2002 CALIFORNIA 305(b) REPORT ON WATER QUALITY

Prepared As Required By

FEDERAL CLEAN WATER ACT SECTION 305(b)

STATE WATER RESOURCES CONTROL BOARD

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I. INTRODUCTION

Every two years, the State Water Resources Control Board (SWRCB) submits a report on the State's water quality to the U.S. Environmental Protection Agency (U.S. EPA) pursuant to Section 305(b) of the federal Clean Water Act (CWA). The Report provides water quality information to the general public and serves as the basis for U.S. EPA 's National Water Quality Inventory Report to Congress. Water quality assessment information from California's nine Regional Water Quality Control Boards (RWQCBs) has been compiled and presented in the format (terminology and tables) requested in U.S. EPA 's 1998 305(b) Guidelines. Future 305(b) reports will be in a format consistent with U.S. EPA's Integrated Water Quality Monitoring and Assessment Report Guidance.

California's Year 2002 305(b) Report on Water Quality pursuant to CWA Section 305(b) [305(b) Report] is presented in four sections titled, "I. Introduction," "II. Background," "III. Surface Water Assessment," and "IV. Groundwater Quality Assessment." Information on total waters assessed and on programs to assess, preserve, maintain, and restore water quality is presented in the Background section. The Background section also includes a cost/benefit assessment. The Surface Water Assessment section presents tables for the summary of designated use support, individual beneficial use support, the major causes and sources impacting designated beneficial uses, and the public health concerns related to elevated levels of toxicants, fish consumption advisories, and numbers of beach closures. This section also contains a discussion on the state's surface water ambient monitoring program. The Groundwater Quality Assessment section contains a summary of groundwater quality monitoring and assessment programs and presents groundwater quality data for individual hydrologic regions.

Assessment information used for compiling and reporting the 305(b) Report is contained in the state's Geospatial Waterbody System (GeoWBS). This is a geographic information system (GIS) database and is structured for the purpose of producing the state's 305(b) Report and 303(d) list. Use of a database enhances the state's assessment capabilities by tracking assessment decisions made for individual water bodies.

This database has a GIS component that allows users to spatially define water bodies as well as enter assessment information. In converting to new GIS based database, the size estimations of water bodies in an older database are being replaced by GIS-measured water body sizes. These new GIS measured water body sizes are often different than previously estimated water body sizes.

There have also been some changes in the classification of water body types, and some water bodies that were once spatially defined in the database as the mainstem of a river, are now defined as the mainstem plus its tributaries (the watershed). These types of changes affecting water body size data make it difficult to draw conclusions regarding trends in water quality in California.

Water body coverage in the GeoWBS

Gaining a spatial and temporal understanding of California's water quality is a continual process. It should be noted that only a portion of the numerous water bodies in the State has been included into the GeoWBS database. Table 1 presents the extent of information in the GeoWBS database.

TABLE 1. WATER BODY COVERAGE IN THE GEOWBS DATABASE

WATER BODY TYPE	TOTAL AREAL EXTENT IN CALIFORNIA	AREAL EXTENT OF ASSESSED WATER BODIES IN WBS	NO. OF WATER BODIES ASSESSED	PERCENT OF TOTAL AREAL EXTENT ASSESSED
Bays and Harbors (acres)	N/A[1]	471,819	62	N/A
Coastal Shoreline (miles)	3,427[2]	769	129	22
Estuaries (acres)	N/A	107,170	61	N/A
Lakes/Reservoirs (acres)	1,672,684[3, 4]	576,013	298	34
Ocean and Open Bay (acres)	N/A	313,494	23	N/A
Rivers/Streams (miles)	211,513[2]	32,536	847	15
Saline Lakes (acres)	N/A	480,585	11	N/A
Wetlands, Freshwater (acres)	N/A	116,846	75	N/A
Wetlands, Tidal (acres)	N/A	80,595	8	N/A

1. Not Available.
2. Includes all tidal shoreline based on California Coastal Commission estimates.
3. Estimates obtained from the 1994 U.S. EPA Reach File 3/Digital Line Graph data.
4. Lake estimates are for perennial and intermittent lakes.

II. BACKGROUND

A. TOTAL SURFACE WATERS

California is a vast state with 158,700 square miles of surface area, a population of over 35,037,000 (2001), and a wide range of water bodies (Table 2). Most of the data presented in Table 2 are from the U.S.EPA Reach File Version 3/U.S. Geological Survey (USGS) Digital Line Graph traces. Estimates for estuaries, harbors and bays, saline lakes, and wetlands are totals from SWRCB's 2002 GeoWBS database and therefore only include those water bodies entered in the database, not total waters in California.

TABLE 2. ATLAS INFORMATION

TOPIC	VALUE
2002 State Population Estimate[1]	35,037,000
State Surface Area in Square Miles[2]	158,693
Number of Water Basins[3]	12
Total Miles of Rivers and Streams[2]	211,513
-- Perennial River Miles (Subset)[2]	64,438
-- Intermittent Stream Miles (Subset)[2]	124,615
-- Ditch and Canal Miles (Subset)[2]	22,059
-- Border Miles of Shared River/Streams (Subset)[2]	401
Number of Lakes/Reservoirs/Ponds[2]	10,141
Acres of Lakes/Reservoirs/Ponds[2]	1,672,684
Acres of Saline Lakes[3]	491,733
Acres of Estuaries/Harbors/Bays[3]	602,705
Miles of Shoreline[4]	3,427
Acres of Wetlands[3]	273,880

[1] The state population estimate is calculated annually by the California Department of Finance Demographic Unit.

[2] Estimates obtained from the 1994 U.S. EPA Reach File Version 3/Digital Line Graph data. Lake estimates are for perennial and intermittent lakes.

[3] Estimates for estuaries, harbors and bays, saline lakes, and wetlands are totals from SWRCB's 2002 GeoWBS database and therefore only include those water bodies entered in the database, not total waters.

[4] Includes all tidal shoreline based on California Coastal Commission estimates.

B. WATER POLLUTION CONTROL PROGRAMS

1. Programs to Assess Water Quality

Surface Water Ambient Monitoring Program (SWAMP)

SWAMP is a relatively new program at the SWRCB and RWQCBs, initiated in 1999. Under SWAMP, SWRCB is responsible for statewide ambient monitoring efforts and oversees RWQCB monitoring activities, while each RWQCB establishes monitoring priorities for the water bodies within its jurisdiction.

SWAMP is intended to meet four goals as follows:

1. Identify specific problems preventing the SWRCB, RWQCBs, and the public from realizing beneficial uses in targeted watersheds.
2. Create an ambient monitoring program that addresses all hydrologic units of the State using consistent and objective monitoring, sampling and analysis methods; consistent data quality assurance protocols; and centralized data management.
3. Document ambient water quality conditions in potentially clean and polluted areas.
4. Provide the data to evaluate the effectiveness of water quality regulatory programs in protecting beneficial uses of waters of the State.

Please refer to Chapter III, Part A of this document for a more detailed discussion of SWAMP

Toxic Substances Monitoring Program

The Toxic Substances Monitoring Program (TSMP) was initiated in 1976 by SWRCB. The TSMP provides 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 toxicants in the tissue 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. Sampling stations are selected primarily by the nine RWQCBs. Data are used by SWRCB, RWQCBs, and other agencies to identify waters impacted by toxic pollutants.

State Mussel Watch Program

The California State Mussel Watch Program (SMWP), initiated in 1977 by SWRCB, provides a uniform statewide approach to detection and evaluation of the occurrence of toxic substances in the waters of California's bays, harbors, and estuaries. This is accomplished through the analysis of toxicants in the tissue of transplanted and resident mussels and clams. The SMWP primarily targets areas with known or suspected impaired water quality and is not intended to give an overall water quality assessment. Information collected in the SMWP is used by SWRCB, RWQCBs, and other agencies to identify waters impacted by toxic pollutants.

Coastal Fish Contamination Program (CFCP)

CFCP, initiated in 1998, is designed to develop comprehensive monitoring and assessment of chemical contamination in sport fish and shellfish from California coastal waters. This is the first systematic program to monitor chemical contamination of sport fish and shellfish caught from all California marine waters specifically to assess the health risks of consumption of these resources. Several state agencies work cooperatively to implement the program. The SWRCB oversees the program and each RWQCB with jurisdiction over coastal waters participates. The Department of Fish and Game collects the samples and performs the chemical analyses. The Office of Environmental Health Hazard Assessment maintains the analytical data and uses them to design future sampling and to evaluate the potential health risks from consumption of sport fish and shellfish.

A second component of the CFCP focuses on identifying sources of fecal contamination to commercial shellfish growing waters. This work began in 1993 when the Shellfish Protection Act of 1993 was added to the California Water Code. The SWRCB oversees individual projects and works cooperatively with coastal RWQCBs having jurisdiction over growing areas that meet the criteria outlined in the Act. Various State and Federal agencies, local governments, shellfish growers and stakeholders are also involved in the projects. Four projects have been completed to date: Humboldt Bay (RWQCB 1), Tomales Bay (RWQCB 3), Morro Bay (RWQCB 3), and Agua Hedionda Lagoon (RWQCB 9). Results of the Tomales Bay and Morro Bay studies provided the basis for the pathogen TMDLs developed for these water bodies. The Morro Bay project also pioneered the use of genetic fingerprinting techniques in watershed studies in California. Ongoing projects include a cooperative study with the Department of Health Services to refine methods for viral detection in POTW effluent, receiving water, and shellfish meats, and a statewide effort to determine if various analytical methods for bacterial indicator organisms give comparable results.

Toxicity Testing Program

The Toxicity Testing Program (TTP) is intended to assess water quality in ambient surface waters of the state using reliable U.S. EPA standardized toxicity testing procedures, modified U.S. EPA toxicity identification evaluation (TIE) methods, bioassessments, and supporting chemical analyses.

Toxicity tests are integrative and cumulative measures of chemical effects on aquatic organisms and, also, provide a measure of the bioavailability of chemicals (i.e., the proportion of the chemical which is toxic) in water samples.

For the past 15 years, the TTP has been successful in providing information that identifies waterways where toxicity water quality standards (objectives) are not being met and whether these surface waters can support biological communities in aquatic ecosystems. In association with effective sampling design, the TTP has been effective in the identification of chemical causes, as well as geographic sources and land use practices, of surface water toxicity. The TTP has also identified the spatial and temporal extent of water quality problems as well as high-risk areas. The monitoring information from this program has been used to assess waters for CWA Section 305(b) and 303(d) reporting.

The Clean Water Team: The Citizen Monitoring Program of SWRCB

"Citizen monitoring" is the monitoring of aquatic resources, aquatic habitat, and water quality by members of the community. Across California, citizens are evaluating the health of streams, lakes, and ocean waters. Monitoring takes numerous forms based on the desires and capabilities of different community groups. Citizens may measure flow, dissolved oxygen, nutrients, or bacteria. They sample aquatic insects, identify birds and amphibians, and watch for potential illegal spills and discharges or chronic problems, such as severe soil and stream bank erosion. Community members respond to the unique nature of the aquatic resources near their homes and design monitoring programs accordingly.

Information collected by community members can be used at the local, regional, and State level. It has been summarized and presented at city council meetings, assessed as part of watershed management plans, posted electronically, and published in local newspapers. Information gleaned from monitoring can help communities evaluate their management goals and the effectiveness of their efforts at restoring habitat, reducing pollutants, and protecting their waterways. Local planning offices, storm water agencies, and RWQCBs have used citizen-collected data to identify riparian restoration sites, catch illegal dischargers, and identify pollution problems. Monitoring organizations that collect data in compliance with appropriate quality control measures can provide their data to RWQCBs for use in 305(b) Reports.

2. Programs to Preserve, Maintain, and Restore Water Quality

a. Permits and Certifications

Storm Water

Statewide General Permits

SWRCB has adopted two statewide National Pollutant Discharge Elimination System (NPDES) general permits addressing storm water discharges associated with industrial activities and from construction activities. Dischargers are required to eliminate most non-storm water discharges, develop a storm water pollution prevention plan to identify and implement control measures to minimize pollutants in storm water runoff, and monitor their discharges.

Municipal Separate Storm Sewer System (MS4) Permits

The RWRCBs have adopted 27 NPDES permits for discharges from MS4s located within the heavily urbanized areas of the State. These permits address the storm water discharges associated with about 300 cities, counties and special districts. The permits require the permittees to develop and implement storm water management plans designed to reduce the discharge of pollutants in storm water to the maximum extent practicable. The storm water management plans provide the framework to identify pollutants of concern, eliminate to the extent feasible non-storm water discharges, and implement Best Management Practices, both structural and non-structural, to reduce pollutant discharges to the Maximum Extent Practicable**.**

Water Quality Certification Program

The State's Water Quality Certification (WQC) Program regulates discharges of fill and dredged material under the authorities of CWA section §401 and the Porter-Cologne Water Quality Control Act. The Program was formally initiated in 1990 in response to the requirements of CWA section 401, which allows the State to ensure that activities requiring a federal permit or license, comply with State water quality standards. Issuing WQC for discharges requiring U.S. Army Corps of Engineers' section 404 permits for fill and dredge discharges remains a core responsibility. Most projects are regulated by the RWQCBs; while the State Board directly regulates multi-Regional projects.

The Program is also the SWRCB and RWQCBs' *de facto* wetland protection program. It protects all waters in its regulatory jurisdiction, but has special responsibility for wetlands, riparian areas, and headwater streams, because these water bodies have high resource value, are vulnerable to filling, and are not systematically protected by other State and Regional Board programs. The WQC Program's attention to these water body types frequently involves protection of the special-status species that are associated with them.

The Program is also the SWRCB and RWQCBs' primary tool to address in-stream hydromodification impacts. The equilibrium between channel form, flow regime, and sediment supply creates the physical condition that supports habitat-related and most other beneficial uses. Projects destabilizing the equilibrium can cause flooding, channel erosion, turbidity, sedimentation, and other adverse impacts. The classical defensive response of more in-stream "improvements" eventually culminates in near total loss of natural stream functions and uses

In addition to regulating individual projects, the Program encourages basin-level analysis and protection. This is because project-specific controls, alone, do not assure the continued functioning of wetlands, riparian areas, headwater stream and other waters in urbanizing basins.

b. Cleanup Funding Programs

Underground Tanks Cleanup Fund

To address the problems and expense of cleaning up leaking underground fuel tanks, SWRCB administers the Underground Storage Tank (UST) Cleanup Fund (implemented in 1991) which pays for corrective action and third party liability costs up to $1.5 million per occurrence. As of June 2002, the fund had received 17,258 applications, of which 13,870 have been approved. There were 9,287 letters of commitment issued for $1.308 billion. Over $1.170billion was paid out on 30,927 reimbursement requests. Since Fiscal Year (FY) 1992-93, the Fund has committed 100 percent of its annual appropriation each year to reimburse responsible parties for their cleanup.

c. Plans and Policies

Nonpoint Source (NPS) Pollution Management Program

The *Plan for California's Nonpoint Source Pollution Control Program (*NPS Program Plan*)* was adopted by SWRCB in December 1999. Developed in collaboration with the California Coastal Commission (CCC), the NPS Program Plan satisfies both Section 319 of the Clean Water Act and Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1999 and was approved by the U. S. Environmental Protection Agency and the National Oceanic and Atmospheric Administration in July 2000.

Nonpoint source pollution presents the state's most serious threat to its water resources. Closed beaches, loss of California's famous fisheries and other wildlife, contaminated drinking water supplies, and human illnesses from recreational contact with polluted water are all related to NPS pollution. Six primary sources of NPS pollution have been identified. These sources are: (1) agriculture, including dairies, pesticide runoff and irrigation return flows; (2) silviculture (timber harvest practices); (3) urban runoff; (4) marina and recreational boating operations; (5) hydromodification activities such as stream channel modification; and (6) destruction of wetlands and riparian areas, which provide critical pollutant filtering capabilities and help manage flood flows.

Working with other state agencies, through an interagency coordinating committee, and with stakeholders in watersheds throughout the state, the NPS Program is focused on controlling NPS pollution through the implementation of 61 management measures (MMs). The MMs are the NPS pollution control goals that must be achieved if California is to once again enjoy waterways that are safe to freely use and enjoy and if wildlife is once again to thrive in these habitats. To implement the MMs, dischargers responsible for NPS pollutant discharges are being encouraged through outreach, education, technical and financial assistance to control their discharges. To do so they are expected to implement management practices that will achieve management measure goals.

The NPS Program Plan is a road map, designed to bring us to a time when adverse water quality conditions no longer threaten the economic future of the State and the welfare of our citizens. To clean up the state's waters, the NPS Program is envisioned as a fifteen-year process built on three five-year planning periods. At the end of each five-year period, an assessment is made evaluating the past five years' planning and implementation efforts, determining if we are pursuing the right course, and adjusting the program where necessary. We are completing the first five-year planning and implementation period and are in the process of evaluating what has been accomplished and developing a workplan for the next five years. In addition to SWRCB and RWQCBs, the CCC and 19 other state agencies, which have mandates and responsibilities related to NPS pollution control, are involved in this process. But the agencies only can provide the framework for NPS control. NPS pollution results from the everyday activities and practices of all California citizens, urban or rural, at work or at play, and it only will be controlled when individuals, professionally and personally, make the changes that will make it happen. Through administration of the CWA section 319(h) grant program and the various bond and loan programs SWRCB and RWQCBs administer, they seek to educate the public, as to its role in controlling NPS pollution, through demonstration projects and other outreach activities and materials.

<u>Policy for Implementation of Toxics Standards for Inland Surface Water, Enclosed Bays, and Estuaries of California</u>

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) was adopted by SWRCB on March 2, 2000. All aspects of the SIP subject to U.S.EPA authorization were approved by U.S.EPA, except for the TMDL Compliance Schedule provision. The SIP contains implementation provisions for 126 priority toxic pollutant criteria found within the National Toxics Rule, the California Toxics Rule and for priority pollutant objectives found in Basin Plans established by RWQCBs. This SIP applies to discharges of toxic pollutants and allows for a standardized approach for permitting, maintaining statewide consistency.

<u>Statewide Water Quality Enforcement Policy</u>

SWRCB has adopted the revised Water Quality Enforcement Policy. The previous enforcement policy was established by SWRCB Resolution 96-030 "Water Quality Enforcement Policy" and was adopted in order to ensure a consistent approach to water quality enforcement actions throughout the state. The revised policy addresses recommendations of SWRCB's Enforcement Order Review Panel, reflects recent statutory changes, and promotes statewide consistency in the enforcement of water quality laws by the State and RWQCBs.

The goals of the adopted policy include:

1. Integrating policy/guidance with SWRCB Information Management Strategy (IMS) to better communicate enforcement needs and effectiveness and to improve efficiency.
2. Ensuring more efficient use of standardized permit and enforcement order language.
3. Improving and standardizing violation and enforcement reporting.
4. Establishing procedures for identifying enforcement priorities.
5. Establishing procedures for response to fraudulent reporting or knowingly withholding data information.
6. Establishing the process for implementation of specific provisions of Senate Bill (SB) 709 (1999), SB 2165 (2000), and Assembly Bill 1664 (2001).
7. Establishing more consistent procedures for staff to use when developing recommendations for Administrative Civil Liability (ACL) amounts. The recommended liabilities would include the recovery of economic benefit and the recovery of staff costs.
8. Detailing the available options for payment of liabilities: a) cash payments to the cleanup and abatement account (CAA); b) funding Establishing criteria for the approval and tracking of supplemental environmental projects (SEPs) for certain portions of the ACL amount; and c) funding compliance projects for certain avoided costs.
9. Establishing procedures for SEP selection and tracking and defining the public's role in this the ACL process.

- *IMPROVED REPORTING TO RWQCBS AND INCREASED ACCOUNTABILITY*

SWRCB and RWQCBs have deployed a computer data base system to track all known instances of non-compliance and the resulting enforcement actions. The commitment to track this information has resulted in increased and more consistent attention to all regulated discharges. This increase has resulted in better compliance rates. The data system will also provide SWRCB and RWQCBs with information needed to target repeat violators and analyze the effects of compliance and enforcement activities.

- *IMPLEMENTATION OF THE MANDATORY MINIMUM PENALTY LAW*

SWRCB and RWQCBs have been implementing the changes to Water Code Section 13385 by SB 709 and SB 2165 since January of 2000. Included in these changes were statutes requiring the issuance of Mandatory Minimum Penalties (MMP) for (1) "serious violations" and (2) when 4 or more violations have occurred in a 6-month period (chronic violations). A "serious violation" is defined as a violation 40 percent over the limit of a conventional pollutant and 20 percent over the limit of a toxic pollutant (WC Section 13385 references 40 CFR 123.45 for the definitions of pollutant types).

From January 1, 2000 through June 30, 2001 we have identified 256 facilities with 2,976 total MMP violations. Almost 60 percent of the facilities with MMP violations received enforcement actions. Generally, enforcement actions have not been taken to date for the remaining violations for the following reasons:

- MMP violations are continuing and enforcement action postponed.
- The RWQCBs are issuing MMPs for continuing violators on intervals of between 6 and 12 months.
- Data for MMP violation are being reanalyzed to verify violation.
- Facility is under criminal investigation.
- An Administrative Civil Liability greater than the MMP is being prepared.
- Other higher priority tasks are being completed first.

The summary data regarding NPDES violations generally indicate that MMPs have had a positive effect on compliance. Overall, violation rates are trending down and focused studies indicate that facilities are undertaking measures to return and remain in compliance.

- *THE 1999 COMPLIANCE ASSURANCE AND ENFORCEMENT INITIATIVE*

SWRCB and RWQCBs created the Compliance Assurance and Enforcement Initiative in response to Winston Hickox, Secretary for Environmental Protection, Cal/EPA. The Initiative contains a result of an enforcement program review, and it provides a blueprint for program improvements including compliance rates. SWRCB and RWQCB continue to work on the Initiative and plan to revise it in the next year.

California Ocean Plan

The Ocean Plan establishes physical, chemical, and biological water quality objectives for California's ocean waters and provides the basis for regulating discharges from point and nonpoint sources into the state's coastal waters. The SWRCB is required to review the Ocean Plan every three years. The current Ocean

Plan was adopted by SWRCB in 2000 and was approved by U.S. EPA in 2001. SWRCB and the six coastal RWQCBs implement the Ocean Plan.

California Pesticide Management Plan

SWRCB and Department of Pesticide Regulation (DPR) have developed the California Pesticide Management Plan for Water Quality to coordinate staff activities to protect surface and ground water from pesticides. It identifies each agency's role in water quality protection and pesticide regulation and promotes a sharing of information relating to the study of pesticides and regulatory efforts.

Watershed Management Initiative

SWRCB and RWQCBs, as part of the Strategic Plan, are implementing a WMI to better coordinate and focus limited public and private resources to address both point and nonpoint source water quality problems especially in high priority targeted watersheds.

Watersheds are geographical areas in which water flows to a common outlet, e.g., a stream, lake, or other body of water. Each point in a drainage basin has its own tributary "watershed" ranging in size from the area upstream of the Golden Gate to the smallest ravine; therefore, California can be divided into thousands of watersheds. Watersheds form the basis for the boundaries of the nine RWQCBs.

Each RWQCB has a watershed strategy described in its WMI Chapter. These chapters are long-term workplans covering activities for the next five to seven years. These strategies rely on close coordination with other state, federal and local agencies in using limited fiscal and technical resources. This ensures that local community groups will receive the assistance they need to effectively manage their local sources of pollution. Implementation of the WMI began in July 1997.

C. COST/BENEFIT ASSESSMENT

Water is a vital component of the economic health of California, which is extremely diverse in agriculture, industry, population, and environmental resources. The balance between these competing needs creates the benefits associated with a robust economy, high quality of life levels, and healthy ecosystems. However, the finances available to restore, enhance, and protect our water resources is limited compared to the essential work that must be done. The following is a discussion of some of the revenue sources available to state, regional, and local agencies to achieve the objectives of the Clean Water Act and case studies that illustrate improvements in water quality and the resulting benefits.

1. Funding Review

Annual Costs to California and Local Governments

SWRCB and the nine RWQCBs in California are responsible for protecting the state's water resources. There are many ways to look at the composition of the portion of the state budget allocated to the water boards. One way is to divide the funds into the categories of state Operations and Local Assistance. State Operations is the revenue that is allotted to State and Regional water boards to administer their water quality programs and to pay for staff resources. Local Assistance is composed of funds that pass through the state to local and regional recipients for projects that are monitored and sometimes administered by the state. These funds come from such entities as the Federal Government, grants from bond measures, and loans from the State Revolving Fund (SRF).

The total financial resources expended to support SWRCB and RWQCB activities have averaged about $523 million each fiscal year since 1997-98. At the time of this writing, the 2001-02 fiscal year expenditures are estimated to be just over $1 billion. The apparently large increase in the total budget over the recent 5-year average is due to carryover from the previous year's Local Assistance. SWRCB/RWQCB budget for fiscal year 2002-03 is proposed to be approximately $664 million. The expenditures described here represent that for surface as well as groundwater protection. The breakdown of State Operations and Local Assistance funds may be seen in Table 3a.

Table 3a. Financial Resources for SWRCB and RWQCB from Fiscal Years 1997-98 to 2002-03

Fiscal Year	State Operations	Local Assistance	Total
1997-98 (actual)	$342,661,000	$104,131,000	$446,792,000
1998-99 (actual)	$288,739,000	$229,708,000	$518,447,000
1999-00 (actual)	$345,085,000	$229,808,000	$574,893,000
2000-01 (actual)	$390,488,000	$160,256,000	$550,744,000
2001-02 (estimated)	$436,886,000	$621,356,000	$1,058,242,000
2002-03 (proposed)	$446,995,000	$216,652,000	$663,647,000

Source: California State Water Resources Control Board, Division of Administrative Services

While SWRCB/RWQCB budgets are significant, preliminary results from the California portion of the U.S. EPA Clean Water Needs Survey conducted in 2000 documented that over $14.4 billion are needed for construction and implementation of water quality protection and enhancement projects across California. This is a conservative estimate because it is derived from the surveys that were completed. Approximately two-thirds of the publicly owned treatment works (POTW) in the state completed and returned the survey, representing about 85% of the outstanding financial needs. The survey focused on POTWs, but also included storm water and non-point source projects. Disaggregation of the $14.4 billion in needs shows that the following needs exist in California:

Wastewater Treatment:	$13,250,000,000
Storm water Collection and Treatment	352,000,000
Non-Point Source	800,000,000
Total Needs	$14,402,000,000

Municipal Facilities—Capital Investments and Cost of Operations and Maintenance

Funds for municipal capital investments in wastewater treatment facilities come from a variety of sources, including the state. Table 3b shows the state contribution to municipal capital investments through the Clean Water Grants, State Revolving Fund (SRF) loans, and from Small Community Grants for the last 5 years, from currently proposed projects, and over the life of each fund source. The largest total share of state contribution comes from the SRF loans at $10.5 billion, followed by the Clean Water Grants (6.1 billion) and the Small Community Grant Projects ($89.3 million). The Clean Water Grants program wound down in the early 1990's therefore, its contribution in the last 5 years has been low. The SRF has provided the most funds ($1.5 billion) in the past 5 years. Small Community Grants also seem to be become more important as bond measures are passed for water quality improvement activities. The overall operations and management budget for the state's publicly owned treatment works is approximately $2.89 billion in fiscal year 2002-02[1].

Table 3b. State Contribution to Capital Investments in Municipal Facilities

Clean Water Grant Projects		
Awarded from January 1997 to July 2002	Proposed as of July 2002	Total Awarded Since 1972
$59,230,656	-	$6,120,431,795
State Revolving Fund Loan Projects		
Awarded from January 1997 to July 2002	Proposed as of July 2002	Total Awarded Since 1972
$1,490,789,956	$5,593,337,728	$10,476,042,080
Small Community Grant Projects		
Awarded from January 1997 to July 2002	Proposed as of July 2002	Total Awarded Since 1972
$64,203,957	$105,785,982	$89,272,044

Source: California State Water Resources Control Board, Division of Clean Water Programs

2. Improvements in Water Quality (Case Studies)

Surface Water Achievements Since 2000 305(b) Report

This section highlights some of the accomplishments by SWRCB and the nine RWQCBs since the last version of this report. Among the accomplishments are efforts to tackle non-point source pollution from storm water, agricultural activities, and timber harvest activities, to develop and adopt Total Daily Maximum Loads (TMDL), and to clean up contaminated surface water bodies. While benefits are not quantified in this section, they are inherent in cleaner beaches, bays, and ocean, less contaminated and saline irrigation return flows to surface and ground water, less polluted runoff from timber harvests, dairies, and abandoned mines, and TMDLs to help restore and maintain surface water quality.

[1] Source: *Wastewater User Charge Survey Report FY 2001-02.* State Water Resources Control Board, Division of Clean Water Programs, Sacramento, CA, May 2002.

Non-Point Source Achievements

An assessment of water quality conditions in California shows that nonpoint sources of pollution have the greatest effect on water quality. They affect some of the largest economic segments of the state's economy such as polluted waters on Southern California beaches from urban storm water runoff and erosion from agricultural and timber harvest activities. Nonpoint sources are not readily controlled by conventional means. Instead, they are controlled with preventive plans and practices used by those directly involved in those activities and by those overseeing such activities. Some of these preventative measures that have been funded by the state include:

- Storm water effects on coastal waters by regulating first storm water flushes from new development or redevelopment projects through permits, conducting pathogen source studies and current circulation studies, reducing the incidence of litter, and helping develop a rapid indicator of pathogens in coastal waters.
- Storm water Information and educational workshops that were conducted by San Diego RWQCB on best management practices for construction sites and new developments.
- Dedicated funding for infrastructure improvements to reduce beach closures and postings, including the Clean Beaches Initiative (see below). While beach closures protect public health, significant losses occur to regional recreational and economic aspects. Sanitation and storm water agencies are partnering with the state to maximize the resources available.
- Increased enforcement on timber harvest activities and associated pre-harvest activities, and post-harvest inspections by North Coast RWQCB.
- Review of waiver policies for irrigation return flows, dairy operations, and retail fertilizer and pesticide rinse water facilities by Central Valley RWQCB.

Total Maximum Daily Loads (TMDLs)

TMDLs provide a means of restoring the health of the state's 685 (from 2002 U.S. EPA approved 303(d) list) surface waters that are currently listed as not meeting water quality standards. The RWQCBs develop the TMDLs, which along with the implementation plans ultimately become part of the Basin Plan for each of the nine RWQCBs. A number of TMDLs have been completed since the 2000 305(b) Report. A complete TMDL includes a technical TMDL report, implementation plan, adoption by the RWQCBs, and approval by SWRCB, the Office of Administrative Law (OAL) and U.S. EPA. The following is a list of TMDLs that have been completed, are going through the approval process, are being considered by the RWQCBs, and Technical TMDLs developed by RWQCBs in cooperation with U.S. EPA and established by U.S. EPA. There are eighteen TMDLs that have been completed. Nine have been adopted by the RWQCBs and are pending approval of the SWRCB, OAL or U.S. EPA. Currently, there are fifteen TMDLs pending adoption by the RWQCBs. U.S. EPA has established fifty-eight Technical TMDLs, which do not include implementation plans. These TMDLs are summarized in Table 3c.

Table 3c. Summary of TMDL Accomplishments

RWQCB	Water Body	Pollutant/Stressor	Date Completed
1	Garcia River	sediment	3/2002
1	Laguna de Santa Rosa	ammonia and dissolved oxygen	5/1995
4	East Fork San Gabriel River	trash	2/2000
4	Los Angeles River	trash	8/2002
4	Ballona Creek	trash	8/2002
5	Salt Slough	selenium	7/1999
5	Grasslands Marsh	selenium	4/2000
5	San Joaquin River	selenium	3/2002
5	Sacramento River	cadmium	6/2002
5	Sacramento River	copper	6/2002
5	Sacramento River	zinc	6/2002
7	New River	pathogen	5/2002
7	Alamo River	sediment	6/2002
8	Santa Ana River	nutrients	12/1994
8	Newport Bay/San Diego Creek	nitrogen	4/1999
8	Newport Bay/San Diego Creek	phosphorus	4/1999
8	Newport Bay/San Diego Creek	sediment	4/1999
8	Newport Bay/San Diego Creek	fecal coliform	2/2000

TMDLs Adopted by RWQCBs and Pending Approval of SWRCB, OAL or U.S. EPA

RWQCB	Water Body	Pollutant/Stressor	Date Adopted	Status
2	South San Francisco Bay	copper	5/2002[1]	SWRCB
2	South San Francisco Bay	nickel	5/2002[1]	SWRCB
3	San Lorenzo River	nitrate	9/2000	Returned to RWQCB
3	Morro Bay	siltation	5/2002	SWRCB
4	Santa Monica Bay Beaches	coliform (dry-weather)	1/2002	SWRCB
6	Heavenly Valley	sediment	1/2001	U.S.EPA
6	Indian Creek Reservoir	nutrients	7/2002	SWRCB
7	New River Sediment	sediment	6/2002	SWRCB
9	Chollas Creek	diazinon	8/2002	SWRCB

[1] Site-specific water quality objectives and implementation provisions for the new objectives have been adopted by the RWQCB. These site-specific objectives and implementation plan provide a basis for delisting Lower South San Francisco Bay for copper and nickel, and therefore preclude establishing a complete TMDL.

TMDLs Pending Adoption by RWQCBs

RWQCB	Water Body	Pollutant/Stressor	Hearing Date
2	San Francisco Bay	mercury	11/2002
3	San Lorenzo River	siltation	9/2002
3	Las Tablas Creek-Nacimiento Reservoir	mercury	10/2002
3	Chorro/Los Osos Creeks	nutrients	12/2002
3	Morro Bay	pathogens	12/2002
4	Santa Clara River	chloride	10/2002
4	Calleguas Creek	nutrients	10/2002
4	Los Angeles River	nutrients	12/2002
4	Malibu Creek	coliform	1/2003
4	Malibu Creek	nutrients	1/2003
4	Los Angeles River	coliform1	12/2002
4	McGrath Beach	coliform	12/2002
4	San Gabriel River	nutrients	4/2003
4	Santa Monica Bay	pathogen (wet weather)	9/2002
5	Clear Lake	mercury	9/2002

TMDLs Established by U.S. EPA[1]

RWQCB	Water Body	Pollutant/Stressor	Date Established
1	Trinity River South Fork / Hayfork Creek	sediment	12/1998
1	Redwood Creek	sediment	12/1998
1	South Fork Eel River	sediment	12/1999
1	South Fork Eel River	temperature	12/1999
1	Noyo River	sediment	12/1999
1	Van Duzen River/Yager Creek	sediment	12/1999
1	Navarro River	sediment	12/2000
1	Navarro River	temperature	12/2000
1	Ten Mile River	sediment	12/2000
1	Gualala River	sediment	12/2001
1	Trinity River	sediment	12/2001
1	Albion River	sediment	12/2001
1	Big River	sediment	12/2001
4	Calleguas Creek	chloride	3/2002

(Continued) TMDLs Established by U.S. EPA[1]

RWQCB	Water Body	Pollutant/Stressor	Date Established
8	Upper Newport Bay	cadmium, coppr, lead, selenium, zinc, chlordane, chlorpyrifos, diazinon, dieldrin, PCBs, DDT	6/2002
8	Lower Newport Bay	cadmium, lead, selenium, zinc, chlordane, dieldrin, PCBs, DDT	6/2002
8	Rhine Channel	copper, lead, selenium, zinc, mercury, chromium, chlordane, dieldrin, DDT, PCBs	6/2002
8	San Diego Creek	Cadmium, copper, lead, selenium, zinc, chlordane, selenium, zinc, chlordane, Chlorpyrifos, diazinon, dieldrin, PCBs, DDT, Toxaphene	6/2002

[1] These TMDLs do not include implementation plans.

Surface Water Clean Up and Restoration Projects

California's surface waters support many beneficial uses, including drinking, swimming, fishing, aquatic life, and agricultural and industrial uses. Typically, in protecting the most sensitive use, such as aquatic life, all other uses are protected. When the concentration of a pollutant in a river, lake, or other surface waters exceeds standards, cleanup actions are necessary to restore water quality, restoring beneficial uses. These efforts are in addition to cleanups being undertaken through TMDLs.

a. Abandoned Mines

The Lahontan RWQCB under an agreement with U.S. EPA, treated over six million gallons of acid mine drainage (AMD) from the Leviathan Mine, improved the treatment system, re-vegetated approximately five acres, and continued ongoing site maintenance and water quality monitoring. This treatment effort will eliminate the probability of pond overflows during the rain season.

The Central Valley RWQCB, in partnership with the East Bay Municipal Utilities District, completed reclamation activities at Penn Mine in Calaveras County. The work involved capping mine waste and restoration of the area to near pre-mining conditions.

The Central Valley RWQCB also reached a settlement after lengthy negotiations with U.S. EPA, the California Department of Toxic Substance Control, and Adventis Crop Sciences, USA, Inc., to assure treatment of AMD containing toxic heavy metals form the inactive Iron Mountain Mine site. The mine was ranked as one of the worst in the United

States. More than 2,000 pounds of copper, zinc, and cadmium were discharged each day into the Sacramento River resulting in numerous fish kills and loss of valuable spawning habitat for salmon, trout, and steelhead. The settlement assures continued treatment of the discharge for the next 30 years and established a fund of over $500 million to assure continued operation.

b. The San Francisco Bay

The San Francisco Bay RWQCB conducted its third major sampling event for dioxins in fish. Previous sampling took place in 1994 and 1997. This is part of an intergovernmental effort between local, state, and Federal agencies to study and formulate a strategy to eliminate additional dioxins from entering the Bay. The source of dioxins includes oil refineries, diesel exhaust, solid waste disposal, and other industrial process located on and around the Bay. Urban and agricultural runoff are also concerns for the Bay. The runoff introduces petrochemical, pesticide, and herbicide contamination. Toward the side of the exotic, the San Francisco Bay RWQCB is also working on regulating the discharge of ships' ballast water into the Bay since the water can introduce non-native species, including pathogens. Many of these issues are being addressed by cooperative efforts among various agencies and stakeholders. Regulatory actions include permits and TMDLs for many of the pollutants.

c. Clean Beaches Initiative Case Study

California has some of the most beautiful and world-renowned beaches that attract millions of tourists and locals alike each year. The direct revenues generated by the California beach economy amounted to over $14 billion in 1998 and after multiplier effects, contributed approximately $73 billion to the national economy[2]. Unfortunately, runoff from creeks, rivers, and storm drains creates the largest source of water pollution for the beaches. Often the currents in the bays, around offshore islands, and along sections of the coast can exacerbate pollution by trapping or directing pollutant to a particular area along the coast. Some stretches of beaches in Southern California are permanently posted by local health departments as unsafe for swimming and surfing or periodically posted after storm events. Runoff from urban areas can contain heavy metals, pesticides, petroleum hydrocarbons, trash, and animal and human waste[3]. It is recommended that no one swim in the ocean during and for at least three days after a significant rain event because of contaminated urban storm water runoff draining directly into the ocean. During dry weather, California beaches experience much better water quality, although sewer spills that result in beach closures and other sources of pollution exist year round.

In response to protecting the state's beach resources, the Governor identified $32.3 million of grant funding in the 2001 state budget to help fund the Clean Beaches Initiative (CBI). The water quality goal of the CBI is to make beaches safe for recreational ocean water-contact. The projects being funded through the CBI include capital improvements to

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[2] Source: King, Philip. *The Fiscal Impact of Beaches in California.* Public Research Institute, San Francisco University, September, 1999.

[3] Source: Heal the Bay's 12th Annual Beach Report Card. Heal the Bay, Santa Monica, CA, May, 2002.

divert storm water to wastewater treatment plants rather than allowing the runoff to go onto the beaches and into the ocean. Since 1998 through June 2002, the SWRCB approved 12 storm water diversion or treatment projects to receive grant funds, totaling approximately $7.2 million. The beaches are located from the Monterey Bay (Pacific Grove) to just north of the US-Mexico border (Imperial Beach).

Storm water diversions on Southern California beaches have historically cost approximately $500,000 to over $1,000,000. However, they are extremely effective in reducing bacterial levels in the water, as well as the other pollutants associated with urban runoff. A success story is the Santa Monica Bay beaches in Los Angeles County. Some beaches on the Bay were either permanently posted or regularly posted prior to the diversions until many of the storm water drains were diverted to a nearby wastewater treatment facility. After the diversions, beaches near the Santa Monica Pier are now off the permanently posted list and are only rarely posted. The beaches on the Bay can get well over a million visitors over the course of a summer weekend. This level of visitation implies a high level of direct and indirect economic benefits gained by the beach community and high indirect economic benefits experienced by surrounding areas.

In addition to the economic benefits there are also environmental and social benefits. Marine ecosystems will be healthier and better able to support marine life habitats, sport and commercial fisheries, and a wider range of recreational activities like boating and diving. Social benefits include reduced health costs, peace of mind that the water is safe for recreation, aesthetic amenities, and maintaining the reputation of California beaches as being beautiful and safe. California beaches are an important environmental and economic resource for the state and the Nation. Efforts such as the Clean Beaches Initiative to fund storm water diversions and other water quality improvement projects are creating benefits that are likely to far out weigh their costs.

d. US-Mexico Border Accomplishments

California and Mexico share a border that is experiencing greater population and economic growth, but at the same time seeing its water quality, water supply, and environmental challenges become more complex. While the geopolitical boundary that is the US-Mexico border is clearly defined on the map, water and pollution follow a set of physical boundaries. Growth in population and industry on both sides of the border are taxing the current water systems, infrastructure, and the need for monetary resources and information exchange. Water quality and quantity are important to the border region if it is to maintain its economic productivity and quality of life for its residents.

Industrialization is happening rapidly along both sides of the border. It is becoming one of the fastest-growing emerging manufacturing centers in the world. Companies and people from US and Mexico are moving there to be near the opportunities, despite physically inadequate and politically complicated water supply, distribution, and treatment systems. The wildlife habitat in the area is also crucial to maintaining a fishing industry along the Baja California and Sonora coasts. The marshes, wetlands, and the Salton Sea form an important rest and feed area for migratory birds along the Pacific Flyway. To address some of these water related issues, SWRCB and two RWQCBs, San Diego and Colorado River regions, are partnering with bi-national institutions to pool resources and technical assistance. Some of these efforts are described below.

- SWRCB provided technical assistance to the U. S. Environmental Protection Agency, the Border Environment Cooperation Commission and the State of Baja California in development of a Water and Wastewater Master Plan for Tijuana, and contributed support for funding of an initial $40 million collection system rehabilitation program.
- SWRCB and RWQCB, San Diego and Colorado River Regions, have worked closely with the State of Baja California to address our joint goal of developing a coordinated regional program for the monitoring, pretreatment and minimization of industrial wastewaters in the border region. SWQCB has established a strong environmental technical assistance program in response to requests from the State of Baja California. Representatives of the states of California and Baja California have worked with the City of San Diego to develop a model industrial wastewater monitoring program in Tijuana, and recently obtained funds to extend the program to Tecate. Both states, working with Sacramento State University, have developed written and video worker training materials for use by domestic wastewater and industrial wastewater workers in the State of Baja California and throughout Mexico. The Tecate Industrial Waste Monitoring and Pretreatment Technical Assistance Program are currently being implemented.
- SWRCB and Colorado River RWQCB, in partnership with the City of San Diego, Sacramento State University and the State of Baja California, worked to complete wastewater worker training manuals for low cost wastewater treatment systems operations and maintenance, and completed a series of industrial wastewater inspector training videos and manuals for use throughout Baja California and the Republic of Mexico.
- SWRCB and San Diego RWQCB, in partnership with the State of Baja California, initiated a contract with Ocean Imaging Inc. to use satellite and aerial imagery to track the marine discharge plumes from the International Wastewater Treatment Plant in San Ysidro and the San Antonio de Los Buenos Wastewater Treatment Plant in Tijuana.
- Colorado River RWQCB completed work on a pathogen TMDL for the New River at the International Boundary, which is the first such effort by any U.S. state to address cross-border water pollution.
- Colorado River RWQCB conducted a comprehensive water quality monitoring program for the New River at the International Boundary; SWRCB, and Colorado River RWQCB, in partnership with San Diego State University and the State of Baja California, initiated a GIS-based ground and remote sensing water quality monitoring program for the Tijuana River Watershed in the California/Baja California border region.
- Colorado River RWQCB, in partnership with the City of Calexico and the State of Baja California, provided training to four Mexicali wastewater treatment plant operators, as an initial step in long range plans by the Mexicali wastewater utility to promote professional development of its work force.
- Colorado River RWQCB provided technical assistance to the International Boundary and Water Commission, the North American Development Bank and the State of

Baja California during construction of 40 wastewater collection system rehabilitation projects in Mexicali.

D. REGIONAL WATERSHED OVERVIEW

1. Introduction

California is divided into hydrological regions that form the boundaries for nine RWQCBs. The mission of RWQCBs is to develop and enforce water quality objectives and implementation plans that best protect area waters at the regional level. This is a challenging task that must recognize local differences in climate, topography, geology, and hydrology. Additionally, the RWQCBs must consider all the competing uses of their Region's water including the needs of the environment, industry, agriculture, and municipal districts.

The foundation for pollution control in each region is its "Basin Plan" which identifies the region's water bodies, its beneficial uses (Appendix A), objectives to protect those uses, and a plan to achieve those objectives.

The RWQCBs issue waste discharge requirements and permits to control discharges to surface water, ground water, or wetlands from both point and nonpoint sources; enforce pollution control requirements; take action against violators; and monitor water quality.

The water resource protection efforts of SWRCB and RWQCBs are guided by a five year Strategic Plan (updated in 2002). A key component of the Strategic Plan is a watershed management approach for water resources protection.

The following pages are brief summaries of information on each RWQCB. Each summary contains a brief description of the RWQCB and some key water quality issues and priorities. Contact information is also presented. For more detailed information on each RWQCB's watersheds including in-depth descriptions of watersheds, water quality problems and plans and efforts towards solutions, you can peruse each RWQCB's Watershed Management Initiative Chapters using the following websites links:

North Coast Region 1
http://www.swrcb.ca.gov/rwqcb1/programs/watermanageinit.html

San Francisco Region 2
http://www.swrcb.ca.gov/rwqcb2/download/r2wmi02c.pdf

Central Coast Region 3
http://www.swrcb.ca.gov/rwqcb3/WMI/WMI%202002,%20Final%20Document,%20Revised%201-22-02.pdf

Los Angeles Region 4
http://www.swrcb.ca.gov/rwqcb4/docs/wmi/webchapter02.pdf
http://www.swrcb.ca.gov/rwqcb4/docs/wmi/webappendix02.pdf

Central Valley Region 5
http://www.swrcb.ca.gov/rwqcb5/available_documents/watershed/R5_WMI_chapter.htm

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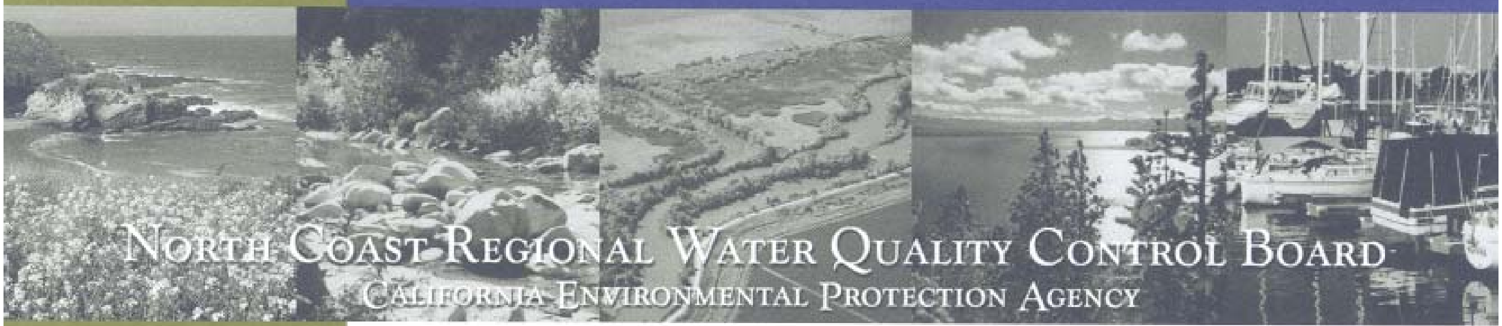
Lahontan Region 6
http://www.swrcb.ca.gov/rwqcb6/WMI/WMI_Index.htm

Colorado River Basin Region 7
http://www.swrcb.ca.gov/rwqcb7/wmi.html

Santa Ana Region 8
http://www.swrcb.ca.gov/rwqcb8/html/wmi.html

San Diego Region 9
http://www.swrcb.ca.gov/rwqcb9/programs/wmc.html

FACT SHEET



- WHERE IS THE NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 1
- PRIORITIES
- WATER DATA
- NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD (REGION 1)

5550 SKYLANE BLVD.
SUITE A
SANTA ROSA, CA 95403
(707) 576-2220
FAX: (707) 523-0135

NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD?

Remote wilderness and towering redwoods characterize the North Coast Region, which stretches from the Oregon border to Marin County. A land of wet coastal mountains and drier inland valleys, it accounts for 12 percent of the state's land area, but 35 percent of its freshwater runoff. Its 320-mile-long coastline includes estuaries and environmentally sensitive areas protected by state law. Timber harvesting, agriculture, recreation and tourism are mainstays of the local economy. The area's population centers are Humboldt Bay and Santa Rosa. Headquarters for the Regional Board is in Santa Rosa. All or parts of the following counties are in the Region: Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity.

KEY ISSUES IN REGION 1

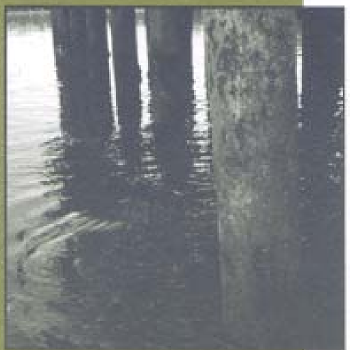
Water Reclamation in the Russian River Watershed. The Regional Water Board actively encourages the use of treated wastewater. Several community wastewater facilities use treated wastewater for irrigation. The Russian River supplies most of the drinking water, and with a growing population, water supply and restoring the endangered species habitat is critical.

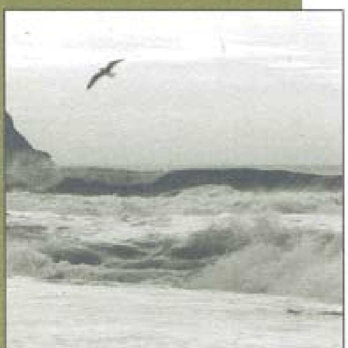
Timber Harvest Plans. The Timber Harvest Division of the Regional Board reviews and conducts field inspections of timber harvest plans on private lands and timber sales on United States Forest Service lands. Approximately 40 percent of the timber harvested within California occurs in the North Coast Region. The Timber Harvest Division's mission is to prevent soil or other pollutants from entering water and to recover beneficial uses of impaired waters.

Vineyards and Water Quality. Vineyards are a large component of North Coast agricultural activities with new vineyards being established rapidly. The Regional Board Nonpoint Source Program responds to water quality concerns about soil erosion from vineyards into surface waters, mostly from new vineyards. The staff is working with the Agricultural Commissioners' offices of Mendocino and Sonoma Counties, compiling information on the use of vineyard pesticides.

Contaminated Drinking Water Wells. The Regional Board is identifying sources of contamination affecting numerous drinking water wells throughout the region, particularly in Sonoma and Mendocino Counties. Staff identifies parties responsible for the contamination and takes appropriate actions to stop, and then clean the contamination.

Water Quality Monitoring. The Regional Board is implementing the new Surface Water Ambient Monitoring Program. The Regional Board has established permanent monitoring stations in several rivers and streams throughout the Region. Rotating intensive basin surveys are also used in this effort.





WATER DATA

- 20,000 square miles of land 320 miles of coastline
- Thousands of miles of streams
- 27,000 acres of lakes

MUNICIPALITIES

Del Norte County: Crescent City

Humboldt County: Arcata, Eureka, Ferndale, Fortuna, Garberville, Rio Dell, and Trinidad

Mendocino County: Fort Bragg, Ukiah, & Willits

Siskiyou County: Weed and Yreka

Sonoma County: Cloverdale, Cotati, Geyserville, Guerneville, Healdsburg, Occidental, Rohnert Park, Santa Rosa, Sebastopol, Windsor.

Trinity County: Trinity Center, & Weaverville

North Coast Regional Water Quality Control Board (Region 1)
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Santa Rosa, CA 95403
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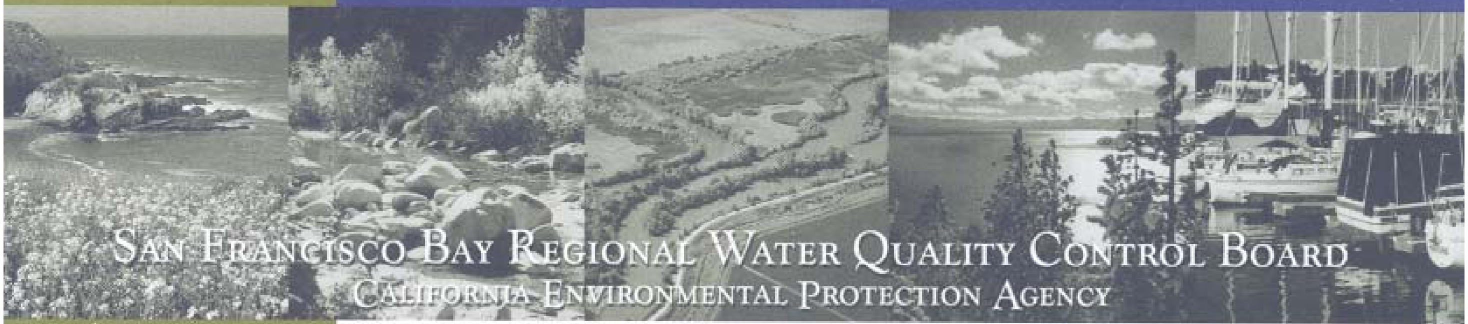
Fax: (707) 523-0135
Executive Officer: Susan Warner

INFORMATION NUMBERS

Aboveground Tanks
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties..............................(707) 570-3769
  All other counties................(707) 576-2699
Certification (401/404) ....(707) 576-2065
  ....(707) 576-2701
Cleanups
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties..............................(707) 570-3769
  All other counties................(707) 576-2699
Dairies.......................................(707) 576-2701
Department Of Defense
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties..............................(707) 570-3769
  All other counties................(707) 576-2699
Development Proposals
  Sonoma & Mendocino
  Counties..............................(707) 576-2065
  All other counties................(707) 576-2701
Hazardous Material Spills
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties..............................(707) 570-3769
  All other counties................(707) 576-2699
Herbicide Regulation (Watershed)
  Klamath, Trinity
  Redwood Creek ....(707) 576-2800
  Headwaters Forest............(707) 576-2350
  Humboldt Bay/Eel River ..(707) 576-2684
  Mendocino Coast/
  Russian River....................(707) 576-2686
Hillside Vineyards ....(707) 576-2682
Industrial Discharges
  Sonoma & Mendocino
  Counties............................(707) 576-2065
  All other counties..............(707) 576-2701
Logging (Timber Harvesting)
  Klamath, Trinity
  Redwood Creek ....(707) 576-2800
  Headwaters Forest............(707) 576-2350
  Humboldt Bay/Eel River ..(707) 576-2684
  Mendocino Coast/
  Russian River....................(707) 576-2686
Monitoring (Watershed)
  ....(707) 576-2693
Nonpoint Source/319(H) Grants
  ....(707) 576-2682
  ....(707) 576-6706
Npl-superfund
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties............................(707) 570-3769
  All other counties ....(707) 576-2699
Ombudsman ....(707) 576-2226
Planning (Watershed)............(707) 576-2693
  (All other)..........................(707) 576-2703
Sewage Treatment Plants
  Sonoma & Mendocino
  Counties............................(707) 576-2065
  All other counties..............(707) 576-2701
Storm Water Permits
  Sonoma & Mendocino
  Counties............................(707) 576-2065
  All other counties..............(707) 576-2701
Solid Waste Disposal Sites/
Chapter 15 ....(707) 576-2682
Timber Harvesting (Watershed)
  Klamath, Trinity,
  Redwood Creek ....(707) 576-2800
  Headwaters Forest............(707) 576-2350
  Humboldt Bay/Eel River ..(707) 576-2684
  Mendocino Coast/
  Russian River....................(707) 576-2686
Total Maximum Daily Load (Tmdl)
  ....(707) 576-2069
Underground Tanks
  Santa Rosa ....(707) 576-2666
  Sonoma & Mendocino
  Counties............................(707) 570-3769
  All other counties ....(707) 576-2699

FACT SHEET



- **WHERE IS THE SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD?**
- **KEY ISSUES IN REGION 2**
- **WATER DATA**
- **SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD (REGION 2)**

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SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD?

