring Program database.

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Marina del Rey Harbor-Back Basins**

**Summary of Proposed Action**

**Proposed New Listings**

- List PCBs in sediment due to exceedance of the Effects Range-Median (ERM) and/or Probable Effects Level (PEL) guidelines.

**Proposed New Delistings**

- Delist benthic infaunal community degradation since the benthic infauna only is moderately degraded based on the benthic community index developed for the Bay Protection and Toxic Cleanup Program.
- Delist TBT in tissue since the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.
- Delist zinc in tissue since the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist copper in tissue since the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist lead in tissue since the listing was based on EDLs which no longer represent valid assessment guidelines.
- Delist DDT in sediment since sediment concentrations have dropped below sediment quality guidelines ERM and/or PEL over the past few years.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Marina del Rey Harbor-Back Basins	<b>Pollutants/Stressors</b>	<b>Add:</b> PCBs (sediment)  <b>Delete:</b> TBT (Tissue); Zn (Tissue); Cu (Tissue); Pb (Tissue); DDT (Sediment); benthic infaunal community degradation
<b>Hydrologic Unit</b>	405.13	<b>Source(s)</b>	Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from urban areas
<b>Total Waterbody Size</b>	413	<b>TMDL Priority</b>	Analytical Unit 54
<b>Size Affected</b>	121	<b>TMDL Start Date (Mo/Yr)</b>	2002
<b>Extent of Impairment</b>	Basins D, E, F	<b>TMDL End Date (Mo/Yr)</b>	2005

**Watershed Characteristics**

The Santa Monica Bay Watershed Management Area (WMA), which encompasses an area of 414 square miles, is quite diverse. Its borders reach from the crest of the Santa Monica Mountains on the north and from the Ventura-Los Angeles County line to downtown Los Angeles. From there it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. South of Ballona Creek the natural drainage area is a narrow strip of wetlands between Playa del Rey and Palos Verdes. The WMA includes several watersheds the two largest being Malibu Creek to the north and Ballona Creek to the south. While the Malibu Creek area contains mostly undeveloped mountain areas, large acreage residential properties and many natural stream reaches; Ballona Creek is predominantly channelized, and highly developed with both residential and commercial properties.

**Water Quality Objectives Not Attained**

ERM and/or PEL

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Sediment toxicity (93, 94, 97)

Sediment Chemistry (93, 94, 96, 97): copper, lead, zinc, chlordane, DDT, PCB

Sediment Chemistry (95-98): copper, lead, zinc

Tissue (93, 95): chlordane, PCB

**Table 2. Summary of Tissue and Sediment Data for Marina Del Rey Harbor-Back Basins**

Dates of Sampling	6/22/93; 1/14/93; 2/15/94; 6/28/95; 6/19/96; October 1996; 2/5/97; October 1997; October 1998; September 1999; October 2000
Number of Samples (n)	1993: 1 (sediment), 1 (fish tissue); 1994: 3 (sediment); 1995: 3 (fish tissue); 1996: 5 (sediment); 1997: 9 (sediment); 1998: 4 (sediment); 1999: 4 (sediment); 2000: 4 (sediment)
Minimum Data Value	Copper (sed): 108 ppm; Lead (sed): 51 ppm Zinc (sed): 157 ppm; Total chlordane (sed): nd Total PCB (sed): nd; Total chlordane (tis): nd; Total PCB (tis): nd
Maximum Data Value	Copper (sed): 420 ppm; Lead (sed): 292 ppm; Zinc (sed): 520 ppm; Total chlordane (sed): 24.9 ppb; Total PCB (sed): 391.5 ppb; Total chlordane (tis): 128 ppb; Total PCB (tis): 490 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 6 (86 %); Copper (sed): 22 (96 %); Lead (sed): 12 (52 %); Zinc (sed): 18 (78 %); Chlordane (sed): 7 (30 %); PCB (sed): 7 (30 %); Chlordane (tis): 2 (50 %); PCB (tis) 3 (75 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from urban areas.