San Francisco Bay lies at the heart of this Region, home to more than seven million people. Industries range from high tech computer manufacturers in "Silicon Valley" to oil refineries in Contra Costa County. The northern part of the Region supports agriculture, such as the wine industry and dairies. Despite the heavy urbanization of the Region, there are still abundant natural resources, such as migratory birds, and fish in and around the Bay. Headquarters for the Regional Board is in Oakland.

KEY ISSUES IN REGION 2

The Regional Board's on-going regulatory programs have resulted in significant pollution reductions over the last 30 years, despite a growing population. The Regional Board has also assessed millions of dollars in fines over the last ten years, with about 70 percent of the money being used for local environmental projects.

The Regional Board is working on several significant programs to improve surface water quality. Staff are pursuing a vigorous enforcement and education program to control construction site erosion and other stormwater issues. Working with the U.S. Environmental Protection Agency, Regional Board staff completed most of the cleanup of the Gambonini mercury mine in Marin County.

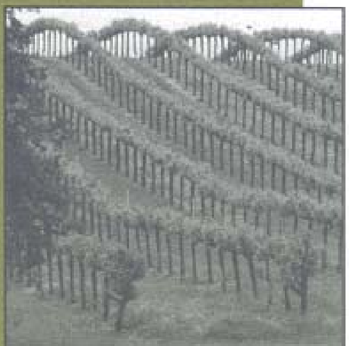
The Regional Board has also worked with local flood control agencies to develop projects that offer flood protection and protect both water quality and natural habitats. Regional Board staff are working on Total Maximum Daily Loads (TMDLs) for, mercury, polychlorinated biphenyls (PCBs), invasive species throughout the Bay, copper and nickel in the South Bay, and pesticides in urban creeks. The Regional Board continues its watershed management efforts, working with stakeholders in Napa and Santa Clara Counties. Staff, working with local agencies on pollution prevention programs, used innovative approaches to deal with surface water issues.

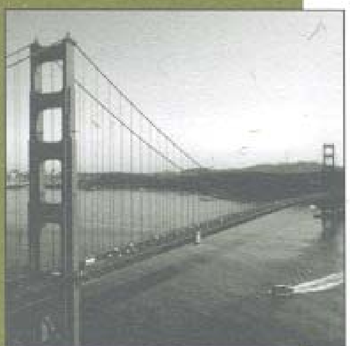
In the area of groundwater, staff made detailed assessments of groundwater use in San Francisco and the East Bay Plain and are currently working on South Bay groundwater basins. These assessments helped guide groundwater cleanup. Staff has also been working with various agencies to help implement "Brownfields" programs. Working with local agencies, Board staff have cleaned and closed more than two-thirds of the Region's leaking underground storage tank (UST) sites.

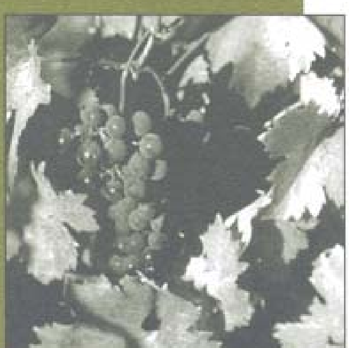
WATER DATA

- 4,300 square miles of land
- 450 square miles of Bay water surface
- 110 miles of coastline

SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD







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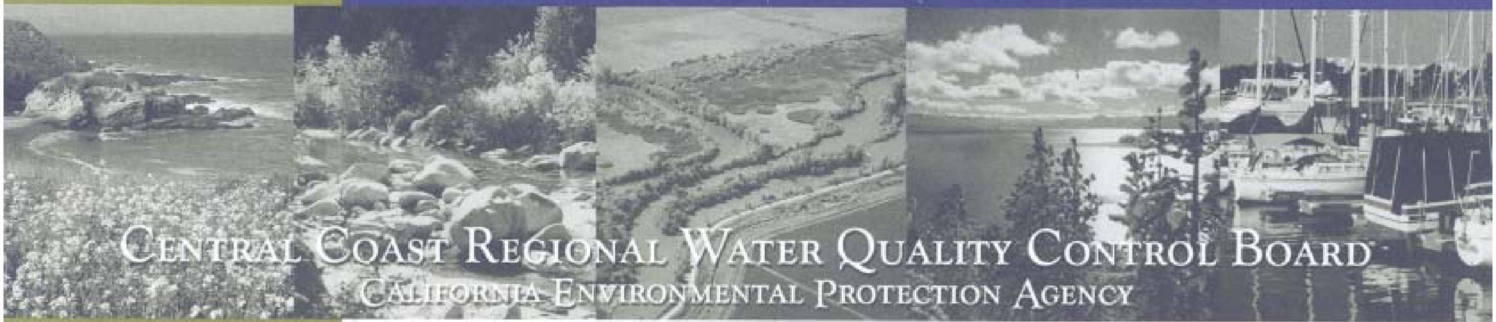
Fax: (510) 622-2460
http://www.swrcb.ca.gov/rwqcb2
Executive Officer: Loretta Barsamian

INFORMATION NUMBERS

Assistance, general.................(510) 622-2327
Administrative.........................(510) 622-2496
Above Ground Tanks..............(510) 622-2401
Animal Waste..........................(510) 622-2362
Basin Planning.........................(510) 622-2351
Beneficial Use of Waters Designations
....(510) 622-2351
Complaint Reporting..............(510) 622-2369
DOD/DOE Federal Facility Cleanups
....(510) 622-2390
Fish Contamination ....(510) 622-2424
Groundwater Cleanups ....
see "underground storage tanks"
Land Disposal - Industrial....(510) 622-2416
Landfills..................................(510) 622-2416
Non-point Source Pollution Coordinator
....(510) 622-2362
NPDES Permitting
North Bay (Marin, Sonoma, Napa, Solano, San Francisco, & San Mateo)
....(510) 622-2378
South Bay (Santa Clara) ...(510) 622-2378
East Bay (Alameda & Contra Costa)
....(510) 622-2425
Ombudsman ....(510) 622-2327
Personnel & Hiring................(510) 622-2507
Procedures & Policies............(510) 622-2327
Sediment Quality ....(510) 622-2351
Sewage Spills ....(510) 622-2312
Spills (non-sewage) ....(510) 622-2369
Storm Water Regulation ....(510) 622-2323
Total Maximum Loads...........(510) 622-2395
Underground Storage Tanks
(Groundwater Cleanup)
San Francisco County, Marin County, Napa County, Solano County & Sonoma County
....(510) 622-2368
Alameda County & Santa Clara County
....(510) 622-2444
San Mateo County.............(510) 622-2385
Waste Classification...............(510) 622-2414
Water Reclamation.................(510) 622-2338
Watershed Management Coordinator
....(510) 622-2362
Watershed Programs
Coastal Counties.................(510) 622-2352
North Counties ....(510) 622-2364
South & East Bay..............(510) 622-2323
Water Quality Standards.......(510) 622-2351
Wetlands ....(510) 622-2402

FACT SHEET



- WHERE IS THE CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 3
- WATER DATA
- CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD (REGION 3)

81 HIGUERA STREET, SUITE 200
SAN LUIS OBISPO, CA 93401
(805) 549-3147
FAX: (805) 543-0397

CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD?

The Central Coast Region extends from Santa Clara County south to northern Ventura County. The Region has 378 miles of coastline, including Santa Cruz and the Monterey Peninsula, the agricultural Salinas and Santa Maria Valleys, and the Santa Barbara coastal plain. Tourism, power and oil production, agriculture and related food processing activities are the major industries. The Regional Board office is in San Luis Obispo.

KEY ISSUES IN REGION 3

In 1998, the Regional Board, with the State Attorney General and other agencies, settled with Unocal Corporation for environmental damage from leaking oil pipelines at two San Luis Obispo County locations – Avila Beach and Guadalupe Oil Field. Unocal paid nearly $62 million in penalties and other assessments to fund natural resource restoration and water quality projects. Unocal also agreed to comply with the Regional Board's cleanup orders. Avila's Front Street area is cleaned, as are the highest risk areas in the Guadalupe Oil Field. Cleanup work on remaining areas in the oil field and in Avila continues.

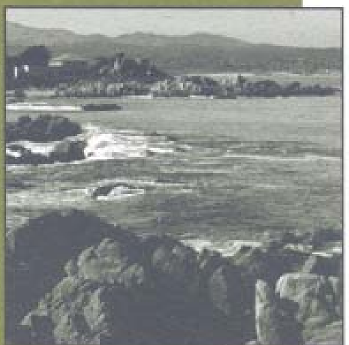
Three power plants in the Region are significant issues with the use of marine water for cooling systems.

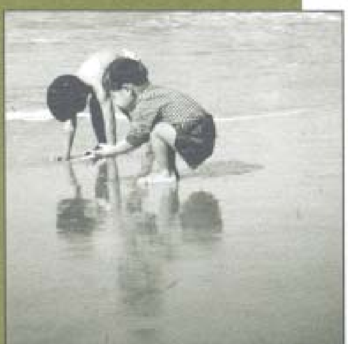
The Regional Board reached settlement with Pacific Gas & Electric for $14.4 million for Clean Water Act violations at the Diablo Canyon Nuclear Power Plant. Funds will benefit the nearby Morro Bay Estuary, State Mussel Watch Monitoring, a restoration and enhancement project in San Luis Obispo Creek, and the State Cleanup and Abatement Account. The Regional Board agreed on a multifaceted mitigation project to resolve permitting issues for continued Diablo dischargers. For the Duke Moss Landing Power Plant, the Regional Board ordered $7 million in watershed improvements for permit mitigation.

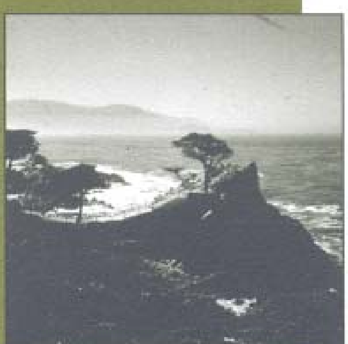
These power plants are examples of how the Region's Watershed Branch focuses on integrating regulatory responsibilities, nonpoint source pollution control, and regional monitoring and planning. These efforts improve the Region's ability to identify and address high priority water quality issues with appropriate regulatory and non-regulatory tools.

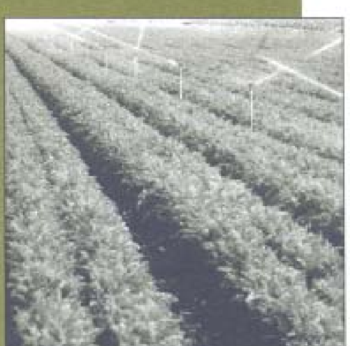
WATER DATA

- 11,274 square miles of land
- 2,360 miles of streams
- 25,040 acres of lakes
- 378 miles of coastline







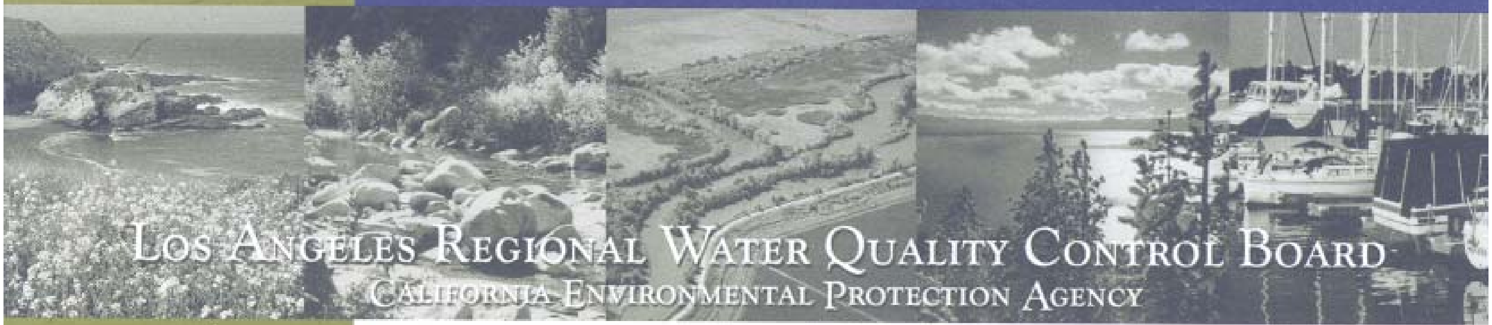


Central Coast Regional Water Quality Control Board (Region 3)
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401
(805) 549-3147
Fax: (805) 543-0397
Executive Officer: Roger Briggs

INFORMATION NUMBERS

Assistance, general ....(805) 549-3372
Administrative ....(805) 549-3505
Above Ground Tanks.............(805) 549-3699
Animal Waste ....(805) 549-3697
Basin Planning ....(805) 549-3333
Beneficial Use of Waters
Designations ....(805) 549-3333
Complaint Reporting.............(805) 542-4642
DOD/DOE Federal
Facility Cleanups ....(805) 542-4645
Fish Contamination ....(805) 549-3333
Groundwater Cleanups.................................
see "underground storage tanks"
Landfills.................................(805) 542-4645
Nonpoint Source
Pollution Coordinator ....(805) 549-3695
NPDES Permitting................(805) 549-3697
Ombudsman...........................(805) 549-4639
Personnel & Hiring
Procedures & Policies ....(805) 549-3505
Monitoring.............................(805) 549-3333
Sewage Spills.........................(805) 549-3504
Spills (non-sewage)................(805) 549-3504
Storm Water Regulation.......(805) 549-3334
Total Maximum Loads...........(805) 549-3132
Underground Storage
Tanks ....(805) 549-3699
Waste Classification..............(805) 542-4639
Water Reclamation................(805) 549-3697
Watershed Management
Coordinator............................(805) 549-3132
Watershed Programs
  Coastal ....(805) 542-4647
  Northern ....(805) 549-3761
  Southern ....(805) 542-4630
  Central ....(805) 549-3467
Water Quality Standards......(805) 549-3333

FACT SHEET



- WHERE IS THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 4
- PRIORITIES
- WATER DATA
- LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD (REGION 4)

320 WEST 4TH STREET, SUITE 200
LOS ANGELES, CA 90013
(213) 576-6600
FAX: (213) 576-6640

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD?

With 10 million residents, the Los Angeles Region is the most densely populated Region in the state. It encompasses all the coastal watersheds of Los Angeles and Ventura Counties, along with portions of Kern and Santa Barbara Counties. Land use varies considerably. In Ventura County, agriculture and open space exist alongside urban, residential and commercial areas. In northern Los Angeles County, open space is steadily being transformed into residential communities. In southern Los Angeles County, land uses include urban, residential, commercial and industrial.

KEY ISSUES IN REGION 4

The activities of the Enforcement and Special Projects Unit, coupled with a strong enforcement effort, have been a primary focus of the Regional Board.

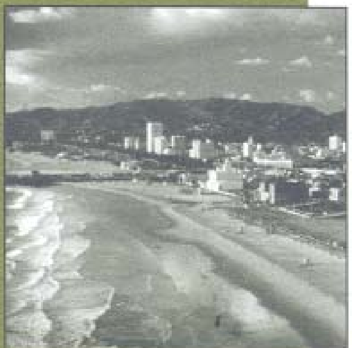
In preparing its Water Quality Assessment Report, Board staff determined that 166 surface water bodies are impaired. Each impaired water body must have a Total Maximum Daily Load (TMDL) developed to address the impairment. The staff also assisted in creating a multi-agency Contaminated Sediments Task Force to develop a long-term management plan for dredging and disposing of contaminated sediments. The Regional Board, in cooperation with the United States Environmental Protection Agency, is supervising the cleanup of the Methyl Tertiary Butyl Ether (MTBE), a gasoline additive responsible for the closure of three-quarters of the city of Santa Monica's water supply wells.

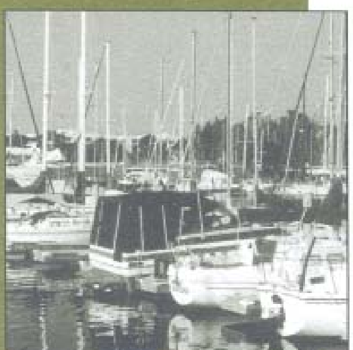
The Regional Board continues to implement its Watershed Management Initiative (WMI) for the Upper San Gabriel River. This "holistic" approach brings together all watershed stakeholders with the aim of cooperatively managing all potential point and non-point pollution sources. Stormwater and urban runoff are regulated by three discharge permits covering the 95 cities and two counties within the Los Angeles Region.

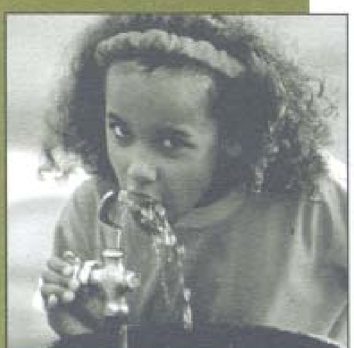
PRIORITIES

The Regional Board is a member of the Beach Water Quality Workgroup, an ad hoc committee composed of groups responsible for the protection and reporting of beach water quality in Southern California. The State Board, in cooperation with local agencies, developed a beach closure warnings database. The Workgroup has developed a model monitoring program for coastal water bacteria. The State and Regional Boards developed and are operating a new Sanitary Sewer Overflow and Spill Management System that reports progress in reducing spills, and identifies agencies and geographic areas with chronic spill problems.

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD







The Regional Board's Standard Urban Storm Water Mitigation Plan requires that the first three-quarters of an inch of rainfall runoff be captured and treated. Design standards in the plan for specific new developments will ensure that storm water runoff is treated to the maximum extent practicable.

The Regional Board is considering three TMDLs during the first half of 2001: trash/litter in the Los Angeles River; Chlorides in Calleguas Creek; and trash/litter in Ballona Creek.

The Regional Board participates in numerous public meetings and conducts workshops on hexavalent chromium contamination. The Regional Board is investigating more than 160 suspected hexavalent chromium sites.

WATER DATA

- 4,447 square miles of land, including offshore islands
- 1,115 miles of streams
- 12,107 acres of lakes
- 120 miles of coastline

Los Angeles Regional Water Quality Control Board (Region 4)

320 West 4th Street, Suite 200

Los Angeles, CA 90013

(213) 576-6600

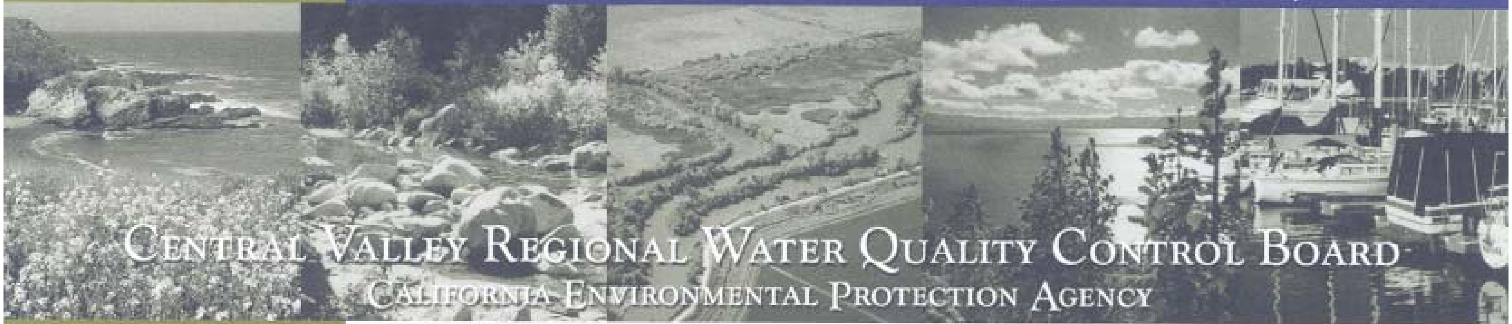
Fax: (213) 576-6640

Executive Officer: Dennis Dickerson

INFORMATION NUMBERS

Assistance, general ....(213) 576-6600
Administrative ....(213) 576-6611
Above Ground Tanks ....(213) 576-6720
Animal Waste.........................(213) 576-6600
Basin Planning.......................(213) 576-6622
Beneficial Use of Waters Designations
....(213) 576-6783
Complaint Reporting ....(213) 576-6600
DOD/DOE Federal Facility Cleanups
....(213) 576-6600
Fish Contamination ....(213) 576-6600
Groundwater Cleanups ....(213) 576-6733
Land Disposal-Industrial......(213) 620-2269
Landfills ....(213) 620-6119
Nonpoint Source Pollution Coordinator
....(213) 576-6689
NPDES Permitting
Municipal ....(213) 576-6651
Industrial...........................(213) 576-6664
General ....(213) 576-6657
Ombudsman ....(213) 576-6808
Personnel & Hiring................(213) 576-6629
Procedures & Policies ....(213) 576-6600
Sediment Quality....................(213) 576-6718
Sewage Spills..........................(213) 576-6720
Spills (non-sewage).................(213) 576-6720
Storm water Regulation ....(213) 576-6753
Total Maximum Daily Loads .(213) 576-6622
Underground Storage Tanks
Coastal ....(213) 576-6710
San Gabriel........................(213) 576-6702
LA River ....(213) 576-6695
Waste Classification...............(213) 576-6119
Water Reclamation ....(213) 576-6600
Watershed Management Coordinator
....(213) 576-6679
Watershed Programs ....(213) 576-6679
Water Quality Standards.......(213) 576-6783
Wetlands.................................(213) 576-6600

FACT SHEET



WHERE IS THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD?

- **KEY ISSUES IN REGION 5**
- **PRIORITIES**
- **WATER DATA**

• CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD (REGION 5)
3443 ROUTIER ROAD, SUITE A
SACRAMENTO, CA 95827
(916) 255-3000
FAX: (916) 255-3015

• FRESNO OFFICE
3614 EAST ASHLAN AVE.
FRESNO, CA 93726
(559) 445-5116
FAX: (559) 445-5910

• REDDING OFFICE
415 KNOLLCREST DRIVE
REDDING, CA 96002
(530) 224-4845
FAX: (530) 224-4857

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD?

The Central Valley Region is the state's largest, encompassing 60,000 square miles, or about 40 percent of the state's total area. Thirty-eight of California's 58 counties are either completely or partially within the Regional Board's boundaries, formed by the crests of the Sierra Nevada on the east, the Coast Ranges and Klamath Mountains on the west, the Oregon border on the north, and the Tehachapi Mountains on the south. (included are 11,350 miles of streams, 579,110 acres of lakes and the largest contiguous groundwater basin in California). The Sacramento and San Joaquin Rivers, along with their tributaries, drain the major part of this large area through an inland Delta, prior to emptying into San Francisco Bay. The Delta is the focal point of the state's two largest water conveyance projects, the State Water Project and the federal Central Valley Project. Together, the Sacramento and San Joaquin Rivers and the Delta furnish over half of the state's water supply. The southern third of the Central Valley contains the Tulare Lake Basin, a closed hydrographic unit, except during extremely wet years. The Central Valley is one of the most important agricultural centers of the world. Its largest metropolitan area is Sacramento, which contains the state capital. The Regional Board's headquarters is in Sacramento with branch offices in Redding and Fresno.

KEY ISSUES IN REGION 5

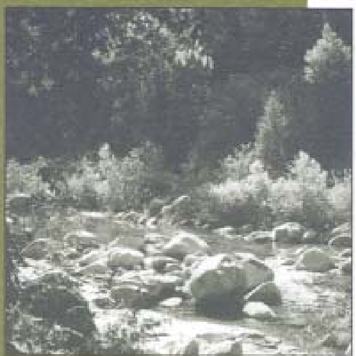
This Region has a diversity of water protection issues ranging from mining and timber harvest in the north to urban areas and agriculture in the Central Valley to petroleum extraction and refining in the southern part of the region. Each part of this region presents its own unique challenges.

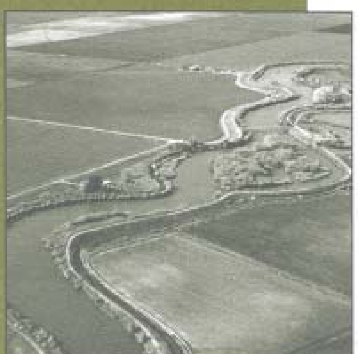
Some recent accomplishments demonstrate the diversity of issues facing the Regional Board. Due to the cooperation of Regional Board staff with numerous organizations, locally directed watershed programs are now in place in virtually all major rivers and streams in the Sacramento River Basin to address nonpoint source pollution issues. Working in cooperation with approximately 30 local agencies, over 3,100 leaking underground tank sites have been closed. "Hot spot" cleanup plans were developed to address dissolved oxygen and mercury problems in the Delta. The Regional Board adopted first-ever waste discharge requirements on agriculture to control selenium discharges from the Grasslands Watershed to the San Joaquin River. Regulation of confined animal facilities, especially dairies, has been improved by: documenting violations; taking enforcement actions; and working with the dairy industry on educational programs for dairy owners and operators.

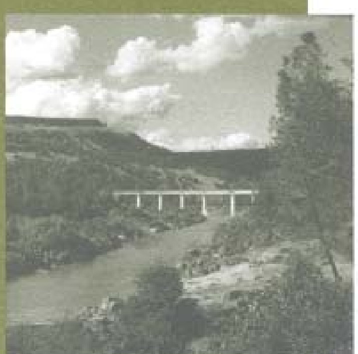
PRIORITIES

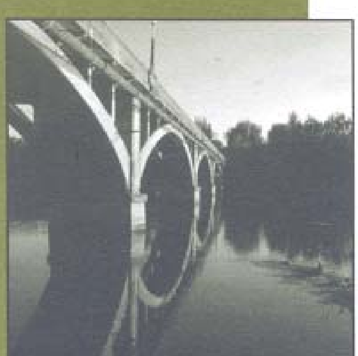
Protecting the Region's surface water quality poses many challenges. Agricultural drainage in the San Joaquin Valley, which is high in selenium and trace elements, must be regulated in a manner which protects water resources while at the same time maintaining a viable agricultural industry. Storm water runoff from urban and rural areas requires additional controls. The effects of abandoned mine discharges of acids and heavy metals must be mitigated to reduce impacts on the Sacramento River system and the Delta. Sources of toxicity in surface waters need further identification and control. To protect aquatic organisms, levels of pesticides reaching surface waters must be reduced. New policies for water quality protection are needed to address the unique challenges of effluent dominated streams and constructed agricultural drains.

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD









The Region's groundwater needs further protection and restoration to be able to support ever-expanding use patterns. The accumulation of salts and trace elements in San Joaquin and Tulare Lake Basin groundwaters should be mitigated or reduced. Additional measures are needed to control nitrate levels in groundwater, which occur in excess of water quality standards in almost half the counties in the region. Water quality at military bases such as McClellan, Mather, and Castle Air Force Bases must be mitigated in a manner that facilitates the return of these properties to productive use. Leaking underground tanks must be prevented from affecting useable groundwater aquifers.

WATER DATA

- 60,000 square miles of land
- 11,350 miles of streams
- 579,110 acres of lakes
- California's largest groundwater basin

Central Valley Regional Water Quality Control Board (Region 5)
3443 Routier Road, Suite A
Sacramento, CA 95827
(916) 255-3000..................Fax: (916) 255-3015
Executive Officer: Gary M. Carlton

Fresno Office
3614 East Ashlan Ave.
Fresno, CA 93726
(559) 445-5116 ....Fax: (559) 445-5910

Redding Office
415 Knollcrest Drive
Redding, CA 96002
(530) 224-4845..................Fax: (530) 224-4857

INFORMATION NUMBERS

Assistance, general
- Sacramento .... (916) 255-3000
- Fresno .... (559) 445-5116
- Redding .... (530) 224-4845

Administrative
- Sacramento .... (916) 255-3020
- Fresno .... (559) 445-6543
- Redding .... (530) 224-4845

Above Ground Tanks
- Sacramento .... (916) 255-3075/3422
- Fresno .... (559) 445-4392/6077
- Redding .... (530) 224-4853

Animal Waste
- Sacramento .... (916) 255-3035/6301
- Fresno .... (559) 445-6186/6077
- Redding .... (530) 224-4859

Basin Planning
- Sacramento .... (916) 255-3093/0743
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Beneficial Uses of Water Designations
- Sacramento .... (916) 255-3093/0743
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Complaint Reporting
- Sacramento .... (916) 255-3000
- Fresno .... (559) 445-5116
- Redding .... (530) 224-4851

Fish Contamination
- Sacramento .... (916) 255-3000
- Fresno .... (559) 445-5116
- Redding .... (530) 224-4851

Groundwater Cleanups ....
see "underground storage tanks" & "spills (non-sewage)"

Land Disposal-Industrial
- Sacramento .... (916) 255-3135/3091
- Fresno .... (559) 445-5156
- Redding .... (530) 224-4848/4860

Landfills
- Sacramento .... (916) 255-3131/3126
- Fresno .... (559) 445-5525
- Redding .... (530) 224-4853

Non-point Source Pollution Coordinator
- Sacramento .... (916) 255-3092/3113
- Fresno .... (559) 445-5576/6278
- Redding .... (530) 224-4851

NPDES Permitting
- Sacramento .... (916) 255-3023/3055/3142
- Fresno .... (559) 445-5035
- Redding .... (530) 224-4848

Ombudsman
- Sacramento .... (916) 255-3039

Personnel & Hiring
- Sacramento .... (916) 255-3020

Procedures & Policies
- Sacramento .... (916) 255-3000
- Fresno .... (559) 445-5116
- Redding .... (530) 224-4845

Sediment Quality
- Sacramento .... (916) 255-3371/3098
- Fresno .... (559) 445-6071
- Redding .... (530) 224-4784

Sewage Spills
- Sacramento .... (916) 255-3023/3055/3142
- Fresno .... (559) 445-5035/6190
- Redding .... (530) 224-4848/4860

Spills (non-sewage)
- Sacramento .... (916) 255-3075
- Fresno .... (559) 445-4390/4392
- Redding .... (530) 224-4853

Storm Water Regulation
- Sacramento .... (916) 255-3064
- Fresno .... (559) 445-6071
- Redding .... (530) 224-4849/4784

Total Maximum Daily Loads
- Sacramento .... (916) 255-3091/3368
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Underground Storage Tanks (Groundwater Cleanup)
- Sacramento .... (916) 255-3139
- Fresno .... (559) 445-5550
- Redding .... (530) 224-4998

Water Reclamation
- Sacramento .... (916) 255-3023/3055/3142
- Fresno .... (559) 445-5035/5116
- Redding .... (530) 224-4848/4860

Waste Classification .... (916) 255-3123

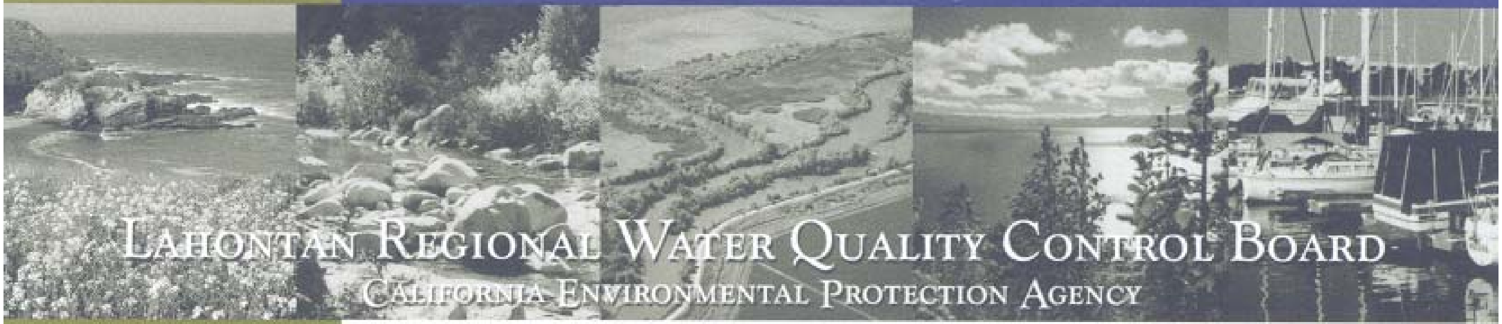
Watershed Management Coordinator
- Sacramento .... (916) 255-3088/3090
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Watershed Programs
- Sacramento .... (916) 255-3088/3103
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Water Quality Standards
- Sacramento .... (916) 255-3123/3025
- Fresno .... (559) 445-5576
- Redding .... (530) 224-4851

Wetlands
- Sacramento .... (916) 255-3397
- Fresno .... (559) 445-6071
- Redding .... (530) 224-4784

FACT SHEET



- WHERE IS THE LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 6
- WATER DATA
- LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD (REGION 6)
  2501 LAKE TAHOE BLVD.
  SOUTH LAKE TAHOE, CA 96150
  (530) 542-5400
  FAX: (530) 544-2271
- VICTORVILLE OFFICE
  15428 CIVIC DRIVE, SUITE 100
  VICTORVILLE, CA 92392
  (760) 241-6583
  FAX: (760) 241-7308

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD?

The Lahontan Region is named for a prehistoric lake that once covered much of the Great Basin. The Region includes about 20 percent of California from the Oregon border south along the eastern crest of the Sierra Nevada through the northern Mojave Desert. Within this area are hundreds of lakes, streams and wetlands, including the nationally significant Lake Tahoe and Mono Lake. Tourism is the most important industry in the Region, which also includes Death Valley National Park, the Mammoth Lakes area and portions of the newly formed Mojave National Preserve. Other important components of the Region's economy are mining (gold, borax, rare earth), agriculture (mostly livestock), and several military bases. The Regional Board has offices at South Lake Tahoe and Victorville.

KEY ISSUES IN REGION 6

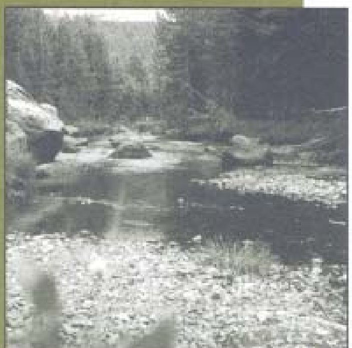
The Regional Board has played a key role in cleanup activities at regional military bases. It also authorized, in coordination with the State Resources Agency, the payment of over $2.2 million from the Tahoe Keys Mitigation Fund to construct projects in the Lake Tahoe Basin.

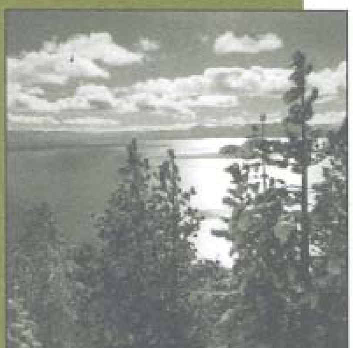
The Regional Board completed a Watercraft Emission Study at Lake Tahoe and found measurable concentrations of Methyl Tertiary Butyl Ether (MTBE) and benzene in the lake. Based, in part, on the results of the study, the Tahoe Regional Planning Agency adopted ordinances banning the use of two-stroke watercraft engines at Lake Tahoe. Cleanup of the Leviathan Mine, an inactive sulfur mine acquired by the State in 1984, continues. The Regional Board has treated about 11 million gallons of acid mine drainage, re-vegetated more than five acres of disturbed area, and constructed treatment lagoons capable of passively treating the drainage. The Board monitors flow and water quality at the site.

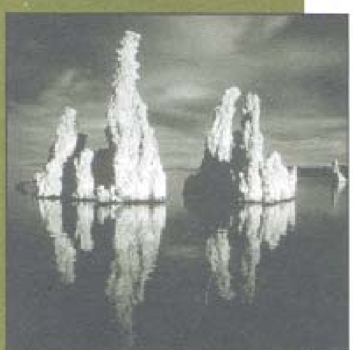
The Regional Board has been instrumental in setting new standards to control pollutants in snowmelt and road runoff entering a tributary to Lake Tahoe. The Regional Board issued a Notice of Violation to the California Department of Transportation requesting changes in their operations. Subsequently, Governor Davis directed the Department to cease the practice.

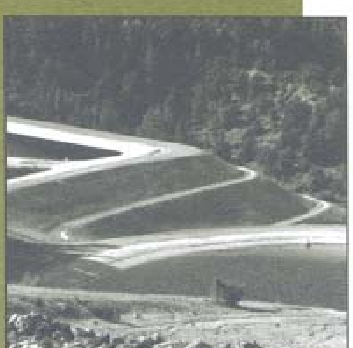
Problems associated with the contamination of drinking water wells in the South Lake Tahoe area by MTBE continue. Since 1998, the Regional Board has continued to clean up MTBE contamination from a recalcitrant owner's site in Meyers using funds from the State's "Emergency, Abandoned, and Recalcitrant" account.

In 2001 the Regional Board adopted its first Total Maximum Daily Load (TMDL) to control









sediment loading to Heavenly Valley Creek in the Lake Tahoe Basin from past ski resort development. The Board's new TMDL unit is working on several other TMDLs affecting the Lake Tahoe, Truckee River, Walker River, and Owens River watersheds.

WATER DATA

- 33,131 square miles of land
- 3,170 miles of streams
- 382,300 acres of lakes

Lahontan Regional Water Quality Control Board (Region 6)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400
Fax: (530) 544-2271
Executive Officer: Harold J. Singer

Victorville Office
15428 Civic Drive, Suite 100
Victorville, CA 92392
(760) 241-6583
Fax: (760) 241-7308

INFORMATION NUMBERS

Assistance, general
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

Administrative Services
Lake Tahoe........................(530) 542-5406
Victorville..........................(760) 241-6583

Above Ground Tanks
Lake Tahoe........................(530) 542-5453
Victorville..........................(760) 241-2434

Basin Planning
Lake Tahoe........................(530) 542-5460

Beneficial Uses of Water Designations
Lake Tahoe........................(530) 542-5460
Victorville..........................(760) 241-6583

Complaint Reporting
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-7325

DOD/DOE Federal Facility Cleanups
Lake Tahoe........................(530) 542-5453
Victorville..........................(760) 241-7404

Groundwater Cleanups..................................
see "underground storage tanks"

Land Disposal-Industrial
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

Nonpoint Source Pollution Coordinator
Lake Tahoe........................(530) 542-5408
Victorville..........................(760) 241-7325

NPDES Permitting
Lake Tahoe........................(530) 542-5432
Victorville..........................(760) 241-7404

Ombudsman
Lake Tahoe........................(530) 542-5410

Personnel & Hiring
Lake Tahoe........................(530) 542-5406
Victorville..........................(760) 241-7325

Sewage Spills
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

Spills (non-sewage)
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

Storm Water Regulation
Lake Tahoe........................(530) 542-5436
Victorville..........................(760) 241-7325

Total Maximum Daily Loads
Lake Tahoe........................(530) 542-5460
Victorville..........................(760) 241-7408

Underground Storage Tanks (Groundwater Cleanup)
Lake Tahoe........................(530) 542-5453
Victorville..........................(760) 241-7413

Waste Classification
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

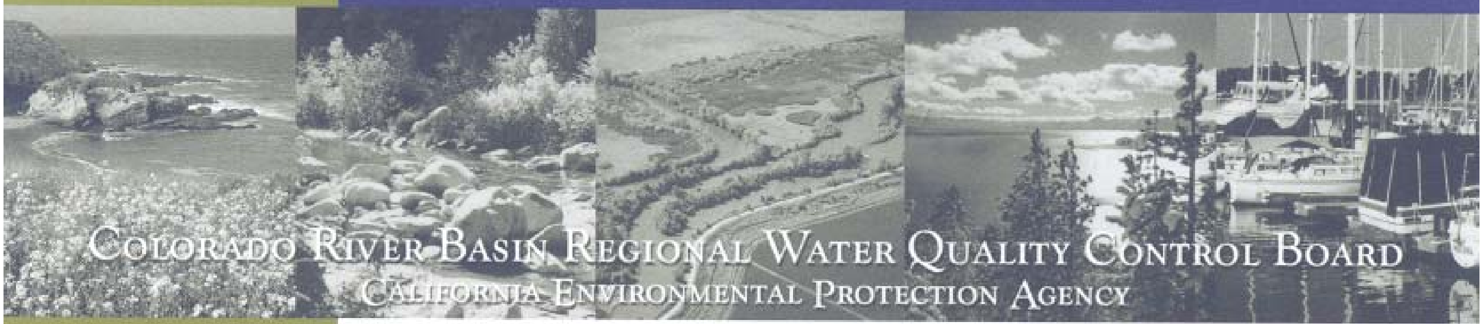
Water Reclamation
Lake Tahoe........................(530) 542-5400
Victorville..........................(760) 241-6583

Watershed Programs
Lake Tahoe........................(530) 542-5408
Victorville..........................(760) 241-7413

Water Quality Standards
Lake Tahoe........................(530) 542-5462
Victorville..........................(760) 241-6583

Wetlands
Lake Tahoe........................(530) 542-5408
Victorville..........................(760) 241-7413

FACT SHEET



- WHERE IS THE COLORADO RIVER BASIN REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 7
- WATER DATA
- COLORADO RIVER BASIN REGIONAL WATER QUALITY CONTROL BOARD (REGION 7)
  73-720 FRED WARING DRIVE, SUITE 100
  PALM DESERT, CA 92260
  (760) 346-7491
  FAX: (760) 341-6820

COLORADO RIVER BASIN REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS COLORADO RIVER BASIN REGIONAL WATER QUALITY CONTROL BOARD?

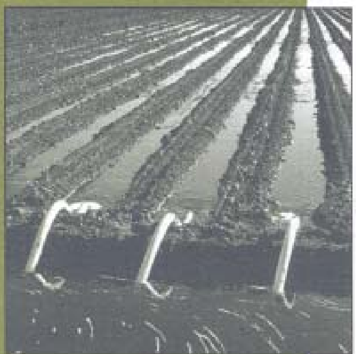
The Colorado River Basin Region covers California's most arid area. Despite its dry climate, the Region contains two water bodies of state and national significance: the Colorado River and the Salton Sea. Water from the Colorado River irrigates more than 700,000 acres of productive farmland in the Imperial, Coachella, Bard, and Palo Verde Valleys. The river also provides drinking water to several million people in California's southern coastal cities. The Regional Board's headquarters is located in Palm Desert.

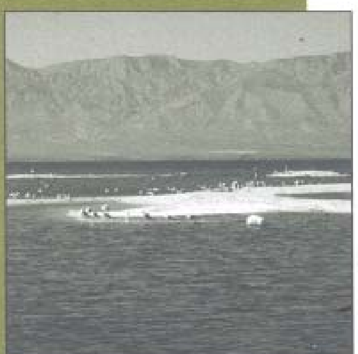
The Salton Sea Transboundary Watershed, which contains the Salton Sea, is the Region's Priority Watershed. The Salton Sea is California's largest lake and has been famous for its sport fishing and other recreational uses. It is a saline lake in a closed basin that is approximately 35 miles long and 9 to 15 miles wide, with approximately 360 square miles of water surface area and 105 miles of shoreline. The Salton Sea is also a federally and state designated repository to receive and store agricultural, surface, and subsurface drainage waters from the Imperial and Coachella Valleys. Water imported from the Colorado River has created an irrigated agricultural ecosystem in the watershed; wildlife and aquatic species are dependant on habitat created by the discharge of agricultural return flows.

KEY ISSUES IN REGION 7

The Salton Sea ecosystem, including the Sonny Bono Salton Sea National Wildlife Refuge, is considered a critical link on the international Pacific Flyway for migratory birds. Freshwater inflow to the Sea is uncertain due to proposed water transfers and water conservation both in the U.S. and in Mexico. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately one percent per year. Because the Sea has no outlet, salts concentrate in it and nutrients cause the formation of eutrophic conditions where the Sea, impaired by nutrients, becomes low in dissolved oxygen, and high in ammonia levels and experiences increased odors. The Sea's salinity problem cannot be directly addressed from a strictly regulatory standpoint; rather a coordinated solution involving an engineered remedy aimed at stabilization and/or restoration of salinity levels must be developed. Catastrophic die-offs of birds and fish between 1992 and 1999 indicate the Sea is in serious trouble and may be unable to support these beneficial uses in the future.

The Regional Board plays a key role in the California Environmental Protection Agency Border Environmental Program, addressing international pollution of the New River. The staff has been instrumental in achieving cooperative, bi-national implementation of projects in Mexicali, Mexico to restore the city's sewage collection and treatment systems to satisfactory operating standards.





The Regional Board staff has set into motion a progressive enforcement program, which has resulted in increased compliance by dischargers at permitted facilities. The staff was also instrumental in the passage of state legislation prohibiting new septic tank systems near sewer hook-ups within the Mission Springs Water District service area, east of Palm Springs.

WATER DATA

- 20,000 square miles of land
- 900 miles of streams and rivers
- 250,000 acres of lakes

Colorado River Basin Regional Water Quality Control Board (Region 7)

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Palm Desert, CA 92260

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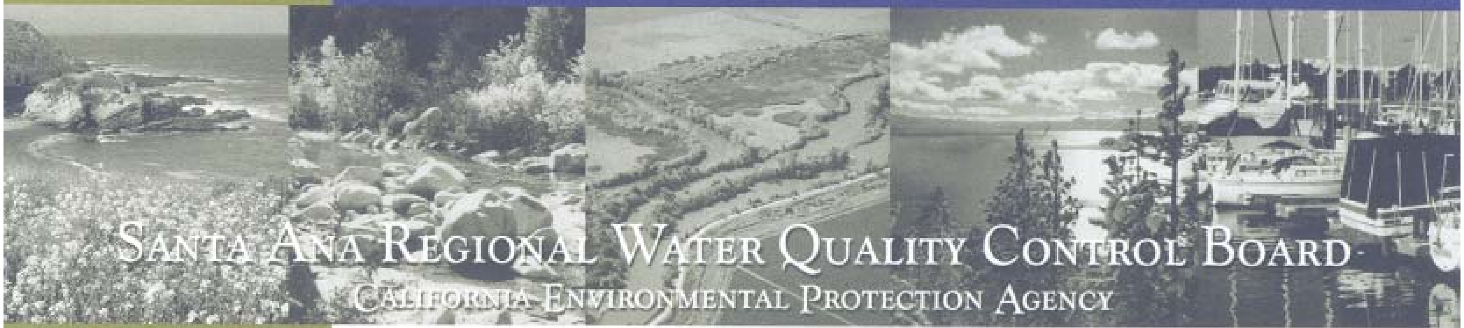
Fax: (760) 341-6820

Executive Officer: Phil Gruenberg

INFORMATION NUMBERS

Assistance, general................(760) 346-7491
Above Ground Tanks ....(760) 776-8939
....(760) 776-8947
Basin Planning ....(760) 776-8982/8932
Beneficial Uses of Water Designations
....(760) 776-7491
Complaint Reporting..............(760) 776-8947
DOD/DOE Federal Facility Cleanups
....(760) 776-8973
Fish Contamination ....(760) 346-7491
Geothermals ....(760) 776-8962
Groundwater Cleanups ....
see "underground storage tanks"
Land Disposal-Industrial......(760) 776-8934
Landfills ....(760) 776-8945
....(760) 346-6116
Nonpoint Source Pollution Coordinator
.................................(760) 776-8932/8942
NPDES Permitting
....(760) 776-8966
....(760) 776-8958
Ombudsman ....(760) 776-8938
Personnel & Hiring ....(760) 776-8938
....(760) 776-8950
Procedures & Policies............(760) 346-7491
Sediment Quality ....(760) 346-7491
Sewage Spills ....(760) 776-8947
....(760) 776-8939
Spills (non-sewage) ....(760) 776-8939
....(760) 776-8947
Storm Water Regulation
....(760) 776-8961
....(760) 776-8935
Total Maximum Daily Loads
....(760) 776-8931
Underground Storage Tanks
(Groundwater Cleanups)......(760) 346-7491
Waste Classification ....(760) 346-7491
Water Reclamation ....(760) 776-8943
....(760) 776-8960
Watershed Management Coordinator
....(760) 776-8932
....(760) 776-8933
Watershed Programs..............(760) 776-8933
Water Quality Standards
....(760) 776-8943
....(760) 776-8966
Wetlands
....(760) 346-7491

FACT SHEET



- **WHERE IS THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD?**
- **KEY ISSUES IN REGION 8**
- **WATER DATA**
- **SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD (REGION 8)**
  3737 MAIN STREET, SUITE 500
  RIVERSIDE, CA 92501-3339
  (909) 782-4130
  FAX: (909) 781-6288

SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD?

The Santa Ana Region, which extends from the San Bernardino and San Gabriel mountains in the north and east to Newport Bay along the coast, continues to be one of the most rapidly growing areas of the state. While the region is geographically the smallest, 2,800 square miles, it boasts one of the largest populations with almost five million people. This semi-arid Region is known for its temperate climate and relatively low rainfall – about 15 inches per year. The Regional Board's office is located in Riverside.

KEY ISSUES IN REGION 8

Extensive groundwater basins underlie much of the Region. Local efforts to recharge and inject reclaimed water back into the aquifer provide only a fraction of the area's water needs, which are primarily met by imported water. The Santa Ana River, the Region's main surface water body, transports more than 125 million gallons per day of reclaimed water from Riverside and San Bernardino Counties for recharge into the Orange County Groundwater Basin. This satisfies approximately 40 percent of the county's water demand. The Region also includes much of coastal Orange County, where water quality impairment in Newport Bay and bacterial contamination in Huntington Beach are key issues.

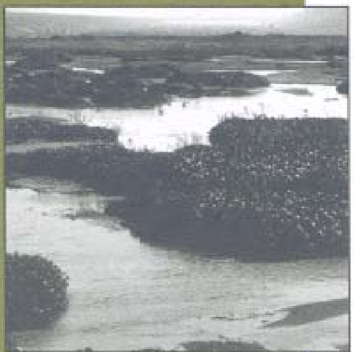
Regional Board staff has developed a watershed management plan for Newport Bay. They have also developed Total Maximum Daily Loads to address beneficial use impacts caused by sediments, nutrients and pathogens in the Newport Bay Watershed.

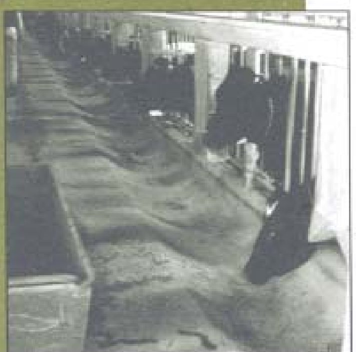
The Regional Board continues to address discharges from dairy and other confined animal feeding operations in the Chino Basin. These discharges degrade underlying groundwater quality and downstream surface water quality.

Deterioration of groundwater quality due to increasing salt levels is a significant issue in the Region. The Regional Board has helped develop a desalination project for the lower Chino Groundwater Basin to intercept and desalt poor quality groundwater and thus protect downstream water supplies. The staff has also brought together major stakeholders in the watershed to review the total dissolved solids and nitrogen water quality objectives of the Santa Ana Basin, and develop a strategy to protect water quality and optimize water resources development.

WATER DATA

- 2,800 square miles of land
- 460 miles of streams
- 21,090 acres of lakes
- 24 miles of coastline



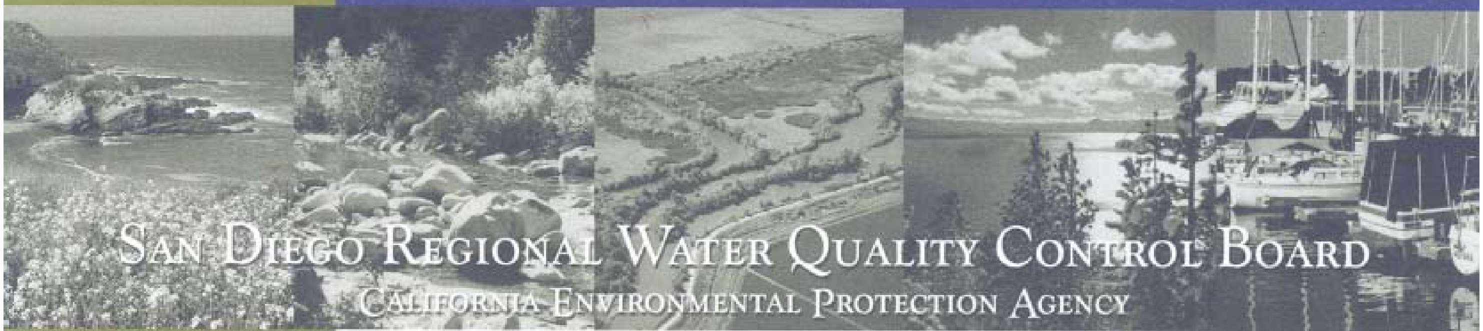


Santa Ana Regional Water Quality Control Board (Region 8)
3737 Main Street, Suite 500
Riverside, CA 92501-3339
(909) 782-4130
Fax: (909) 781-6288
Executive Officer: Gerard Thibeault

INFORMATION NUMBERS

Assistance, general ....(909) 782-4130
Administrative........................(909) 782-4385
Above Ground Tanks ....(909) 782-3292
Animal Waste.........................(909) 782-4992
Basin Planning.......................(909) 782-4493
....(909) 782-4468
....(909) 782-3234
Beneficial Uses of Water
Designations.......................(909) 782-4493
Complaint Reporting ....(909) 782-4379
DOD Federal Facility
Cleanups.................................(909) 782-4904
....(909) 782-4498
Fish Contamination ....(909) 782-4130
Groundwater Cleanup............(909) 782-4904
see "underground storage tanks"
Land Disposal-Industrial ....(909) 782-3295
Landfills ....(909) 782-3295
Nonpoint Source Pollution
Coordinator............................(909) 782-4468
NPDES Permitting................(909) 782-3258
Ombudsman...........................(909) 782-3286
Personnel & Hiring ....(909) 782-4385
....(909) 782-3281
Procedures & Policies............(909) 782-4130
Sediment Quality...................(909) 782-4493
....(909) 782-4468
....(909) 782-3234
Sewage Spills ....(909) 782-4379
....(909) 320-6362
Spills (non-sewage) ....(909) 782-4901
....(909) 320-6362
Storm Water Regulation.......(909) 782-3238
Total Maximum Daily Loads
....(909) 782-4493
....(909) 782-4468
....(909) 782-3234
Underground Storage Tanks
.... (909) 782-4496
Waste Classification..............(909) 782-3295
Water Reclamation................(909) 782-4130
Watershed Management ......(909) 782-4493
....(909) 782-4468
....(909) 782-3234
Water Quality Standards ......(909) 782-3287
Wetlands................................(909) 782-4990

FACT SHEET



- WHERE IS THE SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD?
- KEY ISSUES IN REGION 9
- WATER DATA
- SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD (REGION 9)

9174 SKY PARK COURT,
SUITE 100
SAN DIEGO, CA
92123-4340
(858) 467-2952
FAX: (858) 571-6972

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

WHERE IS SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD?

The San Diego Region stretches along 85 miles of scenic coastline from Laguna Beach to the Mexican Border and extends 50 miles inland to the crest of the coastal mountain range. In a mild coastal climate, the Region's growing population enjoys many water-related activities; however, little precipitation falls within this semi-arid Region. Approximately 90 percent of the Region's water supply is imported from Northern California and the Colorado River.

KEY ISSUES IN REGION 9

The Regional Board took a lead role in conducting the "Bight 98" regional ocean monitoring program in the area's coastal waters. Staff coordinated a comprehensive San Diego Bay monitoring program with the Bight 98 project.

The Regional Board staff continues to coordinate issuance of Waste Discharge Requirements (WDR) for U.S. Navy dredging projects to implement Home Porting projects in San Diego Bay. The U.S. Navy currently ports nearly a third of its active fleet in San Diego Bay.

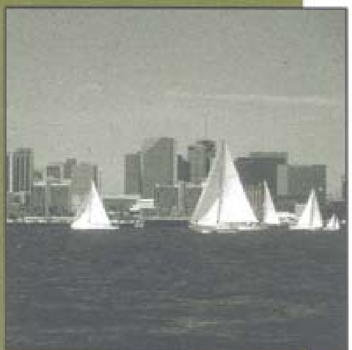
Work is underway to repair impaired water bodies through the development of four Total Maximum Daily Loads (TMDLs). They are diazinon and metals in Chollas Creek and dissolved copper in the Shelter Island Yacht Basin. The fourth is for nutrients in Rainbow Creek.

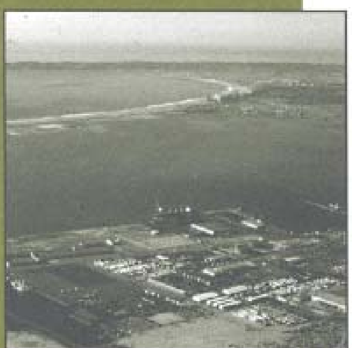
The Regional Board adopted an updated municipal storm water permit for San Diego County. This permit regulates discharges that are currently the greatest sources of contaminants and pollutants that impact water bodies in the San Diego Region. It addresses numerous highly controversial issues, in particular its requirements for new development and for meeting receiving water quality objectives.

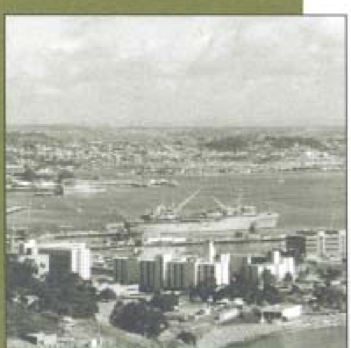
In response to increasing concern over beach closures, the Regional Board has begun shifting its priorities from traditional "point sources" to urban runoff and nonpoint source issues. In an attempt to educate as many people as possible on the water quality effects of urban runoff, the Regional Board has increased outreach efforts to municipal, industrial and construction site dischargers, as well as to the general public and elected officials.

The Regional Board is taking an aggressive compliance effort against operators of sewage conveyance systems, construction site operators and municipalities. This includes bringing fines against sewering agencies that allow sewage spills that contribute to beach closures.

The Regional and State Boards, in cooperation with local agencies, developed a beach closure warnings database for the Beach Water Quality Workgroup, an ad hoc committee composed of groups responsible for the protection and reporting of beach water







quality in Southern California. The workgroup has developed a model monitoring program for bacteria in coastal waters. The model integrates monitoring by storm water agencies with that of sewage treatment plants and environmental health agencies. Additionally, the SWRCB is developing source investigation procedures for beaches where storm drains frequently contaminate beaches.

WATER DATA

- 3,900 square miles of land
- 910 miles of streams
- 19,220 acres of lakes
- 85 miles of coastline

San Diego Regional Water Quality Control Board (Region 9)
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San Diego, CA 92123-4340
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Fax: (858) 571-6972

Executive Officer: John Robertus

INFORMATION NUMBERS

Assistance, general ....(858) 467-2952
Administrative
..........(858) 492-1763 (Dianne Broussard)
Above Ground Tanks
..................(858) 467-2980 (Kelly Dorsey)
Ambient Monitoring
...................(858) 627-3932 (Linda Pardy)
Animal Waste
............(858) 467-2988 (Michael McCann)
Basin Planning
...............(858) 467-2972 (Deborah Jayne)
Beneficial Uses of Water Designations
...............(858) 467-2972 (Deborah Jayne)
Citizen's Monitoring
...................(858) 627-3932 (Linda Pardy)
Complaint Reporting ....(858) 467-2952
DOD/DOE Federal Facility Cleanups
..............(858) 467-2975 (John Anderson)
File Reviews
...................(858) 636-3137 (Mike Gallina)
Fish Contamination
..................(858) 467-2990 (Pete Michael)
Groundwater Cleanups..................................
see "underground storage tanks"
Contaminated Site Assessment & Remediation
..............(858) 467-2975 (John Anderson)
Landfills
.................(858) 467-2982 (Carol Tamaki)
Nonpoint Source Pollution
...........(858) 467-2988 (Michael McCann)
NPDES Stormwater (Municipal & Construction)
Orange County
..................(858) 467-2735 (Jeremy Haas)
Riverside County & Camp Pendleton
....................(858) 492-1785 (Eric Becker)
Northern San Diego County (Oceanside, Fallbrook, Bonsall, Valley Center & San Luis Rey Valley)
..................(858) 637-5581 (Chris Means)
Southern San Diego County (Carlsbad, Leucadia, Encinitas, Vista, San Marcos, Escondido, San Diego)
...................(858) 467-4387 David Gibson
Ombudsman
...........(858) 467-2988 (Michael McCann)
Personnel & Hiring
.........(858) 492-1763 (Dianne Broussard)
San Diego Bay
..................(858) 467-2990 (Pete Michael)
Sediment Quality
..................(858) 467-2990 (Pete Michael)
Sewage Spills
..............(858) 636-3155 (Victor Vasquez)
Storm Water Regulation
...........(858) 467-2988 (Michael McCann)
Total Maximum Daily Loads
..............(858) 467-2972 (Deborah Jayne)
Underground Storage Tanks (Groundwater Cleanup)
....................(858) 636-3146 (Jody Ebsen)
Waste Classification
.................(858) 467-2982 (Carol Tamaki)
Water Reclamation
..................(858) 467-4254 (Brian Kelley)
Watershed Management Coordinator
..........(858) 467-2964 (Bruce Posthumus)
Water Quality Standards
.............(858) 467-2972 (Deborah Jayne)
Wetlands
...........(858) 467-2988 (Michael McCann)

III. SURFACE WATER ASSESSMENT

A. SURFACE WATER AMBIENT MONITORING PROGRAM (SWAMP)

The following summary is taken from the SWRCB Report to the Legislature, Pursuant to AB982 of 1999, Structure and Effectiveness of the State's Water Quality Programs: Section 303(d) of the Federal Clean Water Act and Total Maximum Daily Loads (TMDLs).

A strong monitoring program that can produce extensive monitoring data is essential to the success of assessing the quality of California's waters. SWAMP is a relatively new program at the SWRCB and RWQCBs. Initiated in 1999, SWRCB is responsible for statewide ambient monitoring efforts and oversees RWQCB monitoring activities, while each RWQCB establishes monitoring priorities for the water bodies within its jurisdiction for site-specific monitoring. To ensure statewide consistency, SWAMP also specifies the protocols and methodologies to be used for sampling, data analysis and data reporting

SWAMP is intended to meet four goals as follows:

1. Identify specific problems preventing the SWRCB, RWQCBs, and the public from realizing beneficial uses in targeted watersheds.
2. Create an ambient monitoring program that addresses all watersheds of the State using consistent and objective monitoring, sampling and analysis methods; consistent data quality assurance protocols; and centralized data management.
3. Document ambient water quality conditions in potentially clean and polluted areas.
4. Provide the data to evaluate the effectiveness of water quality regulatory programs in protecting beneficial uses of waters of the State.

Initial field monitoring activities began in Fiscal Year (FY) 2001-02 and focused on site-specific, targeted monitoring. Because of budget constraints, SWAMP continues to focus primarily on site-specific monitoring to better characterize problem sites to meet each RWQCB's needs for 303(d) listing and TMDL development. In the future if additional funds are made available further development of statewide monitoring will be under taken in SWAMP.

SWAMP Progress

- It is important to recognize that SWAMP is still in its infancy. Extensive planning and preliminary research activities were conducted during 1999, 2000, and 2001 to provide the guidance and framework to create an effective surface water quality ambient monitoring program for all of California's surface waters.

- SWAMP field monitoring activities began in FY 2001-02 and focused on site-specific target monitoring. Guidance documents were prepared by SWRCB to provide a framework within which the RWQCBs could develop region-specific SWAMP projects.

- A Water Quality Monitoring Coordinating Committee (WQMCC) was established, consisting of SWRCB and RWQCB SWAMP staff and representatives from other state agencies. WQMCC meets regularly to discuss SWAMP activities and address existing and potential issues. One of the primary focuses of WQMCC's 2002 meetings has been the development of a Quality Assurance Project Plan (QAPP), which is critical to ensure high quality of data. SWAMP sponsored a number of scientific workshops on quality assurance in 2002. Topics for these workshops included sample collection and field data measurement, laboratory analytical methodology and quality assurance/quality control issues, biological assessment and toxicity testing issues, and data management issues. Resolutions of many of these issues are evolving from the discussions held at these workshops and WQMCC meetings.

- SWAMP has organized an external scientific panel, the Scientific Planning and Review Committee (SPARC), to review study design, approaches, indicators, and other relevant topics. SPARC members are representatives from federal and state agencies and academics with expertise in the fields that include monitoring program management, fish habitat, invertebrates, sediment, organic chemistry, metals chemistry, quality assurance, pathogens, toxicology, and statistics, etc.

- SPARC held a two-day meeting in May 2002, at which staff from the nine RWQCBs gave presentations on past and future SWAMP activities within each region. One major comment from SPARC members at the meeting was that statewide data comparability needs to be the first step towards statewide consistency for SWAMP. Statewide data comparability means that ambient water quality measurements taken in one part of the state can be directly compared with like measurements taken in other parts of the state. Data comparability in SWAMP is being achieved through requirements in SWAMP QAPP. Statewide data comparability issues and other comments and recommendations in SPRAC report will be the subject of future WQMCC meetings.

Current Monitoring Activities

Because of the budget constraints, SWAMP has primarily focusing on site-specific monitoring to better characterize problem sites or clean locations (reference sites) to meet each RWQCB's needs for 303(d) listing, TMDL development, and other core regulatory programs. Some of the monitoring activities under SWAMP for FY 2002-03 are conducted through contracts and interagency agreements with a number of organizations.

Another major component of SWAMP– the overall status and trends of the state's surface water quality–will be implemented in the future, if additional funds are made available. Until then, RWQCBs will continue to use SWAMP resources to address high priority water quality issues in each region, while following SWAMP protocols to ensure statewide data comparability.

The following describes the surface water monitoring program currently being implemented at each RWQCB under the umbrella of SWAMP, with maps that identify the watersheds where monitoring activities have occurred or have been scheduled between FY 2001-02 and FY 2002-

03. At the end of FY 2002-03, samples will have been collected and analyzed for 480 water bodies located in 76 of the state's 172 watersheds (hydrological units).

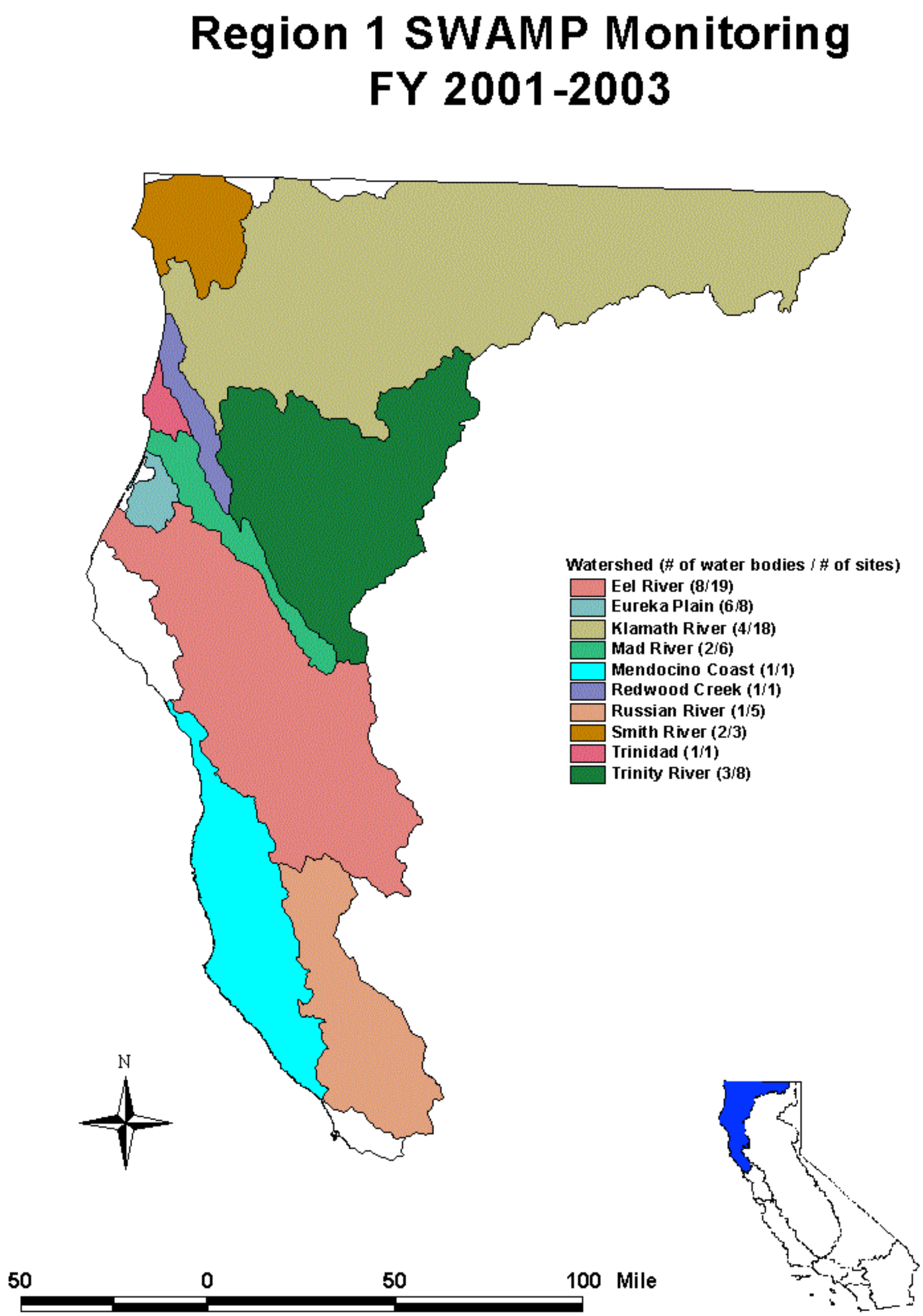
Region 1: North Coast Region

The North Coast region has thousands of stream miles most of which have little or no assessment information. Much of the water quality data are confined to the Russian River basin or to a limited number of specific sites, collected as a result of discharger self-monitoring requirements, cleanup activities, or enforcement actions. With the exception of the Russian River and a few of its tributaries, there are no long-term data on any water body in the region.

Data collected through SWAMP in this region will be used to identify temporal trends in water quality in water bodies for which there currently exists little or no data. This effort is coordinated with RWQCB's core regulatory program, north coast watershed assessment program, nonpoint source program, and TMDL program. The core regulatory program is currently using the draft monitoring data collected by SWAMP to implement the California Toxics Rule. Information collected by SWAMP is also being used to establish receiving water data for NPDES discharges.

The North Coast RWQCB is on a very tight time schedule to establish a number of TMDLs as a result of a court-ordered consent decree. SWAMP is used to collect data in support of these efforts. Draft nutrient data are currently being used to assist U.S. EPA in establishing TMDLs for the Eel River. RWQCB also plans to fund an infrared thermal imaging study of the Scott and Shasta river basins with SWAMP funds to support the watershed assessment program and TMDL efforts in these watersheds. SWAMP has also provided resources for the installation and maintenance of three new stream gages in the Eel River watershed where information on stream flow and sediment load is urgently needed as development of TMDLs is currently underway.

Figure 1


Region 1 SWAMP Monitoring
FY 2001-2003
Watershed (# of water bodies / # of sites)
Eel River (8/19)
Eureka Plain (6/8)
Klamath River (4/18)
Mad River (2/6)
Mendocino Coast (1/1)
Redwood Creek (1/1)
Russian River (1/5)
Smith River (2/3)
Trinidad (1/1)
Trinity River (3/8)
N
50
0
50
100 Mile

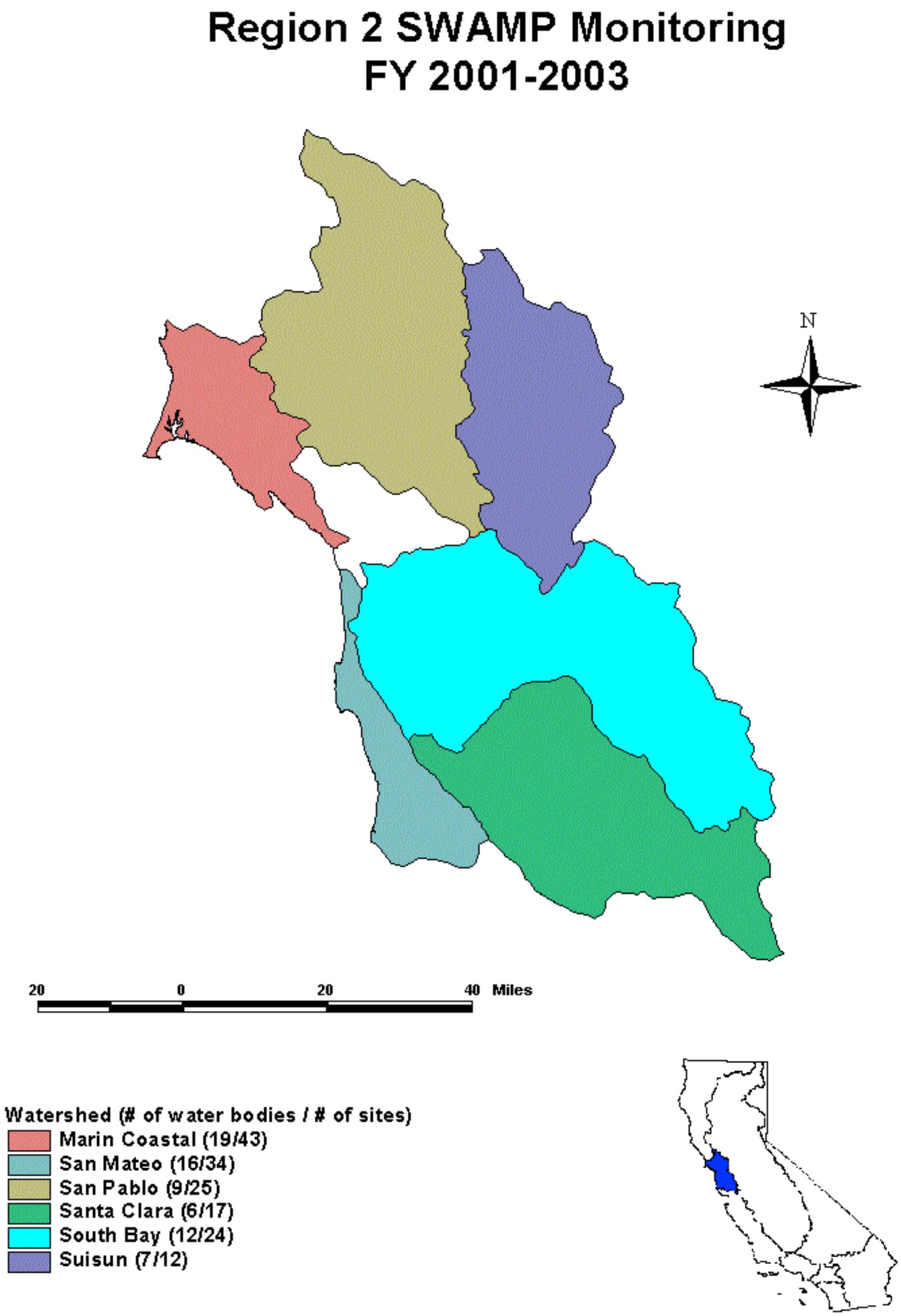
Region 2: San Francisco Bay Region

The goal of SWAMP in the San Francisco Bay region is to monitor and assess all water bodies of the region in order to identify reference sites (clean sites) and water bodies or sites that are impaired, based on data and information that provide a weight-of-evidence assessment of water quality. The San Francisco Bay RWQCB has developed a Regional Monitoring and Assessment Strategy (RMAS) in order to develop information for all water bodies in the region for the report required by CWA section 305(b) [305(b) report] and the 303(d) list. SWAMP resources are used to implement the RMAS. The selection and schedule of watersheds to be monitored are based on a number of factors. Overall, RWQCB is seeking geographic balance in the region in committing its monitoring resources. Watersheds monitored in the beginning years of the program tended to involve time-sensitive issues such as endangered species habitat (e.g., salmonids) or imminent development plans. In some instances, paired watersheds, which are close geographically and have similar land use and geology, are chosen for monitoring.

SWAMP funds are used to concentrate on monitoring watersheds, lakes/reservoirs, and bays and estuaries in this region other than the San Francisco Bay, which is currently monitored through the San Francisco Estuary Regional Monitoring Program. SWAMP monitoring will be used to evaluate beneficial uses in this region, through the use of water quality indicators.

The data collected as a result of SWAMP monitoring will be used to identify impaired water bodies and the cause of impairment for the 303(d) list, identify reference conditions, and establish baseline conditions to evaluate future land use changes. SWAMP data will also be used to determine if there is an association between land use and water quality impacts, evaluate methods to develop the best approach for watershed assessments, and develop indices (i.e., the Index of Biological Integrity).

Figure 2



Region 2 SWAMP Monitoring
FY 2001-2003
N
20
0
20
40 Miles
Watershed (# of water bodies / # of sites)
Marin Coastal (19/43)
San Mateo (16/34)
San Pablo (9/25)
Santa Clara (6/17)
South Bay (12/24)
Suisun (7/12)

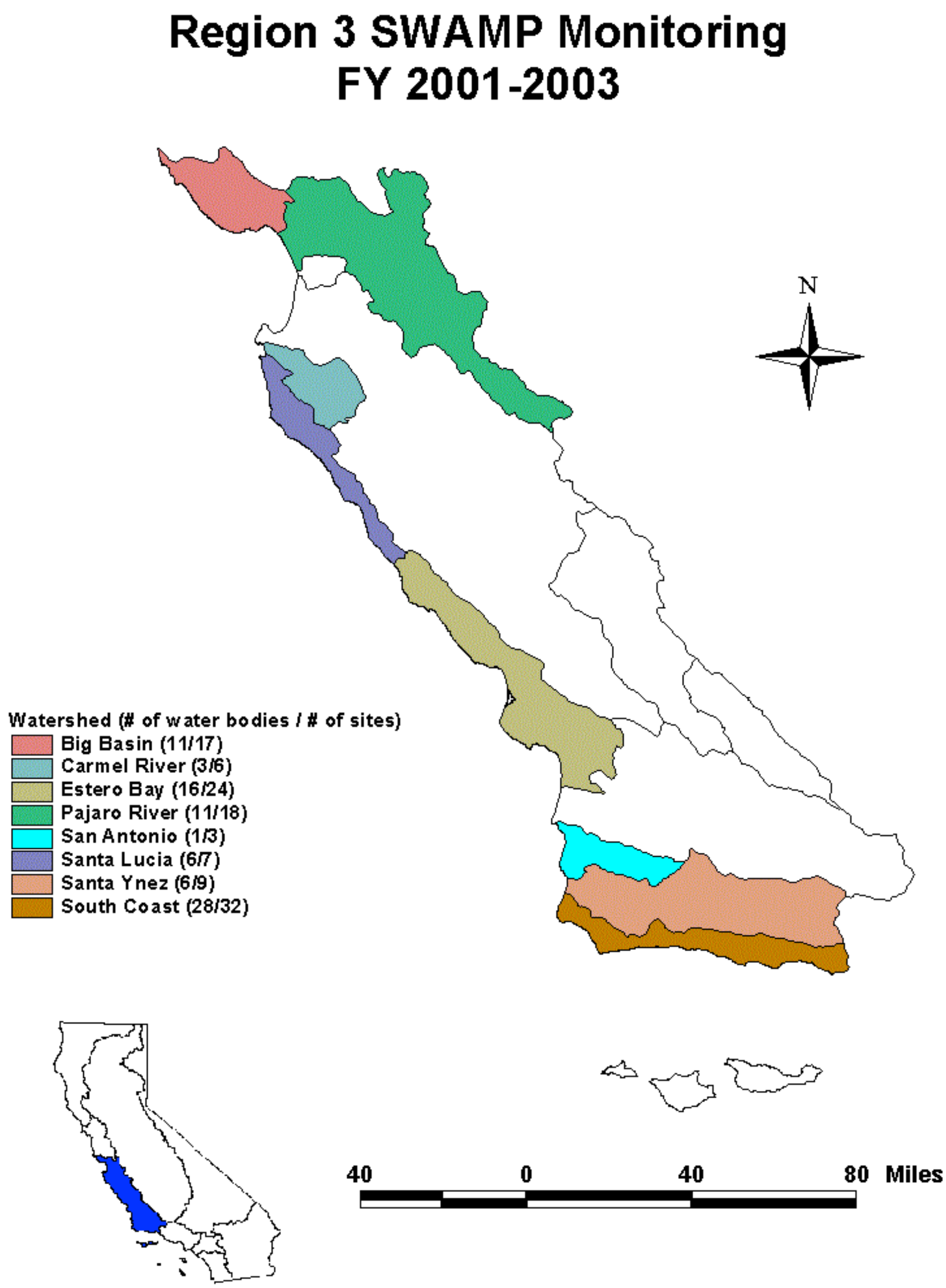
Region 3: Central Coast Region

SWAMP activities in this region are incorporated in RWQCB's Central Coast Ambient Monitoring Program. Primary issues to be addressed in this region are related to nonpoint source pollution associated with row crop agriculture, vineyards, rangeland, and timber harvest. Urban runoff problems are increasing in some parts of the region. Nutrients, sedimentation, pesticides, and pathogens are the primary causes for 303(d) listings in the region. The goal of SWAMP monitoring in this region is to provide a screening level assessment of water quality based on a variety of indicators. The plan to carry out this goal includes several components: Coastal Confluences, Nearshore Assessment, and Watershed Characterization.

Coastal Confluences monitoring establishes ongoing monitoring sites at the lower ends of thirty major creeks and rivers right above tidal influence. This component provides trend data across the entire region, giving information on the nature of inputs to the ocean, which helps to prioritize problem watersheds. Nearshore Assessment focuses on how inputs from river mouths impact the nearshore environment and is being closely tied to Coastal Confluences data. The Watershed Characterization component is conducted in a five-year rotational cycle. Additional "focused" monitoring sites are placed at other locations of interest in the watershed, such as above and below specific land uses, point sources, BMPs, or other areas in need of characterization.

The data collected as a result of SWAMP monitoring will be used in some cases to determine whether water bodies warranted listing on the 303(d) list. At sites along the mainstem and at the lower ends of major tributaries of streams and rivers, some of the monitoring will provide indications of water quality degradation for anadromous fish species, using fish toxicity testing, benthic community analysis, habitat condition, and physical and chemical water condition.

Figure 3


Region 3 SWAMP Monitoring
FY 2001-2003
N
Watershed (# of water bodies / # of sites)
Big Basin (11/17)
Carmel River (3/6)
Estero Bay (16/24)
Pajaro River (11/18)
San Antonio (1/3)
Santa Lucia (6/7)
Santa Ynez (6/9)
South Coast (28/32)
40
0
40
80
Miles

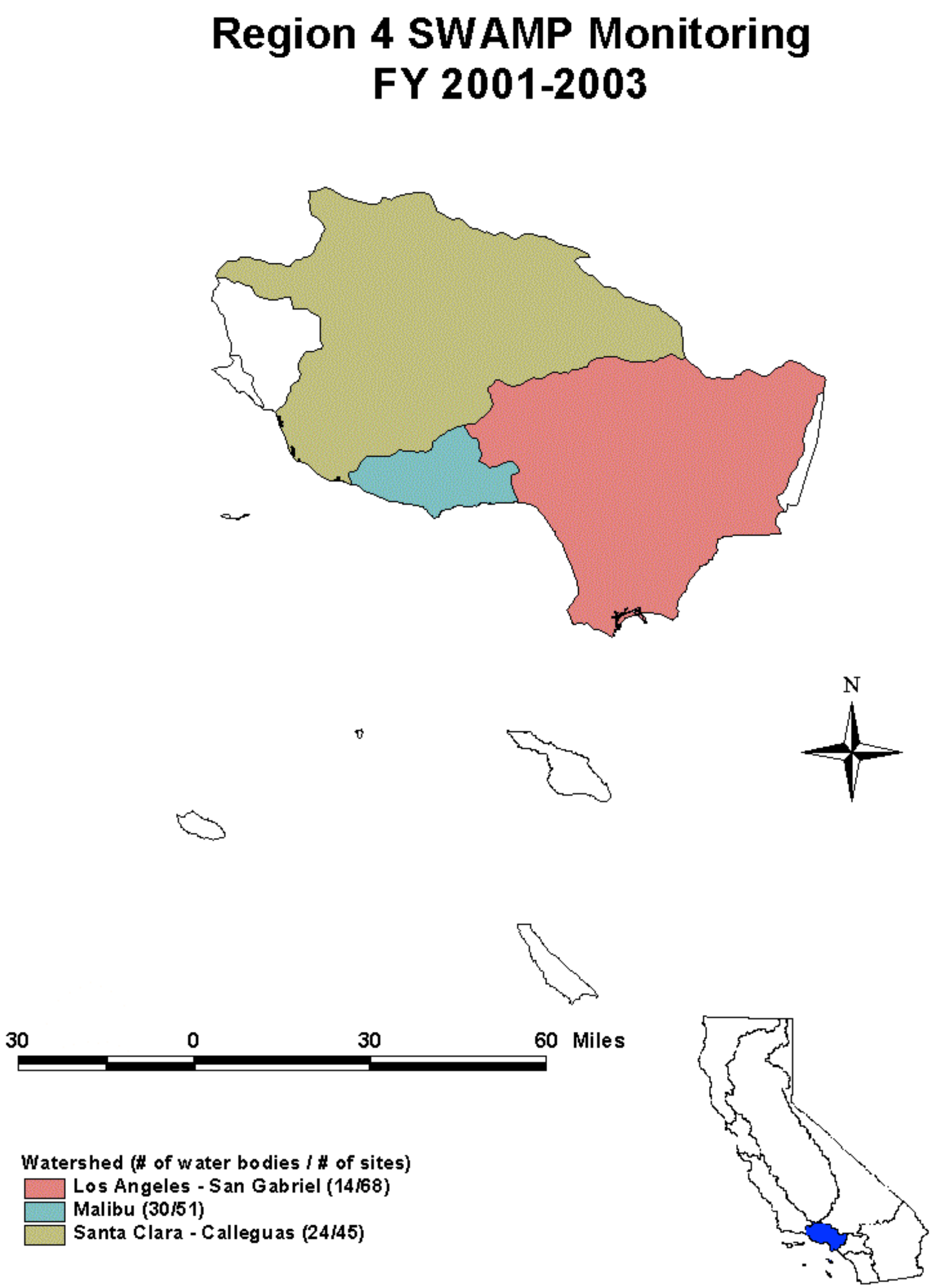
Region 4: Los Angeles Region

SWAMP sampling and analysis in the Los Angeles region will be used to assess the ambient conditions of the watersheds in Los Angeles and Ventura counties and will further delineate the nature, extent, and sources of toxic pollutants which have been detected or are suspected to be problematic for this region and its individual watersheds. Where applicable, a triad approach (benthic community analysis, water chemistry, and toxicity testing) is being used. The monitoring will also help to identify pristine conditions where no pollutants or contaminants are found.

Although the overall goal of SWAMP is to assess the ambient conditions of the watersheds, each watershed in the region is unique, and the design of the monitoring program and goals reflect this individuality. For example, the primary objective of monitoring in the Santa Clara watershed is to provide a broad baseline of the overall health of the watershed. Additional sub-objectives include determination of beneficial use attainment, filling in data gaps where data are either inconsistent or incomplete, and identification of potential reference sites for this watershed. A broad suite of parameters will be tested at the various stations to meet the needs of each unique watershed. In addition to the assessment of the ambient conditions of targeted watersheds, data collected by SWAMP will be used to develop the 305(b) report, 303(d) list and TMDLs, and for NPDES permit renewals. The information gathered will also be used in trend analysis, identification of impaired beneficial uses, as well as potentially in the development of an index of biological integrity.

SWAMP funds were focused in FY 2000-01 on monitoring in the Santa Clara-Calleguas hydrologic unit, and in FY 2001-02 on approximately 30 coastal sub-watersheds of the Malibu and Los Angeles-San Gabriel hydrologic units. Many of these sub-watersheds had not been sampled at all and others had been sampled modestly at best. In FY 2002-03, SWAMP resources are focusing on the Dominguez Channel and Los Angeles and Long Beach harbors. The focus of sampling is on basic and conventional water column chemistry, bacteriology, and bioassessment at most stations, with a major focus on bioassessment which historically has been overlooked.

Figure 4


Region 4 SWAMP Monitoring
FY 2001-2003
N
30
0
30
60 Miles
Watershed (# of water bodies / # of sites)
Los Angeles - San Gabriel (14/68)
Malibu (30/51)
Santa Clara - Calleguas (24/45)

Region 5: Central Valley Region

Three major watersheds—Sacramento River, San Joaquin River, and Tulare Lake Basin—have been delineated within the Central Valley region, which stretches from the Oregon border to the northern tip of Los Angeles County. Since each watershed has both a unique set of stakeholders and unique water quality concerns that must be addressed, the management process and the accompanying monitoring program are watershed specific.

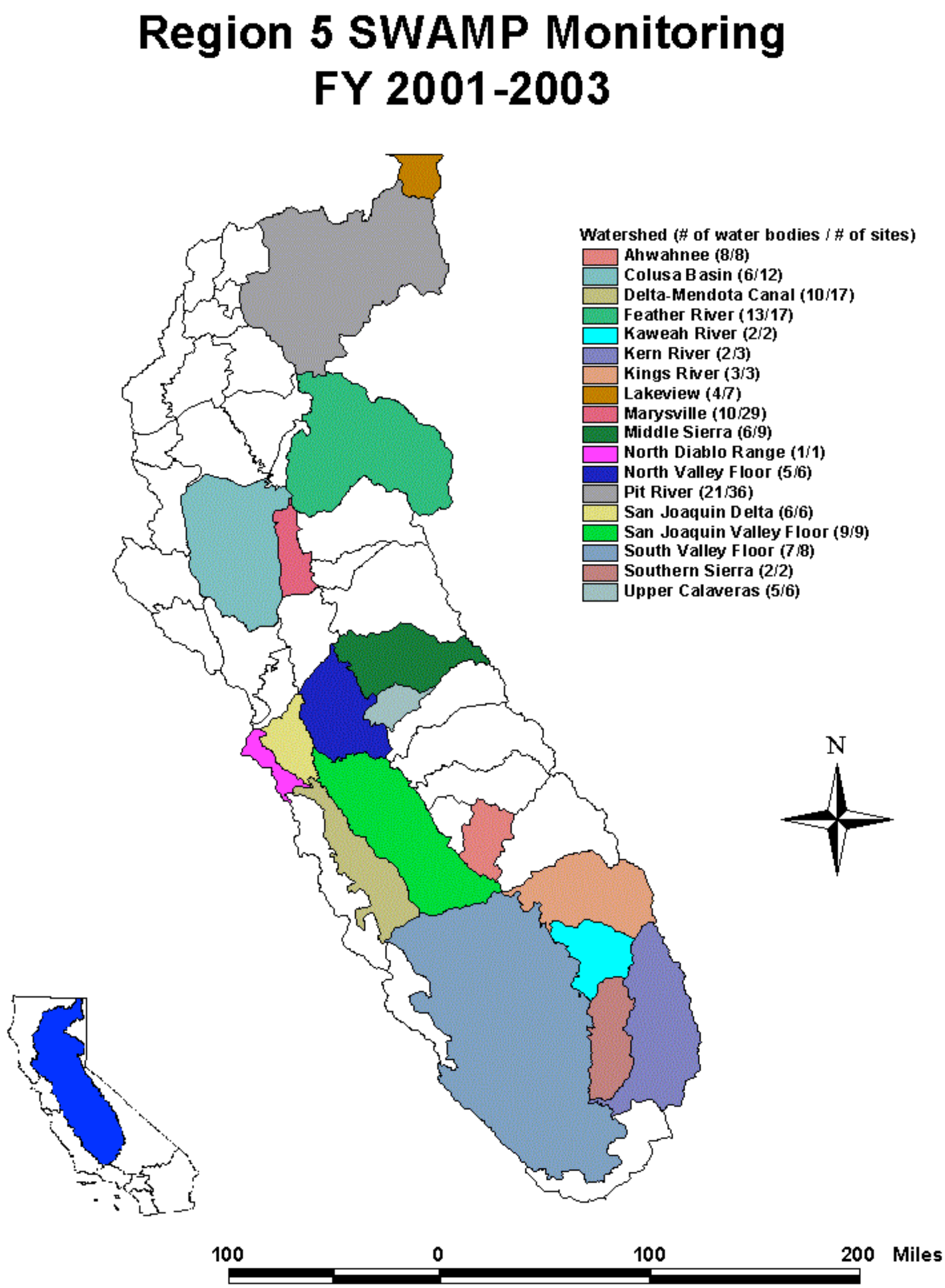
In the upper Sacramento River watershed, water quality issues principally relate to nonpoint source pollution resulting from past and current land management practices. These practices include livestock grazing, irrigated and non-irrigated agriculture, road and building construction, timber harvest, urban runoff, abandoned and inactive mines, and hydro-modification (i.e., dams, diversions, and stream channel disturbances). The overall SWAMP objective for this watershed is to evaluate the extent of water quality and beneficial use impairment.

The lower Sacramento River watershed contains over 5,700 miles of agriculturally dominated water bodies (ADWs). An ADW is a water body receiving greater than 50 percent of the flow from agricultural discharges during a significant portion of the irrigation season. Baseline aquatic community composition in these ADWs is largely unknown. In the fall of 2000, the Central Valley RWQCB undertook a SWAMP biological monitoring project in ADWs and effluent dominated water bodies (EDWs) of the Sacramento River watershed. This two-year project was intended to identify baseline aquatic community composition and assess the habitat condition at 45 sites, and to move towards identification of biological indicators of water quality in wadeable ADWs and EDWs of the lower Sacramento River watershed.

In the San Joaquin River watershed, SWAMP builds upon a monitoring framework developed as part of the agricultural subsurface drainage management program that has evolved since 1985. In addition, the watershed has been divided into five sub-basins to facilitate expanded monitoring within each sub-basin on a five-year rotational basis. SWAMP resources are being utilized for targeted sampling activities to better characterize the extent and source of known and suspected water quality impairments. Findings will be used to focus future control efforts and evaluate potential listing and delisting of 303(d) water bodies.

Point and nonpoint sources of pollution resulting from historical and current land use dominate water quality concerns in the Tulare Lake Basin. These uses include industrial processes, livestock grazing, dams, recreation, irrigated agriculture, confined animal facilities, and foothill and urban development. To date, there has been no comprehensive monitoring or assessment initiated for surface waters in this watershed. The overall objective of SWAMP for the Tulare Lake Basin is to identify reference and baseline surface water conditions, assess water quality and beneficial use impairment/support, provide data for impaired water body listings, and determine if there is an association between land use and water quality impacts.

Figure 5

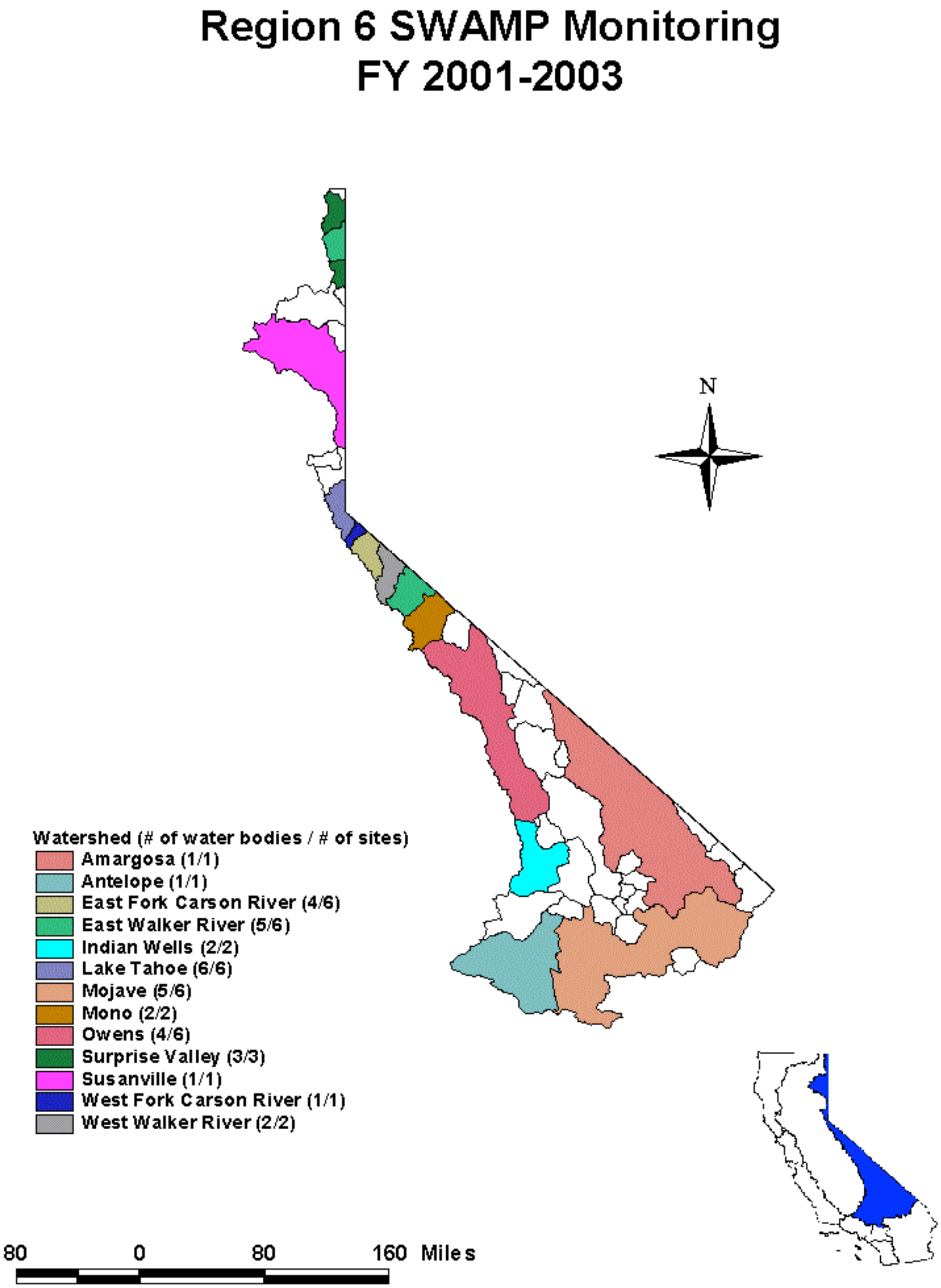

Region 5 SWAMP Monitoring
FY 2001-2003
Watershed (# of water bodies / # of sites)
Ahwahnee (8/8)
Colusa Basin (6/12)
Delta-Mendota Canal (10/17)
Feather River (13/17)
Kaweah River (2/2)
Kern River (2/3)
Kings River (3/3)
Lakeview (4/7)
Marysville (10/29)
Middle Sierra (6/9)
North Diablo Range (1/1)
North Valley Floor (5/6)
Pit River (21/36)
San Joaquin Delta (6/6)
San Joaquin Valley Floor (9/9)
South Valley Floor (7/8)
Southern Sierra (2/2)
Upper Calaveras (5/6)
N
100
0
100
200
Miles

Region 6: Lahontan Region

The Lahontan region spans eastern California from the Oregon border in the north to the Mojave Desert in the south. SWAMP is the only significant source of ambient monitoring funds currently available to this region, as there are few regulated industrial or municipal dischargers to provide substantial monitoring information. The Lahontan RWQCB is using its SWAMP funds to establish a core network of long-term water monitoring stations throughout the region, primarily at locations where discrete numeric water quality objectives have long been established but little or no monitoring has occurred. This approach will allow the RWQCB to make more rapid and definitive assessments of the extent to which water quality standards are met or violated.

The objectives of SWAMP at this region are twofold. The first objective is to determine, using a broadly dispersed, region-wide network of sampling stations, whether ambient water quality for the monitored sites achieves the chemical and physical water quality objectives stipulated in the Basin Plan. The second objective is to continue an effort begun in 1999 to establish "reference conditions," and eventually develop indices of biological integrity, for streams in the eastern Sierra Nevada based on instream benthic macroinvertebrate and algae assemblages. Bioassessment monitoring is focused on the hydrological units in the center of the region in an effort to develop biological reference conditions for streams in the eastern Sierra ecoregion.

Figure 6


Region 6 SWAMP Monitoring
FY 2001-2003
N
Watershed (# of water bodies / # of sites)
Amargosa (1/1)
Antelope (1/1)
East Fork Carson River (4/6)
East Walker River (5/6)
Indian Wells (2/2)
Lake Tahoe (6/6)
Mojave (5/6)
Mono (2/2)
Owens (4/6)
Surprise Valley (3/3)
Susanville (1/1)
West Fork Carson River (1/1)
West Walker River (2/2)
80
0
80
160 Miles

Region 7: Colorado River Basin Region

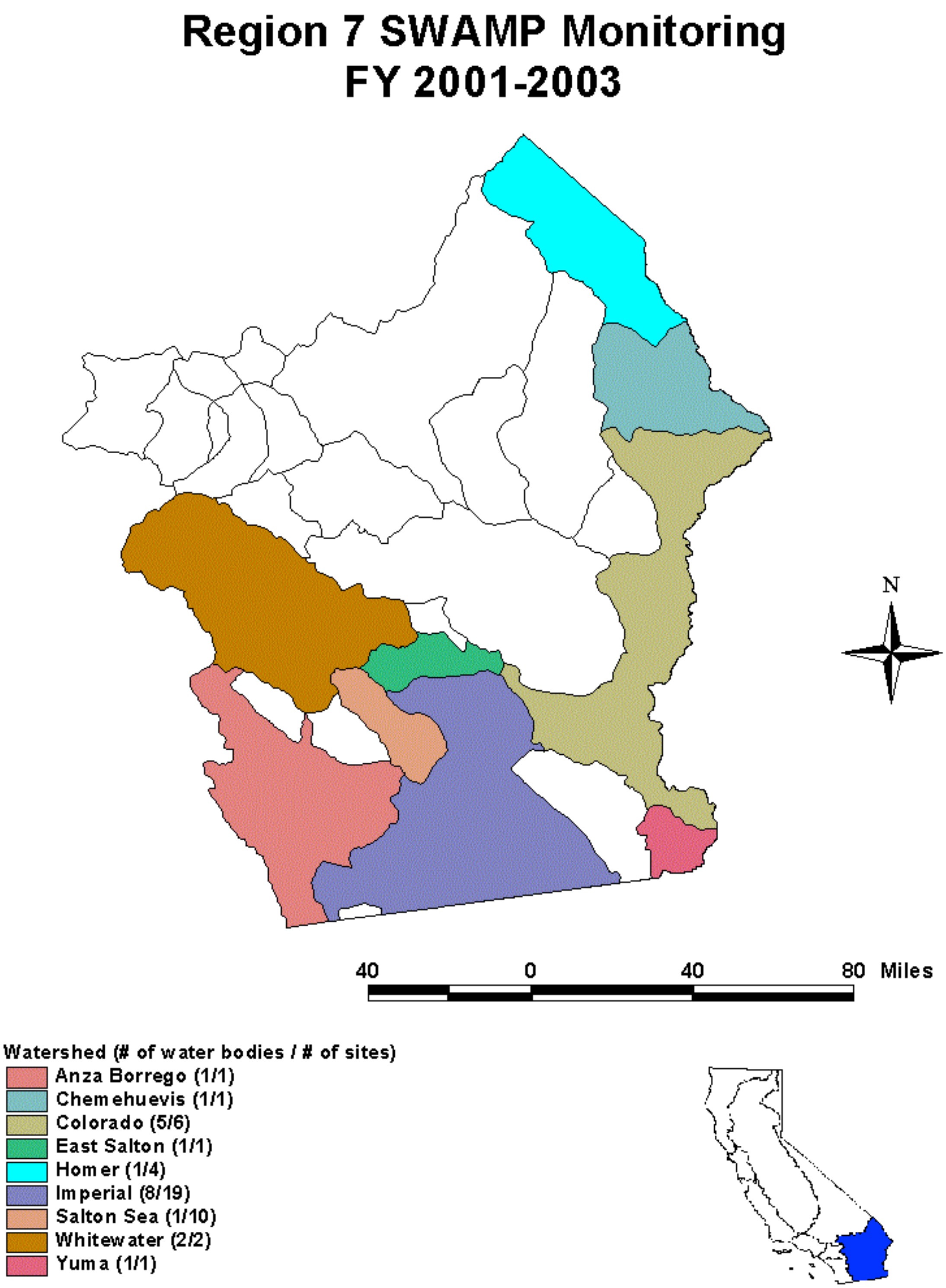
Most surface waters in the Colorado River Basin region are located in the Imperial Valley and East Colorado River Valley, with a few in the Coachella Valley, Lucerne Valley, and Hayfield planning areas. Therefore, SWAMP implementation in the region is focusing on the Imperial Valley and East Colorado River Valley.

SWAMP is implemented in each hydrologic area of the region over a five-year period. The site-specific goal is to monitor and assess the physical, chemical, and biological quality of the region's surface waters. Efforts will concentrate on the Alamo River, given that the Alamo River Sedimentation/Siltation TMDL is the first TMDL that will be implemented in Imperial Valley. The use of BMPs to control silt runoff will take place within the next five years. Ambient monitoring information collected now and during implementation will be used to measure the effectiveness of BMPs. Furthermore, several constituents of concern that are transported with silt may be affected by BMPs. Monitoring will determine if implemented BMPs are reducing the amount of silt and the loading of other contaminants.

RWQCB staff selected monitoring sites based on protecting beneficial uses, taking into consideration the factors such as historical information, site location, information currently being collected, and future plans for implementation of BMPs. Locations that exhibited high concentrations of contaminants (e.g., selenium, pesticides, bacteria) were selected to monitor the progression of these pollutants. Similarly, sites in critical areas with regional significance (e.g., international boundary, diversion points, state borders, source waters) were also included.

SWAMP will provide a comprehensive view of changes that occur with BMP implementation and help develop a bioassessment program specific to the region. The information collected through SWAMP will also be used to prepare the 305(b) report and 303(d) list and to support RWQCB's Basin Planning activities and complement other programs and studies conducted in the region.

Figure 7


Region 7 SWAMP Monitoring
FY 2001-2003
N
40
0
40
80 Miles
Watershed (# of water bodies / # of sites)
Anza Borrego (1/1)
Chemehuevis (1/1)
Colorado (5/6)
East Salton (1/1)
Homer (1/4)
Imperial (8/19)
Salton Sea (1/10)
Whitewater (2/2)
Yuma (1/1)

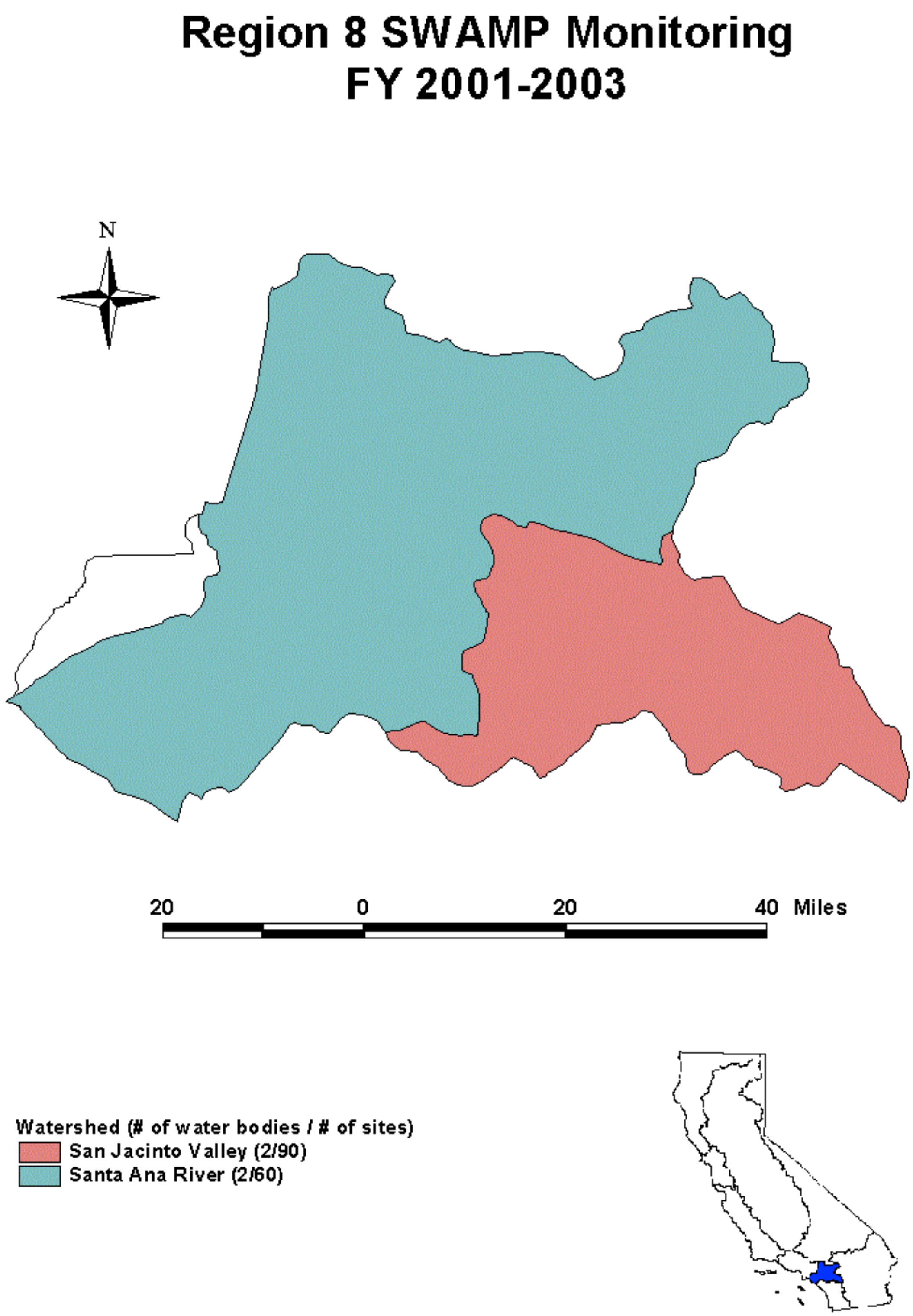
Region 8: Santa Ana Region

A comprehensive monitoring program is needed in the Santa Ana region to determine if the water quality objectives and/or beneficial uses are being attained in the receiving water bodies in this region. SWAMP activities in the region for FY 2000-01 through FY 2002-03 involve sampling in Anaheim Bay, Huntington Harbor, Lake Elsinore, and Canyon Lake. Sampling at Big Bear Lake is planned for FY 2004-05.