**References**

Toxic Substances Monitoring Program database

Bay Protection and Toxic Cleanup Program database

Marina Del Rey Monitoring Program, Los Angeles County Department of Beaches and Harbors

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
McGrath Lake Ag Drain**

**Summary of Proposed Action**

**New Proposed Listings**

- “Not Supporting” (Impaired) for sediment toxicity due to exceedances in toxicity tests.
- “Not Supporting” (Impaired) for degraded benthic infaunal community due to community assessments.
- “Not Supporting” (Impaired) for DDT in sediment due to exceedances of Effects Range-Median (ERM) and/or Probable Effects Level (PEL).
- “Not Supporting” (Impaired) for chlordane in sediment due to exceedances of ERM and/or PEL.
- “Not Supporting” (Impaired) for dieldrin in sediment due to exceedances of ERM and/or PEL.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	McGrath Lake Ag Drain	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	403.11	<b>Source(s)</b>	Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from agricultural fields.
<b>Total Waterbody Size</b>	0.5	<b>TMDL Priority</b>	25
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	2004
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	2007

**Watershed Characteristics**

*McGrath Lake:* McGrath Lake is a small brackish waterbody located just south of the Santa Clara River. The lake is located partially on State Parks land and partially on privately-owned oilfields in current production. A number of agricultural ditches drain into the lake. A state beach is located off the coastal side of the lake. The habitat around the lake is considered to be quite unique and it is utilized by a large number of overwintering migratory birds.

**Water Quality Objectives Not Attained**

Sediment toxicity  
Benthic infaunal community  
ERM/PEL sediment guidelines

**Beneficial Uses Affected**

Aquatic Life

## Data Assessment

Sed Tox (98)

Sed (98): chlordane, DDT

Degraded benthic infaunal community

**Table 2. Summary of Sediment Data for McGrath Lake Ag Drain (Misc. Ventura Coastal WMA)**

Dates of Sampling	October 1998
Number of Samples (n)	1 (sediment)
Minimum Data Value	
Maximum Data Value	Total chlordane: 19 ppb Total DDT: 726 ppb Dieldrin: 5.9 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 1 (100 %) Benthic infauna: 1 (100 %) Chlordane: 1 (100 %) DDT: 1 (100 %) Dieldrin: 1 (100 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

## Potential Sources

Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from agricultural fields.

## References

McGrath Lake characterization study conducted by California Department of Fish and Game on behalf of the LA Regional Board (1998).

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
McGrath Lake (Estuary)**

**Summary of Proposed Action**

**New Proposed Listings**

- “Not Supporting” (Impaired) for benthic infaunal community due to community assessments.
- “Not Supporting” (Impaired) for PCB in sediment due to exceedances of Effects Range-Median (ERM) and/or Probable Effects Level (PEL).
- “Not Supporting” (Impaired) for dieldrin in sediment due to exceedances of ERM and/or PEL.

**New Proposed Delistings**

- Delist total pesticides in sediment because individual chemicals can be listed for exceedances of ERM or PEL as appropriate

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	McGrath Lake Estuary	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	403.11	<b>Source(s)</b>	Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from agricultural fields.
<b>Total Waterbody Size</b>	18.7 ac	<b>TMDL Priority</b>	25
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	2004
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	2007

**Watershed Characteristics**

McGrath Lake: McGrath Lake is a small brackish waterbody located just south of the Santa Clara River. The lake is located partially on State Parks land and partially on privately-owned oilfields in current production. A number of agricultural ditches drain into the lake. A state beach is located off the coastal side of the lake. The habitat around the lake is considered to be quite unique and it is utilized by a large number of overwintering migratory birds.

**Water Quality Objectives Not Attained**

- Sediment toxicity
- Benthic infaunal community
- ERM/PEL sediment guidelines

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

Sed Tox (93, 94, 98)

Sed (93, 96): chlordane, DDT, dieldrin

Sed (98): chlordane, DDT, PCB, dieldrin

Degraded benthic infaunal community

**Table 2. Summary of Sediment and Benthic Infauna Data for McGrath Lake (Estuary)**

Dates of Sampling	1/13/93 4/13/94 6/19/96 October 1998
Number of Samples (n)	1993: 1 (sediment) 1994: 3 (sediment) 1996: 1 (sediment) 1998: 11 (sediment)
Minimum Data Value	Total chlordane: 10 ppb Total DDT: 150 ppb Dieldrin: 0.5 ppb Total PCB: 14 ppb
Maximum Data Value	Total chlordane: 816 ppb Total DDT: 3488 ppb Dieldrin: 38.1 ppb Total PCB: 448 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 12 (81 %) Benthic infauna: 11 (100 %) Chlordane: 13 (100 %) DDT: 13 (100 %) Dieldrin: 10 (77 %) PCB: 7 (54 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from agricultural fields.