The general monitoring approach in this region involves applying a random sampling design to each water body being studied. Sampling activities include collecting surficial sediment samples for toxicity, benthic community and sediment chemistry analyses; and water column samples for toxicity and bacteria analyses. Furthermore, the water quality indicators are specific for each water body type and relate to the specific beneficial use being studied. This design, along with consistent sampling and analytical protocols, will not only allow RWQCB staff to determine whether each water body is attaining the beneficial uses but also allow for comparison among the different water bodies being studied in the region.

The data gathered by these activities will be used to prepare the region's 305(b) report, update the 303(d) list, support other regulatory programs at the RWQCB, and determine the need to do focused studies in the future.

Figure 8


Region 8 SWAMP Monitoring
FY 2001-2003
N
20 0 20 40 Miles
Watershed (# of water bodies / # of sites)
San Jacinto Valley (2/90)
Santa Ana River (2/60)

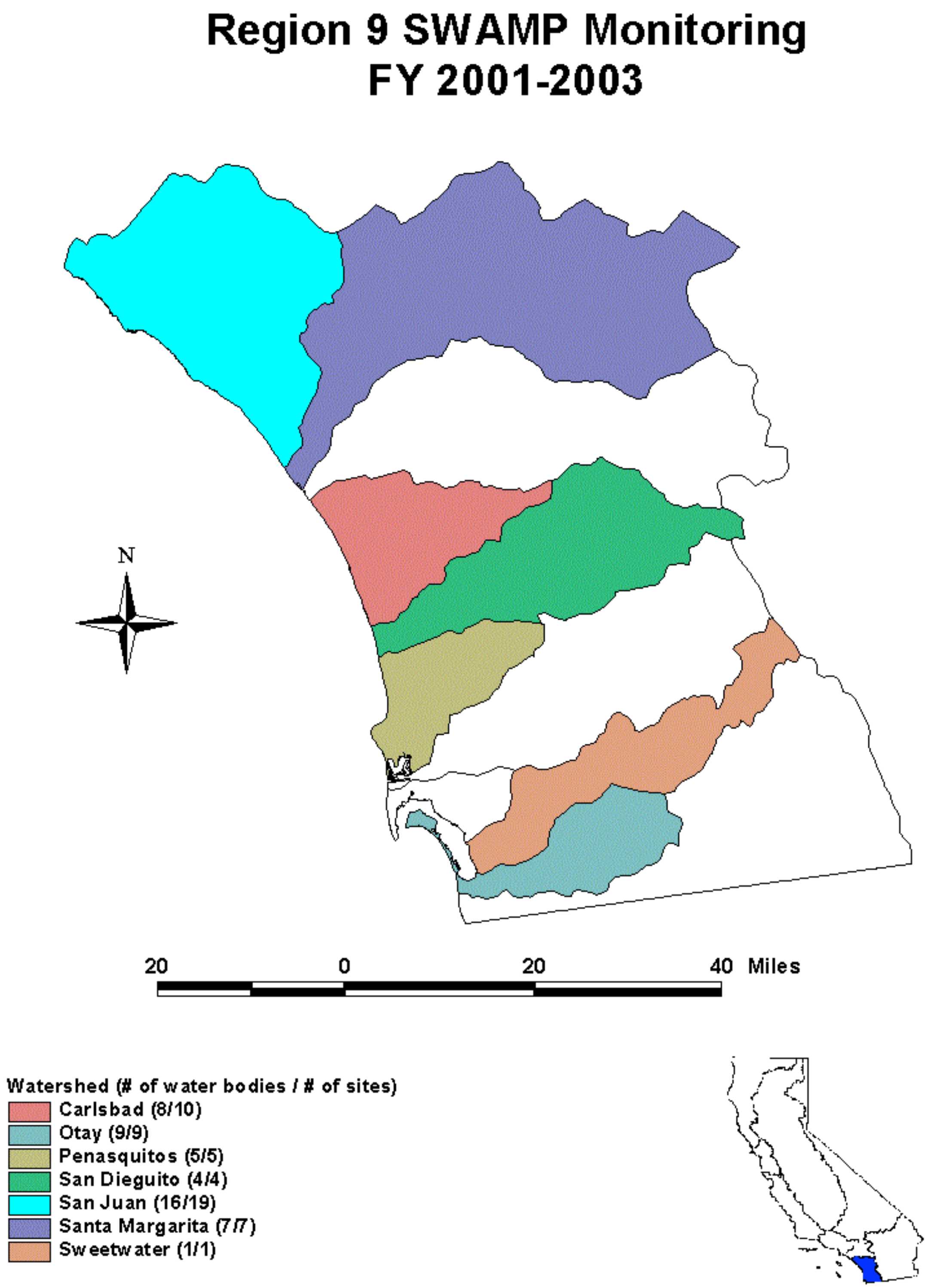
Region 9: San Diego Region

The creation of SWAMP has allowed the San Diego RWQCB to begin ambient monitoring on a five-year rotational basis in the region. This approach ensures that at the end of a five-year period there will have been monitoring activities in each of the watersheds in the region.

The primary objectives for SWAMP monitoring in this region include identifying the spatial extent of degraded sediment locations in rivers, lakes, nearshore waters, enclosed bays, and estuaries. Other objectives include monitoring sites influenced by point sources (e.g., storm drains, publicly owned treatment works, etc.) and those influenced by nonpoint sources of pollutants. In order to accomplish the objectives, the RWQCB plans to use the following indicators: biological response (sediment and water toxicity); pollutant exposure (fish tissue chemistry, nutrients, inorganic and organic water chemistry); and habitat (sediment grain size and gradations, hydrogen sulfide, and ammonia).

SWAMP monitoring in the San Diego region is intended to provide reliable, high quality information necessary to produce the 305(b) report and 303(d) list that are more comprehensive and more defensible than those of past years.

Figure 9


Region 9 SWAMP Monitoring
FY 2001-2003
N
20
0
20
40 Miles
Watershed (# of water bodies / # of sites)
Carlsbad (8/10)
Otay (9/9)
Penasquitos (5/5)
San Dieguito (4/4)
San Juan (16/19)
Santa Margarita (7/7)
Sweetwater (1/1)

B. CWA SECTION 303(d)

1. Background

The State of California is required under Clean Water Act (CWA) section 303(d) and federal regulations (40 CFR 130) to prepare a list of and set priorities for water quality limited segments still requiring Total Maximum Daily Loads (TMDLs). The section 303(d) list was last revised in 1998. Federal regulations require the section 303(d) list to be updated every two years.

CWA section 303(d) requires states to identify waters that do not meet applicable water quality standards after the application of certain technology-based controls. As defined in the CWA and federal regulations, water quality standards include the designated uses of a water body, the adopted water quality criteria, and the State's antidegradation policy. As defined in the Porter-Cologne Water Quality Control Act, water quality standards are beneficial uses to be made of a water body, the established water quality objectives (both narrative and numeric), and the State's nondegradation policy (SWRCB Resolution No. 68-16).

The section 303(d) list must include a description of the pollutants causing the violation of water quality standards (40 CFR 130.7(b)(iii)(4)) and a priority ranking of the water quality limited segments taking into account the severity of the pollution and the uses to be made of the waters. A TMDL is the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background, tributaries, or adjacent segments. Federal regulation defines a "water quality limited segment" as "any segment [of a water body] where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after application of technology-based effluent limitations required by CWA Sections 301(b) or 306."

The states are required to review in even-numbered years the section 303(d) list, make changes as necessary, and submit the list to U.S. EPA for approval. Federal regulation exempted the requirement for the list to be submitted in 2000, and extended the date for submission of the next section 303(d) list to October 1, 2002.

The SWRCB is in the process of developing a Water Quality Control Policy for guidance on the development of the CWA section 303(d) list of water quality limited segments. The Policy will address the solicitation of all readily available data and information, evaluation of the data and information, an approach for considering the weight of evidence for identifying water quality limited segments, listing and de-listing factors for determining attainment of standards or beneficial uses, priority setting, and other topics. This policy, once developed, will be used to develop all future lists.

2. Development of the 2002 CWA Section 303(d) of Water Quality Limited Segments

Beginning March 14, 2001, the RWQCBs solicited other State agencies, Federal agencies, and the public for all readily available data and information to support the update of the section 303(d) list. The solicitation was first closed on May 15, 2001. On May 15, 2002, the SWRCB extended the solicitation of data and information until June 15, 2002.

Each of the nine RWQCBs assembled and evaluated all existing and readily available water quality-related data and information to develop the list and provided an assessment and documentation of decisions to list or not to list a state's waters. RWQCB staff prepared draft staff reports, fact sheets (in many cases), and summaries of the additions, deletions and changes to the section 1998 303(d) list

Each RWQCB held public Workshops and/or Board meetings to consider the recommendations for revising the section 303(d) list. Many of the RWQCBs received substantial public comments (including comments from U.S. EPA), responded to the comments, and revised their reports/lists based on public comments or submitted data.

Each of the RWQCBs submitted staff reports and lists to SWRCB. The SWRCB staff reviewed the RWQCB recommendations and either concurred with the recommendation or identified the reasons for not concurring. SWRCB staff developed fact sheets for each proposal to add water bodies, delete water bodies, and change the section 303(d) list.

The SWRCB held public hearings to receive comment on the proposed section 303(d) list. The first hearing was held in northern California (on May 23 and 24, 2002) and the second hearing was held in southern California (May 30, 2002). The SWRCB heard additional comments on the revised submittal at its November 2002 Workshop. The SWRCB received written submittals and testimony from 425 individuals and organizations. SWRCB staff has responded in writing to all comments received by December 6, 2002 (Volume IV). Changes were made to the staff report and recommendations as a result of the comments.

The SWRCB approved the 303(d) list for submittal to U.S. EPA on February 4, 2003. U.S. EPA approved the Section 303(d) list in June 2003. On July 25, 2003, U.S. EPA added 5 waters and 15 pollutants to waters already listed.

Information on the California 303(d) listing process can be found on the SWRCB website at: http://www.swrcb.ca.gov/tmdl/303d_lists.html

3. 2002 CWA Section 303(d) List of Water Quality Limited Segments

The SWRCB approved 2002 CWA Section 303(d) List of Water Quality Limited Segments contains the following information for each listed segment:

- RWQCB

- Water body type
- Watershed
- Pollutant/stressor,
- Potential sources of pollutants
- A preliminary estimate of the size (area or length) of water body affected
- TMDL priority
- Estimated TMDL completion dates for high priority TMDLs

The 2002 U.S. EPA approved 303(d) list has a total of 685 water quality limited segments and 1,883 segment-pollutant combinations**.** The 2002 U.S. EPA approved 303(d) list is Appendix B of this document and can be found on the SWRCB website at this address: http://www.swrcb.ca.gov/tmdl/docs/2002cwa303d_listof_wqls072003.pdf

4. Monitoring List, Enforceable Program List, and TMDL Completed List for 2003

The SWRCB used portions of the U.S. EPA 2002 Integrated Water Quality Monitoring and Assessment Report Guidance (Office of Wetlands, Oceans and Watersheds) as follows:

> If there is insufficient available data and information to list, water bodies were placed on a "Monitoring List."
>
> If water quality standards are not met but the problem can be addressed now by another enforceable program, water bodies were placed on a "Enforceable Programs List."
>
> If water quality standards are not met and a TMDL and implementation plan has been approved for the water body-pollutant combination, the water body-pollutant combination was placed on the "TMDLs Completed List."

Monitoring List 2002

Many of the RWQCBs identified waters where minimal, contradictory, or anecdotal information suggests standards are not met but the available data or information is inadequate to draw a conclusion. In many cases, the data or information is not of adequate quality and quantity to support a listing and subsequent TMDL regulatory process. In these cases, a finding is warranted that more information must be collected to resolve whether objectives and beneficial uses are attained. However, allocations of resources for monitoring should not be based solely on the Monitoring List because of the multiple functions of SWAMP.

The Monitoring List contains 312 water bodies. It should not be considered part of the section 303(d) list; however, the list will be submitted to USEPA. The 2002 Monitoring List is presented in Appendix C and can be found on the SWRCB website at: http://www.swrcb.ca.gov/tmdl/docs/2002_mon_list_020403.pdf

Enforceable Programs List 2002

Consistent with 40 CFR 130.7(b)(i), (ii), and (iii), several water bodies are listed where the Consolidated Toxic Hot Spots Cleanup Plan and enforcement of existing permits or other legal required authorities are stringent enough to attain water quality standards. These requirements and programs are specifically applicable to the identified water quality problem. SWRCB staff developed a 2002 Enforceable Programs List that contains 14 segment-pollutant combinations.

The 2002 Enforceable Programs List is not part of the section 303(d) list but it will be sent to U.S. EPA. The 2002 Enforceable Programs List is presented in Appendix D and can be found on the SWRCB website at:
http://www.swrcb.ca.gov/tmdl/docs/2002_enf_prog_list_020403.pdf

TMDL Completed List 2002

A number of TMDLs have been completed. To show progress in developing TMDLs, the SWRCB staff developed a list of TMDLs completed. For the purposes of this list, a completed TMDL includes a technical TMDL report; implementation plan; adoption by the RWQCBs; and approval by SWRCB, the Office of Administrative Law (OAL) and U.S. EPA. Several TMDLs are in various stages of the approval process. The TMDLs Completed List contains those water quality limited segments that have TMDLs with an approved implementation plans.

At present, it is assumed that even though the TMDL has been completed that water quality standards or beneficial uses are not yet attained. Once it has been shown that standards are achieved and/or beneficial uses are attained the water bodies will be removed from this list.

The 2002 TMDLs Completed List should not be considered part of the section 303(d) list. However, the TMDLs Completed List will be submitted to U.S. EPA. The 2002 TMDL Completed List is presented in Appendix E and can be found on the SWRCB website at: http://www.swrcb.ca.gov/tmdl/docs/2002_tmdl_comp_list_020403.pdf

C. DESIGNATED USE SUPPORT SUMMARY

In previous 305(b) Reports, overall use support tables were presented for each water body type. These tables are no longer a reporting requirement of CWA Section 305(b) because the presentation of overall use could mask the specific number of uses impaired. The overall use tables have been replaced by the Tables 4A-4I summarizing the extent of impairment in terms of the number of beneficial uses affected.

A determination of degree of use support likely presents a worst-case scenario of the state's water quality because a substantial portion of the state's monitoring data are collected in response to suspected problems (i.e., healthy environments are less likely than troubled ones to be targeted for monitoring).

The two assessment categories "evaluated" and "monitored" used in the following Tables 4A-4I are defined in the U.S. EPA Guidelines for Preparation of the 1998 State Water Quality Assessments [305(b) Report] as follows:

> "Evaluated waters" are those water bodies for which the use support decision is based on information other than current site-specific ambient data, such as data on land use, location of sources, predictive modeling using estimated input variables, and some surveys of fish and game biologists. As a general guide, if an assessment is based on older ambient data (e.g., older than five years), it would be considered "evaluated."
>
> "Monitored waters" are those water bodies for which the use support decision is principally based on current site-specific ambient data believed to accurately portray water quality conditions. Waters with data from biosurveys would be included in this category along with waters monitored by fixed-station chemical/physical monitoring. To be considered "monitored" based on fixed-station chemical/physical monitoring, waters should be sampled quarterly or more frequently.

TABLE 4A. SUMMARY OF DESIGNATED USE SUPPORT: BAYS AND HARBORS (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	454	235	689
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	350	10,899	11,249
Size Impaired for One or More Uses[1]	2,439	457,442	459,881
TOTAL ASSESSED	3,243	468,576	471,819

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4B. SUMMARY OF DESIGNATED USE SUPPORT: COASTAL SHORELINE (Miles)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	535	74	609
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	0	0	0
Size Impaired for One or More Uses[1]	16	144	160
TOTAL ASSESSED	551	218	769

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4C. SUMMARY OF DESIGNATED USE SUPPORT: ESTUARIES (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	2,721	1,009	3,730
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	141	1,181	1,322
Size Impaired for One or More Uses[1]	136	101,982	102,118
TOTAL ASSESSED	2,998	104,172	107,170

1 Impaired = Partially or Not Supporting a Designated Use

TABLE 4D. SUMMARY OF DESIGNATED USE SUPPORT: LAKES / RESERVOIRS (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	89,316	19,124	108,440
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	26,041	80,404	106,445
Size Impaired for One or More Uses[1]	66,596	294,532	361,128
TOTAL ASSESSED	181,953	394,060	576,013

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4E. SUMMARY OF DESIGNATED USE SUPPORT: OCEAN and OPEN BAYS (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	313,494	0	313,494
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	0	0	0
Size Impaired for One or More Uses[1]	0	0	0
TOTAL ASSESSED	313,494	0	313,494

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4F. SUMMARY OF DESIGNATED USE SUPPORT: RIVERS / STREAMS (Miles)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	1,156	329	1,485
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	1,746	1,856	3,602
Size Impaired for One or More Uses[1]	5,670	21,779	27,449
TOTAL ASSESSED	8,572	23,964	32,536

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4G. SUMMARY OF DESIGNATED USE SUPPORT: SALINE LAKES (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	0	0	0
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	0	0	0
Size Impaired for One or More Uses[1]	665	479,920	480,585
TOTAL ASSESSED	665	479,920	480,585

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4H. SUMMARY OF DESIGNATED USE SUPPORT: WETLANDS, FRESHWATER (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	11,740	0	11,740
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	502	494	996
Size Impaired for One or More Uses[1]	92,513	11,597	104,110
TOTAL ASSESSED	104,755	12,091	116,846

[1] Impaired = Partially or Not Supporting a Designated Use

TABLE 4I. SUMMARY OF DESIGNATED USE SUPPORT: WETLANDS, TIDAL (Acres)

DEGREE OF USE SUPPORT	ASSESSMENT CATEGORY		TOTAL ASSESSED
	EVALUATED	MONITORED	
Size Fully Supporting All Assessed Uses	0	0	0
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	0	3	3
Size Impaired for One or More Uses[1]	13,920	66,672	80,592
TOTAL ASSESSED	13,920	66,675	80,595

[1] Impaired = Partially or Not Supporting a Designated Use

D. INDIVIDUAL USE SUMMARY

Use Support Classifications

U.S. EPA categories of Fully Supporting, Fully Supporting But Threatened, Partially Supporting, and Not Supporting, are described below:

Fully Supporting refers to waters of good quality in the GeoWBS database, excluding the *Fully Supporting But Threatened* category which is treated separately. "Good" waters support and enhance all designated beneficial uses.

Fully Supporting But Threatened refers to those portions of good quality waters in the GeoWBS database which specifically identify at least one beneficial use as threatened.

Partially Supporting refers to all intermediate and less severely impaired waters in the GeoWBS database. "Intermediate" waters support beneficial uses with an occasional degradation of water quality. The term "intermediate" usually indicates suspected impacts to beneficial uses, i.e., a problem is indicated but inadequate data are available. "Impaired" water bodies cannot reasonably be expected to attain or maintain applicable water quality standards, and at least one beneficial use shows some degree of impairment.

Not Supporting refers to those water bodies in which a beneficial use is severely impaired and which staff judges to merit serious attention.

Tables 5A-5I show the level of support for each of the eight U.S. EPA designated beneficial uses in different types of water bodies. These include Fish Consumption, Shellfishing, Aquatic Life Support, Swimming, Secondary Contact, Drinking Water Supply, and Agriculture. California has more beneficial use categories than U.S. EPA 's designated use categories (See Appendix A). For Tables 5A-5I, California beneficial use designations have been grouped into the seven basic U.S. EPA beneficial use categories as outlined below:

U.S. EPA DESIGNATED USE CATEGORIES	EQUIVALENT CALIFORNIA BENEFICIAL USE CATEGORY*
Fish Consumption	Ocean Commercial and Sport Fishing
Shellfishing	Shellfish Harvesting
Aquatic Life Support	Warm Freshwater Habitat Cold Freshwater Habitat Freshwater Replacement Preservation of Biological Habitats of Special Significance Estuarine Habitat Marine Habitat Fish Spawning Fish Migration Rare and Endangered Species Wildlife Habitat Saline Water Habitat Aquaculture
Swimming	Water Contact Recreation
Secondary Contact	Non-Contact Water Recreation
Drinking Water Supply	Municipal and Domestic Supply
Agriculture	Agricultural Supply

* A description of these California beneficial uses is included in Appendix A.

Beneficial use support status is determined for entire water bodies or portions of water bodies based on the length or areal extent represented by monitoring data or other evaluation criteria. In many cases, different portions of a water body have a different use support status. In certain cases where information is not available to determine the limits of impaired areas, the entire water body is considered impaired.

TABLE 5A. INDIVIDUAL USE SUPPORT SUMMARY: BAYS AND HARBORS (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	868	961	284,380	158,228	-	27,382
Protect and Enhance Public	*Fish Consumption*	1,492	10,424	301,222	154,577	-	4,005
	Shellfishing	8,235	10,022	256,727	147,983	-	20,293
	Swimming	425,376	402	6,095	4,067	-	35,324
	Secondary Contact	426,380	402	4,851	3,225	-	36,862
	Drinking Water Supply	*	*	*	*	*	*
Social and Economic	*Agriculture*	0	0	0	0	-	285,772
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5B. INDIVIDUAL USE SUPPORT SUMMARY: COASTAL SHORELINE (Miles)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	595	0	28	20	-	90
Protect and Enhance Public	*Fish Consumption*	371	0	29	32	-	92
	Shellfishing	525	0	17	0.4	-	32
	Swimming	531	0	94	59	-	35
	Secondary Contact	596	0	35	52	-	36
	Drinking Water Supply	*	*	*	*	*	*
Social and Economic	*Agriculture*	0	0	0	0	-	43
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5C. INDIVIDUAL USE SUPPORT SUMMARY: ESTUARIES (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	3,498	1,181	97,319	4,023	-	2,829
Protect and Enhance Public	*Fish Consumption*	2,440	55	94,273	2,945	-	4,486
	Shellfishing	2,425	0	1,053	675	-	97,791
	Swimming	8,141	329	88,847	2,902	-	4,648
	Secondary Contact	8,344	198	44,833	2,831	-	48,643
	Drinking Water Supply	0	0	44,060	0		55,093
Social and Economic	*Agriculture*	0	0	465	0	-	96,218
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5D. INDIVIDUAL USE SUPPORT SUMMARY: LAKES / RESERVOIRS (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	142,995	90,571	286,390	4,043	-	69,625
Protect and Enhance Public	*Fish Consumption*	92,825	179,284	89,316	6,049	-	199,782
	Shellfishing	20	0	0	0	-	208,690
	Swimming	149,196	75,570	181,598	2,651	-	155,302
	Secondary Contact	182,773	62,861	133,709	2,220		211,911
	Drinking Water Supply	172,304	125,877	40,294	1,546	-	151,339
Social and Economic	*Agriculture*	192,945	38,238	11,303	2,246		331,452
	Cultural or Ceremonial	0	0	0	26,998	*	68,340

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5E. INDIVIDUAL USE SUPPORT SUMMARY: OCEAN and OPEN BAYS (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	311,305	0	0	0	-	2,916
Protect and Enhance Public	*Fish Consumption*	311,305	0	0	0	-	2,916
	Shellfishing	311,305	0	0	0	-	405
	Swimming	311,305	0	0	0	-	2,916
	Secondary Contact	311,305	0	0	0	-	2,916
	Drinking Water Supply	98,448	0	0	0	-	488
Social and Economic	*Agriculture*	*	*	*	*	*	*
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5F. INDIVIDUAL USE SUPPORT SUMMARY: RIVERS / STREAMS (Miles)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	1,495	2,660	22,815	2,842	-	6,221
Protect and Enhance Public	*Fish Consumption*	955	1,012	6,221	239	-	26,243
	Shellfishing	3	13	19	22	-	14,606
	Swimming	1,421	1,389	10,660	2,362	-	19,437
	Secondary Contact	2,054	1,136	6,668	2,106	-	24,044
	Drinking Water Supply	2,804	1,442	6,195	469	-	21,664
Social and Economic	*Agriculture*	4,945	753	5,437	591	-	22,771
	Cultural or Ceremonial	0	677	612	0	-	10,960

"*" = Category not applicable

"-" = Category applicable but no data available

"0" = Category applicable, but size of waters in the category is zero

TABLE 5G. INDIVIDUAL USE SUPPORT SUMMARY: SALINE LAKES (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance Ecosystems	*Aquatic Life Support*	88,925	30,211	361,426	0	-	23
Protect and Enhance Public	*Fish Consumption*	0	0	0	0	-	402,430
	Shellfishing	0	0	0	0	-	12,021
	Swimming	0	0	479,897	0	-	688
	Secondary Contact	79,534	0	400,363	0	-	688
	Drinking Water Supply	0	0	110,621	0	-	665
Social and Economic	*Agriculture*	0	0	97,499	0	-	688
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

TABLE 5H. INDIVIDUAL USE SUPPORT SUMMARY: WETLANDS, FRESHWATER (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	11,737	688	74,417	0	-	45
Protect and Enhance Public	*Fish Consumption*	173	0	49	0	-	81,801
	Shellfishing	0	0	0	0	-	10,374
	Swimming	11,831	688	8,174	0	-	66,169
	Secondary Contact	11,857	688	8,172	0	-	66,171
	Drinking Water Supply	176	195	62,793	0	-	18,830
Social and Economic	*Agriculture*	0	194	11,081	0	-	70,543
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable

"-" = Category applicable but no data available

"0" = Category applicable, but size of waters in the category is zero

TABLE 5I. INDIVIDUAL USE SUPPORT SUMMARY: WETLANDS, TIDAL (Acres)

GOALS	USE	SIZE FULLY SUPPORTING	SIZE SUPPORTING BUT THREATENED	SIZE PARTIALLY SUPPORTING	SIZE NOT SUPPORTING	SIZE NOT ATTAINABLE	SIZE NOT ASSESSED
Protect & Enhance	*Aquatic Life Support*	0	3	68,244	333	-	36,430
Protect and Enhance Public	*Fish Consumption*	0	-	0	13	-	66,659
	Shellfishing	-	-	-	-	-	67,522
	Swimming	0	66,339	0	320	-	866
	Secondary Contact	0	66,339	0	320	-	866
	Drinking Water Supply	*	*	*	*	*	*
Social and Economic	*Agriculture*	*	*	*	*	*	*
	Cultural or Ceremonial	*	*	*	*	*	*

"*" = Category not applicable
"-" = Category applicable but no data available
"0" = Category applicable, but size of waters in the category is zero

E. TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

The GEOWBS database contains the portion (length or areal extent) of water bodies that are not fully supporting their designated uses (i.e., partially and not supporting uses) because of a specific pollutant or stressor. Causes are pollutants or stressors that contribute to the actual or threatened impairment of designated uses. Stressors are factors or conditions (other than specific pollutants) that cause impairment (e.g., flow and other habitat alterations, presence of exotic species).

Tables 6A-6I present, for each water body type, the length or areal extent of all impaired water bodies that are affected by one or more of 30 specific categories. The measurements in Tables 6A-6I are not additive because a water body may be affected by several pollutants or stressors, and its size is counted in each relevant cause category.

The types of contributions to impairment used in Tables 6A-6I are defined as follows:

A "major" contributor is a pollutant or stressor that is either the only one responsible for nonsupport of any designated use or it predominates over other pollutants or stressors.

A "moderate" contributor is a pollutant or stressor that is the only one responsible for partial support of any use, predominates over other causes of partial support, or is one of multiple causes of nonsupport that have a significant impact on designated use attainment.

A "minor" contributor is a pollutant or stressor that is one of multiple causes responsible for nonsupport or partial support and is judged to contribute relatively little to this nonattainment.

TABLE 6A.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

BAYS AND HARBORS (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown	6	
Toxicity (Unknown toxicant)	63	153,870
Pesticides	342	440,040
Priority organic chemical	63	452,265
Nonpriority organic chemical		1,078
Metals	21,670	359,479
Ammonia		
Cyanide		
Sulfates		
Chlorine		14
Other inorganics		
Nutrients		10,546
PH		
Siltation		26,621
Organic enrichment/low DO		2,316
Salinity/TDS/chlorides		
Thermal modifications		14
Flow alterations		141,665
Other habitat alterations	10,192	140,545
Pathogen indicators	689	26,854
Radiation		
Oil and grease		810
Taste and odor		
Suspended solids		
Noxious aquatic plants (macrophytes)		
Turbidity		14
Exotic species		267,802
Excessive algal growth		
Inappropriate littoral vegetation		

TABLE 6B.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

COASTAL SHORELINE (Miles)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		
Toxicity (Unknown toxicant)		
Pesticides	19	13
Priority organic chemical	0.4	6
Nonpriority organic chemical		
Metals		31
Ammonia		
Cyanide		
Sulfates		
Chlorine		
Other inorganics		
Nutrients		
pH		
Siltation		
Organic enrichment/low DO		
Salinity/TDS/chlorides		
Thermal modifications		
Flow alterations		
Other habitat alterations		
Pathogen indicators	71	57
Radiation		
Oil and grease		
Taste and odor		
Suspended solids		
Noxious aquatic plants (macrophytes)		
Turbidity		
Exotic species		
Excessive algal growth		
Inappropriate littoral vegetation		

TABLE 6C.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

ESTUARIES (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		
Toxicity (Unknown toxicant)	29	44,428
Pesticides	6,781	90,829
Priority organic chemical		93,942
Nonpriority organic chemical		
Metals		95,256
Ammonia		208
Cyanide		
Sulfates		
Chlorine		
Other inorganics		
Nutrients	207	3,591
pH		15
Siltation		5,210
Organic enrichment/low DO	1,359	3,919
Salinity/TDS/chlorides		22,948
Thermal modifications		
Flow alterations		49,875
Other habitat alterations	29	662
Pathogen indicators	241	5,129
Radiation		
Oil and grease		
Taste and odor		
Suspended solids		1,319
Noxious aquatic plants (macrophytes)		
Turbidity		8
Exotic species		5,664
Excessive algal growth		
Inappropriate littoral vegetation		

TABLE 6D.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

LAKES / RESERVOIRS (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		2,114
Toxicity (Unknown toxicant)		2,451
Pesticides	1,871	85,708
Priority organic chemical		86,869
Nonpriority organic chemical		85,864
Metals	7,165	55,920
Ammonia		27,915
Cyanide		
Sulfates		
Chlorine		
Other inorganics		
Nutrients	114,300	79,514
pH	26,998	884
Siltation	86,384	9,545
Organic enrichment/low DO	28,457	109,920
Salinity/TDS/chlorides	950	925
Thermal modifications		
Flow alterations	26,998	89,859
Other habitat alterations	26,998	163
Pathogen indicators	4	31,680
Radiation		
Oil and grease		86,183
Taste and odor		1,236
Suspended solids		59
Noxious aquatic plants (macrophytes)	310	7,218
Turbidity		85,423
Exotic species		85,404
Excessive algal growth	85,455	26,503
Inappropriate littoral vegetation		

TABLE 6E.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

OCEAN AND OPEN BAYS (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown	0	0
Toxicity (Unknown toxicant)	0	0
Pesticides	0	0
Priority organic chemical	0	0
Nonpriority organic chemical	0	0
Metals	0	0
Ammonia	0	0
Cyanide	0	0
Sulfates	0	0
Chlorine	0	0
Other inorganics	0	0
Nutrients	0	0
pH	0	0
Siltation	0	0
Organic enrichment/low DO	0	0
Salinity/TDS/chlorides	0	0
Thermal modifications	0	0
Flow alterations	0	0
Other habitat alterations	0	0
Pathogen indicators	0	0
Radiation	0	0
Oil and grease	0	0
Taste and odor	0	0
Suspended solids	0	0
Noxious aquatic plants (macrophytes)	0	0
Turbidity	0	0
Exotic species	0	0
Excessive algal growth	0	0
Inappropriate littoral vegetation	0	0

TABLE 6F.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

RIVERS / STREAMS (Miles)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		29
Toxicity (Unknown toxicant)	169	1,061
Pesticides	563	2,671
Priority organic chemical	25	322
Nonpriority organic chemical		28
Metals	293	2,281
Ammonia	10	597
Cyanide		
Sulfates		
Chlorine		29
Other inorganics		173
Nutrients	1,041	9,815
pH	46	303
Siltation	2,226	16,009
Organic enrichment/low DO	1,846	4,353
Salinity/TDS/chlorides	221	1,869
Thermal modifications	1,790	14,612
Flow alterations	3,795	4,588
Other habitat alterations	3,375	7,907
Pathogen indicators	597	4,546
Radiation		
Oil and grease		123
Taste and odor		61
Suspended solids		3,626
Noxious aquatic plants (macrophytes)	9	183
Turbidity	17	1,025
Exotic species	18	170
Excessive algal growth	34	103
Inappropriate littoral vegetation		

TABLE 6G.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

SALINE LAKES (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		
Toxicity (Unknown toxicant)		
Pesticides		
Priority organic chemical		
Nonpriority organic chemical		
Metals		401,192
Ammonia		
Cyanide		
Sulfates		
Chlorine		
Other inorganics		
Nutrients		
pH	57,756	69,954
Siltation		57,756
Organic enrichment/low DO		2,627
Salinity/TDS/chlorides	158,845	273,748
Thermal modifications		
Flow alterations	187,386	665
Other habitat alterations		40,933
Pathogen indicators		233,340
Radiation		
Oil and grease	30,211	
Taste and odor		
Suspended solids		
Noxious aquatic plants (macrophytes)		
Turbidity		
Exotic species		
Excessive algal growth		
Inappropriate littoral vegetation		

TABLE 6H.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

WETLANDS, FRESHWATER (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		
Toxicity (Unknown toxicant)		615
Pesticides		120
Priority organic chemical		121
Nonpriority organic chemical		
Metals	33	1,011
Ammonia		
Cyanide		
Sulfates		
Chlorine		
Other inorganics	44	
Nutrients		470
pH		
Siltation		469
Organic enrichment/low DO		
Salinity/TDS/chlorides	7,965	90,135
Thermal modifications		
Flow alterations	76	27,479
Other habitat alterations	3	93,184
Pathogen indicators		
Radiation	2	
Oil and grease		468
Taste and odor		
Suspended solids		
Noxious aquatic plants (macrophytes)		
Turbidity		
Exotic species		
Excessive algal growth		
Inappropriate littoral vegetation		

TABLE 6I.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS CAUSE CATEGORIES

WETLANDS, TIDAL (Acres)

CAUSE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Cause/Stressor unknown		
Toxicity (Unknown toxicant)		44
Pesticides	13	34
Priority organic chemical		
Nonpriority organic chemical		13
Metals		714,112
Ammonia		31
Cyanide		
Sulfates		
Chlorine		
Other inorganics		
Nutrients		714,068
pH		31
Siltation		
Organic enrichment/low DO		714,068
Salinity/TDS/chlorides		714,068
Thermal modifications		
Flow alterations		289
Other habitat alterations		289
Pathogen indicators	31	
Radiation		
Oil and grease		
Taste and odor		
Suspended solids		
Noxious aquatic plants (macrophytes)		
Turbidity		
Exotic species		289
Excessive algal growth		
Inappropriate littoral vegetation		

F. TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

The GEOWBS database contains the portion (length or areal extent) of water bodies that are not fully supporting their designated uses (i.e., partially and not supporting uses) that are affected by a specific source. Sources are the facilities or activities that contribute pollutants or stressors resulting in impairment of designated uses in a water body.

Tables 7A-7I present, for each water body type, the total length or areal extent of all impaired water bodies that are affected by each category of source. In Tables 7A-7I the measurements are not additive because a water body may be affected by several different sources of pollution and the appropriate size is counted in each relevant cause category.

The definitions for the types of contributions to impairment used in Tables 7A-7I are as follows:

A "major" contributor is a source that is either the only one responsible for nonsupport of any designated use or it predominates over other sources.

A "moderate" contributor is a source that is the only one responsible for partial support of any use, predominates over other sources of partial support, or is one of multiple sources of nonsupport that have a significant impact on designated use attainment.

A "minor" contributor is a source that is one of multiple sources responsible for nonsupport or partial support and is judged to contribute relatively little to this nonattainment.

TABLE 7A.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

BAYS AND HARBORS (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources	139,341	257,369
Municipal Point Sources		419,005
Combined Sewer Overflows		
Agriculture		255,218
Crop-related sources	79	2,001
Grazing-related sources		11,338
Intensive animal feeding operations		
Silviculture		
Construction		
Urban Runoff/Storm Sewers	10,028	270,254
Resource Extraction	242,743	38,041
Land Disposal		391
Hydromodification	139,341	155,399
Habitat Modification (non-hydromod)		
Marinas and Recreational Boating		2,219
Erosion from Derelict Land		
Atmospheric Deposition		416,926
Septage Disposal	2,439	10,467
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		
Spills (Accidental)		170,388
Contaminated Sediments	153	171,619
Debris and Bottom Deposits		16,075
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources		417,069
Recreational Activities		119
Salt Storage Sites		
Groundwater Loadings		79,293
Groundwater Withdrawal		21,670
Other	10,022	
Unknown Source	15	266,104
Sources Outside State Jurisdiction/Borders		

TABLE 7B.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

COASTAL SHORELINE (Miles)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources		0.3
Municipal Point Sources		
Combined Sewer Overflows	1.1	1.4
Agriculture		16.6
Crop-related sources		
Grazing-related sources	3.3	
Intensive animal feeding operations		1.2
Silviculture		
Construction		3
Urban Runoff/Storm Sewers	0.4	90
Resource Extraction		12
Land Disposal		1.2
Hydromodification		
Habitat Modification (non-hydromod)		
Marinas and Recreational Boating		0.7
Erosion from Derelict Land		
Atmospheric Deposition		19.9
Septage Disposal		24.6
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		
Spills (Accidental)		56
Contaminated Sediments		12
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources		31.4
Recreational Activities		19.9
Salt Storage Sites		
Groundwater Loadings		
Groundwater Withdrawal		
Other		
Unknown Source		13.5
Sources Outside State Jurisdiction/Borders		

TABLE 7C.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

ESTUARIES (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources	41,768	105,742
Municipal Point Sources		103,647
Combined Sewer Overflows		55
Agriculture	2,034	150,482
Crop-related sources	62	2,043
Grazing-related sources		344
Intensive animal feeding operations		15
Silviculture		
Construction		1,444
Urban Runoff/Storm Sewers	1,488	150,078
Resource Extraction	102,631	43,991
Land Disposal		1,319
Hydromodification	104,665	44,205
Habitat Modification (non-hydromod)		1,515
Marinas and Recreational Boating	141	
Erosion from Derelict Land		
Atmospheric Deposition		102,631
Septage Disposal		21
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		
Spills (Accidental)		49
Contaminated Sediments	2367	414
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources		105,132
Recreational Activities		15
Salt Storage Sites		
Groundwater Loadings		
Groundwater Withdrawal		
Other		
Unknown Source	1,319	147,458
Sources Outside State Jurisdiction/Borders		

TABLE 7D.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

LAKES / RESERVOIRS (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources		
Municipal Point Sources		257
Combined Sewer Overflows		
Agriculture	27,175	73,209
Crop-related sources	56	59
Grazing-related sources	2,735	43,352
Intensive animal feeding operations		
Silviculture	85,364	20,704
Construction	85,364	24,804
Urban Runoff/Storm Sewers	85,506	69,867
Resource Extraction	40,925	98,480
Land Disposal	85,364	21,421
Hydromodification	114,065	16,214
Habitat Modification (non-hydromod)	114,335	1,436
Marinas and Recreational Boating	86,183	49,341
Erosion from Derelict Land		
Atmospheric Deposition	85,364	25,879
Septage Disposal		191
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff	85,364	21,523
Spills (Accidental)		839
Contaminated Sediments		154
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)	164	2,188
Sediment Resuspension	164	
Natural Sources	7,873	45,640
Recreational Activities		6,320
Salt Storage Sites		
Groundwater Loadings		385
Groundwater Withdrawal		
Other	2,687	391
Unknown Source	85,364	85,507
Sources Outside State Jurisdiction/Borders		

TABLE 7E.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

OCEAN AND OPEN BAYS (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources	0	0
Municipal Point Sources	0	0
Combined Sewer Overflows	0	0
Agriculture	0	0
Crop-related sources	0	0
Grazing-related sources	0	0
Intensive animal feeding operations	0	0
Silviculture	0	0
Construction	0	0
Urban Runoff/Storm Sewers	0	0
Resource Extraction	0	0
Land Disposal	0	0
Hydromodification	0	0
Habitat Modification (non-hydromod)	0	0
Marinas and Recreational Boating	0	0
Erosion from Derelict Land	0	0
Atmospheric Deposition	0	0
Septage Disposal	0	0
Leaking Underground Storage Tanks	0	0
Highway Maintenance and Runoff	0	0
Spills (Accidental)	0	0
Contaminated Sediments	0	0
Debris and Bottom Deposits	0	0
Internal Nutrient Cycling (primarily lakes)	0	0
Sediment Resuspension	0	0
Natural Sources	0	0
Recreational Activities	0	0
Salt Storage Sites	0	0
Groundwater Loadings	0	0
Groundwater Withdrawal	0	0
Other	0	0
Unknown Source	0	0
Sources Outside State Jurisdiction/Borders	0	0

TABLE 7F.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

RIVERS / STREAMS (Miles)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources	16	2,293
Municipal Point Sources		3,433
Combined Sewer Overflows		1,413
Agriculture	1,314	11,646
Crop-related sources	148	3,640
Grazing-related sources	191	3,277
Intensive animal feeding operations	71	767
Silviculture	846	13,089
Construction	94	5,405
Urban Runoff/Storm Sewers	143	2,601
Resource Extraction	3,371	2,297
Land Disposal	25	1,707
Hydromodification	4,005	10,911
Habitat Modification (non-hydromod)	2,938	16,106
Marinas and Recreational Boating		
Erosion from Derelict Land		96
Atmospheric Deposition	6	248
Septage Disposal		204
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		2,248
Spills (Accidental)		204
Contaminated Sediments	105	122
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)	4	109
Sediment Resuspension		32
Natural Sources	442	6,232
Recreational Activities	20	318
Salt Storage Sites		
Groundwater Loadings		25
Groundwater Withdrawal		52
Other		959
Unknown Source	56	1,862
Sources Outside State Jurisdiction/Borders	675	2,066

TABLE 7G.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

SALINE LAKES (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources	30,211	
Municipal Point Sources		
Combined Sewer Overflows		
Agriculture		292,951
Crop-related sources		233,340
Grazing-related sources		1,190
Intensive animal feeding operations		
Silviculture		
Construction		
Urban Runoff/Storm Sewers		
Resource Extraction		
Land Disposal		
Hydromodification	167,164	47,992
Habitat Modification (non-hydromod)		
Marinas and Recreational Boating		
Erosion from Derelict Land		
Atmospheric Deposition		
Septage Disposal		
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		
Spills (Accidental)		
Contaminated Sediments		
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources	246,580	665
Recreational Activities		
Salt Storage Sites		
Groundwater Loadings		
Groundwater Withdrawal		97,547
Other		
Unknown Source		39,743
Sources Outside State Jurisdiction/Borders		

TABLE 7H.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

WETLANDS, FRESHWATER (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources		
Municipal Point Sources		
Combined Sewer Overflows		
Agriculture	7,964	96,367
Crop-related sources		120
Grazing-related sources	492	29,617
Intensive animal feeding operations		
Silviculture		1
Construction	1	62,590
Urban Runoff/Storm Sewers	1	469
Resource Extraction		2
Land Disposal		496
Hydromodification	75	27,481
Habitat Modification (non-hydromod)	31	479
Marinas and Recreational Boating		
Erosion from Derelict Land		
Atmospheric Deposition		
Septage Disposal		
Leaking Underground Storage Tanks		1
Highway Maintenance and Runoff		470
Spills (Accidental)		1
Contaminated Sediments		
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources	62,625	27,547
Recreational Activities		3
Salt Storage Sites		
Groundwater Loadings		
Groundwater Withdrawal		3,045
Other		65,636
Unknown Source		1
Sources Outside State Jurisdiction/Borders		

TABLE 7I.

TOTAL SIZES OF WATERS IMPAIRED BY VARIOUS SOURCE CATEGORIES

WETLANDS, TIDAL (Acres)

SOURCE CATEGORY	SIZE OF WATERS BY CONTRIBUTION TO IMPAIRMENT	
	MAJOR	MODERATE/MINOR
Industrial Point Sources		31
Municipal Point Sources		
Combined Sewer Overflows		
Agriculture		714,068
Crop-related sources		
Grazing-related sources		
Intensive animal feeding operations		
Silviculture		
Construction		
Urban Runoff/Storm Sewers		714,404
Resource Extraction		
Land Disposal		
Hydromodification		714,357
Habitat Modification (non-hydromod)		289
Marinas		
Erosion from Derelict Land		
Atmospheric Deposition		
Septage Disposal		
Leaking Underground Storage Tanks		
Highway Maintenance and Runoff		
Spills (Accidental)		34
Contaminated Sediments		
Debris and Bottom Deposits		
Internal Nutrient Cycling (primarily lakes)		
Sediment Resuspension		
Natural Sources		336
Recreational Activities		289
Salt Storage Sites		
Groundwater Loadings		
Groundwater Withdrawal		
Other		
Unknown Source		
Sources Outside State Jurisdiction/Borders		

G. PUBLIC HEALTH CONCERNS

1. Health Warnings

OEHHA determines whether a public health hazard exists in eating fish or waterfowl from certain locations in California. These risk assessments are based on laboratory testing data and monitoring for toxic substances in fish tissue. Over the past several years, the health advisories listed in Table 8 have been issued by OEHHA and listed in the California Sport Fishing Regulations published by the Fish and Game commission and by the DFG. The percent area of rivers and lakes in California with fish consumption advisories is shown in Table 9.

TABLE 8.
FISH CONSUMPTION ADVISORIES FOR CALIFORNIA WATERS

REGION	WATER BODY TYPE	HYDROLOGICAL SUB UNIT AREA	COUNTY	WATER BODY NAME	SIZE OF AREA RESTRICTED	CONTAMINANT	FISH WITH RESTRICTED CONSUMPTION
1	Lake	111.630	Lake	Lake Pillsbury	1,975 acres	Mercury	Under Public Review
2	Bay & Estuary	Several	Several	San Francisco Bay and Delta	NA*	Mercury, PCBs and other chemicals	Striped bass, Shark, Sturgeon, (Richmond Harbor Channel (in addition to the above): Croakers, Surfperches, Bullheads, Gobies, and Shellfish)
2	Lake	207.210	Solano	Lake Herman	108 acres	Mercury	Largemouth bass
2	Reservoir	205.400	Santa Clara	Guadalupe Reservoir	63 acres	Mercury	Any type of fish
2	Reservoir	205.400	Santa Clara	Calero Reservoir	334 acres	Mercury	Any type of fish
2	Reservoir	205.400	Santa Clara	Almaden Reservoir	62 acres	Mercury	Any type of fish
2	River	205.400	Santa Clara	Guadlupe River and associated percolation ponds	18 miles	Mercury	Any type of fish
2	Creek	205.400	Santa Clara	Guadlupe Creek and associated percolation ponds	8 miles	Mercury	Any type of fish
2	Creek	205.400	Santa Clara	Alamitos Creek and associated percolation ponds	7 miles	Mercury	Any type of fish
3	Lake	309.820	San Luis Obispo	Lake Nacimiento	5,735 acres	Mercury	Largemouth bass
4	Bay	404.356	Los Angeles	Point Dume, Malibu (Malibu Bay)	NA*	PCBs and DDT	White croaker
4	Bay	404.210	Los Angeles	Malibu Pier (Malibu Bay)	NA*	PCBs and DDT	Queen fish
4	Bay	413.000	Los Angeles	Short Bank (Malibu Bay)	NA*	PCBs and DDT	White croaker
4	Bay	405.120	Los Angeles	Redondo Pier (Malibu Bay)	NA*	PCBs and DDT	Corbina
4	Bay	405.110	Los Angeles	Point Vicente Palos Verde-Northwest (Malibu Bay)	NA*	PCBs and DDT	White croaker
4	Bay	405.110	Los Angeles	White's Point (Malibu Bay)	NA*	PCBs and DDT	White croaker, Sculpin, Rockfishes, Kelp bass
4	Bay	405.120	Los Angeles	Los Angeles/Long Beach Harbor (esp. Cabrillo Pier) (San Pedro Bay)	NA*	PCBs and DDT	White croaker, Queenfish, Black croaker, Surfperches
4	Bay	405.120	Los Angeles	Los Angeles/Long Beach Breakwater (Ocean side) (Long Beach Harbor)	NA*	PCBs and DDT	White croaker, Queenfish, Black croaker, Surfperches
4	Bay	405.120	Los Angeles	Belmont Pier, Pier J (Long Beach Harbor)	NA*	PCBs and DDT	Surfperches
4	Ocean	413.000	Los Angeles	Horseshoe	NA*	PCBs and DDT	Sculpin
4	Ocean	413.000	Los Angeles	Kelp	NA*	PCBs and DDT	White Croaker
4	Lake	405.120	Los Angeles	Machado Lake (Harbor Park Lake)	45 acres	Chlordane and DDT	Goldfish, Carp
5	Lake	513,520	Lake	Clear Lake	40,070 acres	Mercury	Largemouth bass, White catfish, Channel catfish, Brown bullhead, Blackfish, Crappie, and Hitch
5	Lake	512.210	Napa	Lake Berryessa	19,083	Mercury	Largemouth bass, Smallmouth bass, White catfish, Channel catfish, Rainbow trout
5	Rivers	541.200	Merced	Grasslands Area	NA*	Selenium	Any type of fish
7	Lake	728.000	Imperial and Riverside	Salton Sea	233,340 acres	Selenium	Croaker, Orangemouth corvina, Sargo, and Tilapia
7	River		Imperial	New River	63 miles	Not specified	Any type of fish
8	Bay	801.110	Orange	Newport Pier (Newport Bay)	NA*	PCBs and DDT	Corbina

NA = size of restricted area is unclear

TABLE 9.
PERCENT AREA OF LAKES AND RIVERS WITH FISH CONSUMPTION RESTRICTIONS

WATER BODY TYPE	TOTAL AREA IN CALIFORNIA	TOTAL AREA WITH RESTRICTIONS	PERCENT AREA WITH RESTRICTIONS
Lakes	1,672,684 acres	300,815 acres	18
Rivers	211,513 miles	96 miles	0.05

2. Ocean Beaches Affected By Bathing Area Closures

The following discussion was taken from the draft CALIFORNIA BEACH CLOSURE REPORT- 2001, produced by SWRCB (not yet available to the public).

California Health and Safety Code section 115910 requires local health officers to submit to the State Water Resources Control Board (SWRCB) by the 15th of each month a survey documenting all beach postings and closures that occurred during the preceding month due to threats to the public health. The law also requires SWRCB to (1) make available this information to the public by the 30th of each month, (2) publish a statewide annual report documenting the beach posting and closure data provided by health officers for the preceding calendar year by July 30, and (3) distribute this report to the Governor, Legislature, major media organizations, and public within 30 days of publication of the annual report.

SWRCB publishes the monthly beach posting and closure reports produced from the data provided by the local health officers on its Web site (http://www.swrcb.ca.gov/beach/index.html) for easy public access. The coastal Regional Water Quality Control Boards (RWQCBs) also post this information on their Web sites or link to SWRCB's Web site.

This annual beach closure report summarizes the beach posting and closure information submitted by local health officers for the year 2001. It also includes a brief description of SWRCB and RWQCBs activities that are targeted to keep the beaches clean and healthy. Detailed beach posting/closure data received from local health officers will be provided in Appendix A of the California Beach Closure Report – 2001. Calendar year 2001 saw an increase in the number of beach closures, while the number of beach postings remained approximately the same. However, it is important to note that calendar year 2000 was the first year that full-year beach monitoring data were reported by local health officers and compiled by SWRCB. Also, monitoring efforts have been improved to detect problems, which could have resulted in a higher number of closures in 2001. Therefore, it is difficult to draw conclusions at this time regarding the beach closure trends in California.

Many projects aimed at improving coastal water quality are currently underway as part of the Governor's Clean Beaches Initiative (CBI). These projects are being funded with Proposition 13 bond funds, totaling $32 million for FY 2001-02. Additionally, the FY 2002-03 budget includes $46 million in Proposition 40 funds to continue the funding for CBI projects. It is expected that these, as well as future projects, will have a positive effect on the state's coastal water quality and reduce the health risk to the public wishing to use one of the state's most valuable resources.

Economic Impact of California Beaches

California's coastline is one of its most important natural features. It extends over 1,000 miles from the rocky cliffs of the north coast to the sandy, sun-drenched beaches in the south. The coastal areas represent a desirable place to live. Approximately 80 percent of California's 33 million residents live within a 30-mile drive of its coastline. Millions of visitors come to see its beauty and play on the shores and in its waters. In 1999, Americans made a total of 33 million trips to California's beaches. California's beaches generate $17 billion per year in direct revenue. When indirect benefits are added, California's beaches contribute $73 billion to the national economy and generate 883,000 jobs nationwide.

Increasingly, the public is becoming concerned about beach closures, swimmers' illnesses, and the lack of public confidence due to the up and down nature of posted warning signs. When a beach is closed due to contamination, the economic effect can be devastating to local business owners.

Causes of Beach Closures

Beach closures that are included in this report are caused by water contamination by pathogens, which can potentially impact the health of the beachgoers when they are exposed to the contaminated water through skin contact (swimming or surfing) or ingestion. Fever, flu-like symptoms, ear infection, respiratory illness, gastroenteritis, cryptosporidiosis, hepatitis, and other illnesses have been associated with waterborne pathogens. Table 1 lists a number of pathogenic bacteria, protozoa, and viruses; their observed effects on exposed population; and the diseases commonly associated with them.

A 1996 epidemiological study sponsored by the Santa Monica Bay Restoration Project and partially funded by SWRCB validated the cause and effect relationship between elevated levels of bacteria in beach water and health problems observed in exposed beachgoers. Beach closures can also result from other events, such as a leaking sewage pipe or an oil spill.

Sources of Beach Pollution

The ocean is the final deposition site for most land-based pollutants entering California's coastal watersheds. Nearshore impairments can result from discharges of industrial waste, dredge spoils, agricultural and urban runoff, and municipal sewer discharges. Although this impairment has been controlled to a great extent in recent years, the increases in population and development offer a constant challenge to those federal, state, and local agencies responsible for water quality control. As California's coastal population increases, the number and volume of discharges from industrial and municipal facilities into our coastal waters also increase.

Table 10. Waterborne Pathogens, Diseases They Cause, and the Effects on Exposed Populations.

PATHOGEN		DISEASE	EFFECTS
BACTERIA	***Escherichia coli*** (enteropathogenic)	Gastroenteritis	Vomiting, diarrhea, death in susceptible populations
	Legionella pneumophila	Legionellosis	Acute respiratory illness
	Leptospira	Leptospirosis	Jaundice, fever (Weil's disease)
	Salmonella typhi	Typhoid fever	High fever, diarrhea, ulceration of the small intestine
	Salmonella	Salmonellosis	Diarrhea, dehydration
	Shigella	Shigellosis	Bacillary dysentery
	Vibrio cholerae	Cholera	Extremely heavy diarrhea, dehydration
	Yersinia enterolitica	Yersinosis	Diarrhea
PROTOZOANS	***Balantidium coli***	Balantidiasis	Diarrhea, dysentery
	Crytosporidium	Cryptosporidiosis	Diarrhea
	Entamoeba histolytica	Amedbiasis (amoebic dysentery)	Prolonged diarrhea with bleeding, abscesses of the liver and small intestine
	Giardia lamblia	Giardiasis	Mild to severe diarrhea, nausea, indigestion
	Naegleria fowleri	Amoebic meningoencephalitis	Fatal disease; inflammation of the brain
VIRUSES	Adenovirus (31 types)	Respiratory disease	
	Enterovirus (67 types, e.g., polio, echo, and Coxsackie viruses)	Gastroenteritis	Heart anomalies, meningitis
	Hepatitis A	Infectious hepatitis	Jaundice, fever
	Norwalk agent	Gastroenteritis	Vomiting, diarrhea
	Reovirus	Gastroenteritis	Vomiting, diarrhea
	Rotavirus	Gastroenteritis	Vomiting, diarrhea

Another primary source of coastal water impairment comes from the runoff flowing from the land through storm drains and hundreds of natural stream courses. Runoff from creeks, rivers, and storm drains is a significant source of impairment to California's beaches. This runoff may come from rooftops, streets, yards, gardens, open spaces, parking lots, animal yards, construction sites, logging roads, and any other surface exposed to rain or snow. It collects human and animal waste, oil and rubber residue from cars, asbestos and metals from brake linings, pesticides, silt, and various types of vegetable matter. It may contain high bacterial counts and viruses, may be toxic to marine life, and may carry tons of garbage and silt that litter the ocean and beaches and kill or injure marine life. Since this runoff does not come from a discrete source, such as a pipe, it is regarded as "nonpoint source pollution." Some of these types of wastes are collected in urban storm drains. Storm drain discharges are considered "point source" under the federal Clean Water Act's (CWA) Storm Water Program and require National Pollutant Discharge Elimination System (NPDES) permits for discharges to surface waters.

SWRCB Projects to Improve Coastal Water Quality

Clean Beaches Initiative

In January 2001, Governor Gray Davis proposed a CBI to combat the problem of contaminated ocean water and beach postings/closures. The Governor's CBI enables state and local agencies to address this contamination, making California beaches safer and ensuring the economic vitality of coastal areas. The proposed CBI activities include assistance to local agencies in areas that have chronic beach contamination problems and high beach usage. CBI also provided funding for research to develop rapid, inexpensive methods for detecting and analyzing bacteria and pathogens. Fifty projects were funded by Proposition 13 in FY 2001-02, totaling $32 million, as part of CBI. A list of these projects is provided in Appendix B of the California Beach Closure Report – 2001. In addition, FY 2002-03 budget includes $46 million in Proposition 40 funds to continue the funding for CBI projects. It is expected that these, as well as future projects, will have a positive effect on the state's coastal water quality and reduce the health risk to the public wishing to use one of the state's most valuable resources.

Development of Rapid Indicators and Sources Tracking Methods

The 2001 Budget Act provides $1.5 million in General Fund contract support for the development of rapid indicators. Subsequently, the Legislature passed Assembly Bill 639 (Chapter 502, Statutes of 2001) requiring SWRCB, in conjunction with the California Department of Health Services (DHS), to develop reliable, rapid, and affordable diagnostic tests for indicator organisms on or before July 1, 2003. SWRCB is currently developing a contract with the Southern California Coastal Water Research Project (SCCWRP), with the goal of developing analytical methods that can be completed within one day, ideally within several hours. The development of rapid indicators will reduce the lag time between the time when a sample is taken and analyzed and the time when warning signs are posted at a contaminated beach. The reduction in lag time will better protect the public by keeping them out of the water when conditions are known to be a threat to human health, rather than allowing the public to swim in possibly contaminated water while health officials wait several days for lab results before they post or close a beach.

In addition to the Clean Beaches Initiative projects listed in Appendix B, SWRCB also has entered into a contract with SCCWRP using Proposition 13 funds to study the technologies that can be used to implement the requirements of the coliform TMDL for the Santa Monica Bay beaches. The goal of this project is to identify the best techniques and the most rapid technologies for determining the sources of fecal contamination.

Responsibilities of SWRCB and RWQCBs

One of the primary responsibilities of SWRCB is to protect California's valuable coastal waters by controlling discharges. The six RWQCBs bordering the coastline have prime responsibility for protecting coastal waters. Anyone wishing to discharge waste to the ocean from a pipe or waste facility (a "point source") must obtain an NPDES permit from the appropriate RWQCB. RWQCBs establish monitoring programs to be conducted by the discharger as a way of measuring compliance with permit provisions. RWQCBs currently issue NPDES permits for discharges from municipal storm sewer systems serving a population of 100,000 or more. RWQCBs and SWRCB will soon implement storm water programs for smaller municipalities and construction projects to further control storm water discharges. SWRCB has also adopted two statewide general storm water permits for industrial and construction activities and a statewide permit to address all road construction activities of the California Department of Transportation. These permits require the storm water dischargers to implement programs to reduce and/or eliminate storm water pollution to the maximum extent possible. If nonpoint source discharges cause serious pollution, RWQCBs work with the dischargers to require the application of measures to control the waste (known as management practices or MPs) and prevent pollution. If those measures are not carried out effectively, RWQCBs may issue waste discharge requirements or take enforcement action. When necessary, RWQCBs also establish Total Maximum Daily Loads (TMDLs) to control discharges into impaired beach waters.

Responsibilities of Local Health Officers

California law (Health and Safety Code section 115880 et. seq.) requires local health officers to conduct weekly bacterial testing between April 1 and October 31 of waters adjacent to public beaches which have more than 50,000 visitors annually and are near storm drains which flow in the summer. Local health officers are required to test for three indicator organisms: total coliform, fecal coliform, and enterococci. If any one of these indicator organisms exceeds the standards (Table 2) established by DHS, the county health officer is required to post warning signs at the beach and make a determination whether to close that beach in the case of extended exceedances.

In the event of a known discharge of untreated sewage, the health officer is required to immediately test the waters adjacent to the public beach and take the appropriate action. If the discharge of untreated sewage is known to have reached recreational waters, then the health officer is required to close the beach until the waters meet the established bacterial standards. The law also requires the county health officer to establish a telephone hotline to inform the public of all beaches that are closed, posted, or otherwise restricted.

Ten coastal counties (Sonoma, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Orange, Los Angeles, and San Diego) and one city (Long Beach) have reported that they have beaches that are near storm drains and are visited by more than 50,000 people annually. Those beaches have been tested regularly for bacterial contamination as required by law, and each month the counties submit the information of beach postings and closures to SWRCB for publication on its Web site.

Table 11. California Department of Health Services' Bacteriological Standards for Water-Contact Sports.

SAMPLE TYPE	INDICATOR	STANDARD[1]
Single	Total Coliform[2]	1,000
	Total Coliform	10,000
	Fecal Coliform	400
	Enterococci	104
30-day Log Mean	Total Coliform	1,000
	Fecal Coliform	200
	Enterococci	35

[1] Number of organisms or colonies forming per 100ml of water.
[2] If the ratio of Fecal to Total Coliform exceeds 0.1.

Indicator Organisms

Since identification and enumeration of pathogens (such as viruses in water) are difficult, time consuming, and expensive, laboratory methods have been developed to measure the presence and density of "indicator" organisms. The indicator organisms may not cause human health impacts, but their presence indicates the potential for water contamination with other pathogens that are harmful, such as bacteria, viruses, and protozoa. Indicator bacteria are carried to coastal waters in a variety of ways. Bacteria typically enter coastal waters from sewage spills, such as overflows of sanitary sewers and storm water runoff from urban, suburban, and rural areas. An ideal indicator would indicate when disease-causing agents were present at densities that could cause problems. As the coliform bacteria group (total, fecal, E. coli, and enterococci) is found in the intestines and feces of warm-blooded animals, its presence indicates that pathogens from untreated or partially treated sewage or contaminated runoff may be present in water. Other advantages of using the coliform bacteria group as indicator organisms include: (1) it is easily detected by simple laboratory methods; (2) it is not usually present in unpolluted waters; (3) its concentration in water can be correlated with the extent of contamination; and (4) it is safe to work with in the laboratory.

The drawback of using this "indicator" is that it may not accurately represent the actual health risk to swimmers. Even though the indicator group is present in the intestines and feces of many warm-blooded animals, the specific pathogens that are hazardous to human health may not be present. For example, large flocks of birds or migrating whales may contribute high levels of indicator bacteria to the waters adjacent to a public beach, but these animals may not be carrying any pathogens that are a threat to humans. At the present time, the potential health risk to humans from pathogens carried by animals is unknown. Additionally, the technology is not available to positively distinguish between animal and human-borne indicator bacteria. More research is needed on both of these topics.

Beach Closure, Beach Posting (Warning Sign), and Rain Advisory

County health officers may take three discrete actions based on beach water quality monitoring data, sewage spills, and storm events. Beaches or, more precisely, the ocean waters adjacent to the beaches are posted with warning signs or are closed when water samples that are collected in the surf zone have indicator levels which exceed DHS standards. The beach is reopened to the public once further sampling confirms that bacteria levels no longer exceed health standards.

A "Beach Closure" occurs as a result of a sewage spill or repeated incidences of exceedances of bacterial standards from an unknown source. A closure is a notice to the public that the water is unsafe for contact and that there is a high risk of getting ill from swimming in the water. Closures are mandatory in the event of a known untreated sewage discharge reaching recreational waters; otherwise, the decision to close the beach is at the discretion of the local health officer. A beach closure does not necessarily result in the closure of the entire beach for recreational activities. In most cases, the ocean is closed to swimming and other water contact recreation while the beach area is open for sunbathing, volleyball, and other activities that do not involve water contact.

A "Beach Warning" sign means that at least one bacterial standard has been exceeded, but there is no known source of human sewage. The posting of warning signs alerts the public of a possible risk of illness associated with water contact. The placement of signs may be short term when a single bacterial indicator standard is exceeded, or more permanent where monitoring indicates repeated contamination (e.g., from a storm drain). Warnings may also be posted where sources of contamination are identifiable and can be explained as not of human origin (e.g., resident marine mammals or seabirds).

A "Rain Advisory" is issued during and for a period of 72 hours after a storm event. Past experience has shown that indicator levels generally exceed state standards during and after storm events. The runoff generated by the storm event brings with it pollution from the surrounding urban and rural areas and, with that pollution, comes high numbers of indicator bacteria. Rain advisories are typically issued to the public through various media outlets (television, radio, newspapers, etc.). These advisories are preemptive in nature and may not be based on actual water quality data. Since there is no consistency among counties of when and if they issue rain advisories, the discussions below do not include the numbers of advisories issued for each county. Rain advisory information reported by counties is included in Appendix A of the California Beach Closure Report – 2001.

Beach-Mile Days (BMDs)

BMD is used to express the magnitude of a beach closure or posting incident. It is the product of the number of days a beach was posted/closed and the length of impacted coastline (in miles). For example, if a particular beach was closed for five days and for a distance of 200 yards, the number of BMDs for this incident would be 0.57 (200 yards/1 mile X 5 days). BMD is a useful measure for comparing the health of beaches from year to year. It is a more meaningful measure of comparison than the number of incidences or the number of days of postings or closures.

BEACH POSTING AND CLOSURE INFORMATION FOR THE YEAR 2001

Calendar year 2001 saw an increase in the number of beach closures, while the number of beach postings remained approximately the same. However, it is important to note that calendar year 2000 was the first year that full-year beach monitoring data were reported by local health officers and compiled by SWRCB. Also, monitoring efforts have been improved to detect problems, which could have resulted in a higher number of closures in 2001. Therefore, it is difficult to draw conclusions at this time regarding the beach closure trends in California.

The information presented in this report is derived from SWRCB's Beach Posting and Closure Database, which identifies the beach name, type of event (closure/posting/rain advisory), dates of the event, and length of affected coastline. The database calculates the number of BMDs associated with each posting or closure. Reports detailing the events that were reported in 2001 for each county can be found in Appendix A of the California Beach Closure Report – 2001. The reports are grouped by closures, postings, and rain advisories and then grouped in order beginning with the northernmost county and ending with the southernmost county. At the end of each individual county report, the total of the incidences of closures/postings/rain advisories, days (duration), and BMDs are specified.

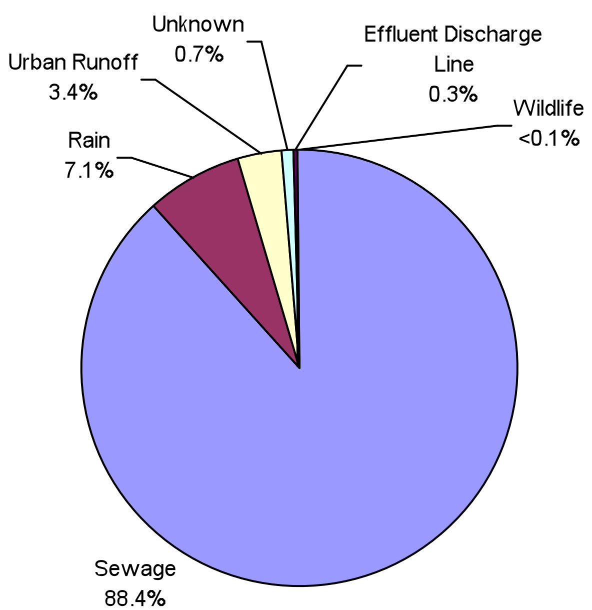
Beach Closures

Table 12 shows a summary of the number of closures, duration, and BMDs for each county for both 2001 and 2000. The table clearly shows an increase in the total number of beach closures between 2000 and 2001, with the biggest percent increase in closures occurring in Ventura County. Figure 10 illustrates that the vast majority (greater than 88 percent) of beach closures statewide are due to sewage discharges resulting from system failures, line breaks, and overflows.

Table 12. Beach Closures for 2001 and 2000 by County.

COUNTY	NUMBER OF INCIDENCES		NUMBER OF DAYS		BEACH-MILE DAYS CLOSED	
YEAR	2001	2000	2001	2000	2001	2000
Del Norte	0	0	-	-	-	-
Humboldt	0	0	-	-	-	-
Mendocino	1	1	12	15	2.7	2.6
Sonoma	2	2	37	4	3.7	0.4
Marin	0	0	-	-	-	-
Contra Costa	1	0	10	-	0.9	-
Alameda	0	0	-	-	-	-
San Francisco	0	0	-	-	-	-
San Mateo	6	9	38	217	21.2	41.9
Santa Cruz	2	0	4	-	0.2	-
Monterey	6	6	39	16	6.8	3.9
San Luis Obispo	0	1	-	1	-	0.1
Santa Barbara	1	0	7	-	1.6	-
Ventura	16	4	78	12	37.7	0.7
Los Angeles	6	7	12	45	34.1	33.6
Long Beach (City)	1	0	9	-	0.5	-
Orange	51	40	182	152	53.1	53.4
San Diego	59	47	362	310	362.4	187.0
TOTAL	**152**	**117**	**790**	**772**	**524.9**	**323.6**

Figure 10. Sources of Contamination Resulting in 2001 Beach Closures Statewide (Based on Beach-Mile Days)



The large increase in the number of BMDs is partially due to two events that occurred in San Diego County. One occurred at OCE Imperial Beach City Beach (2/13/01-3/16/01) that resulted in 41.1 BMDs of closure. The other occurred at OCE Tijuana Slough National Wildlife Refuge Shoreline (1/9/01-5/10/01), which resulted in 119.17 BMDs of closure. These two events accounted for 80 percent of the increase in BMDs of closure reported by all counties between 2000 and 2001, and 44 percent of San Diego County's BMDs of closure in 2001. Both of these events were the result of increased runoff (due to winter storm events) originating in Mexico, which overwhelmed dry weather diversions at the border and resulted in sewage and contaminated runoff being carried by the Tijuana River to the coast.

Beach Postings

Table 13 shows a summary of the number of postings, duration and BMDs for each county for both 2001 and 2000. In general, the statewide number of incidents, their duration, and BMDs for beach postings have not notably increased or decreased. However, some counties have had noticeable increases and decreases. For example, Sonoma County had the largest percent decrease (over 80 percent) in the number of postings, duration and BMDs, while San Francisco County had the largest percent increase (over 200 percent) in the number of postings, duration and BMDs. Many factors could have contributed to the increase or decrease of the number of beaches posted. A conclusion should not be drawn solely based on these numbers as to whether water quality is improving or declining in the water adjacent to those beaches.

There were 28 permanently posted beaches statewide in 2001. Some counties have chosen to post warning signs year-round (typically at storm drain outfalls or creek mouths) to warn the public about chronically poor water quality at a particular location. Counties have the option of whether or not to include their permanently posted beaches in the beach database. Of the 28 permanently posted beaches, 21 are included in the database and are in the individual county reports in Appendix A of the California Beach Closure Report – 2001 (one in San Mateo County and 20 in Orange County). Table 14 shows the remaining seven beaches that had permanent postings but were not included in the Beach Database for 2001. There is currently no established standard as to the circumstances under which a beach should be permanently posted; it is at the discretion of the local health officer.

Statewide, the majority of all beach postings (over 75 percent) are the result of unknown sources as illustrated by Figure 11. When postings and closures are combined, greater than 50 percent of all sources are unknown (Figure 12). This clearly indicates that there is a need for more research into methods that would help local health officials determine the source of coastal water contamination. If inexpensive and non labor-intensive methods were made available to county officials, many of the sources of poor coastal water quality could be diagnosed, and management steps could be taken to reduce contamination and the health risk to the public.

Table 13. Beach Postings for 2001 and 2000 by County.

COUNTY	NUMBER OF INCIDENCES		NUMBER OF DAYS		BEACH-MILE DAYS POSTED	
YEAR	2001	2000	2001	2000	2001	2000
Del Norte	0	0	-	-	-	-
Humboldt	0	0	-	-	-	-
Mendocino	0	0	-	-	-	-
Sonoma	2	12	4	29	0.4	2.7
Marin	0	0	-	-	-	-
Contra Costa	0	0	-	-	-	-
Alameda	0	0	-	-	-	-
San Francisco	34	13	70	31	104.2	49.0
San Mateo[1]	17	17	101	387	59.0	21.5
Santa Cruz	14	7	47	44	6.1	19.8
Monterey	15	16	81	42	31.5	13.8
San Luis Obispo	20	6	68	16	11.1	2.2
Santa Barbara	147	152	1,176	1,296	56.3	73.5
Ventura	96	72	967	237	98.5	13.4
Los Angeles	263	325	1,204	1,150	93.0	126.1
Long Beach (City)	58	99	78	161	2.2	4.6
Orange[1]	325	290	3,235	2,055	646.5	595.8
San Diego	187	274	855	2,450	51.5	168.9
TOTAL	**1,178**	**1,283**	**7,886**	**7,898**	**1,160.3**	**1,091.3**

[1]Numbers do not include permanent postings. The permanent postings for these counties are included in the beach database and in the reports in Appendix A of the SWRCB California Beach Closure Report—2001.

Table 14. Permanently Posted Beaches not Reported in 2001 Beach Database

County	Beaches
Santa Cruz	Neary Lagoon at Cowell Beach
	San Lorenzo River at the mouth
	Schwan Lake at Twin Lakes Beach[1]
	Soquel Creek at the mouth at Capitola Beach[1]
	Aptos Creek at the mouth between Rio del Mar Beach and Seacliff Beach[1]
Los Angeles	Santa Monica Canyon Creek[2]
San Diego	Casa Beach at Children's Pool[3]

[1] Due to birds.
[2] Posted 25 yards on each side.
[3] San Diego County Department of Environmental Health no longer considers this a recreational beach; however, the San Diego RWQCB has designated this beach as a recreational beach, and it is currently listed on the state's CWA section 303(d) list of impaired water bodies.

Figure 11. Sources of Contamination Resulting in 2001Beach Postings Statewide (Based on Beach-Mile Days)

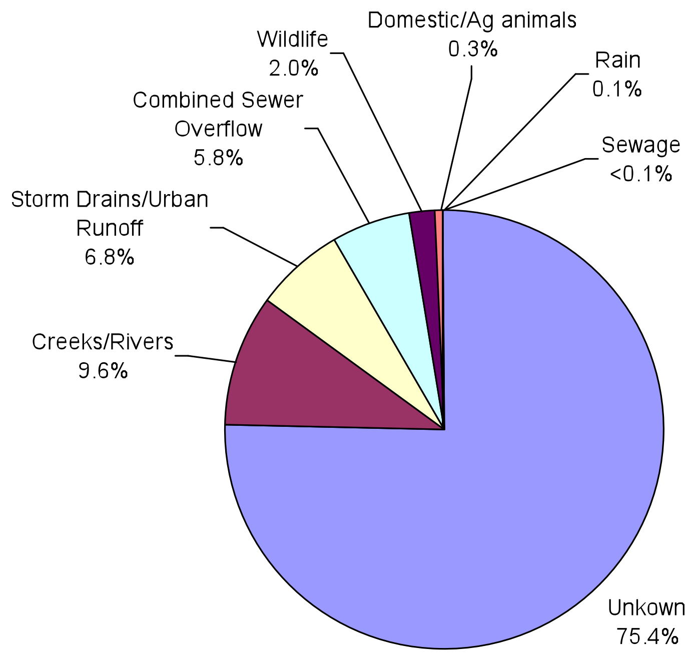
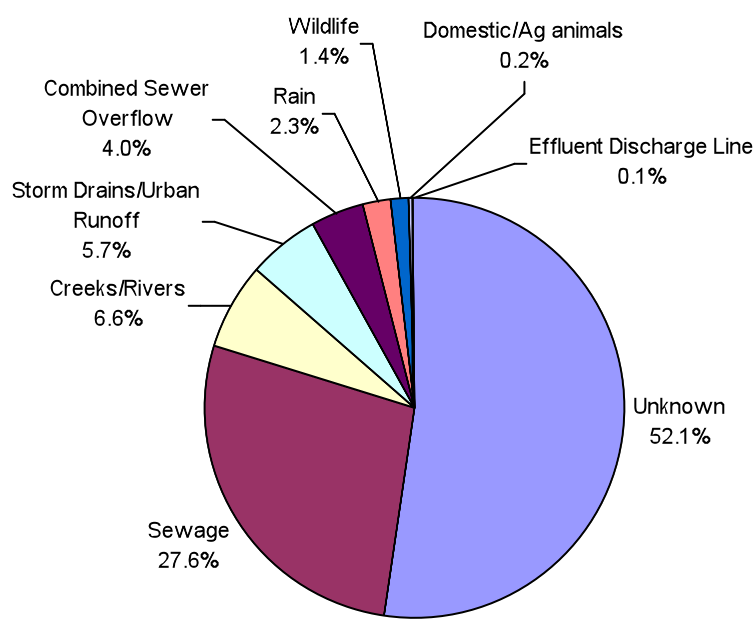


Figure 12. Sources of Contamination Resulting in 2001 Beach Closures and Postings Statewide (Based on Beach-Mile Days)



IV. GROUNDWATER QUALITY ASSESSMENT

This portion of the 305(b) report summarizes an assessment of groundwater quality in California. Although the Clean Water Act does not require that states conduct a groundwater quality assessment for 305(b) reporting, significant efforts are being made to comprehensively monitor and assess California's groundwater. These efforts and available data are summarized herein.

A. EXISTING GROUNDWATER QUALITY MONITORING AND ASSESSMENT PROGRAMS IN CALIFORNIA

The quality of California's groundwater resources is the concern of more than one agency. Each of these agencies, at the state and federal levels, approaches groundwater issues from a unique perspective, based on its individual mandate. As a result, different types of groundwater quality data and information are collected. The functions of these agencies and the data that they generate are complementary but not overlapping. The state agencies that implement groundwater-related monitoring and assessment programs are the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs), Department of Water Resources (DWR), Department of Health Services (DHS), Department of Toxic Substances Control (DTSC), and Department of Pesticide Regulation (DPR). Federal agencies that implement groundwater-related monitoring and assessment programs include the United States Environmental Protection Agency (USEPA) and the United States Geological Survey (USGS). The following table (Table 15) describes the various groundwater monitoring and assessment programs currently implemented through the various state agencies.

TABLE 15: Groundwater Monitoring and Assessment Programs

Agency	Groundwater Programs	Groundwater Monitoring/ Assessment Objectives
Dept. of Health Services (DHS)	California Safe Drinking Water Act	• Ascertain quality of all public water supply sources for compliance with MCLs; • Complete source water assessments of all sources by May 2003; A source water assessment is required for all new sources before receiving a DHS permit
Dept. of Pesticide Regulation (DPR)	Groundwater Contaminant Identification	• Determine potential for movement of pesticide residues to groundwater based on their physical/chemical properties • Conduct well sampling to identify new pesticide active ingredients in groundwater • Provide monitoring data to determine trends in pesticide concentrations in contaminated basins
	Vulnerable Area Identification	• Determine the spatial extent of contamination for residues already detected in groundwater • Use monitoring, soil, depth to groundwater, climate and other geographic or agronomic factors to identify areas vulnerable to pesticide contamination of groundwater
	Mitigation Measure Development and Implementation	• Identify and test mitigation measures to prevent movement of residues to groundwater • Implement mitigation measures to prevent continued movement of pesticides to groundwater
	Backflow and Chemigation Education and Training Program	Prevent the backflow of residues into groundwater when they are applied through injection into irrigation water
Dept. of Toxic Substances Control (DTSC)	Hazardous Waste Management Program - Facility Permitting Division	Evaluation of groundwater contamination at Resource Conservation and Recovery Act storage, treatment, and disposal facilities
	Site Mitigation Program - Statewide Cleanup Operations Division	Evaluation of groundwater contamination at Superfund, brownfield, and voluntary cleanup sites
	Site Mitigation Program - Emergency Response and Statewide Operations Division	Evaluation of groundwater contamination at Superfund, brownfield, and voluntary cleanup sites (technical support)
	Site Mitigation Program - Office of Military Facilities	Evaluation of groundwater contamination at military sites
Dept. of Water Resources (DWR)	Bulletin 118	Update of groundwater basin boundaries and basin characteristics
	Water Quality & Quantity (Water & Environmental Monitoring)	Long-term water quality and well level data
	Local and Regional Studies	Miscellaneous groundwater studies addressing local groundwater issues
	Groundwater Quantity for Updating the State Water Plan	State's water supply and demand budget
	State Water Project Conjunctive use program	Basin monitoring associated with State Water Project conjunctive use projects
	Integrated Storage Investigations Conjunctive Use Program, and Grants and Loans	Data collection, monitoring, & evaluation, feasibility studies for Groundwater recharge and storage
	Water Data Management Systems	Water Data Library: on-line access to hydrologic data
	Subsidence Monitoring	Monitoring along California Aqueduct; special studies as needed

TABLE 15: Groundwater Monitoring and Assessment Programs (*continued*)

Agency	Groundwater Programs	Groundwater Monitoring/ Assessment Objectives
State Water Board (SWRCB)	Groundwater Ambient Monitoring and Assessment (GAMA) Program	Assesses statewide groundwater quality and aquifer susceptibility.
State and Regional Water Boards (SWRCB/ RWQCBs)	Underground Storage Tank (UST) Program	Regulates USTs and provides cleanup oversight.
	Land Disposal Program	Imposes statewide requirements for siting, operation, and closure of waste disposal sites through issuance of waste discharge requirements and compliance and enforcement efforts to ensure adequate protection of water quality.
	Spills, Leaks, Investigations, and Cleanup (SLIC) Program (reimbursed cleanup program)	Oversees the investigation and remediation of sites associated with unauthorized releases that may impact water quality.
	Department of Defense Program (DOD)	Partners with the US Dept. of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at over 200 military facilities.
Regional Water Boards (RWQCBs)	Regional Board specific efforts	Conduct special projects to address groundwater monitoring outside the regulatory programs described above. San Francisco Bay Regional Water Quality Control Board – Groundwater Basin Evaluations, Electronic Reporting of Solvent Plume Maps

B. EXISTING GROUNDWATER MONITORING/ASSESSMENT DATA

Through the various groundwater monitoring and assessment programs, a significant amount of groundwater-related data is collected in various formats. Table 16 specifies information on the state agencies' groundwater-related monitoring and assessment data; the type of sampling used to collect the data (Survey – one time effort; Monitoring – ongoing data collection but limited analysis; Assessment – ongoing data collection and detailed analysis); the data format (hard copy or electronic); and whether or not spatial location Geographic Information System (GIS) data are available. The information presented in this table is based on the information available at the time this report was written.

TABLE 16: Groundwater Monitoring/Assessment Data

Types of Groundwater Data Collected	Spatial Coverage (Statewide/Regional/ Local)	Type of Sampling (Survey – one time effort, Monitoring – ongoing data collection but limited analysis, or Assessment – ongoing data collection and detailed analysis)	Data Format (Hard copy or Electronic; Application - Oracle, Access, Dbase, Excel, etc.)	Spatial Data (GIS) Availability
Dept. of Health Services (DHS)				
Public Water Well Locations and Water Quality	Statewide	Monitoring, Assessment	Electronic (Access); Hardcopy	Yes
Source Water Assessment Program Data	Statewide	Survey, Assessment	Electronic (Access)	Yes
Well Data	Statewide	Monitoring	Electronic (Access); Hardcopy	Yes
Water System Water Quality Monitoring Plan	Statewide	Monitoring, Assessment	Hardcopy	No
Groundwater Recharge with Recycled Water Monitoring Programs	Local	Survey, Monitoring	Hardcopy	No
Dept. of Pesticide Regulation (DPR)				
Well Inventory Database – Mandated by law that other state agencies report their pesticide well monitoring results to DPR. Other federal and local agencies are contacted for submission of data	Statewide	Collects survey and monitoring data	Electronic - Oracle	Yes. All databases are indexed according to the USGS Public Land Survey Coordinate System - Township/Range/Section (TRS)
Well Sampling Investigations - Well sampling conducted to comply with Pesticide Contamination Prevention Act. Study objectives are to: 1. Identify pesticide active ingredients in groundwater; 2. Identify vulnerable areas; 3. Determine relationship of detections with agronomic and geographic variables; 4. Determine trends in concentration to measure effective of regulations	Local to Statewide	Surveys and monitoring	Electronic - Oracle (captured in the Well Inventory Database)	Yes. Indexed to TRS
Pesticide Use Report Database – Beginning in 1990, all agricultural uses of pesticides are reported to DPR by Township, Range, and Section via the County Agricultural Commissioner	Statewide	Assessment (used to identify potential sampling sites)	Electronic - Oracle	Yes. Indexed to TRS

Types of Groundwater Data Collected	Spatial Coverage (Statewide/Regional/ Local)	Type of Sampling (Survey – one time effort, Monitoring – ongoing data collection but limited analysis, or Assessment – ongoing data collection and detailed analysis)	Data Format (Hard copy or Electronic; Application - Oracle, Access, Dbase, Excel, etc.)	Spatial Data (GIS) Availability
California Vulnerability Model (CALVUL) – Identify soil, climatic, depth to groundwater and other geographic properties of vulnerable areas	Statewide	Assessment (used to identify potential sampling sites)	Electronic - Oracle or Access	Yes. Indexed to TRS
Pesticide Chemistry Database – Registrants of pesticide active ingredients are required to submit data on the physical and chemical properties of pesticides including water solubility, soil adsorption coefficient (KOC), hydrolysis half-life, aerobic and anaerobic soil metabolism and dissipation of pesticides	Not Applicable	Assessment (used to identify potential sampling sites)	Electronic - Oracle or Access	Not Applicable
Dept. of Toxic Substances Control (DTSC)				
Hazardous Waste Management Program - Facility Permitting Division	Statewide (mostly urbanized areas)	Survey, Monitoring	Hard copy only	No. Spatial well information is not available
Site Mitigation Program - Statewide Cleanup Operations Division	Statewide (mostly urbanized areas)	Survey, Monitoring	Hard copy only	No. Spatial well information is not available
Site Mitigation Program - Emergency Response and Statewide Operations Division	Statewide (mostly urbanized areas)	Survey, Monitoring	Hard copy only except for Stringfellow site (data are currently in Access and will be moved to Equis in the near future)	Yes. for Stringfellow site. Otherwise, spatial well information is not available
Site Mitigation Program - Office of Military Facilities	Statewide (military bases)	Survey, Monitoring	Hard copy only	No. Spatial well information is not available
Dept. of Water Resources (DWR)				
Bulletin 118 groundwater basin and subbasin boundaries and associated numbers based on basin and subbasin data (some data in GIS)	Statewide	NA	ArcView	limited
Groundwater levels, available in hydrograph and tabular format on DWR's web page	Statewide	Monitoring	Hardcopy, electronic, Oracle, Access	limited
Groundwater quality analyses, available in tabular format on DWR's web page	Regional, Local	Monitoring, Assessment	Oracle, Access	limited

Types of Groundwater Data Collected	Spatial Coverage (Statewide/Regional/ Local)	Type of Sampling (Survey – one time effort, Monitoring – ongoing data collection but limited analysis, or Assessment – ongoing data collection and detailed analysis)	Data Format (Hard copy or Electronic; Application - Oracle, Access, Dbase, Excel, etc.)	Spatial Data (GIS) Availability
Inelastic and elastic subsidence	Regional, Local	Monitoring	Access	none
AB 303 Data (WC §10750)—The statute requires that any data collected as a result of the grant must be submitted to DWR.	Local	Survey, Monitoring, Assessment	Hardcopy, Electronic: (various applications)	Yes, varies with project
Well Completion Reports, commonly called Well Logs (DWR 188)	Statewide	NA	Electronic: Access	Yes, limited
Watermaster data for Central and West Coast Basins (Southern District)	Local, Regional	Monitoring	Electronic: Excel	No
Prop 13 Groundwater Storage and conjunctive management project specific data	Local, Regional	Survey, Monitoring, Assessment	Hardcopy, Electronic: (various applications)	Yes, varies with project
State and Regional Water Boards (SWRCB/RWQCBs)				
Groundwater Ambient Monitoring and Assessment (GAMA) Program, California Aquifer Susceptibility (CAS) Assessment - Low-level VOCs, groundwater age data	Statewide	Survey, Assessment	Oracle	Yes
GAMA Program, Voluntary Domestic Well Assessment Project - Private domestic drinking water well location and water quality data	Local	Assessment	Access	Yes
Location, release, water quality, and water level data for Leaking UST sites (Geotracker)	Leaking UST sites located statewide	Monitoring	Hard copy and Electronic: Oracle	Yes
Location, water quality, and water level data for Land Disposal Program sites	Land Disposal sites located statewide	Monitoring	Location (hard copy, limited electronic: Excel); Water quality (hard copy, limited electronic: Excel); Water level data (hard copy, limited electronic Excel)	Yes (Land Disposal site locations)
Location, water quality, and water level data for Dept. of Defense (DOD), Leaking Landfills, and Spills Leaks, Investigations, and Cleanup (SLIC) sites	DOD, landfills, and SLIC sites located statewide.	Monitoring	Electronic UST data in Geotracker. In general, site location (hard copy, limited electronic: Excel);	In progress

Types of Groundwater Data Collected	Spatial Coverage (Statewide/Regional/ Local)	Type of Sampling (Survey – one time effort, Monitoring – ongoing data collection but limited analysis, or Assessment – ongoing data collection and detailed analysis)	Data Format (Hard copy or Electronic; Application - Oracle, Access, Dbase, Excel, etc.)	Spatial Data (GIS) Availability
			Water quality (hard copy, limited electronic: Excel); Water level data (hard copy, limited electronic: Excel)	
Hydrogeologic Vulnerability Areas (GIS) delineated based on published hydrogeologic data and information	Statewide	NA	Electronic: GIS	Yes
RWQCBs specific efforts: San Francisco Bay Regional Water Quality Control Board – Electronic Solvent Plume Reporting Project. Others – To be determined	Regional	Survey, Monitoring, Assessment	(San Francisco Bay Regional Water Quality Control Board, Electronic Solvent Plume Reporting Project - Excel)	Yes (San Francisco Bay Regional Water Quality Control Board, Electronic Solvent Plume Reporting Project)

C. DEVELOPMENT OF A COMPREHENSIVE MONITORING PROGRAM IN CALIFORNIA

State Water Resources Control Board Groundwater Programs

The scope of the SWRCB groundwater programs ranges from pollution prevention to formal monitoring, assessment, and water quality cleanups. Pollution prevention includes regulation of wastes associated with operation of underground fuel storage tanks, landfills, and surface impoundments. Cleanup programs include oversight of assessment and remediation of discharges of wastes associated with the same types of facilities represented in the pollution prevention programs, with the addition of a general category of groundwater cleanup sites that were never formally regulated, such as dry cleaners. Recent significant efforts in groundwater monitoring and assessment are described below.

Groundwater Ambient Monitoring Assessment (GAMA) Program

As a result of an increased awareness toward groundwater quality, the Supplemental Report of the 1999 Budget Act required the SWRCB to develop a comprehensive ambient groundwater monitoring plan. To meet this mandate, the SWRCB created the Groundwater Ambient Monitoring and Assessment (GAMA) Program.

One objective of the GAMA Program is an effort to identify and centralize the many sources of groundwater data and information available in the state. As part of this effort, the SWRCB has joined with other state and federal agencies to form a Groundwater Resources Information Sharing Team (GRIST). Agencies currently participating in GRIST include the SWRCB, Department of Health Services (DHS), Department of Pesticide Regulation (DPR), Department of Water Resources (DWR), Lawrence Livermore National Laboratory (LLNL), and U.S. Geological Survey (USGS).

The various groundwater data sets will be made accessible to the public and interested agencies within a Groundwater Resources Information Database (GRID). A listing of the data, along with the appropriate agency contacts and Internet links, are maintained by the SWRCB on the GRID. In addition, to facilitate effective information sharing and communication among stakeholders, groundwater data are being made available on the SWRCB Geotracker system. Geotracker is a database with a Geographic Information System (GIS) that provides Internet access to environmental data. The centralization of environmental data through Geotracker is enabling more in-depth geospatial and statistical analyses of groundwater data. This expansion in capabilities should greatly assist public agencies in planning and resource management.

Another objective of the GAMA Program is to assess the water quality and relative susceptibility of groundwater resources. In addition to ongoing assessments of groundwater based on existing water quality data, the GAMA Program has two sampling components: the

California Aquifer Susceptibility (CAS) Assessment which addresses public supply drinking water wells, and the Voluntary Domestic Well Assessment Project which addresses private drinking water wells.

- **California Aquifer Susceptibility (CAS) Assessment**

  The California Aquifer Susceptibility (CAS) Assessment is a study of the water quality and relative susceptibility of groundwater that serves as a source for public drinking water supplies. The SWRCB, with assistance from the USGS and LLNL, is collecting data to evaluate the use of groundwater age (using tritium-helium analysis) and low-level volatile organic compound (VOC) concentrations as indicators of the susceptibility of groundwater to contamination. Age-dating provides information on the presence of young groundwater, i.e., groundwater that has been in contact with the earth's surface within the last 50 years. Young groundwater or groundwater with trace amounts of VOCs can be considered indicators of vulnerability to pollution from surface contaminants from land use activities. In addition, analysis for trace amounts of recently introduced compounds such as methyl tert-butyl ether (MTBE) will allow water managers to identify trends in groundwater quality in their region and respond before concentrations reach action levels.

  The CAS assessment is designed to sample approximately 15,000 public supply wells in California, through voluntary cooperation of water suppliers. Sampling began in 2000 and will continue for the next several years depending on the availability of funding. Sampling and analysis are being conducted by scientists from the USGS and LLNL. Quality-control samples are collected to assure that bias has not been introduced as a result of sampling procedures. As of the Fall of 2002, more than 800 public drinking water wells have been sampled in this way.

  The SWRCB is implementing the CAS Assessment, in consultation with the DHS, DWR, and other entities. More detailed information about the GAMA Program and the CAS Assessment is available at the GAMA Program website:

  http://www.swrcb.ca.gov/gama

- **Voluntary Domestic Well Assessment Project**

  Currently, the quality of domestic well water in California is largely unknown. Other states with domestic well sampling programs have occasionally found constituents such as MTBE and bacteria in domestic wells. The Voluntary Domestic Well Assessment Project samples domestic wells for various constituents commonly found in domestic well water and provides that information to the domestic well owners. In addition, the Voluntary Domestic Well Assessment Project includes a public education component to aid the public in understanding water quality data and water quality issues affecting domestic water wells. The Voluntary Domestic Well

Assessment Project focuses on specific areas, as resources permit. The focus areas are chosen based upon existing knowledge of water quality and land use, in coordination with local environmental health agencies. The SWRCB incurs the costs of sampling and analysis. As of the summer of 2002, over 100 domestic wells have been sampled in a focused area.

- **AB 599 – Groundwater Quality Management Act**

  In October 2001, the Governor approved Assembly Bill 599 (AB 599), establishing the Groundwater Quality Monitoring Act of 2001. Introduced by Assemblymember Carol Liu, the goal of AB 599 (WC§10780) is to improve comprehensive groundwater monitoring and increase the availability of information about groundwater quality to the public.

  AB 599 requires that the SWRCB, in coordination with an Interagency Task Force (ITF) and Public Advisory Committee (PAC), integrate existing monitoring programs and design new program elements, as necessary, to establish a comprehensive statewide groundwater quality monitoring program. AB 599 also requires that on or before March 1, 2003, the SWRCB submit a report to the Governor and Legislature, detailing the efforts of the joint activities with the ITF and PAC, and including the following elements:

  - A detailed description of a comprehensive groundwater quality monitoring program;
  - A description of how the program takes maximum advantage of existing information;
  - An assessment of additional monitoring necessary;
  - A specific set of recommendations for coordinating existing monitoring programs;
  - An estimate of funding necessary to implement the program;
  - Recommendations for an ongoing source of funds; and
  - A prioritized list of actions to increase effectiveness of monitoring efforts

  The ITF is composed of representatives of the following member state agencies: SWRCB, DWR, DHS, DPR, DTSC, and the California Department of Food and Agriculture. The ITF has the following responsibilities:

  - Identify actions necessary to establish a comprehensive groundwater quality monitoring program;
  - Identify measures to increase coordination among agencies that collect groundwater quality information;
  - Design a database capable of supporting the groundwater monitoring program;
  - Determine constituents to be included in the monitoring program;

- Assess the scope and nature of necessary monitoring enhancements;
- Identify the cost of any recommended measures; and
- Identify how to make monitoring information available to the public.

The SWRCB convened the required PAC to the ITF, including members from two representatives of federal agencies, two representatives of public water systems, one representative of a local water agency, two representatives from groundwater management entities, two representatives of environmental organizations, two representatives of the business, and two representatives of agriculture.

As of the Fall of 2002, the ITF and PAC had met several times and the development of the report to the Legislature, including the description of a comprehensive groundwater monitoring program, was well underway.

- **Groundwater Quality in California:**

Currently, the best available and readily usable source of groundwater data, for widespread groundwater quality assessment in the State of California, is the DHS public water supply well database. The database contains results of regular water quality monitoring, required by federal and state laws and regulations, for numerous chemical, radiological, and bacteriological contaminants. The laws and regulations applicable to the public supply wells establish numerical water quality criteria for these contaminants, called Maximum Contaminant Levels (MCLs), to protect public health. The DHS database contains water quality data and locational data for over 15,000 public water supply wells within the state. While these data are not evenly spatially distributed throughout the state or the aquifers within the state, they do provide a good inventory of the quality of groundwater that is being used for public consumption.

Nearly 10,000 public supply wells are within the DWR-defined alluvial groundwater basins of the state. In working with staff from DWR, the SWRCB queried the DHS database to identify general water quality patterns in the alluvial groundwater basins. The list of Contaminants of Concern (COC's) categories used in the queries is listed in Table 17. The results of the water quality queries are summarized by Hydrologic Region in Table 18, with most frequent constituent exceedences summarized in Table 19. The tables show the total number of DHS-regulated public supply wells within each hydrologic region, and the number of those wells within the most recently available sampling cycle (1994-2000) that had a MCL exceedence for at least one of the COCs in a COC group. These data show that in general, the groundwater used for public supply in the state is of reasonably good quality. When an occasional problem occurs, DHS's regulatory programs are in place to limit the public's potential exposure to contaminants. Following the summary tables, in Appendix A, expanded lists of water quality data, at the basin and sub-basin levels for each hydrologic region, are provided.

It should be noted that the DHS data only measure the quality of groundwater at the point of resource consumption, the supply well intake. This does not allow for a comprehensive evaluation of the status of the entire groundwater resource (used and currently unused portions of all aquifers). Previously discussed efforts such as the SWRCB's GAMA Program, and the multi-agency effort to address the AB 599 requirements, build on existing data to create more comprehensive groundwater assessments.

Table 17: Constituents of Contaminant Groups Used in General Queries

Inorganics (Primary MCL)	Inorganics (Secondary MCL)	Radiological	Nitrates	Pesticides	VOCs
Aluminum Antimony Arsenic Asbestos Barium Beryllium Cadmium Chromium (Total) Cyanide Fluoride Mercury Nickel Selenium Thallium	Chloride Copper Iron Manganese Silver Specific Conductance Sulfate Total Dissolved Solids Zinc	Combined Ra (226 + Ra 228) Gross Alpha Radium 226 Radium 228 Strontium-90 Uranium	Nitrate (As No3) Nitrate + Nitrite (As N) Nitrate Nitrogen (No3-N) Nitrite (As N)	1,3-Dichloropropene (Total) 2,4-D Bentazon Carbofuran Chlordane Di(2-Ethylhexyl)Phthalate DBCP Dinoseb EDB Heptachlor Heptachlor Epoxide Lindane Methoxychlor Pentachlorophenol Polychlorinated Biphenyls (Total PCB's) Toxaphene	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethylene 1,2-Dichloroethane 1,2-Dichloropropane 1,4-Dichlorobenzene 1,1,2,2-Tetrachloroethane Benzene Benzo (A) Pyrene Bromodichlormethane (Thm) Carbon Tetrachloride Chloroform (Thm) Cis-1,2-Dichloroethylene Dichloromethane Methyl-Tert-Butyl-Ether (MtBE) Tetrachloroethylene Total Trihalomethanes Trans-1,2-Dichloroethylene Trichloroethylene Trichlorofluoromethane Vinyl Chloride

Other consituents not categorized: color, foaming agents (MBAS), odor threshold @ 60 C, turbidity (laboratory and field)

Table 18: Summary of MCL Exceedences Per Number of Public Supply Wells Sampled By Hydrologic Region: DHS Database, 1994-2000*

Hydrologic Region (Inclusive Regional Board No. follows in parentheses)	Inorganics Primary MCL # Exceedence / (# Sampled)	Radiological	Nitrates	Pesticides	VOCs
North Coast (R1)	**12 (515)**	**7 (307)**	**8 (573)**	**0 (356)**	**5 (348)**
S.F. Bay (R2)	**27 (444)**	**3 (363)**	**28 (458)**	**5 (419)**	**13 (415)**
Central Coast (R3)	**21 (608)**	**18 (540)**	**69 (627)**	**6 (570)**	**11 (586)**
South Coast (R4, R8, and R9)	**115 (2,151)**	**119 (2,093)**	**374 (2,237)**	**71 (2,130)**	**315 (2,169)**
Sacramento River (R5)	**19 (1,131)**	**4 (943)**	**24 (1,273)**	**3 (907)**	**25 (895)**
San Joaquin River (R5)	**17 (607)**	**49 (486)**	**27 (630)**	**55 (625)**	**18 (609)**
Tulare Lake (R5)	**68 (1,319)**	**81 (1,223)**	**87 (1,371)**	**148 (1,336)**	**49 (1,275)**
North Lahontan (R6)	**7 (121)**	**7 (77)**	**0 (129)**	**0 (72)**	**8 (73)**
South Lahontan (R6)	**52 (518)**	**21 (469)**	**15 (567)**	**2 (497)**	**6 (499)**
Colorado River (R7)	**17 (286)**	**21 (279)**	**6 (293)**	**0 (274)**	**0 (272)**
Totals	**355 (7,700)**	**330 (6,780)**	**638 (8,158)**	**290 (7,186)**	**450 (7,141)**

* Does not include over 4,000 public supply wells located outside DWR-defined alluvial groundwater basins.

Table 19: Overview of Individual Constituent Exceedences By Hydrologic Region (See Appendix A for Expanded Regional Information)

Hydrologic Region (Inclusive Regional Board No. follows in parentheses)	Individual Constituents Most Frequently Exceeding MCLs (Number of Exceedences)
North Coast (R1)	***Nitrates (8), Aluminum (4), Arsenic (4), Radium 228 (3), TCE (2)**
S.F. Bay (R2)	**Iron (57), Manganese (57), *Nitrates (28), Fluoride (7), TCE (4)**
Central Coast (R3)	***Nitrates (69), Gross Alpha (15)**
South Coast (R4, R8, and R9)	***Nitrates (374), TCE (196), PCE (152), Gross Alpha (104)**
Sacramento River (R5)	***Nitrates (24), PCE (11), TCE (7), Benzene (4), Gross Alpha (4)**
San Joaquin River (R5)	**DBCP (44), Uranium (33), *Nitrates (27), Gross Alpha (26)**
Tulare Lake (R5)	**DBCP (130), *Nitrates (87), Gross Alpha (74), Fluoride (32)**
North Lahontan (R6)	**1,2-DCA (8), Gross Alpha (7), Uranium (5), Fluoride (3)**
South Lahontan (R6)	**Fluoride (30), *Nitrates (15), Arsenic (19), Gross Alpha (18)**
Colorado River (R9)	**Fluoride (17), *Nitrates (6), Radium (3)**

*The nitrate numbers represent total public supply wells with one or more exceedences of nitrate quantities in at least one of three ways: Nitrate as (NO_3), Nitrate + Nitrite, or Nitrate Nitrogen (NO_3 –N).

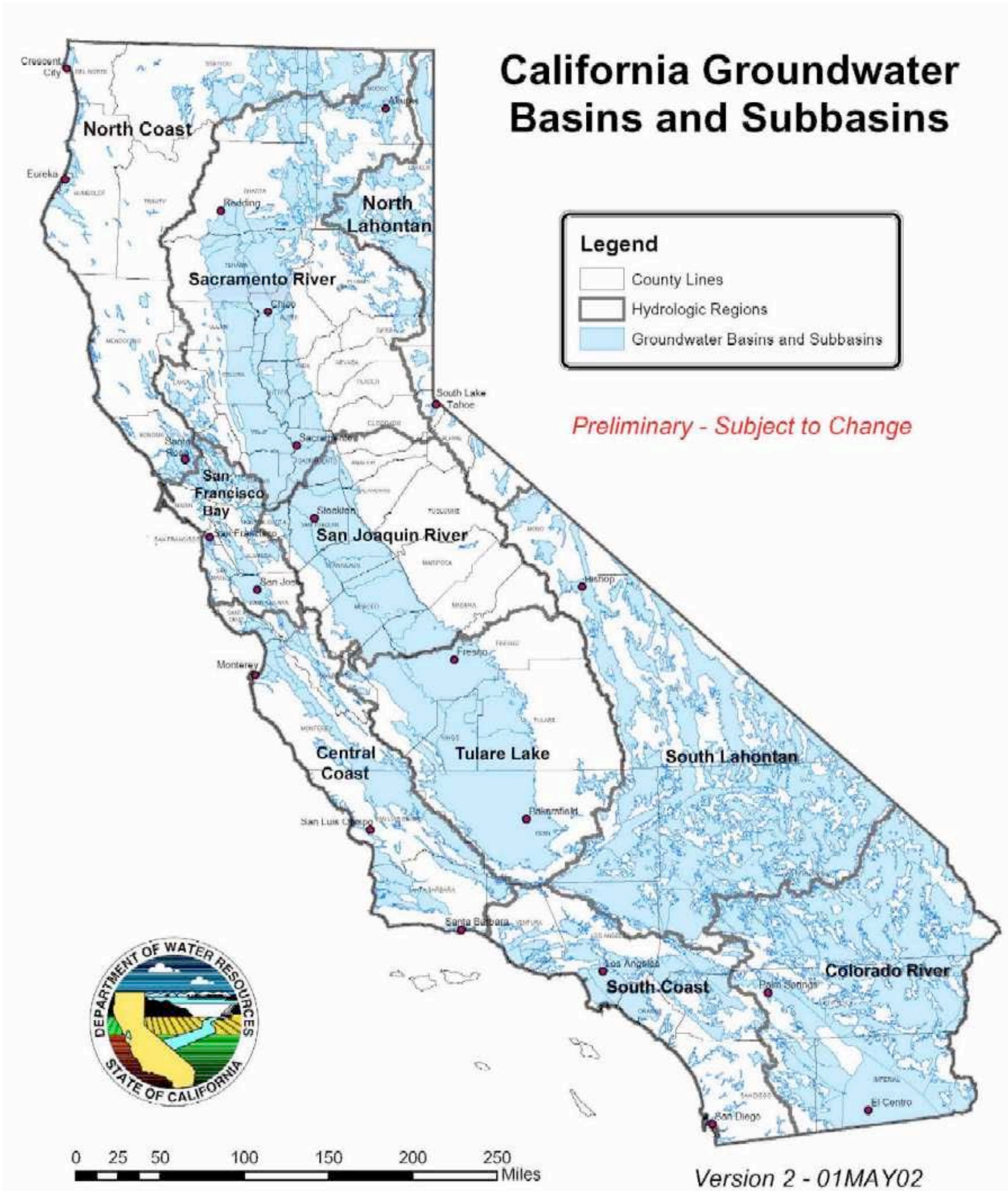


Figure 13: Hydrologic Regions, and Groundwater Basins and Sub-basins
From: California's Groundwater – Bulletin 118, Version 2 (Draft)

D. CHAPTER REFERENCES

California's Groundwater – Bulletin 118, Version 2 (Draft) – Department of Water Resources - http://www.waterplan.water.ca.gov/groundwater/118index.htm

EPIC – Drinking Water Quality Indicators – http://www.oehha.ca.gov/multimedia/epic/2002reptpdf/Chapter3-3of8Water.pdf

Personal Communication with Mr. Robert J. Swartz, Senior Engineering Geologist, California Department of Water Resources, 8 October 2002.