**References**

McGrath Lake characterization study conducted by California Department of Fish and Game on behalf of the LA Regional Board (1998).

Bay Protection and Toxic Cleanup Program database.



California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Port Hueneme Harbor (back basins)**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist PAHs in sediment since levels appear to be low throughout most of the back basin area based on Army Corps of Engineers data.
- Delist TBT for tissue because there are no tissue assessment guidelines for TBT and levels in the sediments are low.
- Delist zinc for tissue because there are no tissue assessment guidelines for zinc and levels in the sediments are low.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Port Hueneme Harbor (back basins)	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	403.11	<b>Source(s)</b>	Unknown
<b>Total Waterbody Size</b>	50	<b>TMDL Priority</b>	PAH: 27 Zinc: 28 TBT: 30
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	N/A
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	N/A

**Watershed Characteristics**

Port Hueneme is a medium-sized deepwater harbor located in Ventura County, north of Mugu Lagoon. Part of it was operated by a U.S. Navy Construction Battalion until very recently while the rest of the harbor serves as a commercial port operated by the Oxnard Harbor District. The construction of a majority of the harbor was completed in 1975. The commercial side generally serves ocean-going cargo vessels and oil supply boats; the latter serve the oil platforms in the Santa Barbara Channel. Two endangered bird species may use the harbor, the California Brown Pelican and the California Least Tern.

**Water Quality Objectives Not Attained**

N/A

**Beneficial Uses Affected**

Aquatic Life

## Data Assessment

Sediment chemistry (96, 01): metals and organics levels were low, except for PCBs at 1 of 20 stations sampled in 2001.

**Table 2. Summary of Tissue and Sediment Data for Port Hueneme Harbor (back basins)**

Dates of Sampling	6/19/96 5/1/01
Number of Samples (n)	1996: 2 + 12 (sediments) 2001: 20 (sediments)
Minimum Data Value	
Maximum Data Value	
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

## Potential Sources

Unknown

## References

Bay Protection and Toxic Cleanup Program database  
U.S. Army Corps of Engineers sampling data for maintenance dredging

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Calleguas Creek R1 (estuary to 0.5 mi s of Broome Rd) and R2 (0.5 mi s of Broome Rd to Potrero Rd)**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist dacthal in tissue in Reach 2 because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Calleguas Creek R1 and R2	<b>Pollutants/Stressors</b>	<b>Delete: Dacthal (Tissue) [R2]</b>
<b>Hydrologic Unit</b>	403.11 & 403.12	<b>Source(s)</b>	Historical use of pesticides and lubricants.
<b>Total Waterbody Size</b>	2.2 & 2.3	<b>TMDL Priority</b>	5
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

Calleguas Creek and its major tributaries, Revolon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura County and a small portion of western Los Angeles County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space, however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

Mugu Lagoon, located at the mouth of the watershed, is one of the few remaining significant saltwater wetland habitats in southern California. The Point Mugu Naval Air Base is located in the immediate area and the surrounding Oxnard Plain supports a large variety of agricultural crops. These fields drain into ditches which either enter the lagoon directly or through Calleguas Creek and its tributaries. Other fields drain into tile drain systems which discharge to drains or creeks. Also in the area of the base are freshwater wetlands created on a seasonal basis to support duck hunting clubs. The lagoon borders on an Area of Special Biological Significance (ASBS) and supports a great diversity of wildlife including several

endangered birds and one endangered plant species. Except for the military base, the lagoon area is relatively undeveloped.

### Water Quality Objectives Not Attained

EDLs have been determined to be an insufficient basis for impairment listing.