Plan For Implementing A Comprehensive Program For Monitoring Surface and Groundwater Quality, State Water Resources Control Board, January 2000.

SWRCB GAMA Program Web Site - http://www.swrcb.ca.gov/gama

SWRCB Geotracker Web Site - http://geotracker.swrcb.ca.gov/

E. Groundwater Quality Data for Individual Hydrologic Regions

North Coast Hydrologic Region

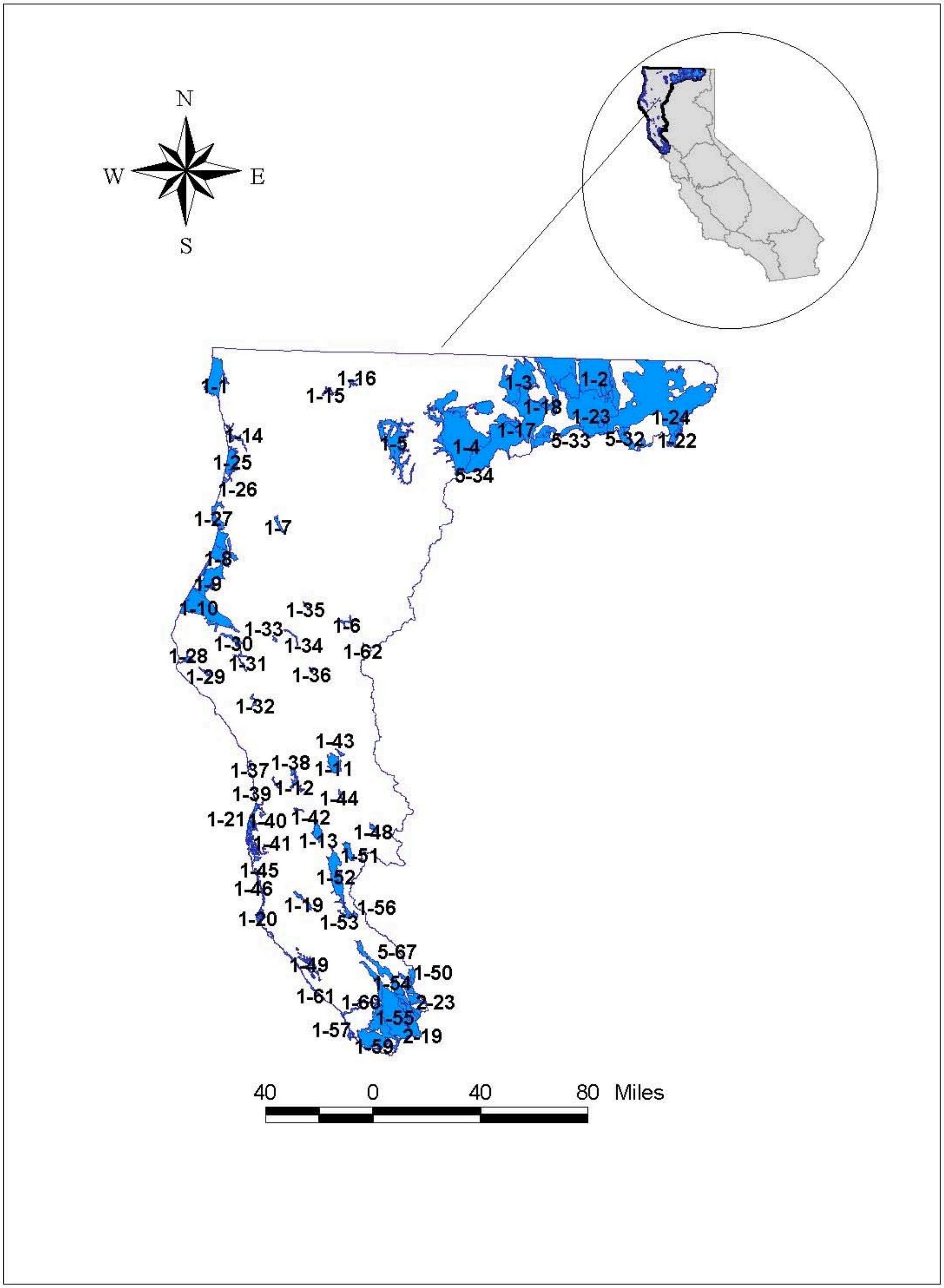


Figure 14: North Coast Hydrologic Region

Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 20: Basins and Subbasins of the North Coast Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
1-1	Smith River Plain	1-34	Dinsmores Town Area
1-2	Klamath River Valley	1-35	Hyampom Valley
1-3	Butte Valley	1-36	Hettenshaw Valley
1-4	Shasta Valley	1-37	Cottoneva Creek Valley
1-5	Scott River Valley	1-38	Lower Laytonville Valley
1-6	Hayfork Valley	1-39	Branscomb Town Area
1-7	Hoopa Valley	1-40	Ten Mile River Valley
1-8	Mad River Valley	1-41	Little Valley
1-8.01	Mad River Valley Lowland	1-42	Sherwood Valley
1-8.02	Dows Prairie School Area	1-43	Williams Valley
1-9	Eureka Plain	1-44	Eden Valley
1-10	Eel River Valley	1-45	Big River Valley
1-11	Covelo Round Valley	1-46	Navarro River Valley
1-12	Laytonville Valley	1-48	Gravelley Valley
1-13	Little Lake Valley	1-49	Anapolis Ohlson Ranch For Highlands
1-14	Lower Klamath River Valley	1-50	Knights Valley
1-15	Happy Camp Town Area	1-51	Potter Valley
1-16	Seiad Valley	1-52	Ukiah Valley
1-17	Bray Town Area	1-53	Sanel Valley
1-18	Red Rock Valley	1-54	Alexander Valley
1-19	Anderson Valley	1-54.01	Alexander Area
1-20	Garcia River Valley	1-54.02	Cloverdale Area
1-21	Fort Bragg Terrace Area	1-55	Santa Rosa Valley
1-22	Fairchild Swamp Valley	1-55.01	Santa Rosa Plain
1-25	Prairie Creek Area	1-55.02	Healdsburg Area
1-26	Redwood Creek Area	1-55.03	Rincon Valley
1-27	Big Lagoon Area	1-56	McDowell Valley
1-28	Mattole River Valley	1-57	Bodega Bay Area
1-29	Honeydew Town Area	1-59	Wilson Grove Formation Highlands
1-30	Pepperwood Town Area	1-60	Lower Russian River Valley
1-31	Weott Town Area	1-61	Fort Ross Terrace Deposits
1-32	Garberville Town Area	1-62	Wilson Point Area
1-33	Larabee Valley		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 21: Three most frequently occurring contaminants by contaminant group in the North Coast Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Aluminum – 4	Arsenic – 4	4 tied at 1 exceedance
Inorganics – Secondary	Manganese – 150	Iron – 108	Copper – 2
Radiological	Radium 228 – 3	Combined RA226 + RA228 – 3	Radium 226 – 1
Nitrates	Nitrate(as NO3) – 7	Nitrite(as N) – 1	
Pesticides			
VOCs	TCE – 2	3 tied at 1 exceedance	

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 22: Groundwater Quality in North Coast Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
1-1	1(23)	1(23)	0(12)	0(26)	0(8)	1(15)	164	32 - 496
1-2	()	()	()	()	()	()	721	140 - 2,200
1-3	0(1)	0(1)	0(2)	0(1)	0(0)	0(0)	310	55 - 1,110
1-4	0(5)	0(5)	0(4)	2(15)	0(2)	0(2)		
1-5	1(4)	1(4)	0(0)	0(4)	0(1)	0(1)	258	47 - 1,510
1-6	()	()	()	()	()	()		
1-7	()	()	()	()	()	()	125	95 - 159
1-8								
1-8.01	0(2)	1(2)	0(2)	0(2)	0(0)	0(1)	184	55 - 280
1-8.02	0(2)	2(2)	0(2)	0(3)	0(1)	0(1)		
1-9	0(14)	4(14)	0(8)	0(20)	0(8)	0(6)	177	97 - 460
1-10	0(24)	8(24)	0(14)	0(27)	0(8)	0(12)	237	110 - 340
1-11	0(4)	2(4)	0(0)	0(6)	0(1)	0(2)	239	116 - 381
1-12	2(3)	2(3)	0(2)	0(3)	0(2)	0(2)	149	53 - 251
1-13	()	()	()	()	()	()	340	97 - 1,710
1-14	0(10)	2(10)	0(6)	0(17)	0(5)	0(6)		43 - 150
1-15	()	()	()	()	()	()		
1-16	0(1)	1(1)	0(0)	0(2)	0(0)	0(0)		
1-17	()	()	()	()	()	()		
1-18	()	()	()	()	()	()		
1-19	0(6)	2(6)	0(4)	0(6)	0(4)	0(3)		80 - 400
1-20	()	()	()	()	()	()		
1-21	0(46)	10(46)	0(15)	0(46)	0(25)	0(24)	185	26 - 650
1-22	()	()	()	()	()	()		
1-25	()	()	()	()	()	()	106	
1-26	0(4)	1(4)	0(0)	0(4)	0(2)	0(2)		102 - 332
1-27	1(7)	1(7)	0(2)	0(13)	0(0)	0(0)	174	
1-28	()	()	()	()	()	()		
1-29	()	()	()	()	()	()		
1-30	()	()	()	()	()	()		
1-31	0(2)	0(2)	0(1)	0(3)	0(0)	0(0)		
1-32	0(2)	0(2)	0(1)	0(4)	0(0)	0(1)		
1-33	()	()	()	()	()	()		
1-34	()	()	()	()	()	()		
1-35	0(0)	0(0)	0(0)	0(1)	0(0)	0(0)		
1-36	()	()	()	()	()	()		
1-37	()	()	()	()	()	()		
1-38	()	()	()	()	()	()	NA	NA
1-39	()	()	()	()	()	()		
1-40	()	()	()	()	()	()		
1-41	()	()	()	()	()	()		
1-42	()	()	()	()	()	()		
1-43	()	()	()	()	()	()		
1-44	()	()	()	()	()	()		
1-45	()	()	()	()	()	()		
1-46	()	()	()	()	()	()		
1-48	()	()	()	()	()	()		
1-49	0(1)	0(1)	0(0)	0(1)	0(1)	0(1)		
1-50	()	()	()	()	()	()		
1-51	0(1)	0(1)	0(0)	0(1)	0(1)	0(1)		140 - 395
1-52	0(23)	6(23)	0(21)	0(28)	0(23)	0(22)	224	108 - 401
1-53	1(5)	1(5)	0(2)	0(5)	0(5)	0(5)		174-306
1-54								
1-54.01	0(19)	6(19)	0(9)	0(21)	0(16)	0(16)		130 - 444
1-54.02	0(10)	0(10)	0(7)	0(10)	0(9)	0(8)		130 - 304
1-55								
1-55.01	3(150)	86(150)	5(120)	1(155)	0(139)	2(126)		
1-55.02	0(25)	11(25)	0(11)	0(26)	0(13)	0(14)		90 - 500
1-55.03	0(12)	5(12)	0(9)	0(14)	0(11)	0(10)		
1-56	()	()	()	()	()	()		
1-57	0(4)	2(4)	0(3)	1(4)	0(3)	0(2)		
1-59	2(61)	31(61)	0(27)	4(59)	0(45)	2(43)		
1-60	1(29)	14(29)	2(19)	0(29)	0(19)	0(18)		120-210
1-61	0(5)	3(5)	0(4)	0(7)	0(4)	0(4)		
1-62	()	()	()	()	()	()		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

San Francisco Hydrologic Region

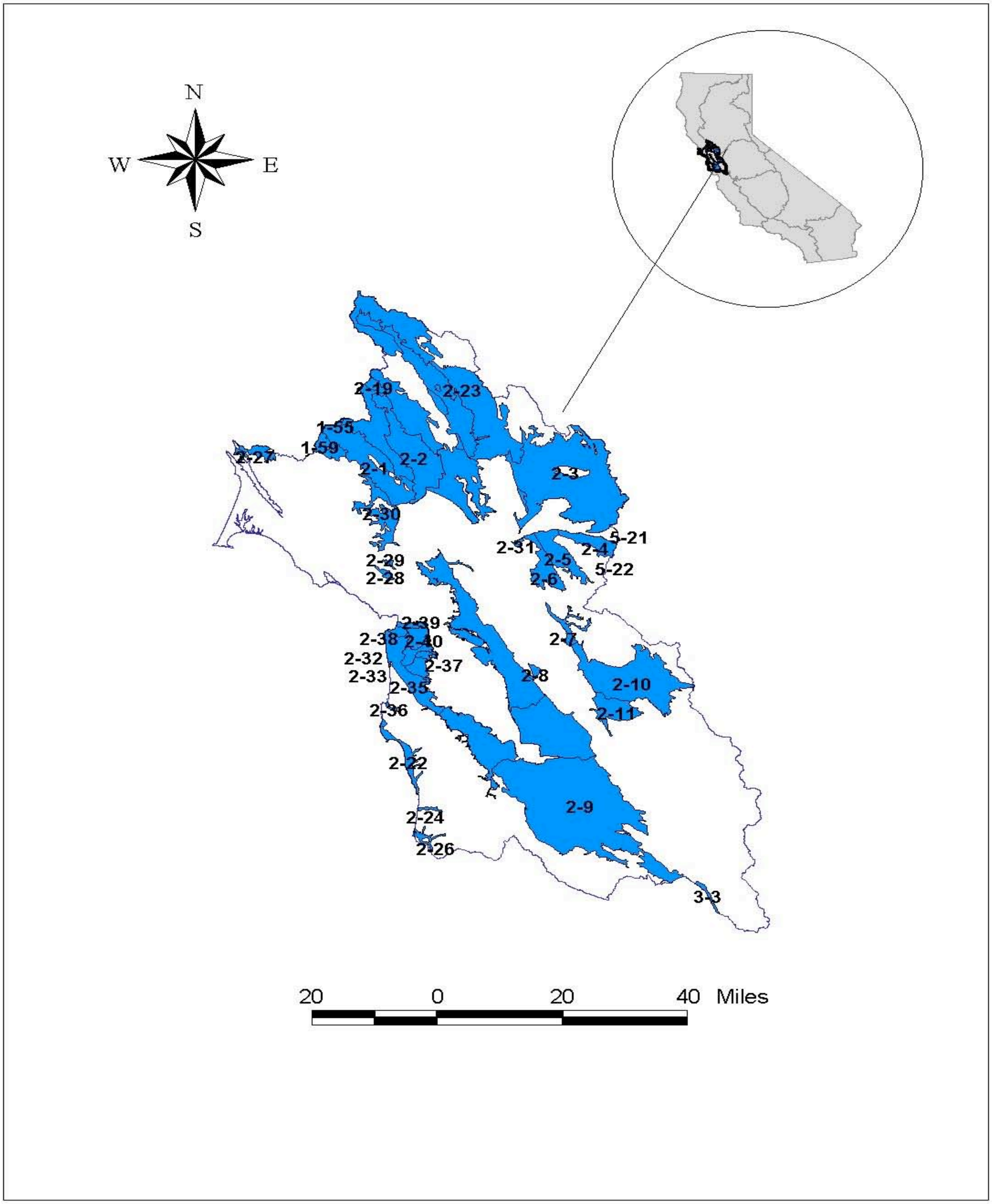


Figure 15: San Francisco Hydrologic Region
Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 23: Basins and Subbasins of the San Francisco Bay Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
2-1	Petaluma Valley	2-10	Livermore Valley
2-2	Napa-Sonoma Valley	2-11	Sunol Valley
2-2.01	Napa Valley	2-19	Kenwood Valley
2-2.02	Sonoma Valley	2-22	Half Moon Bay Terrace
2-2.03	Napa-Sonoma Lowlands		
2-3	Suisun-Fairfield Valley	2-24	San Gregorio Valley
2-4	Pittsburg Plain	2-26	Pescadero Valley
2-5	Clayton Valley	2-27	Sand Point Area
2-6	Ygnacio Valley	2-28	Ross Valley
2-7	San Ramon Valley	2-29	San Rafael Valley
2-8	Castro Valley	2-30	Novato Valley
2-9	Santa Clara Valley	2-31	Arroyo Del Hambre Valley
2-9.01	Niles Cone	2-32	Visitation Valley
2-9.02	Santa Clara	2-33	Islais Valley
2-9.03	San Mateo Plain	2-34	San Francisco Sand Dune Area
2-9.04	East Bay Plain	2-35	Merced Valley
		2-36	San Pedro Valley

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 24: Three most frequently occurring contaminants by contaminant group in the San Francisco Bay Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics	Iron – 57	Manganese – 57	Fluoride – 7
Radiological	Gross Alpha – 2	Radium 226 – 1	
Nitrates	Nitrate (as NO3) – 27	Nitrate + Nitrite – 3	Nitrite (as N) – 1
Pesticides	Di(2-Ethylhexyl)phthalate – 4	Heptachlor – 1	
VOCs	Tetrachloroethylene – 4	Dichloromethane – 3	Trichloroethylene – 2 Vinyl Chloride – 2

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 25: Groundwater Quality in San Francisco Bay Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
2-1	1(25)	9(25)	0(16)	1(27)	0(16)	0(16)	347	58-650
2-2								
2-2.01	1(5)	3(5)	0(2)	0(4)	0(9)	0(6)	272	150-370
2-2.02	3(26)	5(26)	0(7)	0(27)	0(15)	0(16)	321	100-550
2-2.03	0(1)	0(1)	0(2)	0(1)	0(2)	1(2)	185	50-300
2-3	1(15)	3(15)	0(6)	2(16)	0(12)	0(13)	410	160-740
2-4	0(3)	3(3)	1(4)	1(3)	0(6)	0(6)		
2-5	0(5)	2(5)	0(5)	0(5)	0(5)	0(5)		
2-6	0(0)	0(0)	0(1)	0(1)	0(0)	0(0)		
2-7	()	()	()	()	()	()		
2-8	()	()	()	()	()	()		
2-9								
2-9.01	4(16)	7(16)	1(14)	1(16)	0(16)	0(16)		
2-9.02	9(257)	29(257)	1(234)	10(268)	3(253)	4(252)	408	200-931
2-9.03	0(10)	2(10)	0(11)	0(10)	0(11)	0(9)	407	300-480
2-9.04	0(5)	2(5)	0(4)	0(5)	0(3)	0(3)	638	364-1,420
2-10	0(33)	5(33)	0(24)	5(33)	1(31)	2(31)		
2-11	()	()	()	()	()	()		
2-19	2(10)	4(10)	0(4)	0(10)	0(6)	0(6)		
2-22	3(12)	10(12)	0(13)	0(12)	1(13)	4(13)		
2-24	()	()	()	()	()	()		
2-26	()	()	()	()	()	()		
2-27	0(3)	0(3)	0(3)	0(3)	0(3)	0(3)		
2-28	()	()	()	()	()	()		
2-29	()	()	()	()	()	()		
2-30	0(2)	0(2)	0(1)	0(2)	0(1)	0(1)		
2-31	()	()	()	()	()	()		
2-32	()	()	()	()	()	()		
2-33	()	()	()	()	()	()		
2-35	3(16)	5(16)	0(12)	8(15)	0(17)	2(17)		
2-36	()	()	()	()	()	()		
2-37	()	()	()	()	()	()		
2-38	()	()	()	()	()	()		
2-39	()	()	()	()	()	()		
2-40	()	()	()	()	()	()		

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Central Coast Hydrologic Region

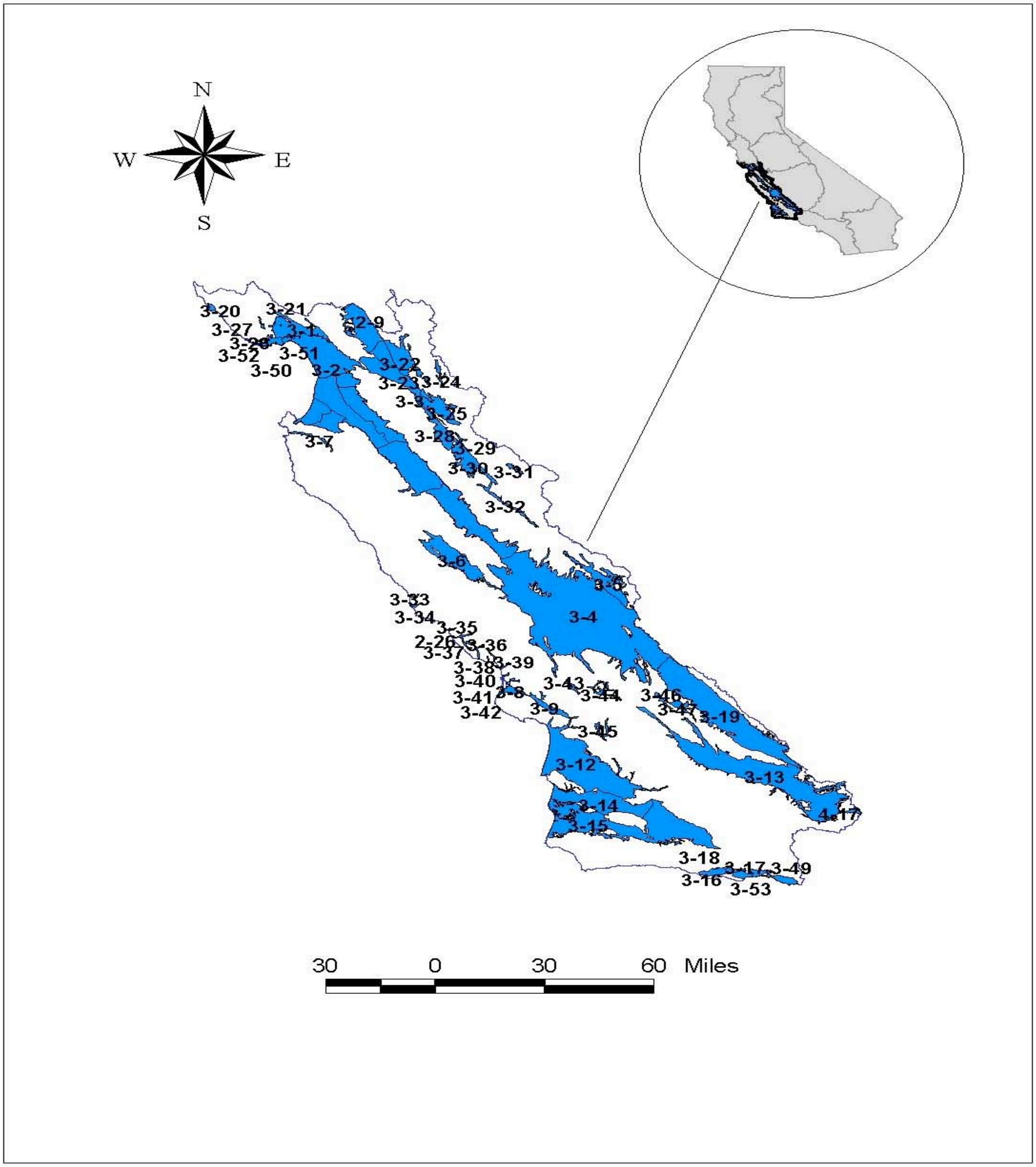

Figure 16: Central Coast Hydrologic Region

Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 26: Basins and Subbasins of Central Coast Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
3-1	Soquel Valley	3-24	Quien Sabe Valley
3-2	Pajaro Valley	3-25	Tres Pinos Valley
3-3	Gilroy-Hollister Valley	3-26	West Santa Cruz Terrace
3-3.01	Llagas Area	3-27	Scotts Valley
3-3.02	Bolsa Area	3-28	San Benito River Valley
3-3.03	Hollister Area	3-29	Dry Lake Valley
3-3.04	San Juan Bautista Area	3-30	Bitter Water Valley
3-4	Salinas Valley	3-31	Hernandez Valley
3-4.01	180/400 Foot Aquifer	3-32	Peach Tree Valley
3-4.02	East Side Aquifer	3-33	San Carpoforo Valley
3-4.04	Forebay Aquifer	3-34	Arroyo de la Cruz Valley
3-4.05	Upper Valley Aquifer	3-35	San Simeon Valley
3-4.06	Paso Robles Area	3-36	Santa Rosa Valley
3-4.08	Seaside Area	3-37	Villa Valley
3-4.09	Langley Area	3-38	Cayucos Valley
3-4.10	Corral de Tierra Area	3-39	Old Valley
3-5	Cholame Valley	3-40	Toro Valley
3-6	Lockwood Valley	3-41	Morro Valley
3-7	Carmel Valley	3-42	Chorro Valley
3-8	Los Osos Valley	3-43	Rinconada Valley
3-9	San Luis Obispo Valley	3-44	Pozo Valley
3-12	Santa Maria River Valley	3-45	Huasna Valley
3-13	Cuyama Valley	3-46	Rafael Valley
3-14	San Antonio Creek Valley	3-47	Big Spring Area
3-15	Santa Ynez River Valley	3-49	Montecito
3-16	Goleta	3-50	Felton Area
3-17	Santa Barbara	3-51	Majors Creek
3-18	Carpinteria	3-52	Needle Rock Point
3-19	Carrizo Plain	3-53	Foothill
3-20	Ano Nuevo Area		
3-21	Santa Cruz Purisima Formation		
3-22	Santa Ana Valley		
3-23	Upper Santa Ana Valley		

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Table 27: Three most frequently occurring contaminants by contaminant group in the Central Coast Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Antimony – 6	Aluminum – 4	Chromium (Total) – 4
Inorganics – Secondary	Iron – 145	Manganese – 135	TDS – 11
Radiological	Gross Alpha – 15	Radium 226 – 3	Uranium – 3
Nitrates	Nitrate (as NO3) – 69	Nitrate + Nitrite – 24	
Pesticides	Heptachlor – 4	Di (2-Ethylhexyl) phthalate – 2	
VOCs	TCE – 3	3 are tied at 2 exceedances	

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 28: Groundwater Quality in the Central Coast Hydrologic Region

	Public Supply Wells Wells Exceeding MCL (Wells Sampled)						Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
3-1	0(14)	8(14)	0(10)	0(10)	0(8)	0(8)	482	270-990
3-2	0(37)	9(37)	0(34)	0(37)	1(41)	0(42)	580-910	300-30,000
3-3								
3-3.01	3(65)	11(65)	0(35)	13(72)	5(51)	0(51)		
3-3.02	0(1)	0(1)	0(1)	1(3)	0(1)	0(1)		
3-3.03	0(24)	9(24)	0(10)	3(24)	0(16)	0(16)		
3-3.04	5(33)	16(33)	4(23)	8(37)	0(29)	0(30)		
3-4								
3-4.01	0(33)	7(33)	3(36)	2(33)	0(41)	4(41)	478	223-1,013
3-4.02	0(28)	4(28)	0(30)	2(28)	0(30)	0(30)	450	168-977
3-4.04	2(15)	6(15)	0(17)	3(14)	0(14)	0(15)	624	300-1,100
3-4.05	4(12)	0(12)	0(11)	6(12)	0(13)	0(13)	443	140-3,700
3-4.06	1(56)	13(56)	5(52)	4(58)	0(51)	1(51)	614	165-3,868
3-4.08	1(19)	6(19)	3(21)	0(21)	0(20)	0(20)	600	200-900
3-4.09	0(6)	0(6)	0(4)	0(2)	0(11)	0(11)	Unknown	52-348
3-4.10	0(9)	5(9)	0(11)	0(9)	0(10)	0(10)		
3-5	()	()	()	()	()	()		Unknown
3-6	0(5)	0(5)	0(4)	0(5)	0(5)	0(5)		
3-7	0(18)	14(18)	0(17)	0(18)	0(18)	0(18)	260-670	220-1,200
3-8	0(11)	5(11)	0(10)	2(11)	0(10)	0(10)	354	78-33,700
3-9	0(5)	2(5)	0(5)	0(6)	0(5)	0(5)	583	278-1,949
3-12	2(81)	19(81)	1(79)	15(81)	0(79)	1(79)	598	139-1,200
3-13	1(4)	3(4)	0(3)	0(4)	0(2)	0(2)		206-3,905
3-14	0(7)	5(7)	0(7)	0(7)	0(6)	0(6)	415	129-8,040
3-15	0(49)	25(49)	0(51)	4(58)	0(52)	0(51)	507	400-700
3-16	0(12)	5(12)	1(12)	0(12)	0(5)	0(11)	755	617-929
3-17	0(4)	3(4)	0(3)	0(4)	0(3)	0(3)		217-385
3-18	0(4)	3(4)	0(4)	0(4)	0(4)	0(4)	557	317-1,780
3-19	()	()	()	()	()	()		
3-20	()	()	()	()	()	()		
3-21	1(7)	6(7)	0(3)	0(6)	0(10)	1(10)	440	380-560
3-22	()	()	()	()	()	()		Unknown
3-23	()	()	()	()	()	()		Unknown
3-24	()	()	()	()	()	()		Unknown
3-25	0(3)	1(3)	0(2)	0(2)	0(1)	0(1)		Unknown
3-26	0(6)	4(6)	0(6)	0(5)	0(5)	1(5)		
3-27	0(4)	2(4)	0(4)	0(4)	0(4)	2(4)	360	100-980
3-28	()	()	()	()	()	()		Unknown
3-29	0(0)	0(0)	0(0)	0(2)	0(0)	0(0)		Unknown
3-30	()	()	()	()	()	()		Unknown
3-31	()	()	()	()	()	()		Unknown
3-32	()	()	()	()	()	()		Unknown
3-33	()	()	()	()	()	()		217-385
3-34	()	()	()	()	()	()		211-381
3-35	0(3)	0(3)	0(3)	0(3)	0(3)	0(3)	413	46-2,210
3-36	0(1)	1(1)	0(1)	0(1)	0(1)	0(1)		298-2,637
3-37	()	()	()	()	()	()		260-1,635
3-38	()	()	()	()	()	()		815-916
3-39	0(1)	0(1)	0(0)	0(1)	0(1)	0(0)		346-2,462
3-40	()	()	()	()	()	()		458-732
3-41	1(4)	2(4)	0(4)	0(4)	0(4)	0(4)	1150	469-5,100
3-42	0(6)	2(6)	0(4)	4(6)	0(4)	0(4)	656	60-3,606
3-43	()	()	()	()	()	()		
3-44	()	()	()	()	()	()		287-676
3-45	()	()	()	()	()	()		
3-46	()	()	()	()	()	()		
3-47	()	()	()	()	()	()		
3-49	0(14)	8(14)	0(15)	2(16)	0(5)	0(5)	700	600-1,100
3-50	()	()	()	()	()	()		
3-51	()	()	()	()	()	()		
3-52	()	()	()	()	()	()		
3-53	0(7)	1(7)	1(8)	0(7)	0(7)	1(7)	828	554-1,118

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South Coast Hydrologic Region

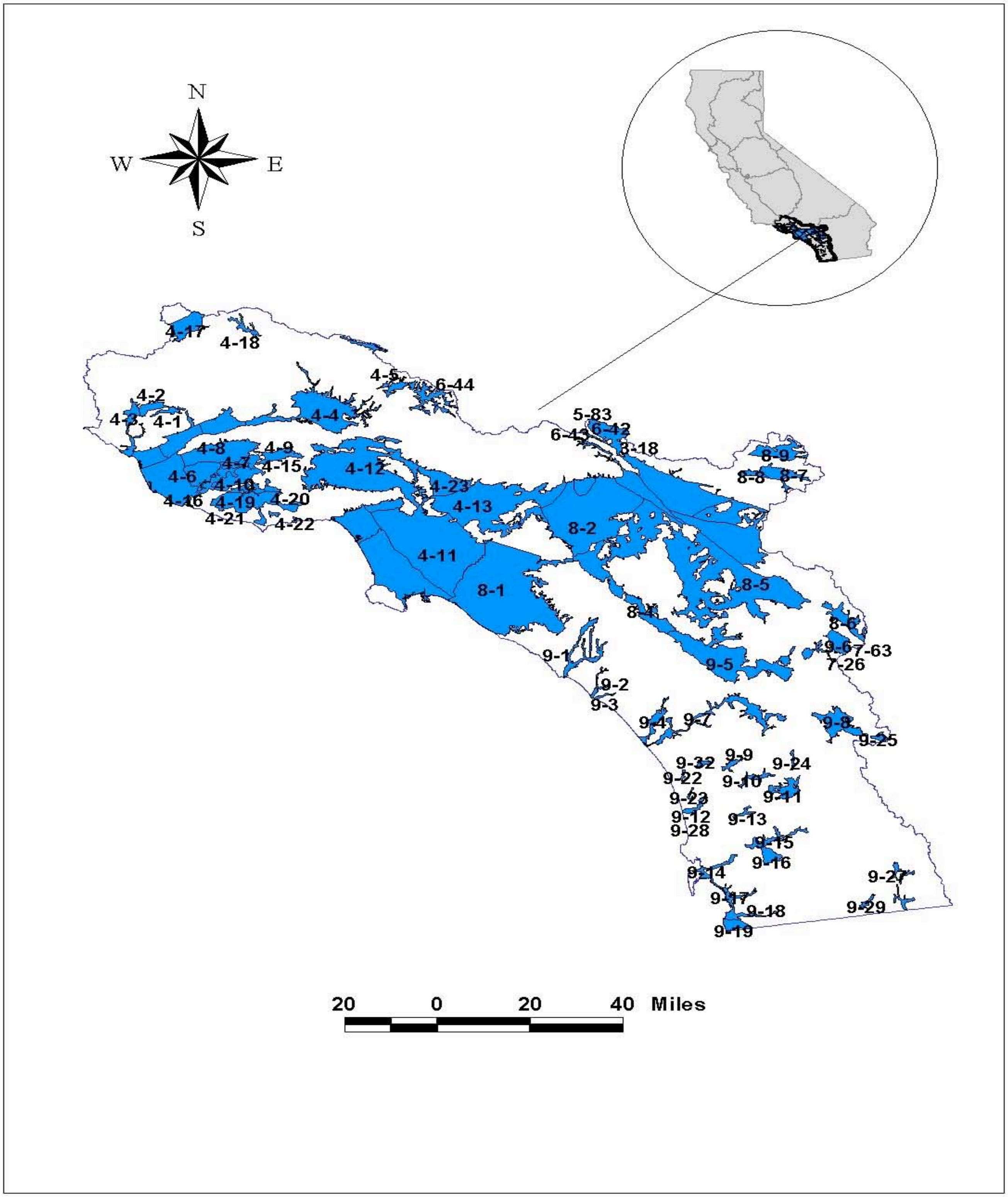

Figure 17: South Coast Hydrologic Region

Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 29: Basins and Subbasins of the South Coast Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
4-1	Upper Ojai Valley	8-2.04	Rialto-Colton
4-2	Ojai Valley	8-2.05	Cajon
4-3	Ventura River Valley	8-2.06	Bunker Hill
4-3.01	Upper Ventura River	8-2.07	Yucaipa
4-3.02	Lower Ventura River	8-2.08	San Timoteo
4-4	Santa Clara River Valley	8-2.09	Temescal
4-4.02	Oxnard	8-4	Elsinore
4-4.03	Mound	8-5	San Jacinto
4-4.04	Santa Paula	8-6	Hemet Lake Valley
4-4.05	Fillmore	8-7	Big Meadows Valley
4-4.06	Piru	8-8	Seven Oaks Valley
4-4.07	Santa Clara River Valley East	8-9	Bear Valley
4-5	Acton Valley	9-1	San Juan Valley
4-6	Pleasant Valley	9-2	San Mateo Valley
4-7	Arroyo Santa Rosa Valley	9-3	San Onofre Valley
4-8	Las Posas Valley	9-4	Santa Margarita Valley
4-9	Simi Valley	9-5	Temecula Valley
4-10	Conejo Valley	9-6	Coahuila Valley
4-11	Coastal Plain of Los Angeles	9-7	San Luis Rey Valley
4-11.01	Santa Monica	9-8	Warner Valley
4-11.02	Hollywood	9-9	Escondido Valley
4-11.03	West Coast	9-10	San Pasqual Valley
4-11.04	Central	9-11	Santa Maria Valley
4-12	San Fernando Valley	9-12	San Dieguito Creek
4-13	San Gabriel Valley	9-13	Poway Valley
4-15	Tierre Rejada	9-14	Mission Valley
4-16	Hidden Valley	9-15	San Diego River Valley
4-17	Lockwood Valley	9-16	El Cajon Valley
4-18	Hungry Valley	9-17	Sweetwater Valley
4-19	Thousand Oaks Area	9-18	Otay Valley
4-20	Russell VAlley	9-19	Tijuana Basin
4-21X	Conejo-Tierra Rejada Volcanic	9-22	Batiquitos Lagoon Valley
4-22	Malibu Valley	9-23	San Elijo Valley
4-23	Raymond	9-24	Pamo Valley
8-1	Coastal Plain of Orange County	9-25	Ranchita Town Area
8-2	Upper Santa Ana Valley	9-27	Cottonwood Valley
8-2.01	Chino	9-28	Campo Valley
8-2.02	Cucamonga	9-29	Potrero Valley
8-2.03	Riverside-Arlington	9-32	San Marcos Area

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Table 30: Three most frequently occurring contaminants by contaminant group in the South Coast Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Fluoride – 56	Thallium – 13	Aluminum – 12
Inorganics – Secondary	Iron – 337	Manganese – 335	TDS – 36
Radiological	Gross Alpha – 104	Uranium – 40	Radium 226 – 9 Radium 228 – 9
Nitrates	Nitrate (as NO3) – 364	Nitrate + Nitrite – 179	Nitrate Nitrogen (NO3-N) – 14
Pesticides	DBCP – 61	Di(2-Ethylhexyl)phthalate –5	Heptchlor – 2 EDB – 2
VOCs	Trichloroethylene – 196	Tetrachloroethylene – 152	1,2 Dichloroethane – 89

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Table 31: Groundwater Quality in the South Coast Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
4-1	0(1)	1(1)	0(1)	0(1)	0(1)	0(1)	707	438-1,249
4-2	0(8)	8(8)	1(8)	1(8)	0(8)	0(6)	640	450-1,140
4-3								
4-3.01	4(17)	4(17)	0(17)	2(18)	0(16)	0(16)	706	500-1,240
4-3.02	()	()	()	()	()	()		760-3,000
4-4								
4-4.02	6(73)	49(73)	8(69)	14(80)	1(63)	2(68)	1,102	160-1,800
4-4.03	1(2)	2(2)	0(2)	0(2)	0(2)	0(2)	1,644	1,498-1,908
4-4.04	3(16)	15(16)	1(12)	2(16)	0(9)	0(9)	1,198	470-3,010
4-4.05	0(13)	3(13)	1(10)	1(14)	0(10)	1(10)	1,100	800-2,400
4-4.06	0(3)	1(3)	0(3)	0(3)	0(3)	0(3)	1,300	608-2,400
4-4.07	4(67)	7(67)	2(56)	2(74)	4(66)	0(66)		
4-5	0(7)	0(7)	0(0)	1(14)	0(4)	0(4)		
4-6	0(10)	10(10)	1(10)	0(10)	0(10)	0(10)	1,110	597-3,490
4-7	1(8)	2(8)	0(8)	5(8)	0(8)	0(8)	1,006	670-1,200
4-8	1(22)	16(22)	2(22)	0(24)	1(22)	0(22)	742	338-1,700
4-9	0(4)	3(4)	3(4)	1(4)	0(4)	0(1)		1,580
4-10	0(3)	0(3)	0(2)	1(3)	0(1)	0(2)	631	335-2,064
4-11								
4-11.01	0(13)	8(13)	1(12)	0(13)	0(12)	9(12)	916	729-1,156
4-11.02	()	()	()	()	()	()		526
4-11.03	0(45)	30(45)	1(45)	0(46)	0(46)	0(44)	456	
4-11.04	15(316)	113(316)	1(315)	2(315)	0(322)	43(344)	453	200-2,500
4-12	6(129)	17(129)	13(122)	44(129)	3(134)	90(134)	499	176-1,160
4-13	3(287)	20(287)	4(278)	73(300)	1(292)	85(301)	367	90-4,288
4-15	()	()	()	()	()	()		619-930
4-16	()	()	()	()	()	()	453	289-743
4-17	0(1)	1(1)	0(0)	0(1)	0(1)	0(1)		
4-18	()	()	()	()	()	() <350		
4-19	()	()	()	()	()	()	1,410	1,200-2,300
4-20	()	()	()	()	()	()		
4-21X	()	()	()	()	()	()		
4-22	()	()	()	()	()	()		
4-23	9(66)	9(66)	8(55)	23(78)	0(57)	19(60)	346	138-780
8-1	1(249)	21(249)	5(253)	15(267)	0(268)	7(268)	475	232-661
8-2								
8-2.01	17(153)	31(153)	5(149)	73(164)	6(153)	10(151)	484	200-600
8-2.02	0(24)	4(24)	0(23)	14(24)	10(24)	0(24)		
8-2.03	2(48)	11(48)	11(48)	21(51)	19(50)	8(50)		370-756
8-2.04	0(38)	3(38)	0(40)	2(38)	0(40)	3(40)	337	
8-2.05	0(2)	1(2)	0(2)	0(2)	0(2)	0(2)		
8-2.06	13(212)	25(212)	34(207)	34(214)	20(211)	32(211)		150-550
8-2.07	1(43)	4(43)	1(44)	12(46)	4(43)	1(44)	334	
8-2.08	0(27)	1(27)	0(26)	0(28)	0(27)	0(27)		
8-2.09	2(20)	2(20)	1(17)	13(20)	0(17)	0(17)	753	373-950
8-4	1(18)	4(18)	0(20)	0(18)	0(20)	1(20)		
8-5	3(56)	15(56)	2(56)	12(58)	1(55)	0(54)	463	160-12,000
8-6	0(5)	2(5)	0(5)	0(5)	0(5)	0(5)		
8-7	0(4)	0(4)	0(3)	0(4)	0(3)	0(3)		
8-8	()	()	()	()	()	()		
8-9	7(33)	5(33)	0(37)	0(32)	0(20)	0(31)		
9-1	0(3)	3(3)	0(3)	0(3)	1(3)	0(3)	760	430-12,880
9-2	1(5)	3(5)	0(4)	2(5)	0(5)	0(5)	586	490-770
9-3	()	()	()	()	()	()		600-1,500
9-4	()	()	()	()	()	()		337-9,030
9-5	4(56)	16(56)	1(57)	2(56)	0(58)	2(56)	476	220-1,500
9-6	()	()	()	()	()	()		304-969
9-7	10(27)	17(27)	3(23)	2(24)	0(19)	1(19)	1,258	530-7,060
9-8	0(2)	1(2)	1(1)	0(2)	0(1)	0(1)		263
9-9	()	()	()	()	()	()		250-5,000
9-10	()	()	()	()	()	()		500-1,550
9-11	0(3)	0(3)	3(3)	0(3)	0(3)	0(2)	1,000	324-1,680
9-12	()	()	()	()	()	()		2,000

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
9-13	0(1)	0(1)	0(0)	0(1)	0(1)	0(1)		610-1,500
9-14	()	()	()	()	()	()		
9-15	0(1)	1(1)	0(1)	0(1)	0(1)	0(1)		260-2,870
9-16	0(1)	1(1)	1(1)	0(1)	0(1)	1(1)		2,340
9-17	0(9)	9(9)	3(9)	0(9)	0(9)	0(9)	2,114	300-50,000
9-18	()	()	()	()	()	()		500->2,000
9-19	()	()	()	()	()	()		380-3,620
9-22	()	()	()	()	()	()	1,280	788-2,362
9-23	()	()	()	()	()	()		1,170-5,090
9-24	()	()	()	()	()	()	369	279-455
9-25	()	()	()	()	()	()		283-305
9-27	()	()	()	()	()	()		
9-28	()	()	()	()	()	()		800
9-29	()	()	()	()	()	()		
9-32	()	()	()	()	()	()		500-700

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Sacramento River Hydrologic Region

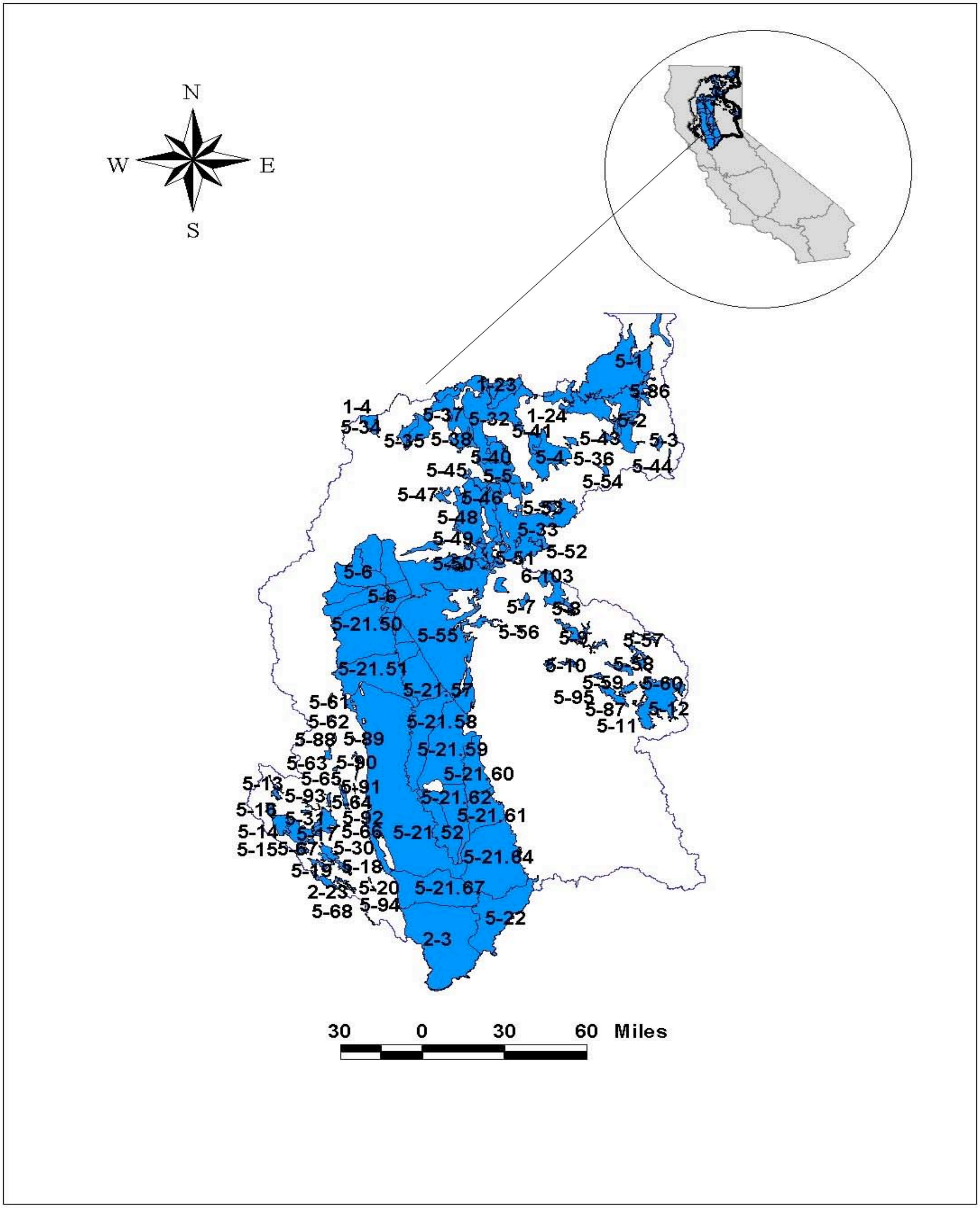

Figure 18: Sacramento River Hydrologic Region

Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 32: Basins and Subbasins of Sacramento River Hydrologic Region

Basin/subbasins	Basin Name	Basin/subbasins	Basin Name
5-1	Goose Lake Valley	5-21.64	North American
5-1.01	Lower Goose Lake Valley	5-21.65	South American
5-1.02	Fandango Valley	5-21.66	Solano
5-2	Alturas Area	5-21.67	Yolo
5-2.01	South Fork Pitt River	5-21.68	Capay Valley
5-2.02	Warm Springs Valley	5-30	Lower Lake Valley
5-3	Jess Valley	5-31	Long Valley
5-4	Big Valley	5-35	Mccloud Area
5-5	Fall River Valley	5-36	Round Valley
5-6	Redding Area	5-37	Toad Well Area
5-6.01	Bowman	5-38	Pondosa Town Area
5-6.02	Rosewood	5-40	Hot Springs Valley
5-6.03	Anderson	5-41	Egg Lake Valley
5-6.04	Enterprise	5-43	Rock Prairie Valley
5-6.05	Millville	5-44	Long Valley
5-6.06	South Battle Creek	5-45	Cayton Valley
5-7	Lake Almanor Valley	5-46	Lake Britton Area
5-8	Mountain Meadows Valley	5-47	Goose Valley
5-9	Indian Valley	5-48	Burney Creek Valley
5-10	American Valley	5-49	Dry Burney Creek Valley
5-11	Mohawk Valley	5-50	North Fork Battle Creek
5-12	Sierra Valley	5-51	Butte Creek Valley
5-12.01	Sierra Valley	5-52	Gray Valley
5-12.02	Chilcoot	5-53	Dixie Valley
5-13	Upper Lake Valley	5-54	Ash Valley
5-14	Scotts Valley	5-56	Yellow Creek Valley
5-15	Big Valley	5-57	Last Chance Creek Valley
5-16	High Valley	5-58	Clover Valley
5-17	Burns Valley	5-59	Grizzly Valley
5-18	Coyote Valley	5-60	Humbug Valley
5-19	Collayomi Valley	5-61	Chrome Town Area
5-20	Berryessa Valley	5-62	Elk Creek Area
5-21	Sacramento Valley	5-63	Stonyford Town Area
5-21.50	Red Bluff	5-64	Bear Valley
5-21.51	Corning	5-65	Little Indian Valley
5-21.52	Colusa	5-66	Clear Lake Cache Formation
5-21.53	Bend	5-68	Pope Valley
5-21.54	Antelope	5-86	Joseph Creek
5-21.55	Dye Creek	5-87	Middle Fork Feather River
5-21.56	Los Molinos	5-88	Stony Gorge Reservoir
5-21.57	Vina	5-89	Squaw Flat
5-21.58	West Butte	5-90	Funks Creek
5-21.59	East Butte	5-91	Antelope Creek
5-21.60	North Yuba	5-92	Blanchard Valley
5-21.61	South Yuba	5-93	North Fork Cache Creek
5-21.62	East Sutter	5-94	Middle Creek
5-21.63	West Sutter	5-95	Meadow Valley

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 33: Three most frequently occurring contaminants by contaminant group in the Sacramento River Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Cadmium – 4	Chromium (Total) – 3	3 tied at 2
Inorganics – Secondary	Manganese – 221	Iron – 166	Specific Conductance – 3
Radiological	Gross Alpha – 4		
Nitrates	Nitrate (as NO3) – 22	Nitrate + Nitrite – 5	Nitrate Nitrogen (NO3-N) – 2
Pesticides	Di(2-Ethylhexyl)phthalate–4		
VOCs	Tetrachloroethylene–11	Trichloroethylene – 7	Benzene – 4

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 34: Groundwater Quality in the Sacramento River Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
5-1								
5-1.01	()	()	()	()	()	()	183	68 - 528
5-1.02	()	()	()	()	()	()		
5-2							357	180 - 800
5-2.01	()	()	()	()	()	()		
5-2.02	()	()	()	()	()	()		
5-3	()	()	()	()	()	()		
5-4	0(7)	4(7)	0(5)	0(9)	0(3)	0(3)	260	141 - 633
5-5	0(1)	0(1)	0(2)	0(2)	0(1)	0(1)	174	115 - 232
5-6								
5-6.01	0(6)	1(6)	0(5)	0(6)	0(5)	0(5)		70 - 247
5-6.02	()	()	()	()	()	()		118 - 218
5-6.03	0(19)	1(19)	0(31)	0(20)	0(13)	0(17)	194	109-320
5-6.04	0(18)	7(18)	0(19)	0(17)	0(7)	0(14)		160 - 210
5-6.05	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	140	
5-6.06	()	()	()	()	()	()	360	
5-7	0(3)	0(3)	0(3)	0(3)	0(3)	0(3)	105	53 - 260
5-8	()	()	()	()	()	()		
5-9	0(14)	1(14)	0(5)	0(17)	0(1)	0(1)		
5-10	0(29)	7(29)	0(14)	0(34)	0(12)	1(13)		
5-11	0(11)	5(11)	0(3)	0(15)	0(4)	0(4)	248	210 - 285
5-12								
5-12.01	0(9)	1(9)	0(3)	0(10)	0(9)	0(9)	312	110 - 1,620
5-12.02	0(5)	1(5)	0(4)	0(5)	0(4)	0(4)		
5-13	0(6)	3(6)	0(4)	0(7)	0(4)	0(4)		
5-14	1(7)	1(7)	0(6)	1(9)	0(4)	0(5)	158	140 - 175
5-15	0(8)	6(8)	0(6)	0(8)	0(6)	0(5)	535	270 - 790
5-16	0(1)	1(1)	0(0)	0(1)	0(0)	0(0)	598	480 - 745
5-17	()	()	()	()	()	()	335	280 - 455
5-18	0(5)	0(5)	0(3)	0(5)	0(2)	0(2)	288	175 - 390
5-19	0(2)	0(2)	0(2)	0(2)	0(2)	0(2)	202	150 - 255
5-20	()	()	()	()	()	()		
5-21								
5-21.50	2(41)	4(41)	0(33)	0(41)	0(23)	0(16)	207	120 - 500
5-21.51	0(20)	0(20)	0(19)	0(20)	0(18)	0(16)	286	130 - 490
5-21.52	0(103)	18(103)	0(57)	2(109)	0(64)	0(58)	391	120 - 1,220
5-21.53	0(1)	0(1)	0(1)	0(1)	0(0)	0(0)		334-360
5-21.54	0(17)	3(17)	0(10)	0(17)	0(6)	0(3)	296	
5-21.55	0(2)	0(2)	0(2)	0(2)	0(1)	0(0)	240	159 - 396
5-21.56	0(6)	0(6)	0(6)	0(6)	0(4)	0(3)	217	
5-21.57	0(52)	1(52)	0(49)	4(56)	0(49)	4(48)	285	48 - 543
5-21.58	0(29)	2(29)	0(25)	0(30)	0(26)	1(26)	293	130 - 676
5-21.59	1(30)	3(30)	0(25)	2(32)	0(16)	0(19)	235	122 - 570

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
5-21.60	0(27)	7(27)	1(23)	1(35)	0(23)	2(24)		
5-21.61	2(38)	32(38)	0(31)	0(43)	0(33)	1(33)		
5-21.62	0(37)	12(37)	0(34)	4(41)	0(19)	0(20)		
5-21.63	0(4)	4(4)	0(3)	0(4)	0(3)	0(0)		
5-21.64	7(265)	75(265)	2(254)	0(276)	0(268)	6(267)	300	150 - 1,000
5-21.65	2(144)	46(144)	1(147)	1(170)	0(148)	8(144)	221	24-581
5-21.66	1(71)	17(71)	0(41)	8(96)	3(56)	1(57)	427	150 - 880
5-21.67	3(61)	11(61)	0(53)	1(67)	0(59)	1(59)	880	480 - 2,060
5-21.68	()	()	()	()	()	()		
5-30	0(3)	2(3)	0(1)	0(5)	0(1)	0(0)	568	290 - 1,230
5-31	()	()	()	()	()	()		
5-35	0(0)	0(0)	0(0)	0(1)	0(0)	0(0)		
5-36	()	()	()	()	()	()		148 - 633
5-37	()	()	()	()	()	()		
5-38	()	()	()	()	()	()		
5-39	0(1)	0(1)	0(0)	0(1)	0(0)	0(0)		
5-40	()	()	()	()	()	()		
5-41	0(6)	0(6)	0(0)	0(7)	0(2)	0(2)		
5-43	()	()	()	()	()	()		
5-44	()	()	()	()	()	()		
5-45	()	()	()	()	()	()		
5-46	()	()	()	()	()	()		
5-47	()	()	()	()	()	()		
5-48	0(0)	0(0)	0(0)	0(1)	0(0)	0(0)		

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San Joaquin River Hydrologic Region

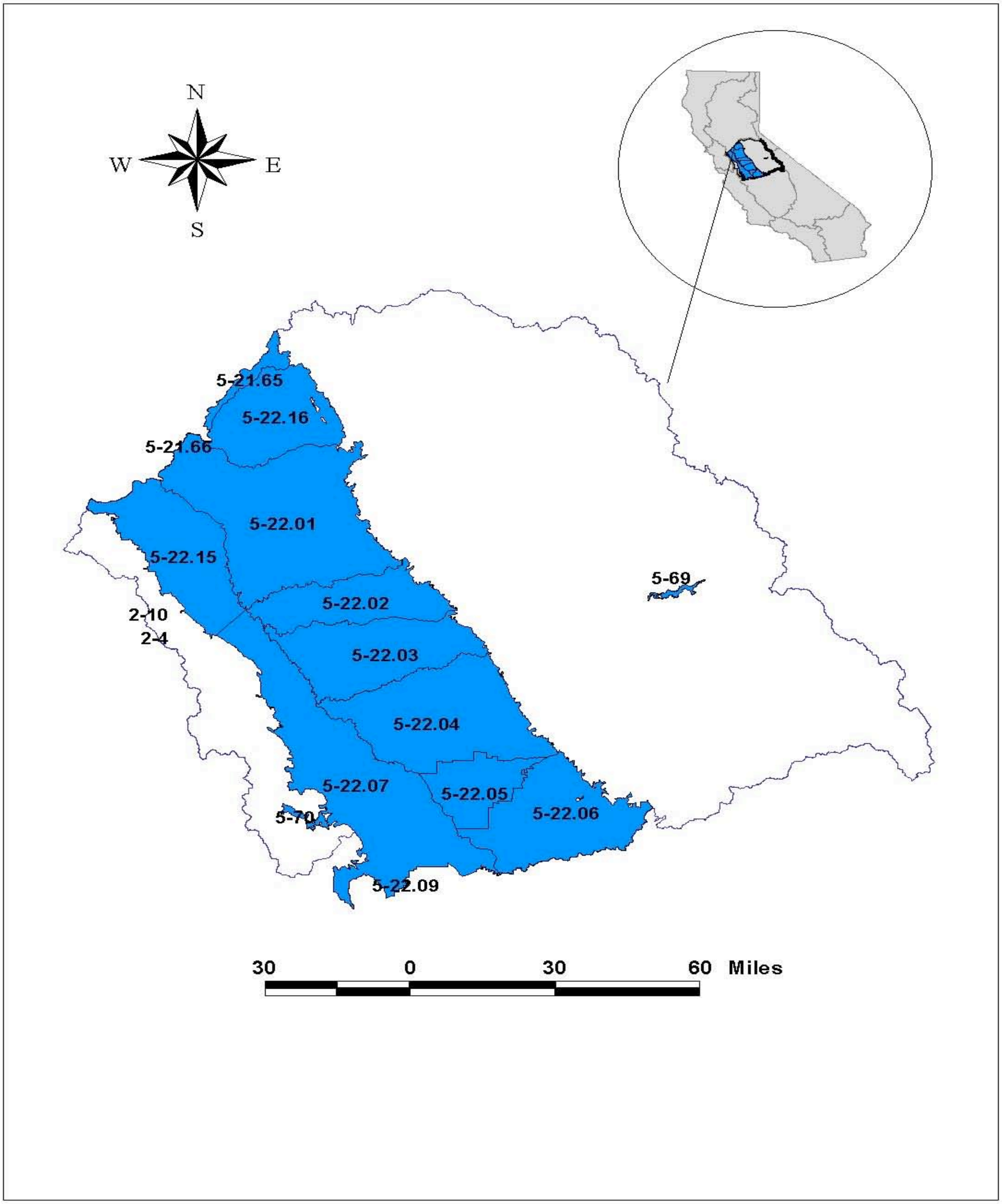

Figure 19: San Joaquin River Hydrologic Region
Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 35: Basins and Subbasins for the San Joaquin River Hydrologic Region

Basin/subbasin	Basin Name
5-22	San Joaquin Valley
5-22.01	Eastern San Joaquin
5-22.02	Modesto
5-22.03	Turlock
5-22.04	Merced
5-22.05	Chowchilla
5-22.06	Madera
5-22.07	Delta-Mendota
5-22.15	Tracy
5-22.16	Cosumnes
5-69	Yosemite Valley
5-70	Los Banos Creek Valley

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft)
(water quality data provided by California DHS)

Table 36: Three most frequently occurring contaminants by contaminant group in the San Joaquin River Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Aluminum – 4	Arsenic – 4	4 tied at 2 exceedances
Inorganics – Secondary	Manganese – 123	Iron – 102	TDS – 9
Radiological	Uranium – 33	Gross Alpha – 26	Radium 228 – 6
Nitrates	Nitrate (as NO3) – 23	Nitrate + Nitrite – 6	Nitrate Nitrogen (NO3-N) – 3
Pesticides	DBCP – 44	Di(2-Ethylhexyl)phthalate – 11	EDB – 6
VOCs	Tetrachloroethylene–8	Dichloromethane – 3	Trichloroethylene – 3

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 37: Groundwater Quality in the San Joaquin River Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
5-22								
5-22.01	8(182)	71(182)	8(179)	7(189)	21(191)	6(185)	310	30 - 1,632
5-22.02	3(110)	8(110)	25(109)	3(114)	14(117)	8(117)	60-500	200-8300
5-22.03	0(84)	11(84)	12(80)	8(90)	5(89)	3(86)	200-500	100-8300
5-22.04	0(65)	8(65)	1(58)	2(64)	8(62)	1(59)	200-400	100-3600
5-22.05	0(12)	0(12)	0(10)	0(10)	0(12)	0(12)	200-500	120-6400
5-22.06	0(44)	7(44)	0(44)	1(43)	3(46)	0(45)	200-400	100-6400
5-22.07	2(47)	18(47)	1(47)	4(51)	1(47)	0(45)	770	210-86,000
5-22.15	4(34)	18(34)	2(39)	2(36)	2(36)	0(37)	1,190	210-7,800
5-22.16	0(26)	21(26)	0(17)	0(30)	1(22)	0(22)	218	140-438
5-69	0(3)	1(3)	0(3)	0(3)	0(3)	0(3)	54	43-73
5-70	()	()	()	()	()	()	Unknown	Unknown

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Tulare Lake Hydrologic Region

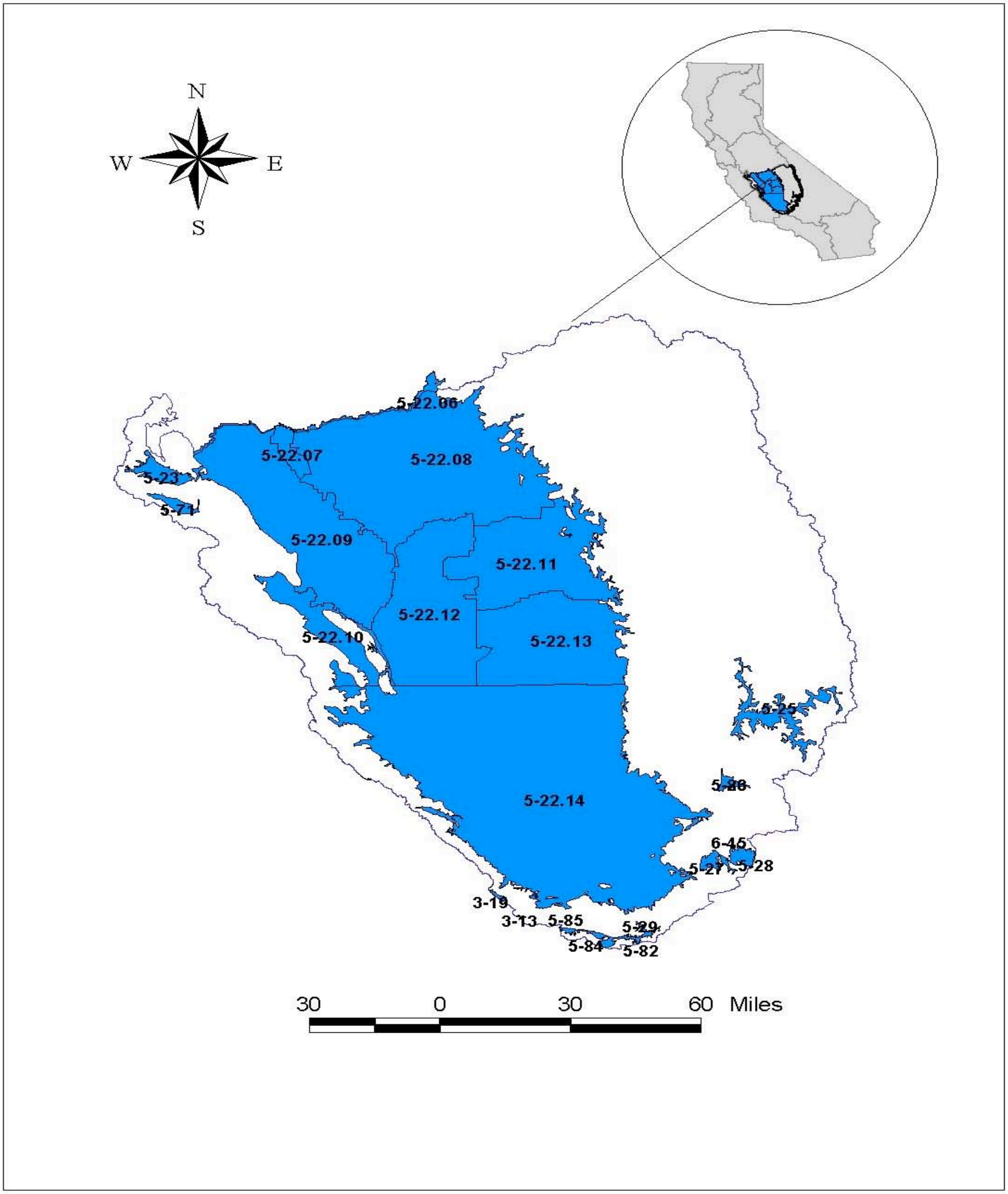

Figure 20: Tulare Lake Hydrologic Region
Modified From DWR, 2002. Note: Not all sub-basins labeled on map

Table 38: Basins and Subbasins of Tulare Lake Hydrologic Regions

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
5-22	San Joaquin Valley	5-26	Walker Basin Creek Valley
5-22.08	Kings	5-27	Cummings Valley
5-22.09	Westside	5-28	Tehachapi Valley West
5-22.10	Pleasant Valley	5-29	Castac Lake Valley
5-22.11	Kaweah	5-71	Vallecitos Creek Valley
5-22.12	Tulare Lake	5-82	Cuddy Canyon Valley
5-22.13	Tule	5-83	Cuddy Ranch Area
5-22.14	Kern County	5-84	Cuddy Valley
5-23	Panoche Valley	5-85	Mil Potrero Area
5-25	Kern River Valley		

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Table 39: Three most frequently occurring contaminants by contaminant group in the Tulare Lake Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics - Primary	Fluoride – 32	Arsenic – 16	Aluminum – 13
Inorganics - Secondary	Iron – 155	Manganese – 82	TDS – 9
Radiological	Gross Alpha – 74	Uranium – 24	Radium 228 – 8
Nitrates	Nitrate(as NO3) – 83	Nitrate + Nitrite – 14	Nitrite(as N) – 3
Pesticides	DBCP – 130	EDB – 24	Di(2-Ethylhexyl)phthalate – 7
VOCs	Trichloroethylene – 17	Tetrachloroethylene – 16	Benzene – 6 MTBE – 6

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 40: Groundwater Quality in the Tulare Lake Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
5-22								
5-22.08	8(457)	41(457)	24(443)	23(463)	105(495)	17(468)	200-700	40-2000
5-22.09	0(2)	2(2)	0(1)	0(2)	0(2)	0(2)	520	220-35,000
5-22.10	()	()	()	()	()	()	1,500	1000-3000
5-22.11	1(157)	25(157)	8(158)	13(165)	16(167)	5(165)	189	35-580
5-22.12	11(39)	10(39)	7(39)	0(38)	2(40)	2(39)	200-600	200-40,000
5-22.13	0(73)	10(73)	3(71)	6(71)	1(73)	5(71)	256	200-30,000
5-22.14	18(444)	60(444)	15(372)	38(475)	23(436)	19(409)	400-450	150-5000
5-23	()	()	()	()	()	()	1,300	394-3530
5-25	14(73)	21(73)	19(78)	5(76)	0(58)	1(58)	378	253-480
5-26	()	()	()	()	()	()	Unknown	Unknown
5-27	2(15)	5(15)	1(11)	0(15)	1(15)	0(14)	344	Unknown
5-28	3(28)	2(28)	0(23)	2(30)	0(23)	0(22)	315	280-365
5-29	3(7)	1(7)	1(5)	0(8)	0(6)	0(6)	583	570-605
5-71	()	()	()	()	()	()	Unknown	Unknown
5-82	4(5)	2(5)	2(5)	0(5)	0(5)	0(5)	693	695
5-83	1(6)	3(6)	0(5)	0(6)	0(5)	0(5)	550	480-645
5-84	2(6)	4(6)	1(6)	0(10)	0(5)	0(5)	407	325-645
5-85	1(7)	5(7)	0(6)	0(7)	0(6)	0(6)	460	372-657

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North Lahontan Hydrologic Region

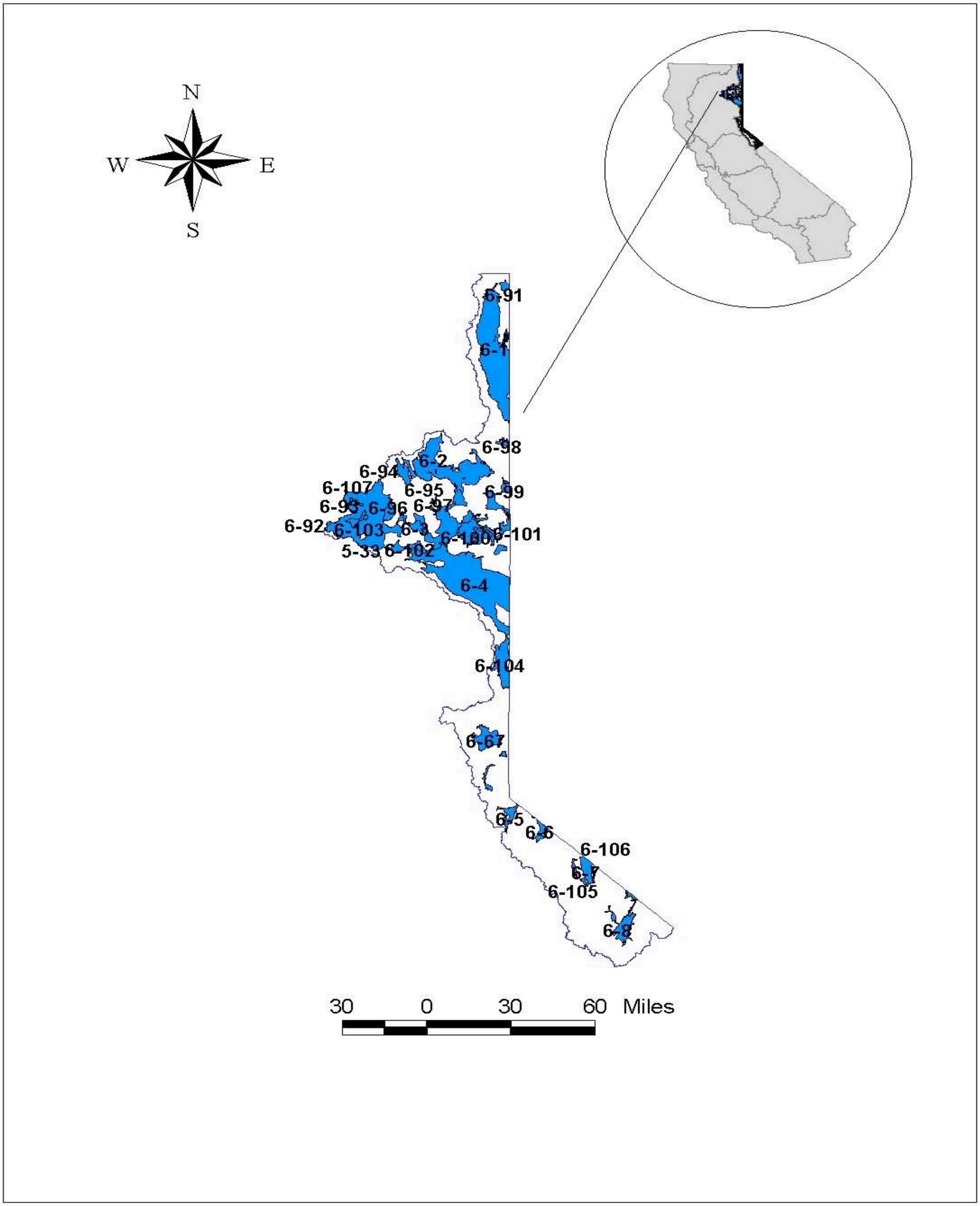

Figure 21: North Lahontan Hydrologic Region
Modified From DWR, 2002. Note: Not all sub-basins labeled on map

Table 41: Basins and Subbasins of North Lahontan Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
6-1	Surprise Valley	6-93	Harvey Valley
6-2	Madeline Plains	6-94	Grasshopper Valley
6-3	Willow Creek Valley	6-95	Dry Valley
6-4	Honey Lake Valley	6-96	Eagle Lake Area
6-5	Tahoe Valley	6-97	Horse Lake Valley
6-5.01	Tahoe Valley South	6-98	Tuledad Canyon
6-5.02	Tahoe Valley West	6-99	Painters Flat
6-5.03	Tahoe Valley North	6-100	Secret Valley
6-6	Carson Valley	6-101	Bull Flat
6-7	Antelope Valley	6-104	Long Valley
6-8	Bridgeport Valley	6-105	Slinkard Valley
6-67	Martis (Truckee) Valley	6-106	Little Antelope Valley
6-91	Cow Head Lake Valley	6-107	Sweetwater Flat
6-92	Pine Creek Valley		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 42: Three most frequently occurring contaminants by contaminant group in the North Lahontan Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Fluoride – 3	Thallium – 3	3 tied at 1 exceedance
Inorganics – Secondary	Iron – 14	Manganese – 13	TDS – 1
Radiological	Gross Alpha – 7	Uranium – 5	Radium 226 – 1
Nitrates			
Pesticides			
VOCs	1,2 Dichloroethane – 8	TCE – 2	MTBE – 1

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 43: Groundwater Quality in the North Lahontan Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
6-1	0(2)	0(2)	0(1)	0(4)	0(0)	0(1)	224	87 - 1,800
6-2	0(1)	0(1)	0(0)	0(1)	0(0)	0(0)	402	81 - 1,790
6-3	()	()	()	()	()	()	401	90 - 1,200
6-4	4(54)	11(54)	1(17)	0(60)	0(12)	0(12)	518	89 - 2,500
6-5								
6-5.01	2(44)	12(44)	4(47)	0(46)	0(44)	8(44)		59 - 206
6-5.02	0(8)	1(8)	0(5)	0(8)	0(7)	0(7)	103	68 - 128
6-5.03	()	()	()	()	()	()	141	
6-6	()	()	()	()	()	()		
6-7	1(5)	0(5)	2(5)	0(4)	0(5)	0(5)		
6-8	0(3)	1(3)	0(2)	0(2)	0(2)	0(2)		
6-67	()	()	()	()	()	()		
6-91	()	()	()	()	()	()		
6-92	()	()	()	()	()	()		
6-93	()	()	()	()	()	()		
6-94	()	()	()	()	()	()		
6-95	()	()	()	()	()	()		
6-96	0(4)	0(4)	0(0)	0(4)	0(2)	0(2)		
6-97	()	()	()	()	()	()		
6-98	()	()	()	()	()	()		
6-99	()	()	()	()	()	()		
6-100	()	()	()	()	()	()		125 - 3,200
6-101	()	()	()	()	()	()		
6-104	()	()	()	()	()	()	302	127 - 570
6-105	()	()	()	()	()	()		
6-106	()	()	()	()	()	()		
6-107	()	()	()	()	()	()		

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South Lahontan Hydrologic Region

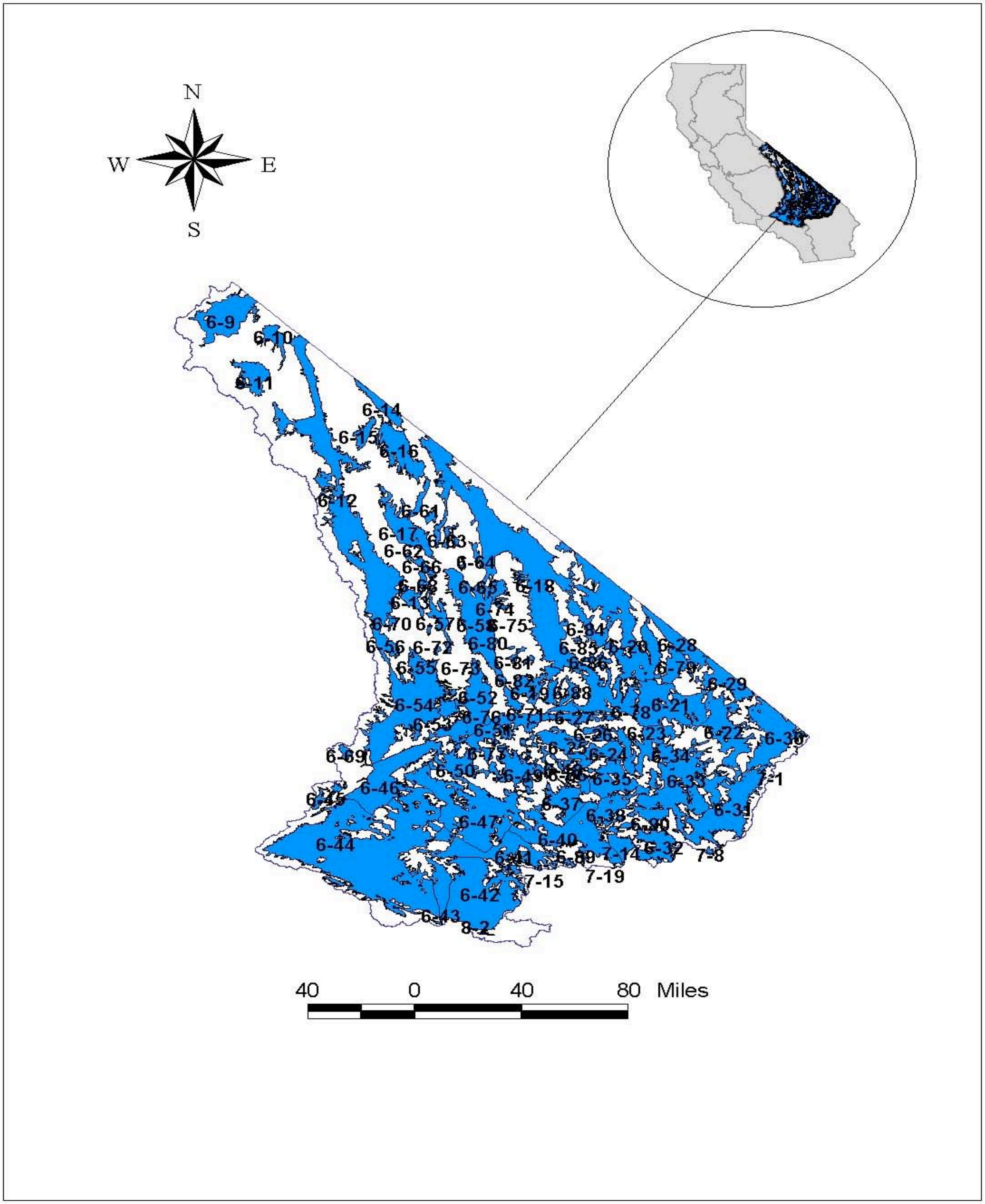

Figure 22: South Lahontan Hydrologic Region

Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 44: Basins and Subbasins of South Lahontan Hydrologic Region

Basin/subbasins	Basin Name	Basin/subbasins	Basin Name
6-09	Mono Valley	6-47	Harper Valley
6-10	Adobe Lake Valley	6-48	Goldstone Valley
6-11	Long Valley	6-49	Superior Valley
6-12	Owens Valley	6-50	Cuddeback Valley
6-13	Black Springs Valley	6-51	Pilot Knob Valley
6-14	Fish Lake Valley	6-52	Searles Valley
6-15	Deep Springs Valley	6-53	Salt Wells Valley
6-16	Eureka Valley	6-54	Indian Wells Valley
6-17	Saline Valley	6-55	Coso Valley
6-18	Death Valley	6-56	Rose Valley
6-19	Wingate Valley	6-57	Darwin Valley
6-20	Middle Amargosa Valley	6-58	Panamint Valley
6-21	Lower Kingston Valley	6-61	Cameo Area
6-22	Upper Kingston Valley	6-62	Race Track Valley
6-23	Riggs Valley	6-63	Hidden Valley
6-24	Red Pass Valley	6-64	Marble Canyon Area
6-25	Bicycle Valley	6-65	Cottonwood Spring Area
6-26	Avawatz Valley	6-66	Lee Flat
6-27	Leach Valley	6-68	Santa Rosa Flat
6-28	Pahrump Valley	6-69	Kelso Lander Valley
6-29	Mesquite Valley	6-70	Cactus Flat
6-30	Ivanpah Valley	6-71	Lost Lake Valley
6-31	Kelso Valley	6-72	Coles Flat
6-32	Broadwell Valley	6-73	Wild Horse Mesa Area
6-33	Soda Lake Valley	6-74	Harrisburg Flats
6-34	Silver Lake Valley	6-75	Wildrose Canyon
6-35	Cronise Valley	6-76	Brown Mountain Valley
6-36	Langford Valley	6-77	Grass Valley
6-36.01	Langford Valley East	6-78	Denning Spring Valley
6-36.02	Langford Well Lake	6-79	California Valley
6-36.03	Irwin	6-80	Middle Park Canyon
6-37	Coyote Lake Valley	6-81	Butte Valley
6-38	Caves Canyon Valley	6-82	Spring Canyon Valley
6-40	Lower Mojave River Valley	6-84	Greenwater Valley
6-41	Middle Mojave River Valley	6-85	Gold Valley
6-42	Upper Mojave River Valley	6-86	Rhodes Hill Area
6-43	El Mirage Valley	6-88	Owl Lake Valley
6-44	Antelope Valley	6-89	Kane Wash Area
6-45	Tehachapi Valley East	6-90	Cady Fault Area
6-46	Fremont Valley		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 45: Three most frequently occurring contaminants by contaminant group in the South Lahontan Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant – # of wells
Inorganics – Primary	Fluoride – 30	Arsenic – 19	Antimony – 5
Inorganics – Secondary	Iron – 82	Manganese – 36	Specific Conductance–5 TDS – 5
Radiological	Gross Alpha – 18	Uranium – 7	Radium 228 – 2
Dissolved Nitrogen	Nitrate (as NO3) – 12	Nitrate + Nitrite–6	Nitrite (as N) – 4
Pesticides	Di(2-Ethylhexyl)phthalate)–2		
VOCs	MTBE – 2	Trichloroethylene–2	Carbon Tetrachloride–2

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 46: Groundwater Quality in the South Lahontan Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
6-09	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)		2060
6-10	()	()	()	()	()	()		
6-11	0(4)	4(4)	2(6)	0(4)	0(4)	0(4)		
6-12	1(25)	2(25)	0(26)	0(25)	0(24)	0(22)		300-450,000
6-13	()	()	()	()	()	()		
6-14	()	()	()	()	()	()		
6-15	()	()	()	()	()	()		
6-16	()	()	()	()	()	()		
6-17	()	()	()	()	()	()		
6-18	()	()	()	()	()	()		
6-19	()	()	()	()	()	()		
6-20	()	()	()	()	()	()		
6-21	()	()	()	()	()	()		
6-22	()	()	()	()	()	()		
6-23	()	()	()	()	()	()		
6-24	()	()	()	()	()	()		
6-25	5(6)	5(6)	1(6)	0(6)	0(5)	0(5)	618	508-810
6-26	()	()	()	()	()	()		
6-27	()	()	()	()	()	()		
6-28	()	()	()	()	()	()		
6-29	()	()	()	()	()	()		
6-30	()	()	()	()	()	()		
6-31	()	()	()	()	()	()		
6-32	1(1)	0(1)	0(0)	0(1)	0(1)	0(1)		
6-33	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)		
6-34	()	()	()	()	()	()		
6-35	()	()	()	()	()	()		
6-36								
6-36.01	3(3)	2(3)	1(3)	0(3)	0(3)	0(3)	498	440-568
6-36.02	0(5)	0(5)	0(5)	0(5)	0(4)	0(4)	528	496-598
6-37	()	()	()	()	()	()		300-1000
6-38	1(1)	0(1)	0(0)	0(1)	0(0)	0(0)		300-1000
6-40	2(41)	9(41)	6(38)	4(41)	0(36)	0(36)	300	
6-41	1(4)	1(4)	0(3)	0(5)	0(4)	0(4)	500	
6-42	9(122)	11(122)	2(115)	2(125)	0(117)	0(120)	500	1105
6-43	0(19)	2(19)	0(18)	0(20)	0(18)	2(17)		
6-44	25(214)	39(214)	6(183)	8(243)	2(207)	4(207)	300	200-800
6-45	1(7)	0(7)	0(2)	0(10)	0(7)	0(8)	361	298-405
6-46	0(14)	5(14)	0(11)	0(15)	0(13)	0(12)	596	350-100,000
6-47	0(2)	0(2)	0(2)	0(2)	0(4)	0(4)		179-2391
6-48	()	()	()	()	()	()		

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
6-49	()	()	()	()	()	()		
6-50	()	()	()	()	()	()		
6-51	0(2)	0(2)	0(2)	0(2)	0(2)	0(2)		
6-52	()	()	()	()	()	()		
6-53	()	()	()	()	()	()		
6-54	3(47)	15(47)	2(46)	1(58)	0(47)	0(49)	312	110-1620
6-55	()	()	()	()	()	()		
6-56	0(0)	0(0)	0(1)	0(0)	0(0)	0(0)		
6-57	()	()	()	()	()	()		
6-58	()	()	()	()	()	()		
6-61	()	()	()	()	()	()		
6-62	()	()	()	()	()	()		
6-63	()	()	()	()	()	()		
6-64	()	()	()	()	()	()		
6-65	()	()	()	()	()	()		
6-66	()	()	()	()	()	()		
6-68	()	()	()	()	()	()		
6-69	()	()	()	()	()	()		
6-70	()	()	()	()	()	()		
6-71	()	()	()	()	()	()		
6-72	()	()	()	()	()	()		
6-73	()	()	()	()	()	()		
6-74	()	()	()	()	()	()		
6-75	()	()	()	()	()	()		
6-76	()	()	()	()	()	()		
6-77	0	0	0	0	0	0		
6-78	0	0	0	0	0	0		
6-79	0	0	0	0	0	0		
6-80	0	0	0	0	0	0		
6-81	0	0	0	0	0	0		
6-82	0	0	0	0	0	0		
6-84	0	0	0	0	0	0		
6-85	0	0	0	0	0	0		
6-86	0	0	0	0	0	0		
6-88	0	0	0	0	0	0		
6-89	0	0	0	0	0	0		
6-90	()	()	()	()	()	()		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Colorado River Hydrologic Region

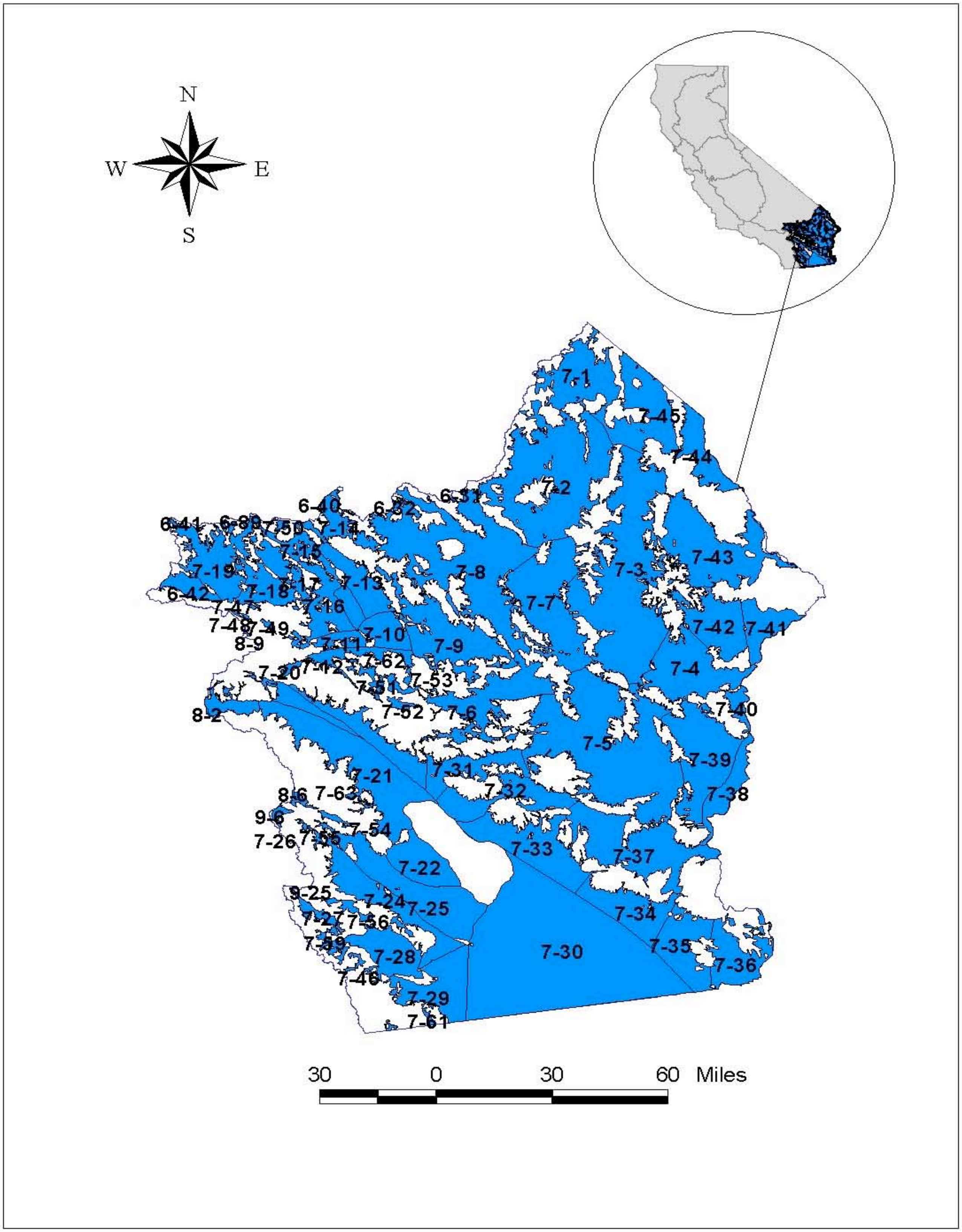

Figure 23: Colorado River Hydrologic Region
Modified From DWR, 2002. Note: Not all sub-basins labeled on map.

Table 47: Basins and Subbasins of Colorado River Hydrologic Region

Basin/subbasin	Basin Name	Basin/subbasin	Basin Name
7-1	Lanfair Valley	7-28	Vallecito-Carrizo Valley
7-2	Fenner Valley	7-29	Coyote Wells Valley
7-3	Ward Valley	7-30	Imperial Valley
7-4	Rice Valley	7-31	Orocopia Valley
7-5	Chuckwalla Valley	7-32	Chocolate Valley
7-6	Pinto Valley	7-33	East Salton Sea
7-7	Cadiz Valley	7-34	Amos Valley
7-8	Bristol Valley	7-35	Ogilby Valley
7-9	Dale Valley	7-36	Yuma Valley
7-10	Twentynine Palms Valley	7-37	Arroyo Seco Valley
7-11	Copper Mountain Valley	7-38	Palo Verde Valley
7-12	Warren Valley	7-39	Palo Verde Mesa
7-13	Deadman Valley	7-40	Quien Sabe Point Valley
7-13.01	Deadman Lake	7-41	Calzona Valley
7-13.02	Surprise Spring	7-42	Vidal Valley
7-14	Lavic Valley	7-43	Chemehuevi Valley
7-15	Bessemer Valley	7-44	Needles Valley
7-16	Ames Valley	7-45	Piute Valley
7-17	Means Valley	7-46	Canebrake Valley
7-18	Johnson Valley Area	7-47	Jacumba Valley
7-18.01	Soggy Lake	7-48	Helendale Fault Valley
7-18.02	Upper Johnson Valley	7-49	Pipes Canyon Fault Valley
7-19	Lucerne Valley	7-50	Iron Ridge Area
7-20	Morongo Valley	7-51	Lost Horse Valley
7-21	Coachella Valley	7-52	Pleasant Valley
7-21.01	Indio	7-53	Hexie Mountain Area
7-21.02	Mission Creek	7-54	Buck Ridge Fault Valley
7-21.03	Desert Hot Springs	7-55	Collins Valley
7-21.04	San Gorgonio Pass	7-56	Yaqui Well Area
7-22	West Salton Sea	7-59	Mason Valley
7-24	Borrego Valley	7-61	Davies Valley
7-25	Ocotillo-Clark Valley	7-62	Joshua Tree
7-26	Terwilliger Valley	7-63	Vandeventer Flat
7-27	San Felipe Valley		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 48: Three most frequently occurring contaminants by contaminant group in the Colorado River Hydrologic Region

Contaminant Group	Contaminant – # of wells	Contaminant – # of wells	Contaminant # of wells
Inorganics – Primary	Fluoride – 17		
Inorganics – Secondary	Iron – 38	Manganese – 26	TDS – 5
Radiological	Radium 228 – 3	Combined RA226 + RA228 – 3	Radium 226 – 1
Nitrates	Nitrate (as NO3) – 6	Nitrate + Nitrite – 1	
Pesticides			
VOCs			

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

Table 49: Groundwater Quality in the Colorado River Hydrologic Region

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
7-1	()	()	()	()	()	()	515	173-2,260
7-2	()	()	()	()	()	()	515	173- 2,260
7-3	()	()	()	()	()	()		327-589
7-4	()	()	()	()	()	()		
7-5	1(1)	0(1)	0(1)	0(1)	0(1)	0(1)		424
7-6	1(1)	0(1)	0(0)	0(1)	0(1)	0(1)		
7-7	()	()	()	()	()	()	400	300-3000
7-8	()	()	()	()	()	()		300-298,000
7-9	()	()	()	()	()	()		
7-10	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	640	
7-11	0(2)	0(2)	0(2)	0(2)	0(2)	0(2)		180-214
7-12	1(18)	3(18)	1(18)	5(18)	0(16)	0(16)	196	129-269
7-13								
7-13.01	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)		311-985
7-13.02	0(9)	5(9)	1(9)	0(9)	0(9)	0(9)	177	141-1,050
7-14	()	()	()	()	()	()		
7-15	()	()	()	()	()	()		
7-16	0(10)	0(10)	3(10)	0(10)	0(10)	0(10)	459	
7-17	()	()	()	()	()	()		
7-18								
7-18.01	0(1)	1(1)	0(1)	0(1)	0(1)	0(1)		300-2,000
7-18.02	()	()	()	()	()	()		3,000
7-19	0(5)	0(5)	0(4)	0(6)	0(4)	0(4)	301	200-5,000
7-20	0(4)	2(4)	5(5)	0(4)	0(4)	0(4)		
7-21								
7-21.01	2(161)	13(161)	7(162)	0(164)	0(163)	0(161)	300	
7-21.02	0(14)	0(14)	2(15)	1(15)	0(14)	0(14)	<500	
7-21.03	0(0)	0(0)	0(1)	0(1)	0(1)	0(1)		800-1,000
7-21.04	()	()	()	()	()	()		106-205
7-22	()	()	()	()	()	()		
7-24	1(11)	0(11)	0(9)	0(12)	0(6)	0(6)		300-2,440
7-25	()	()	()	()	()	()		
7-26	()	()	()	()	()	()		500
7-27	()	()	()	()	()	()		
7-28	()	()	()	()	()	()		
7-29	()	()	()	()	()	()		
7-30	0(1)	0(1)	0(0)	0(0)	0(0)	0(0)	1088	498-7,280
7-31	()	()	()	()	()	()		
7-32	()	()	()	()	()	()		
7-33	()	()	()	()	()	()		
7-34	()	()	()	()	()	()		
7-35	()	()	()	()	()	()		
7-36	()	()	()	()	()	()		

Public Supply Wells Wells Exceeding MCL (Wells Sampled)							Groundwater Quality (TDS in mg/L)	
Basin/ Subbasin	Inorganics Primary	Inorganics Secondary	Radiological	Nitrates	Pesticides	VOCs	Avg	Range
7-37	()	()	()	()	()	()		
7-38	0(11)	10(11)	0(12)	0(11)	0(11)	0(11)	840	658-1,030
7-39	1(11)	9(11)	0(10)	0(11)	0(11)	0(11)		
7-40	()	()	()	()	()	()		
7-41	0(2)	1(2)	0(0)	0(2)	0(1)	0(1)		
7-42	0(1)	0(1)	0(0)	0(1)	0(0)	0(0)		
7-43	()	()	()	()	()	()		
7-44	0(4)	3(4)	0(3)	0(5)	0(4)	0(4)		
7-45	()	()	()	()	()	()		
7-46	()	()	()	()	()	()		
7-47	0(1)	0(1)	0(0)	0(1)	0(0)	0(0)		296-6,100
7-48	()	()	()	()	()	()		
7-49	()	()	()	()	()	()		
7-50	()	()	()	()	()	()		
7-51	()	()	()	()	()	()		
7-52	()	()	()	()	()	()		
7-53	()	()	()	()	()	()		
7-54	()	()	()	()	()	()		
7-55	()	()	()	()	()	()		
7-56	()	()	()	()	()	()		
7-59	()	()	()	()	()	()		
7-61	()	()	()	()	()	()		
7-62	10(16)	2(16)	2(15)	0(16)	0(13)	0(13)	180	117-185
7-63	()	()	()	()	()	()		

From: California's Groundwater – Bulletin 118 (2002), Version 2 (Draft) (water quality data provided by California DHS)

APPENDIX A

BENEFICIAL USE DESIGNATIONS

BENEFICIAL USE DESIGNATIONS

"Beneficial uses" are the many ways water can be used either directly by people or for their overall benefit. Drinking and bathing are obvious examples, but there are many others, such as uses by industry, agriculture, commerce, and wildlife. SWRCB recognizes 23 beneficial uses summarized below:

Municipal and Domestic Supply (MUN)--Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

Agricultural Supply (AGR)--Uses of water for farming, horticulture, or ranching including, but not limited to irrigation, stock watering, or support of vegetation for range grazing.

Industrial Process Supply (PRO)--Uses of water for industrial activities that depend primarily on water quality.

Industrial Service Supply (IND)--Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

Groundwater Recharge (GWR)--Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

Freshwater Replenishment (FRSH)--Uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

Navigation (NAV)--Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

Hydropower Generation (POW)--Uses of water for hydropower generation.

Water Contact Recreation (REC-1)--Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

Noncontact Water Recreation (REC-2)--Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Ocean Commercial and Sport Fishing (COMM)--Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

Aquaculture (AQUA)--Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

Warm Freshwater Habitat (WARM)--Uses of water that support warmwater ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

Cold Freshwater Habitat (COLD)--Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates.

Inland Saline Water Habitat (SAL)--Uses of water that support inland saline water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates.

Estuarine Habitat (EST)--Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).

Marine Habitat (MAR)--Uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

Wildlife Habitat (WILD)--Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Preservation of Biological Habitats of Special Significance (BIOL)--Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.

Rare, Threatened, or Endangered Species (RARE)--Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Migration of Aquatic Organisms (MIGR)--Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

Spawning, Reproduction, and/or Early Development (SPWN)--Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

Shellfish Harvesting (SHELL)--Uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sports purposes.