### Beneficial Uses Affected

Aquatic Life  
Fish Consumption

### Data Assessment

Tissue (94, 97): chlordanes, DDT, HCH, toxaphene (NAS)

**Table 2. Summary of Tissue Data for Calleguas Creek Reaches 1 and 2**

Dates of Sampling	6/23/94 7/16/97
Number of Samples (n)	4 (fish tissue)
Minimum Data Value	Total chlordanes: 48.0 ppb p,p'-DDD: 85 ppb p,p'-DDE: 1300 ppb p,p-DDT: 32 ppb gamma-HCH: 4.8 ppb toxaphene: 2300 ppb
Maximum Data Value	Total chlordanes: 117.7 ppb p,p'-DDD: 300 ppb p,p'-DDE: 4100 ppb p,p-DDT: 100 ppb gamma-HCH: 7.0 ppb toxaphene: 5400 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Chlordanes: 4 (100 %) DDTs: 11 (92 %) Toxaphene: 4 (100%)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### Potential Sources

Historical use of pesticides.

### References

Toxic Substances Monitoring Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Mugu Lagoon**

**Summary of Proposed Action**

**New Proposed Listings**

- “Not Supporting” (Impaired) for benthic community degradation due to community assessment.

**New Proposed Delistings**

- Delist dacthal in tissue as there are no approved guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Mugu Lagoon	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	403.11	<b>Source(s)</b>	Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from urban and agricultural areas.
<b>Total Waterbody Size</b>	505 ac	<b>TMDL Priority</b>	5
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	2002
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	2005.

**Watershed Characteristics**

Calleguas Creek and its major tributaries, Revolon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura County and a small portion of western Los Angeles County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space, however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

Mugu Lagoon, located at the mouth of the watershed, is one of the few remaining significant saltwater wetland habitats in southern California. The Point Mugu Naval Air Base is located in the immediate area and the surrounding Oxnard Plain supports a large variety of agricultural crops. These fields drain into

ditches which either enter the lagoon directly or through Calleguas Creek and its tributaries. Other fields drain into tile drain systems which discharge to drains or creeks. Also in the area of the base are freshwater wetlands created on a seasonal basis to support duck hunting clubs. The lagoon borders on an Area of Special Biological Significance (ASBS) and supports a great diversity of wildlife including several endangered birds and one endangered plant species. Except for the military base, the lagoon area is relatively undeveloped.

Supplies of ground water are critical to agricultural operations and industry (sand and gravel mining) in this watershed. Moreover, much of the population in the watershed relies upon ground water for drinking.

## Water Quality Objectives Not Attained

Benthic Community Index

## Beneficial Uses Affected

Aquatic Life

## Data Assessment

Sediment toxicity (94)

Sed chem (97): DDT, chlordane (ERM, PEL)

Tissue (94): chlordane

Tissue (94, 97): DDT (MTRL)

Tissue (97): PCB (MTRL)

**Table 2. Summary of Tissue and Sediment Data for Mugu Lagoon**

Dates of Sampling	2/8/94 4/14/94 6/12/94 2/6/97 7/16/97
Number of Samples (n)	1994: 3 (sediment) + 1 (fish tissue) + 1 (mussel tissue) 1997: 6 (sediment) + 1 (fish tissue)
Minimum Data Value	Total chlordane (sed): 3.3 ppb Total DDT (sed): 64.7 ppb Total chlordane (tis): nd p,p'-DDD (tis): nd p,p'-DDE (tis): 43 ppb p,p'-DDT (tis): nd dieldrin (tis): nd toxaphene (tis): nd
Maximum Data Value	Total chlordane (sed): 12.97 ppb Total DDT (sed): 276.8 ppb Total chlordane (tis): 28.5 ppb p,p'-DDD (tis): 54.6 ppb p,p'-DDE (tis): 325 ppb p,p'-DDT (tis): 120.9 ppb dieldrin (tis): 4.7 ppb toxaphene (tis): 468 ppb
Median Data Value	

Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Sediment toxicity: 2 (67 %) Chlordane (sed): 6 (100 %) DDT (sed): 6 (100 %) Chlordane (tis): 1 (33 %) DDTs (tis): 5 (56 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides and lubricants, stormwater runoff and aerial deposition from urban and agricultural areas.

**References**

- Bay Protection and Toxic Cleanup Program database
- Toxic Substances Monitoring Program database
- State Mussel Watch Program databases database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data**  
**Revolon Slough Main Branch: Mugu Lagoon to Central Avenue**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist dacthal in sediment as there are no valid approved guidelines for this compound.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Revolon Slough	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	403.11	<b>Source(s)</b>	Historical use of pesticides.
<b>Total Waterbody Size</b>	8.90	<b>TMDL Priority</b>	5
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

Calleguas Creek and its major tributaries, Revolon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura County and a small portion of western Los Angeles County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space, however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

Mugu Lagoon, located at the mouth of the watershed, is one of the few remaining significant saltwater wetland habitats in southern California. The Point Mugu Naval Air Base is located in the immediate area and the surrounding Oxnard Plain supports a large variety of agricultural crops. These fields drain into ditches which either enter the lagoon directly or through Calleguas Creek and its tributaries. Other fields drain into tile drain systems which discharge to drains or creeks. Also in the area of the base are freshwater wetlands created on a seasonal basis to support duck hunting clubs. The lagoon borders on an Area of Special Biological Significance (ASBS) and supports a great diversity of wildlife including several endangered birds and one endangered plant species. Except for the military base, the lagoon area is relatively undeveloped.



Supplies of ground water are critical to agricultural operations and industry (sand and gravel mining) in this watershed. Moreover, much of the population in the watershed relies upon ground water for drinking.

**Water Quality Objectives Not Attained**

No valid approved guidelines for this compound.

**Beneficial Uses Affected**

Aquatic Life  
Fish Consumption

**Data Assessment**

Tissue (94, 97): chlordane, DDT, dieldrin, PCB, toxaphene (NAS)

**Table 2. Summary of Tissue Data for Revolon Slough (Main Branch) of the Calleguas Creek Watershed**

Dates of Sampling	6/23/94 7/16/97
Number of Samples (n)	2 (fish tissue)
Minimum Data Value	Total chlordane: 127 ppb p,p-DDD: 330 ppb p,p-DDE: 3700 ppb p,p-DDT: 200 ppb Toxaphene: 4700 ppb
Maximum Data Value	Total chlordane: 265.1 ppb p,p-DDD: 450 ppb p,p-DDE: 4800 ppb p,p-DDT: 270 ppb Toxaphene: 12000 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	Chlordane: 2 (100 %) DDTs: 9 (100 %) Toxaphene: 2 (100 %)

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

Historical use of pesticides.

**References**

Toxic Substances Monitoring Program database

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
San Gabriel River Estuary**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist arsenic in tissue because there is no longer a Maximum Tissue Residue Level (MTRL) for this compound.

This action affects the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	San Gabriel River Estuary	<b>Pollutants/Stressors</b>	Delete: As (Tissue)
<b>Hydrologic Unit</b>	405.15	<b>Source(s)</b>	
<b>Total Waterbody Size</b>	2.95	<b>TMDL Priority</b>	39
<b>Size Affected</b>	2.95	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire estuary	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The San Gabriel River receives drainage from a large area of eastern Los Angeles County; its headwaters originate in the San Gabriel Mountains. The watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area; other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams. Further downstream, towards the middle of the watershed, are large spreading grounds utilized for groundwater recharge. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir (normally only during high storm flows). The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming a soft bottom channel once again near the ocean in the city of Long Beach. Large electrical power poles line the river along the channelized portion and nurseries, small stable areas, and a large poultry farm are located in these areas.

**Water Quality Objectives Not Attained**

There is no longer a tissue MTRL for this compound.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

No new data.

**Potential Sources**

N/A

**References**

N/A

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Ventura River Estuary**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist DDT in tissue as the original listing appears to have been based on DDT concentrations found in shiner surfperch in 1993 (TSM); however, the level of 23 ppb for p,p'-DDE is below the MTRL (which equals 32.0 ppb).

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River Estuary	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	402.10	<b>Source(s)</b>	n/a
<b>Total Waterbody Size</b>	0.35 mi	<b>TMDL Priority</b>	87
<b>Size Affected</b>		<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>		<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

**Water Quality Objectives Not Attained**

N/A

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

**Table 2. Summary of Tissue and Sediment Data for the Ventura River Estuary**

Dates of Sampling	2/10/93 6/21/93 6/20/98
Number of Samples (n)	1993: 1 (sediment) + 1 (fish tissue) 1998: 2 (sediment)
Minimum Data Value	
Maximum Data Value	
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

**Potential Sources**

N/A

**References**

- Toxic Substances Monitoring Program Database
- Bay Protection and Toxic Cleanup Program Database
- Ojai Valley Sanitation Districts NPDES Monitoring

California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Ventura River R1 (Estuary to Main St) and R2 (Main St to Weldon Canyon)**

**Summary of Proposed Action**

**Proposed New Delistings**

- Delist copper in tissue in Reaches 1 and 2 since these listings were based on Elevated Data Levels (EDLs), which do not represent valid assessment guidelines.
- Delist selenium in tissue in Reach 2 since this listing was based on EDLs, which do not represent valid assessment guidelines.
- Delist silver in tissue in Reaches 1 and 2 since these listings were based on EDLs, which do not represent valid assessment guidelines.
- Delist zinc in tissue in Reaches 1 and 2 since these listings were based on EDLs, which do not represent valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River Reaches 1 and 2	<b>Pollutants/Stressors</b>	See Above
<b>Hydrologic Unit</b>	402.10	<b>Source(s)</b>	Historical use of pesticides.
<b>Total Waterbody Size</b>	0.18 & 4.64	<b>TMDL Priority</b>	90
<b>Size Affected</b>	Reach 2 (4.64)	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>		<b>TMDL End-Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather

pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

### Water Quality Objectives Not Attained

EDLs have been determined to be an insufficient basis for impairment determination.

### Beneficial Uses Affected

Aquatic Life

### Data Assessment

Tissue (93, 98): chlordane, HCH

**Table 2. Summary of Tissue Data for the Ventura River Reaches 1 and 2**

Dates of Sampling	6/21/93 6/26/98
Number of Samples (n)	3 (fish tissue)
Minimum Data Value	Total chlordane: 5.8 ppb Gamma-HCH: nd
Maximum Data Value	Total chlordane: 23.8 ppb Gamma-HCH: 5.8 ppb
Median Data Value	
Arithmetic Mean Value	
Standard Deviation	
Number (Percent) above Objective	

This table may summarize additional data not relevant to this factsheet that supports a continued listing for this waterbody.

### Potential Sources

Historical use of pesticides.

### References

Toxic Substances Monitoring Program Database

## California Regional Water Quality Control Board, Los Angeles Region

**Tissue, Sediment and Benthic Infauna Data  
Westlake Lake**

**Summary of Proposed Action****Proposed New Delistings**

- Delist chlordane in tissue because the listing was based on a tissue concentration that now is below the Maximum Tissue Residue Level (MTRL) for this compound.
- Delist copper in tissue because the listing was based on Elevated Data Levels (EDLs) which no longer represent valid assessment guidelines.

These actions all affect the aquatic life beneficial uses.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Westlake Lake	<b>Pollutants/Stressors</b>	<b>Delete:</b> chlordane (Tissue); Cu (Tissue);
<b>Hydrologic Unit</b>	404.25	<b>Source(s)</b>	Unknown
<b>Total Waterbody Size</b>	186	<b>TMDL Priority</b>	Chlordane: 61 Copper: 68
<b>Size Affected</b>	186	<b>TMDL Start Date (Mo/Yr)</b>	
<b>Extent of Impairment</b>	Entire lake	<b>TMDL End Date (Mo/Yr)</b>	

**Watershed Characteristics**

The Santa Monica Bay Watershed Management Area (WMA), which encompasses an area of 414 square miles, is quite diverse. Its borders reach from the crest of the Santa Monica Mountains on the north and from the Ventura-Los Angeles County line to downtown Los Angeles. From there it extends south and west across the Los Angeles plain to include the area east of Ballona Creek and north of the Baldwin Hills. South of Ballona Creek the natural drainage area is a narrow strip of wetlands between Playa del Rey and Palos Verdes. The WMA includes several watersheds the two largest being Malibu Creek to the north and Ballona Creek to the south. While the Malibu Creek area contains mostly undeveloped mountain areas, large acreage residential properties and many natural stream reaches; Ballona Creek is predominantly channelized, and highly developed with both residential and commercial properties.

**Water Quality Objectives Not Attained**

EDLs have been determined to be an insufficient basis for impairment determination.

**Beneficial Uses Affected**

Aquatic Life

**Data Assessment**

No new data



**Potential Sources**

Unknown

**References**

N/A