2002 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

Approved by USEPA: July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Albion River, Mendocino Coast HU, Albion River HA	11340013					
				Sedimentation/Siltation		High	77 Miles	2003
					Silviculture			
					Logging Road Construction/Maintenance			
					Nonpoint Source			
1	R	Americano Creek, Bodega HU, Estero Americano HA	11530012					
				Nutrients		Low	38 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Intensive Animal Feeding Operations			
					Manure Lagoons			
					Dairies			
1	R	Big River, Mendocino Coast HU, Big River HA	11330043					
				Sedimentation/Siltation		High	225 Miles	2003
					Silviculture			
					Logging Road Construction/Maintenance			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Nonpoint Source			
				Temperature		Low	225 Miles	
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Erosion/Siltation			
					Nonpoint Source			
1	R	Eel River Delta, Eel River HU, Lower Eel River HA	11111032					
				Sedimentation/Siltation		Medium	426 Miles	
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Nonpoint Source			
				Temperature		Medium	426 Miles	
					Removal of Riparian Vegetation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Eel River, Middle Fork, Eel River HU, Middle Fork HA	11171045					
				Sedimentation/Siltation		Medium	1071 Miles	
					Erosion/Siltation			
				Temperature		Medium	1071 Miles	
					Removal of Riparian Vegetation			
					Nonpoint Source			
1	R	Eel River, Middle Main Fork, Eel River HU, Middle Main HA	11141061					
				Sedimentation/Siltation		Medium	674 Miles	
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Construction/Land Development			
					Land Development			
					Hydromodification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
				Temperature		Medium	674 Miles	
					Upstream Impoundment			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
1	R	Eel River, North Fork, Eel River HU, North Fork HA	11150065					
				Sedimentation/Siltation		Medium	382 Miles	
					Silviculture			
					Logging Road Construction/Maintenance			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Medium	382 Miles	
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Eel River, South Fork, Eel River HU, South Fork HA	11131030					
				Sedimentation/Siltation		Medium	943 Miles	
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Logging Road Construction/Maintenance			
					Resource Extraction			
					Hydromodification			
					Flow Regulation/Modification			
					Removal of Riparian Vegetation			
					Erosion/Siltation			
					Nonpoint Source			
				Temperature		Medium	943 Miles	
					Hydromodification			
					Flow Regulation/Modification			
					Removal of Riparian Vegetation			
					Erosion/Siltation			
					Nonpoint Source			
1	R	Eel River, Upper Main HA (Includes Tomki Creek)	11163050					
				Sedimentation/Siltation		Medium	1141 Miles	
					Agriculture-grazing			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Silvicultural Point Sources			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Medium	1141 Miles	
					Channelization			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Nonpoint Source			
1	R	Elk River, Eureka Plain HU	11000042					
				Sedimentation/Siltation		High	88 Miles	2003
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
1	E	Estero Americano, Bodega HU, Estero Americano HA	11530012					
				Nutrients		Medium	199 Acres	
					Pasture Grazing-Riparian and/or Upland			
					Manure Lagoons			
				Sedimentation/Siltation		Low	199 Acres	
					Range Grazing-Riparian			
					Hydromodification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Nonpoint Source			
1	R	Freshwater Creek, Eureka Plain HU	11000050					
				Sedimentation/Siltation		High	84 Miles	2003
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Garcia River, Mendocino Coast HU	11370026					
				Temperature		High	154 Miles	2002
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Gualala River, Mendocino Coast HU, Gualala River HA	11385021					
				Sedimentation/Siltation		High	455 Miles	2004
					Specialty Crop Production			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Highway/Road/Bridge Construction			
					Land Development			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			
				Temperature		Low	455 Miles	
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			
1	B	Humboldt Bay, Eureka Plain HU	11000000					
				PCBs		Low	16075 Acres	
				This listing was made by USEPA.				
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Jacoby Creek, Eureka Plain HU	11000013					
				Sediment		Low	19 Miles	
					Silviculture			
					Road Construction			
					Land Development			
					Disturbed Sites (Land Develop.)			
					Urban Runoff/Storm Sewers			
					Hydromodification			
					Channelization			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Sediment Resuspension			
					Natural Sources			
					Nonpoint Source			
1	R	Klamath River, Klamath River HU, Butte Valley HA	10581023					
				Nutrients		Medium	265 Miles	
					Nonpoint Source			
				Temperature		Medium	265 Miles	
					Nonpoint Source			
1	R	Klamath River, Klamath River HU, Lost River HA, Clear Lake, Boles HSAs	10593011					
				Nutrients		Medium	601 Miles	
					Hydromodification			
					Nonpoint Source			
				Temperature		Medium	601 Miles	
					Hydromodification			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Water Diversions			
					Agricultural Water Diversion			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Klamath River, Klamath River HU, Lost River HA, Tule Lake and Mt Dome HSAs	10591063					
				Nutrients		Medium	612 Miles	
					Agriculture			
					Specialty Crop Production			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Water Diversions			
					Agricultural Water Diversion			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Drainage/Filling Of Wetlands			
					Natural Sources			
					Nonpoint Source			
				Temperature		Medium	612 Miles	
					Hydromodification			
					Channelization			
					Flow Regulation/Modification			
					Water Diversions			
					Agricultural Water Diversion			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Drainage/Filling Of Wetlands			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Klamath River, Klamath River HU, Lower HA, Klamath Glen HSA	10511086					
				Nutrients		Medium	609 Miles	
					Industrial Point Sources			
					Major Industrial Point Source			
					Minor Industrial Point Source			
					Municipal Point Sources			
					Major Municipal Point Source-dry and/or wet weather discharge			
					Minor Municipal Point Source-dry and/or wet weather discharge			
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Intensive Animal Feeding Operations			
					Agriculture-storm runoff			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
				Organic Enrichment/Low Dissolved Oxygen		Medium	609 Miles	
					Industrial Point Sources			
					Municipal Point Sources			
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
					Range Grazing-Riparian			
					Agriculture-storm runoff			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
					Agriculture-animal			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Out-of-state source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Medium	609 Miles	
					Hydromodification			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Channel Erosion			
1	R	Klamath River, Klamath River HU, Middle HA, Iron Gate Dam to Scott River	10535053					
				Nutrients		Medium	548 Miles	
					Out-of-state source			
					Nonpoint/Point Source			
				Organic Enrichment/Low Dissolved Oxygen		Medium	548 Miles	
					Out-of-state source			
					Nonpoint/Point Source			
				Temperature		Medium	548 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Nonpoint Source			
1	R	Klamath River, Klamath River HU, Middle HA, Oregon to Iron Gate	10537022					
				Nutrients		Medium	129 Miles	
					Industrial Point Sources			
					Municipal Point Sources			
					Agriculture			
					Specialty Crop Production			
					Agricultural Return Flows			
					Internal Nutrient Cycling (primarily lakes)			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Organic Enrichment/Low Dissolved Oxygen		Medium	129 Miles	
					Industrial Point Sources			
					Municipal Point Sources			
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
					Agriculture-animal			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Out-of-state source			
				Temperature		Medium	129 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Nonpoint Source			
1	R	Klamath River, Klamath River HU, Middle HA, Scott River to Trinity River	10512050					
				Nutrients		Medium	1389 Miles	
					Industrial Point Sources			
					Municipal Point Sources			
					Agriculture			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Wastewater - land disposal			
					Upstream Impoundment			
					Natural Sources			
					Nonpoint Source			
					Out-of-state source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Organic Enrichment/Low Dissolved Oxygen		Medium	1389 Miles	
					Industrial Point Sources			
					Municipal Point Sources			
					Combined Sewer Overflow			
					Agriculture			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Out-of-state source			
				Temperature		Medium	1389 Miles	
					Hydromodification			
					Channelization			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Natural Sources			
					Nonpoint Source			
1	R	Klamath River, Klamath River HU, Salmon River HA	10521034					
				Nutrients		High	871 Miles	2004
					Unknown Nonpoint Source			
				Temperature		High	871 Miles	2004
					Removal of Riparian Vegetation			
					Unknown Nonpoint Source			
1	R	Laguna de Santa Rosa, Russian River HU, Middle Russian River HA	11421020					
				Low Dissolved Oxygen		Low	96 Miles	
					Internal Nutrient Cycling (primarily lakes)			
					Nonpoint Source			
					Point Source			
				Nitrogen *This listing was made by USEPA.*		Low	96 Miles	
					Internal Nutrient Cycling (primarily lakes)			
					Nonpoint Source			
					Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Low	96 Miles	
				This listing was made by USEPA.				
					Internal Nutrient Cycling (primarily lakes)			
					Nonpoint Source			
					Point Source			
				Sedimentation/Siltation		Medium	96 Miles	
				Entire Russian River watershed (including Laguna de Santa Rosa) is listed for sedimentation.				
					Road Construction			
					Land Development			
					Disturbed Sites (Land Develop.)			
					Urban Runoff/Storm Sewers			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Hydromodification			
					Channelization			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Erosion From Derelict Land			
					Highway Maintenance and Runoff			
					Nonpoint Source			
				Temperature		Low	96 Miles	
				Entire Russian River watershed (including Laguna de Santa Rosa) is listed for temperature.				
					Hydromodification			
					Upstream Impoundment			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	L	Lake Pillsbury (Eel River HU, Upper Main HA, Lake Pillsbury HSA)	11163051					
				Mercury		Low	1973 Acres	
					Natural Sources			
1	R	Mad River, Mad River HU	10910011					
				Sedimentation/Siltation		Low	654 Miles	
					Silviculture			
					Resource Extraction			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Low	654 Miles	
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Nonpoint Source			
					Unknown Nonpoint Source			
				Turbidity		Low	654 Miles	
					Silviculture			
					Resource Extraction			
					Nonpoint Source			
1	R	Mattole River, Cape Mendocino HU, Mattole River HA	11230072					
				Sedimentation/Siltation		High	503 Miles	2004
					Specialty Crop Production			
					Range Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Silviculture			
					Road Construction			
					Hydromodification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
				Temperature		High	503 Miles	2004
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Road Construction			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Natural Sources			
					Nonpoint Source			
1	L	Mendocino, Lake	11432060					
				Mercury		Low	1704 Acres	
					Resource Extraction			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	E	Navarro River Delta, Mendocino Coast HU, Navarro River HA	11350077					
				Sedimentation/Siltation		High	48 Acres	2004
					Erosion/Siltation			
1	R	Navarro River, Mendocino Coast HU	11350077					
				Sedimentation/Siltation		High	415 Miles	2004
					Agriculture			
					Nonirrigated Crop Production			
					Irrigated Crop Production			
					Specialty Crop Production			
					Range Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Agriculture-grazing			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Silvicultural Point Sources			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Land Development			
					Disturbed Sites (Land Develop.)			
					Resource Extraction			
					Flow Regulation/Modification			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		High	415 Miles	2004
					Agriculture			
					Agricultural Return Flows			
					Resource Extraction			
					Flow Regulation/Modification			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Nonpoint Source			
1	R	Noyo River, Mendocino Coast HU, Noyo River HA	11320010					
				Sedimentation/Siltation		High	144 Miles	2003
					Silviculture			
					Nonpoint Source			
1	R	Redwood Creek, Redwood Creek HU	10710020					
				Sedimentation/Siltation		Medium	332 Miles	
					Range Grazing-Riparian			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Construction/Land Development			
					Disturbed Sites (Land Develop.)			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
				Temperature		Low	332 Miles	
					Logging Road Construction/Maintenance			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River, Russian River HU, Lower Russian River HA, Austin Creek HSA	11412013					
				Sedimentation/Siltation		Medium	81 Miles	
					Silviculture			
					Construction/Land Development			
					Disturbed Sites (Land Develop.)			
					Dam Construction			
					Flow Regulation/Modification			
					Erosion/Siltation			
				Temperature		Low	81 Miles	
					Hydromodification			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Nonpoint Source			
1	R	Russian River, Russian River HU, Lower Russian River HA, Guerneville HSA	11411041					
				Pathogens		Low	195 Miles	
				Listing covers only the Monte Rio area of this watershed from the confluence of Dutch Bill Creek to the confluence of Fife Creek and Healdsburg Memorial Beach from the Hwy 101 crossing to the railroad crossing upstream of the Beach.				
					Nonpoint/Point Source			
				Sedimentation/Siltation		Medium	195 Miles	
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
					Agriculture-storm runoff			
					Agriculture-grazing			
					Silviculture			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Land Development			
					Hydromodification			
					Channelization			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Low	195 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Russian River, Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA	11426023					
				Sedimentation/Siltation		Medium	85 Miles	
					Geothermal Development			
					Erosion/Siltation			
					Nonpoint Source			
				Temperature		Low	85 Miles	
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Nonpoint Source			
1	R	Russian River, Russian River HU, Middle Russian River HA, Dry Creek HSA	11424034					
				Sedimentation/Siltation		Medium	255 Miles	
					Agriculture			
					Agriculture-storm runoff			
					Silviculture			
					Logging Road Construction/Maintenance			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Disturbed Sites (Land Develop.)			
					Hydromodification			
					Channelization			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Temperature		Low	255 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Russian River, Russian River HU, Middle Russian River HA, Geyserville HSA	11425032					
				Sedimentation/Siltation		Medium	243 Miles	
					Agriculture			
					Nonirrigated Crop Production			
					Irrigated Crop Production			
					Specialty Crop Production			
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Agriculture-storm runoff			
					Agriculture-grazing			
					Silviculture			
					Construction/Land Development			
					Geothermal Development			
					Disturbed Sites (Land Develop.)			
					Surface Runoff			
					Resource Extraction			
					Channelization			
					Bridge Construction			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
				Temperature		Low	243 Miles	
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River, Russian River HU, Middle Russian River HA, Mark West Creek HSA	11423021					
				Sedimentation/Siltation		Medium	99 Miles	
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
					Range Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Intensive Animal Feeding Operations			
					Agriculture-storm runoff			
					Agriculture-grazing			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Land Development			
					Disturbed Sites (Land Develop.)			
					Other Urban Runoff			
					Surface Runoff			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
				Temperature		Low	99 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River, Russian River HU, Upper Russian River HA, Coyote Valley HSA	11432060					
				Sedimentation/Siltation		Medium	171 Miles	
					Agriculture			
					Silviculture			
					Construction/Land Development			
					Hydromodification			
					Channelization			
					Dam Construction			
					Flow Regulation/Modification			
					Bridge Construction			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
				Temperature		Low	171 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Russian River, Russian River HU, Upper Russian River HA, Forsythe Creek HSA	11433040					
				Sedimentation/Siltation		Medium	122 Miles	
					Erosion/Siltation			
					Nonpoint Source			
				Temperature		Low	122 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Russian River, Russian River HU, Upper Russian River HA, Ukiah HSA	11431071					
				Sedimentation/Siltation		Medium	460 Miles	
					Agriculture			
					Silviculture			
					Construction/Land Development			
					Resource Extraction			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Highway Maintenance and Runoff			
					Natural Sources			
				Temperature		Low	460 Miles	
					Hydromodification			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			
1	R	Santa Rosa Creek, Russian River HU, Middle Russian River HA	11422013					
				Pathogens		Low	87 Miles	
					Nonpoint Source			
					Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		**Medium**	**87 Miles**	
				Entire Russian River watershed (including Santa Rosa Creek) is listed for sedimentation.				
					Agriculture			
					Nonirrigated Crop Production			
					Irrigated Crop Production			
					Specialty Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Dairies			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Land Development			
					Urban Runoff/Storm Sewers			
					Urban Runoff--Non-industrial Permitted			
					Other Urban Runoff			
					Surface Runoff			
					Hydromodification			
					Channelization			
					Bridge Construction			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
				Temperature		**Low**	**87 Miles**	
				Entire Russian River watershed (including Santa Rosa Creek) is listed for temperature.				
					Hydromodification			
					Upstream Impoundment			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Scott River, Klamath River HU, Scott River HA	10541035					
				Sedimentation/Siltation		Medium	902 Miles	
					Irrigated Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Silviculture			
					Resource Extraction			
					Mill Tailings			
					Natural Sources			
					Nonpoint Source			
				Temperature		Medium	902 Miles	
					Irrigated Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Agricultural Return Flows			
					Silviculture			
					Flow Regulation/Modification			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Other			
					Nonpoint Source			
1	R	Shasta River, Klamath River HU, Shasta River HA	10550001					
				Organic Enrichment/Low Dissolved Oxygen		Medium	630 Miles	
					Minor Municipal Point Source-dry and/or wet weather discharge			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Dairies			
					Hydromodification			
					Dam Construction			
					Flow Regulation/Modification			
					Habitat Modification			
				Temperature		Medium	630 Miles	
					Agriculture-irrigation tailwater			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Drainage/Filling Of Wetlands			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	L	Sonoma, Lake	11424030					
				Mercury		Low	2377 Acres	
					Resource Extraction			
					Nonpoint Source			
1	R	Stemple Creek/Estero do San Antonio, Bodega HU, Estero de San Antonio HA	11540010					
				Nutrients		Medium	61 Miles	
				This pollutant was relisted for this water body by USEPA in 1998.				
					Agriculture			
					Irrigated Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian			
					Intensive Animal Feeding Operations			
					Concentrated Animal Feeding Operations (permitted, point source)			
					Agriculture-storm runoff			
					Land Development			
					Hydromodification			
					Channelization			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Natural Sources			
				Sediment		Low	61 Miles	
					Agriculture			
					Grazing-Related Sources			
					Land Development			
					Erosion/Siltation			
					Nonpoint Source			
1	R	Ten Mile River, Mendocino Coast HU, Rockport HA, Ten Mile River HSA	11313045					
				Sedimentation/Siltation		High	162 Miles	2003
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
				Temperature		Low	162 Miles	
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Trinity River, East Fork, Trinity River HU, Upper HA	10640030					
				Sedimentation/Siltation		Medium	92 Miles	
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Resource Extraction			
					Surface Mining			
					Placer Mining			
					Mine Tailings			
					Hydromodification			
					Dam Construction			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
1	R	Trinity River, South Fork, Trinity River HU, South Fork HA	10621035					
				Sedimentation/Siltation		Medium	1161 Miles	
					Range Grazing-Riparian			
					Silviculture			
					Nonpoint Source			
				Temperature		Low	1161 Miles	
					Range Grazing-Riparian			
					Water Diversions			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Trinity River, Trinity River HU, Lower Trinity HA	10611034					
				Sedimentation/Siltation		Medium	1256 Miles	
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Silvicultural Point Sources			
					Resource Extraction			
					Surface Mining			
					Mine Tailings			
					Hydromodification			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
1	R	Trinity River, Trinity River HU, Middle HA	10631021					
				Sedimentation/Siltation		Medium	331 Miles	
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Silvicultural Point Sources			
					Resource Extraction			
					Placer Mining			
					Mine Tailings			
					Hydromodification			
					Dam Construction			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
1	R	Trinity River, Trinity River HU, Upper HA	10640003					
				Sedimentation/Siltation		Medium	570 Miles	
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Resource Extraction			
					Surface Mining			
					Placer Mining			
					Mine Tailings			
					Hydromodification			
					Dam Construction			
					Flow Regulation/Modification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
1	L	Tule Lake and Lower Klamath Lake National Wildlife Refuge (Klamath River HU)	10591020					
				pH (high)		Low	26998 Acres	
					Internal Nutrient Cycling (primarily lakes)			
					Nonpoint Source			
1	R	Van Duzen River, Eel River HU, Van Duzen River HA	11121012					
				Sedimentation/Siltation		Medium	585 Miles	
					Range Grazing-Riparian			
					Range Grazing-Upland			
					Silviculture			
					Harvesting, Restoration, Residue Management			
					Logging Road Construction/Maintenance			
					Silvicultural Point Sources			
					Construction/Land Development			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	R	Alameda Creek	20430051	Diazinon *This listing was made by USEPA.*	Urban Runoff/Storm Sewers	High	51 Miles	2004
2	R	Alamitos Creek	20540041	Mercury *TMDL will be developed as part of the Santa Clara Basin Watershed Management Initiative. Additional monitoring and assessment is needed.*	Mine Tailings	Medium	7.1 Miles	
2	R	Arroyo Corte Madera Del Presidio	20320020	Diazinon *This listing was made by USEPA.*	Urban Runoff/Storm Sewers	High	4 Miles	2004
2	R	Arroyo De La Laguna	20430084	Diazinon *This listing was made by USEPA.*	Urban Runoff/Storm Sewers	High	7.4 Miles	2004
2	R	Arroyo Del Valle	20430023	Diazinon *This listing was made by USEPA.*	Urban Runoff/Storm Sewers	High	31 Miles	2004
2	R	Arroyo Las Positas	20430080	Diazinon	Urban Runoff/Storm Sewers	High	14 Miles	2004
2	R	Arroyo Mocho	20430080	Diazinon	Urban Runoff/Storm Sewers	High	34 Miles	2004
2	R	Butano Creek	20240031	Sedimentation/Siltation *Impairment to steelhead habitat.*	Nonpoint Source	Medium	3.6 Miles	
2	R	Calabazas Creek	20640012	Diazinon *This listing was made by USEPA.*	Urban Runoff/Storm Sewers	High	4.7 Miles	2004

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	L	Calero Reservoir	20540031					
				Mercury		Medium	334 Acres	
				TMDL will be developed as part of the Santa Clara Basin Watershed Management Initiative. Additional monitoring and assessment is needed.				
					Surface Mining			
					Mine Tailings			
2	E	Carquinez Strait	20710020					
				Chlordane		Low	5657 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	5657 Acres	
					Nonpoint Source			
				Diazinon		Low	5657 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	5657 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	5657 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	5657 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	5657 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6, 7,8,-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	5657 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		High	5657 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	5657 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Selenium		Low	5657 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
2	E	**Castro Cove, Richmond (San Pablo Basin)**	20660014					
				Dieldrin (sediment)		Low	71 Acres	
					Urban Runoff/Storm Sewers			
					Point Source			
				Mercury (sediment)		Low	71 Acres	
					Urban Runoff/Storm Sewers			
					Point Source			
				PAHs (sediment)		Low	71 Acres	
					Urban Runoff/Storm Sewers			
					Point Source			
				Selenium (sediment)		Low	71 Acres	
					Urban Runoff/Storm Sewers			
					Point Source			
2	B	**Central Basin, San Francisco (part of SF Bay, Central)**	20440010					
				Chlordane		Low	40 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	40 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	40 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Dieldrin		**Low**	**40 Acres**	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		**Low**	**40 Acres**	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		**Medium**	**40 Acres**	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		**Low**	**40 Acres**	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		**High**	**40 Acres**	**2003**
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Minor Industrial Point Source			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Mercury (sediment)		**Low**	**40 Acres**	
					Urban Runoff/Storm Sewers			
					Point Source			
				PAHs (sediment)		**Low**	**40 Acres**	
					Urban Runoff/Storm Sewers			
					Point Source			
				PCBs		**High**	**40 Acres**	**2004**
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		**Low**	**40 Acres**	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Selenium		Low	40 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
2	R	Corte Madera Creek	20320011					
				Diazinon		High	4.1 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Coyote Creek (Marin County)	20320020					
				Diazinon		High	2.6 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Coyote Creek (Santa Clara Co.)	20530021					
				Diazinon		High	55 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Gallinas Creek	20620013					
				Diazinon		High	2.1 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Guadalupe Creek	20540050					
				Mercury		Medium	8.1 Miles	
				TMDL will be developed as part of the Santa Clara Basin Watershed Management Initiative. Additional monitoring and assessment is needed.				
					Mine Tailings			
2	L	Guadalupe Reservoir	20540040					
				Mercury		Medium	63 Acres	
				TMDL will be developed as part of the Santa Clara Basin Watershed Management Initiative. Additional monitoring and assessment is needed.				
					Surface Mining			
					Mine Tailings			
2	R	Guadalupe River	20540050					
				Diazinon		High	18 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Mercury		Medium	18 Miles	
				TMDL will be developed as part of the Santa Clara Basin Watershed Management Initiative. Additional monitoring and assessment is needed.				
					Mine Tailings			
2	E	Islais Creek	20440010					
				Ammonia		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Chlordane (sediment)		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Dieldrin (sediment)		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Endosulfan sulfate (sediment)		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Hydrogen Sulfide		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				PAHs (sediment)		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				PCBs (sediment)		Low	46 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
2	R	Lagunitas Creek	20113020					
				Nutrients		Low	17 Miles	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
				Pathogens		Low	17 Miles	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		**Medium**	**17 Miles**	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
2	**L**	**Lake Herman**	**20721030**					
				Mercury		**Low**	**108 Acres**	
				Additional monitoring and assessment needed. Problem due to historical mining.				
					Surface Mining			
2	**L**	**Lake Merced**	**20210010**					
				Low Dissolved Oxygen		**Low**	**299 Acres**	
				This listing was made by USEPA.				
					Source Unknown			
				pH		**Low**	**299 Acres**	
				This listing was made by USEPA.				
					Source Unknown			
2	**L**	**Lake Merritt**	**20420040**					
				Organic Enrichment/Low Dissolved Oxygen		**Low**	**142 Acres**	
				This listing was made by USEPA.				
					Source Unknown			
				Trash		**Low**	**142 Acres**	
					Urban Runoff/Storm Sewers			
2	**R**	**Laurel Creek (Solano Co)**	**20440040**					
				Diazinon		**High**	**3 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**Ledgewood Creek**	**20723010**					
				Diazinon		**High**	**12 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**Los Gatos Creek (R2)**	**20540011**					
				Diazinon		**High**	**19 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**E**	**Marina Lagoon (San Mateo County)**	**20440040**					
				High Coliform Count		**Low**	**169 Acres**	
					Urban Runoff/Storm Sewers			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	R	Matadero Creek	20550040					
				Diazinon		High	7.3 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Miller Creek	20620012					
				Diazinon		High	9 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	E	Mission Creek	20440010					
				Ammonia		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Chlordane (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Chlorpyrifos (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Chromium (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Copper (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Dieldrin (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Hydrogen Sulfide		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Lead (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Mercury (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			
				Mirex (sediment)		Low	8.5 Acres	
					Industrial Point Sources			
					Combined Sewer Overflow			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PAHs		Low	8.5 Acres	
					Industrial Point Sources Combined Sewer Overflow			
				PCBs (sediment)		Low	8.5 Acres	
					Industrial Point Sources Combined Sewer Overflow			
				Silver (sediment)		Low	8.5 Acres	
					Industrial Point Sources Combined Sewer Overflow			
				Zinc (sediment)		Low	8.5 Acres	
					Industrial Point Sources Combined Sewer Overflow			
2	R	Mt. Diablo Creek	20731040					
				Diazinon *This listing was made by USEPA.*		High	13 Miles	2004
					Urban Runoff/Storm Sewers			
2	R	Napa River	20650010					
				Nutrients *TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.*		Medium	65 Miles	
					Agriculture			
				Pathogens *TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.*		Low	65 Miles	
					Agriculture Urban Runoff/Storm Sewers			
				Sedimentation/Siltation *TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.*		Medium	65 Miles	
					Agriculture Construction/Land Development Land Development Urban Runoff/Storm Sewers			
2	R	Novato Creek	20620010					
				Diazinon *This listing was made by USEPA.*		High	17 Miles	2004
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	B	Oakland Inner Harbor (Fruitvale Site, part of SF Bay, Central)	20420040					
				Chlordane		Low	0.93 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Chlordane (sediment)		Low	0.93 Acres	
					Source Unknown			
				DDT		Low	0.93 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	0.93 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	0.93 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	0.93 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	0.93 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	0.93 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	0.93 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		High	0.93 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	0.93 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				PCBs (sediment)		Low	0.93 Acres	
					Source Unknown			
				Selenium		Low	0.93 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
2	B	Oakland Inner Harbor (Pacific Dry-dock Yard 1 Site, part of SF Bay, Central)	20420040					
				Chlordane		Low	1.8 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Chlordane (sediment)		Low	1.8 Acres	
					Source Unknown			
				Chlorpyrifos (sediment)		Low	1.8 Acres	
					Source Unknown			
				Copper (sediment)		Low	1.8 Acres	
					Source Unknown			
				DDT		Low	1.8 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	1.8 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	1.8 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Dieldrin (sediment)		Low	1.8 Acres	
					Source Unknown			
				Dioxin Compounds		Low	1.8 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	1.8 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	1.8 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Lead (sediment)		Low	1.8 Acres	
					Source Unknown			
				Mercury		High	1.8 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Mercury (sediment)		Low	1.8 Acres	
					Source Unknown			
				Mirex (sediment)		Low	1.8 Acres	
					Source Unknown			
				PAHs (sediment)		Low	1.8 Acres	
					Source Unknown			
				PCBs		High	1.8 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	1.8 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (sediment)		Low	1.8 Acres	
					Source Unknown			
				ppDDE (sediment)		Low	1.8 Acres	
					Source Unknown			
				Selenium		Low	1.8 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
				Tributyltin (sediment)		Low	1.8 Acres	
					Source Unknown			
				Zinc (sediment)		Low	1.8 Acres	
					Source Unknown			
2	C	Pacific Ocean at Fitzgerald Marine Reserve	20221012					
				High Coliform Count		Low	0.46 Miles	
					Nonpoint Source			
2	C	Pacific Ocean at Pacifica State Beach	20221011					
				High Coliform Count		Low	0.87 Miles	
				Linda Mar and San Pedro beaches are the areas affected.				
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
2	C	Pacific Ocean at Pillar Point Beach	20221012					
				High Coliform Count		Low	1.1 Miles	
					Nonpoint Source			
2	C	Pacific Ocean at Rockaway Beach	20221011					
				High Coliform Count		Low	0.29 Miles	
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
2	C	Pacific Ocean at Venice Beach	20222011					
				High Coliform Count		Low	0.38 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	**R**	**Permanente Creek**	**20550021**					
				Diazinon		**High**	**13 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**Pescadero Creek**	**20240013**					
				Sedimentation/Siltation		**Medium**	**26 Miles**	
				Impairment to steelhead habitat.				
					Nonpoint Source			
2	**R**	**Petaluma River**	**20630020**					
				Diazinon		**Low**	**22 Miles**	
				Data source: Abelli-Amen, Petaluma Tree Planters, 1999.				
					Urban Runoff/Storm Sewers			
				Nutrients		**Medium**	**22 Miles**	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
				Pathogens		**Medium**	**22 Miles**	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
				Sedimentation/Siltation		**Medium**	**22 Miles**	
					Agriculture			
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
2	**R**	**Petaluma River (tidal portion)**	**20630040**					
				Diazinon		**Low**	**1.1 Miles**	
				Data source: Abelli-Amen, Petaluma Tree Planters, 1999.				
					Urban Runoff/Storm Sewers			
				Nickel		**Low**	**1.1 Miles**	
				Exceedance of California Toxic Rule dissolved criteria and National Toxic Rule total criteria; elevated water and sediment tissue levels.				
					Municipal Point Sources			
					Urban Runoff/Storm Sewers			
					Atmospheric Deposition			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nutrients		Medium	1.1 Miles	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
				Pathogens		Medium	1.1 Miles	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
2	R	Pine Creek (Contra Costa Co)	20731011					
				Diazinon		High	13 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Pinole Creek	20660020					
				Diazinon		High	9.2 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	Pomponio Creek	20240020					
				High Coliform Count		Low	7.1 Miles	
					Nonpoint Source			
2	B	Richardson Bay	20312010					
				Chlordane		Low	2439 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	2439 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dieldrin		Low	2439 Acres	
				This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Dioxin Compounds		Low	2439 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	2439 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Furan Compounds		Low	2439 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6, 7,8,-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				High Coliform Count		Low	2439 Acres	
				Affected area, Waldo Point Harbor, is less than 10% of embayment; source has been positively identified as substandard sewage systems in some houseboat areas; extensive local control program in place with significant water quality improvements.				
					Urban Runoff/Storm Sewers			
					Septage Disposal			
					Boat Discharges/Vessel Wastes			
				Mercury		High	2439 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				PCBs		High	2439 Acres	2004
				This listing covers non dioxin-like PCBs. Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	2439 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
2	R	**Rodeo Creek**	20660022					
				Diazinon		High	8 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	E	**Sacramento San Joaquin Delta**	20710010					
				Chlordane		Low	41736 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	41736 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Diazinon		**Low**	**41736 Acres**	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		**Low**	**41736 Acres**	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		**Low**	**41736 Acres**	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		**Medium**	**41736 Acres**	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		**Low**	**41736 Acres**	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6, 7,8,-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		**High**	**41736 Acres**	**2003**
				Current data indicate fish consumption and wildlife consumption impacted uses. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Nonpoint Source			
				Nickel		**Low**	**41736 Acres**	
				This listing was made by USEPA.				
					Source Unknown			
				PCBs		**High**	**41736 Acres**	**2004**
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		**Low**	**41736 Acres**	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Selenium		Low	41736 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place. Another source is exotic species.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
2	R	San Antonio Creek (Marin/Sonoma Co)	20630031					
				Diazinon		High	18 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	R	San Felipe Creek	20530041					
				Diazinon		High	15 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	B	San Francisco Bay, Central	20312010					
				Chlordane		Low	70992 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	70992 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	70992 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	70992 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	70992 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	70992 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Furan Compounds		Low	70992 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	70992 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				PCBs		High	70992 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	70992 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Selenium		Low	70992 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
2	B	San Francisco Bay, Lower	20410010					
				Chlordane		Low	79293 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	79293 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Diazinon		Low	79293 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	79293 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	79293 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	79293 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	79293 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6, 7,8,-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	79293 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources: water quality objective exceedances. Elevated sediment levels and elevated tissue levels.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Nickel		Low	79293 Acres	
				This listing was made by USEPA.				
					Source Unknown			
				PCBs		High	79293 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	79293 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	B	San Francisco Bay, South	20510000					
				Chlordane		Low	21669 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	21669 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	21669 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	21669 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	21669 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	21669 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	21669 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	21669 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources: water quality objective exceedances. Elevated sediment level and elevated tissue levels.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				PCBs		High	21669 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (dioxin-like)		Low	21669 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Selenium		Low	21669 Acres	
				A formal health advisory has been issued by OEHHA for benthic-feeding ducks in South San Francisco Bay. This health advisory clearly establishes that water contact recreation beneficial use (REC-1) is not fully supported and standards are not fully met.				
					Agriculture			
					Domestic Use of Ground Water			
2	R	San Francisquito Creek	20550040					
				Diazinon		High	12 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
				Sedimentation/Siltation		Medium	12 Miles	
				Impairment to steelhead habitat.				
					Nonpoint Source			
2	R	San Gregorio Creek	20230014					
				High Coliform Count		Low	11 Miles	
					Nonpoint Source			
				Sedimentation/Siltation		Medium	11 Miles	
				Impairment to steelhead habitat.				
					Nonpoint Source			
2	B	San Leandro Bay (part of SF Bay, Central)	20420040					
				Chlordane		Low	588 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	588 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT (sediment)		Low	588 Acres	
					Source Unknown			
				Diazinon		Low	588 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	588 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Dioxin Compounds		Low	588 Acres	
					Atmospheric Deposition			
				Exotic Species		Medium	588 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	588 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Lead (sediment)		Low	588 Acres	
					Source Unknown			
				Mercury		High	588 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Mercury (sediment)		Low	588 Acres	
					Source Unknown			
				PAHs (sediment)		Low	588 Acres	
					Source Unknown			
				Pesticides (sediment)		Low	588 Acres	
					Source Unknown			
				Selenium		Low	588 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
				Selenium (sediment)		Low	588 Acres	
					Source Unknown			
				Zinc (sediment)		Low	588 Acres	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	**R**	**San Leandro Creek, Lower**	**20420012**					
				Diazinon		**High**	**9.3 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**San Lorenzo Creek**	**20420023**					
				Diazinon		**High**	**11 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**San Mateo Creek**	**20440032**					
				Diazinon		**High**	**11 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**B**	**San Pablo Bay**	**20610010**					
				Chlordane		**Low**	**68349 Acres**	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		**Low**	**68349 Acres**	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		**Low**	**68349 Acres**	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		**Low**	**68349 Acres**	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		**Low**	**68349 Acres**	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		**Medium**	**68349 Acres**	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		**Low**	**68349 Acres**	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6, 7,8,-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Mercury		High	68349 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Municipal Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Nickel		Low	68349 Acres	
				This listing was made by USEPA.				
					Source Unknown			
				PCBs		High	68349 Acres	2004
				This listing covers non dioxin-like PCBs.Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown Nonpoint Source			
				PCBs (dioxin-like)		Low	68349 Acres	
				The specific dioxin like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5,-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Selenium		Low	68349 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Agriculture			
					Natural Sources			
					Exotic Species			
2	R	San Pablo Creek	20660014					
				Diazinon		High	9.9 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	L	San Pablo Reservoir	20660012					
				Mercury		Low	784 Acres	
					Atmospheric Deposition			
2	R	San Pedro Creek	20221011					
				High Coliform Count		Low	2.4 Miles	
					Urban Runoff/Storm Sewers			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	**R**	**San Rafael Creek**	**20320012**					
				Diazinon		**High**	**3.6 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**San Vicente Creek**	**20221012**					
				High Coliform Count		**Low**	**3.8 Miles**	
					Nonpoint Source			
2	**R**	**Saratoga Creek**	**20550040**					
				Diazinon		**High**	**18 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
2	**R**	**Sonoma Creek**	**20640050**					
				Nutrients		**Medium**	**30 Miles**	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Land Development			
					Urban Runoff/Storm Sewers			
				Pathogens		**Low**	**30 Miles**	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Land Development			
					Urban Runoff/Storm Sewers			
				Sedimentation/Siltation		**Medium**	**30 Miles**	
				TMDL will be developed as part of ongoing watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
					Construction/Land Development			
					Land Development			
					Urban Runoff/Storm Sewers			
2	**R**	**Stevens Creek**	**20550020**					
				Diazinon		**High**	**20 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	B	Suisun Bay	20710020					
				Chlordane		Low	27498 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				DDT		Low	27498 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Diazinon		Low	27498 Acres	
				Diazinon levels cause water column toxicity. Two patterns: pulses through riverine systems linked to agricultural application in late winter and pulse from residential land use areas linked to homeowner pesticide use in late spring, early summer. Chlorpyrifos may also be the cause of toxicity; more data needed, however.				
					Nonpoint Source			
				Dieldrin		Low	27498 Acres	
				This listing was made by USEPA.				
					Nonpoint Source			
				Dioxin Compounds		Low	27498 Acres	
				The specific compounds are 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8-HpCDD, and OCDD. This listing was made by USEPA.				
					Atmospheric Deposition			
				Exotic Species		Medium	27498 Acres	
				Disrupt natural benthos; change pollutant availability in food chain; disrupt food availability to native species.				
					Ballast Water			
				Furan Compounds		Low	27498 Acres	
				The specific compounds are 2,3,7,8-TCDF, 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, and OCDF. This listing was made by USEPA.				
					Atmospheric Deposition			
				Mercury		High	27498 Acres	2003
				Current data indicate fish consumption and wildlife consumption impacted uses. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Industrial Point Sources			
					Resource Extraction			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Nickel		Low	27498 Acres	
				This listing was made by USEPA.				
					Source Unknown			
				PCBs		High	27498 Acres	2004
				This listing covers non-dioxin-like PCBs. Interim health advisory for fish; uncertainty regarding water column concentration data.				
					Unknown point source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (dioxin-like)		Low	27498 Acres	
				The specific dioxin-like compounds are 3,4,4,5-TCB (81), 3,3,3,3-TCB (77), 3,3,4,4,5-PeCB (126), 3,3,4,4,4,4-HxCB (169), 2,3,3,4,4-PeCB (105), 2,3,4,4,5-PeCB (114), 2,3,4,4,5-PeCB (118), 2,3,4,4,5-PeCB (123), 2,3,3,4,4,5-HxCB (156), 2,3,3,4,4,5-HxCB (157), 2,3,4,4,5,5-HxCB (167), 2,3,3,4,4,5,5-HpCB (189). This listing was made by USEPA.				
					Unknown Nonpoint Source			
				Selenium		Low	27498 Acres	
				Affected use is one branch of the food chain; most sensitive indicator is hatchability in nesting diving birds, significant contributions from oil refineries (control program in place) and agriculture (carried downstream by rivers); exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks); low TMDL priority because Individual Control Strategy in place.				
					Industrial Point Sources			
					Natural Sources			
					Exotic Species			
2	T	Suisun Marsh Wetlands	20723000					
				Metals		Low	66339 Acres	
				Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
				Nutrients		Low	66339 Acres	
				Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
				Organic Enrichment/Low Dissolved Oxygen		Low	66339 Acres	
				Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
				Salinity/TDS/Chlorides		Low	66339 Acres	
				Additional monitoring and assessment needed.				
					Agriculture			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
2	E	Suisun Slough	20723000					
				Diazinon		High	1124 Acres	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	**B**	**Tomales Bay**	**20114033**					
				Mercury		**Medium**	**8545 Acres**	
				Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark. Major source is historic: gold mining sediments and local mercury mining; most significant ongoing source is erosion and drainage from abandoned mines; moderate to low level inputs from point sources.				
					Mine Tailings			
				Nutrients		**Medium**	**8545 Acres**	
				TMDL will be developed as part of ongoing watershed management effort. Tributary streams, Lagunitas Creek and Walker Creek, must be managed first. Additional monitoring and assessment needed.				
					Agriculture			
				Pathogens		**High**	**8545 Acres**	**2004**
				TMDL will be developed as part of ongoing watershed management effort. Tributary streams, Lagunitas Creek and Walker Creek, must be managed first. Additional monitoring and assessment needed.				
					Intensive Animal Feeding Operations			
					Septage Disposal			
				Sedimentation/Siltation		**Medium**	**8545 Acres**	
				TMDL will be developed as part of ongoing watershed management effort. Tributary streams, Lagunitas Creek and Walker Creek, must be managed first. Additional monitoring and assessment needed.				
					Agriculture			
					Upstream Impoundment			
2	**R**	**Walker Creek**	**20112013**					
				Mercury		**Medium**	**16 Miles**	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Surface Mining			
					Mine Tailings			
				Nutrients		**Medium**	**16 Miles**	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
				Sedimentation/Siltation		**Medium**	**16 Miles**	
				Tributary to Tomales Bay. TMDLs will be developed as part of evolving watershed management effort. Additional monitoring and assessment needed.				
					Agriculture			
2	**R**	**Walnut Creek**	**20731040**					
				Diazinon		**High**	**9 Miles**	**2004**
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
2	R	Wildcat Creek	20660013					
				Diazinon		High	12 Miles	2004
				This listing was made by USEPA.				
					Urban Runoff/Storm Sewers			
3	R	Alamo Creek	31230072					
				Fecal Coliform		Low	5.8 Miles	
					Agriculture			
					Range Grazing-Riparian and/or Upland			
					Natural Sources			
3	R	Alisal Creek (Salinas)	30970093					
				Fecal Coliform		Low	7.4 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Natural Sources			
					Nonpoint Source			
				Nitrate		Low	7.4 Miles	
					Source Unknown			
3	R	Aptos Creek	30413023					
				Pathogens		Medium	8.4 Miles	
				Impaired length for pathogens is below Bridge Creek to the mouth (approximately 5 miles).				
					Urban Runoff/Storm Sewers			
				Sedimentation/Siltation		Low	8.4 Miles	
					Disturbed Sites (Land Develop.)			
					Channel Erosion			
3	R	Arroyo Burro Creek	31532010					
				Pathogens		Low	6.1 Miles	
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
3	R	Atascadero Creek (San Luis Obispo County)	30981124					
				Fecal Coliform		Low	5.4 Miles	
					Source Unknown			
				Low Dissolved Oxygen		Low	5.4 Miles	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Bean Creek	30412041					
				Sedimentation/Siltation		Low	8.9 Miles	
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Resource Extraction			
					Erosion/Siltation			
					Nonpoint Source			
3	R	Bear Creek(Santa Cruz County)	30412030					
				Sedimentation/Siltation		Low	6.3 Miles	
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			
3	R	Blanco Drain	30911010					
				Pesticides		Medium	15 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Nonpoint Source			
3	R	Blosser Channel	31210030					
				Fecal Coliform		Low	0.02 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			
3	R	Boulder Creek	30412020					
				Sedimentation/Siltation		Low	7.6 Miles	
					Specialty Crop Production			
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Bradley Canyon Creek	31210030					
				Fecal Coliform		Low	17 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			
3	R	Bradley Channel	31210030					
				Fecal Coliform		Low	3.1 Miles	
					Source Unknown			
3	R	Branciforte Creek	30412051					
				Sedimentation/Siltation		Low	5.8 Miles	
					Silviculture			
					Road Construction			
					Nonpoint Source			
3	R	Carbonera Creek	30412050					
				Nutrients		Low	10 Miles	
					Nonpoint Source			
				Pathogens		Medium	10 Miles	
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
				Sedimentation/Siltation		High	10 Miles	2002
					Construction/Land Development			
					Nonpoint Source			
3	R	Carpinteria Creek	31534020					
				Pathogens		Low	5.8 Miles	
					Agriculture			
					Land Disposal			
					Septage Disposal			
3	E	Carpinteria Marsh (El Estero Marsh)	31534020					
				Nutrients		Low	188 Acres	
					Agriculture			
				Organic Enrichment/Low Dissolved Oxygen		Low	188 Acres	
					Agriculture			
				Priority Organics		Low	188 Acres	
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Low	188 Acres	
					Agriculture			
					Construction/Land Development			
					Storm sewers			
3	R	Cholame Creek	31700053					
				Boron		Low	8.7 Miles	
					Source Unknown			
				Fecal Coliform		Low	8.7 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Natural Sources			
					Nonpoint Source			
3	R	Chorro Creek	31022012					
				Fecal Coliform		Low	14 Miles	
					Source Unknown			
				Nutrients		High	14 Miles	2002
					Municipal Point Sources			
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
				Sedimentation/Siltation		High	14 Miles	2002
					Agriculture			
					Irrigated Crop Production			
					Range Grazing-Riparian and/or Upland			
					Range Grazing-Upland			
					Agriculture-storm runoff			
					Construction/Land Development			
					Road Construction			
					Resource Extraction			
					Hydromodification			
					Channelization			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Golf course activities			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Chumash Creek	31022011					
				Fecal Coliform		Low	2.1 Miles	
					Source Unknown			
				Low Dissolved Oxygen		Low	2.1 Miles	
				This listing was made by USEPA.				
					Natural Sources			
3	R	Clear Creek (San Benito County)	30550013					
				Mercury		Medium	9.6 Miles	
					Resource Extraction			
3	R	Corralitos Creek	30510010					
				Fecal Coliform		Low	13 Miles	
					Source Unknown			
3	R	Dairy Creek	31022010					
				Fecal Coliform		Low	4.5 Miles	
					Source Unknown			
				Low Dissolved Oxygen		Low	4.5 Miles	
					Source Unknown			
3	E	Elkhorn Slough	30600014					
				Pathogens		Low	2034 Acres	
					Natural Sources			
					Nonpoint Source			
				Pesticides		Low	2034 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agricultural Return Flows			
					Erosion/Siltation			
					Contaminated Sediments			
					Nonpoint Source			
				Sedimentation/Siltation		Low	2034 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Channel Erosion			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Espinosa Slough	30911010					
				Nutrients		Low	1.5 Miles	
					Agriculture			
					Storm sewers			
				Pesticides		Medium	1.5 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
				Priority Organics		Medium	1.5 Miles	
					Nonpoint Source			
3	R	Fall Creek	30412022					
				Sedimentation/Siltation		Low	5.1 Miles	
					Road Construction			
					Habitat Modification			
					Erosion/Siltation			
					Nonpoint Source			
3	R	Gabilan Creek	30919000					
				Fecal Coliform		Low	6.4 Miles	
					Urban Runoff/Storm Sewers			
					Natural Sources			
					Nonpoint Source			
3	E	Goleta Slough/Estuary	31531020					
				Metals		Low	196 Acres	
					Industrial Point Sources			
				Pathogens		Low	196 Acres	
					Urban Runoff/Storm Sewers			
				Priority Organics		Low	196 Acres	
					Nonpoint Source			
				Sedimentation/Siltation		Low	196 Acres	
					Construction/Land Development			
3	L	Hernandez Reservoir	30550016					
				Mercury		Medium	626 Acres	
					Surface Mining			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Kings Creek	30412011					
				Sedimentation/Siltation		Low	4.4 Miles	
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			
3	R	Las Tablas Creek	30981293					
				Metals		High	5.7 Miles	2002
					Surface Mining			
3	R	Las Tablas Creek, North Fork	30981290					
				Metals		High	6.5 Miles	2002
					Surface Mining			
3	R	Las Tablas Creek, South Fork	30981290					
				Metals		High	4.7 Miles	2002
					Surface Mining			
3	R	Llagas Creek	30530020					
				Chloride		Low	16 Miles	
				Impaired section for Chlorides is located downstream of confluence with Miller Slough (approximately 1 mile of stream near Southside Drive).				
					Nonpoint Source			
					Point Source			
				Fecal Coliform		Low	16 Miles	
				Impaired section for Fecal Coliform is located between the confluence with Church Creek and the confluence with Pajaro River (approximately 9.5 miles of stream length).				
					Pasture Grazing-Riparian and/or Upland			
					Natural Sources			
					Nonpoint Source			
				Low Dissolved Oxygen		Low	16 Miles	
				This listing was made by USEPA.				
					Municipal Point Sources			
					Irrigated Crop Production			
					Agricultural Return Flows			
					Habitat Modification			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nutrients		Medium	16 Miles	
				Impaired section for Nutrients is located between the confluence with Church Creek and the confluence with Pajaro River (approximately 9.5 miles of stream length).				
					Municipal Point Sources			
					Agriculture			
					Irrigated Crop Production			
					Pasture Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Habitat Modification			
					Nonpoint Source			
					Unknown point source			
				pH		Low	16 Miles	
					Source Unknown			
				Sedimentation/Siltation		Medium	16 Miles	
				Impaired section for Sediment/Siltation is located between the confluence with Church Creek and the confluence with Pajaro River (approximately 9.5 miles of stream length).				
					Agriculture			
					Hydromodification			
					Habitat Modification			
				Sodium		Low	16 Miles	
				Impaired section for Sodium is located downstream of confluence with Miller Slough (approximately 1 mile of stream near Southside Drive).				
					Source Unknown			
					Nonpoint Source			
				Total Dissolved Solids		Low	16 Miles	
				Impaired section for Total Dissolved Solids is located between the confluence with Church Creek and the confluence with Pajaro River (approximately 9.5 miles of stream length).				
					Nonpoint Source			
					Point Source			
3	R	Lompico Creek	30412040					
				Nutrients		Low	4.5 Miles	
					Septage Disposal			
				Pathogens		Medium	4.5 Miles	
					Septage Disposal			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		High	4.5 Miles	2002
					Construction/Land Development			
					Natural Sources			
3	R	Los Osos Creek	31023012					
				Fecal Coliform		Low	9.9 Miles	
					Source Unknown			
				Low Dissolved Oxygen		Low	9.9 Miles	
				This listing was made by USEPA.				
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			
				Nutrients		High	9.9 Miles	2002
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agricultural Return Flows			
				Sedimentation/Siltation		High	9.9 Miles	2002
					Agriculture			
					Irrigated Crop Production			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Hydromodification			
					Channelization			
					Dredging			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
3	R	Love Creek	30412021					
				Sedimentation/Siltation		Low	3.8 Miles	
					Agriculture			
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Main Street Canal	31210030					
				Nitrate		Low	5.1 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
3	R	Mission Creek	31532011					
				Pathogens		Low	8.6 Miles	
					Urban Runoff/Storm Sewers			
					Transient encampments			
				Unknown Toxicity		Low	8.6 Miles	
					Urban Runoff/Storm Sewers			
3	C	Monterey Bay South (Coastline)	30950042					
				Metals		Low	12 Miles	
					Surface Mining			
				Pesticides		Low	12 Miles	
					Agriculture			
3	B	Monterey Harbor	30950042					
				Metals		Medium	76 Acres	
					Railroad Slag Pile			
				Unknown Toxicity		Low	76 Acres	
					Source Unknown			
3	E	Moro Cojo Slough	30913011					
				Low Dissolved Oxygen		Low	62 Acres	
					Source Unknown			
				Pesticides		Medium	62 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agricultural Return Flows			
					Nonpoint Source			
				Sedimentation/Siltation		Low	62 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Construction/Land Development			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	B	Morro Bay	31023012					
				Metals		Medium	1922 Acres	
				Affected area is 2300 acres. Open water habitat is approximately 1900 acres and delta area is approximately 400 acres.				
					Surface Mining			
					Nonpoint Source			
					Boat Discharges/Vessel Wastes			
				Pathogens		High	1922 Acres	2002
				Affected area is 2300 acres. Open water habitat is approximately 1900 acres and delta area is approximately 400 acres.				
					Range Grazing-Upland			
					Urban Runoff/Storm Sewers			
					Septage Disposal			
					Natural Sources			
					Nonpoint Source			
				Sedimentation/Siltation		High	1922 Acres	2002
				Affected area is 2300 acres. Open water habitat is approximately 1900 acres and delta area is approximately 400 acres.				
					Agriculture			
					Irrigated Crop Production			
					Construction/Land Development			
					Resource Extraction			
					Channelization			
					Channel Erosion			
3	B	Moss Landing Harbor	30600014					
				Pathogens		Low	79 Acres	
					Agriculture			
					Nonpoint Source			
					Boat Discharges/Vessel Wastes			
				Pesticides		Low	79 Acres	
					Agriculture			
					Irrigated Crop Production			
					Specialty Crop Production			
				Sedimentation/Siltation		Low	79 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Hydromodification			
					Dredging			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Mountain Charlie Gulch	30412040					
				Sedimentation/Siltation		Low	3.9 Miles	
					Silviculture			
					Road Construction			
					Erosion/Siltation			
					Nonpoint Source			
3	L	Nacimiento Reservoir	30982000					
				Metals		High	5736 Acres	2003
					Surface Mining			
					Natural Sources			
3	R	Newell Creek (Upper)	30412031					
				Sedimentation/Siltation		Low	3.5 Miles	
					Agriculture			
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			
3	R	Nipomo Creek	31210011					
				Fecal Coliform		Low	9.3 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Natural Sources			
3	E	Old Salinas River Estuary	30911010					
				Fecal Coliform		Low	74 Acres	
					Source Unknown			
				Low Dissolved Oxygen		Low	74 Acres	
					Source Unknown			
				Nutrients		Medium	74 Acres	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-irrigation tailwater			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Pesticides		Medium	74 Acres	
					Agriculture Irrigated Crop Production Agriculture-storm runoff Agriculture-irrigation tailwater Agricultural Return Flows Nonpoint Source			
3	R	Orcutt Solomon Creek	31210030					
				Boron *This listing was made by USEPA.*		Low	4.7 Miles	
					Natural Sources			
				Fecal Coliform		Low	4.7 Miles	
					Agriculture Pasture Grazing-Riparian and/or Upland Natural Sources Nonpoint Source			
				Nitrate		Low	4.7 Miles	
					Source Unknown			
3	R	Oso Flaco Creek	31210030					
				Fecal Coliform		Low	6.3 Miles	
					Source Unknown			
				Nitrate		Low	6.3 Miles	
					Source Unknown			
3	L	Oso Flaco Lake	31210030					
				Nitrate		Low	56 Acres	
					Agriculture Nonpoint Source			
3	C	Pacific Ocean at Arroyo Burro Beach (Santa Barbara County)	31532010					
				Total Coliform		Low	3.1 Miles	
					Source Unknown			
3	C	Pacific Ocean at Carpinteria State Beach (Carpinteria Creek mouth, Santa Barbara County)	31534020					
				Fecal Coliform		Low	0.35 Miles	
					Source Unknown			
				Total Coliform		Low	0.35 Miles	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	C	Pacific Ocean at East Beach (mouth of Mission Creek, Santa Barbara County)	31532011					
				Fecal Coliform		Low	0.06 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Natural Sources			
					Nonpoint Source			
					Unknown Nonpoint Source			
				Total Coliform		Low	0.06 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Nonpoint Source			
					Unknown Nonpoint Source			
3	C	Pacific Ocean at East Beach (mouth of Sycamore Creek, Santa Barbara County)	31532012					
				Total Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Gaviota Beach (mouth of Canada de la Gaviota Creek, Santa Barbara County)	31510031					
				Total Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Hammonds Beach (Santa Barbara County)	31533010					
				Fecal Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Hope Ranch Beach (Santa Barbara County)	31532010					
				Fecal Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Jalama Beach (Santa Barbara County)	31510051					
				Fecal Coliform		Low	3.3 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Total Coliform		Low	3.3 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Natural Sources			
					Nonpoint Source			
3	C	Pacific Ocean at Ocean Beach (Santa Barbara County)	31410050					
				Fecal Coliform		Low	0.06 Miles	
					Source Unknown			
				Total Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Point Rincon (mouth of Rincon Cr, Santa Barbara County)	31534012					
				Fecal Coliform		Low	0.06 Miles	
					Source Unknown			
				Total Coliform		Low	0.06 Miles	
					Source Unknown			
3	C	Pacific Ocean at Refugio Beach (Santa Barbara County)	31510022					
				Total Coliform		Low	0.06 Miles	
					Source Unknown			
3	R	Pajaro River	30510030					
				Fecal Coliform		Low	32 Miles	
				Impaired length is above Llagas Creek (approximately 4.5 miles).				
					Pasture Grazing-Riparian and/or Upland			
					Natural Sources			
					Nonpoint Source			
				Nutrients		Medium	32 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Wastewater - land disposal			
					Channelization			
					Removal of Riparian Vegetation			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Medium	32 Miles	
					Agriculture			
					Irrigated Crop Production			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Resource Extraction			
					Surface Mining			
					Hydromodification			
					Channelization			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
3	R	Pennington Creek	31022011					
				Fecal Coliform		Low	5.3 Miles	
					Source Unknown			
3	R	Rider Gulch Creek	30510010					
				Sedimentation/Siltation		Medium	1.8 Miles	
					Agriculture			
					Silviculture			
					Construction/Land Development			
3	R	Salinas Reclamation Canal	30911010					
				Fecal Coliform		Low	5.9 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			
				Low Dissolved Oxygen		Low	5.9 Miles	
					Source Unknown			
				Nitrate		Low	5.9 Miles	
					Source Unknown			
				Pesticides		Medium	5.9 Miles	
					Minor Industrial Point Source			
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Priority Organics		Medium	5.9 Miles	
					Minor Industrial Point Source			
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Source Unknown			
					Nonpoint Source			
3	R	Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920)	30917000					
				Fecal Coliform		Low	31 Miles	
					Source Unknown			
				Nutrients		Medium	31 Miles	
					Agriculture			
				Pesticides		Medium	31 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Nonpoint Source			
				Salinity/TDS/Chlorides		Low	31 Miles	
					Agriculture			
					Natural Sources			
					Nonpoint Source			
				Sedimentation/Siltation		Medium	31 Miles	
					Agriculture			
					Irrigated Crop Production			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Road Construction			
					Land Development			
					Channel Erosion			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Salinas River (midddle, near Gonzales Rd crossing to confluence with Nacimiento River)	30981177					
				Pesticides		Medium	72 Miles	
				Area affected is the lower 20 miles of the middle Salinas River.				
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Nonpoint Source			
				Salinity/TDS/Chlorides		Low	72 Miles	
				Area affected is the lower 20 miles of the middle Salinas River.				
					Agriculture			
					Natural Sources			
					Nonpoint Source			
				Sedimentation/Siltation		Medium	72 Miles	
					Agriculture			
					Irrigated Crop Production			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Road Construction			
					Land Development			
					Channel Erosion			
					Nonpoint Source			
3	R	Salinas River (upper, confluence of Nacimiento River to Santa Margarita Reservoir)	30981112					
				Chloride		Low	49 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
				Sodium		Low	49 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
3	E	Salinas River Lagoon (North)	30911010					
				Nutrients		Medium	197 Acres	
					Nonpoint Source			
				Pesticides		Medium	197 Acres	
					Agriculture			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Medium	197 Acres	
					Nonpoint Source			
3	E	Salinas River Refuge Lagoon (South)	30911010					
				Nutrients		Medium	30 Acres	
					Agriculture			
				Pesticides		Medium	30 Acres	
					Agriculture			
				Salinity/TDS/Chlorides		Low	30 Acres	
					Agriculture			
3	R	San Antonio Creek (San Antonio Watershed, Rancho del las Flores Bridge at Hwy 135 to downstream at Railroad Bridge)	31300050					
				Boron *This listing was made by USEPA.*		Low	14 Miles	
					Natural Sources			
3	R	San Antonio Creek (South Coast Watershed)	31531011					
				Sedimentation/Siltation		Low	6.5 Miles	
					Agriculture Nonpoint Source			
3	R	San Benito River	30530020					
				Fecal Coliform		Low	86 Miles	
					Source Unknown			
				Sedimentation/Siltation		Medium	86 Miles	
					Agriculture Resource Extraction Nonpoint Source			
3	R	San Bernardo Creek	31022012					
				Fecal Coliform		Low	6.9 Miles	
					Source Unknown			
3	R	San Lorenzo Creek	30970023					
				Boron		Low	49 Miles	
					Source Unknown			
				Fecal Coliform		Low	49 Miles	
					Agriculture Pasture Grazing-Riparian and/or Upland Urban Runoff/Storm Sewers Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	San Lorenzo River	30412022					
				Nutrients		Low	27 Miles	
					Septage Disposal			
					Nonpoint Source			
				Pathogens		Medium	27 Miles	
					Urban Runoff/Storm Sewers			
					Septage Disposal			
				Sedimentation/Siltation		High	27 Miles	2002
					Silviculture			
					Construction/Land Development			
					Land Development			
					Urban Runoff/Storm Sewers			
3	E	San Lorenzo River Lagoon	30412053					
				Pathogens		Medium	66 Acres	
					Urban Runoff/Storm Sewers			
					Natural Sources			
3	R	San Luis Obispo Creek (Below W Marsh Street)	31024012					
				Nutrients		High	9.6 Miles	2004
					Municipal Point Sources			
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
				Pathogens		High	9.6 Miles	2004
					Source Unknown			
				Priority Organics		High	9.6 Miles	2002
					Source Unknown			
3	R	San Luisito Creek	31022011					
				Fecal Coliform		Low	6.7 Miles	
					Source Unknown			
3	R	Santa Maria River	31210030					
				Fecal Coliform		Low	51 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nitrate		Low	51 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
3	R	Santa Ynez River	31410050					
				Nutrients		Low	47 Miles	
					Nonpoint Source			
				Salinity/TDS/Chlorides		Low	47 Miles	
					Agriculture			
				Sedimentation/Siltation		Low	47 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Resource Extraction			
3	L	Schwan Lake	30412053					
				Nutrients		Low	23 Acres	
					Nonpoint Source			
				Pathogens		Medium	23 Acres	
					Urban Runoff/Storm Sewers			
					Natural Sources			
3	R	Shingle Mill Creek	30412022					
				Nutrients		Low	1.6 Miles	
					Septage Disposal			
				Sedimentation/Siltation		High	1.6 Miles	2002
					Construction/Land Development			
					Nonpoint Source			
3	E	Soquel Lagoon	30413014					
				Nutrients		Low	1.2 Acres	
					Septage Disposal			
					Nonpoint Source			
				Pathogens		Medium	1.2 Acres	
					Urban Runoff/Storm Sewers			
					Natural Sources			
					Nonpoint Source			
				Sedimentation/Siltation		Low	1.2 Acres	
					Construction/Land Development			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Tembladero Slough	30911010					
				Fecal Coliform		Low	5 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff/Storm Sewers			
					Natural Sources			
				Nutrients		Low	5 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agricultural Return Flows			
					Nonpoint Source			
				Pesticides		Medium	5 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agricultural Return Flows			
					Nonpoint Source			
3	R	Tequisquita Slough	30530020					
				Fecal Coliform		Low	7.2 Miles	
					Agriculture			
					Natural Sources			
					Nonpoint Source			
3	R	Valencia Creek	30413023					
				Pathogens		Medium	6.2 Miles	
					Agriculture			
					Septage Disposal			
				Sedimentation/Siltation		Low	6.2 Miles	
					Agriculture			
					Construction/Land Development			
3	R	Waddell Creek, East Branch	30411010					
				Nutrients		Low	3.5 Miles	
					Municipal Point Sources			
3	R	Walters Creek	31022011					
				Fecal Coliform		Low	2.8 Miles	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
3	R	Warden Creek	31023010					
				Fecal Coliform		Low	6 Miles	
					Source Unknown			
				Low Dissolved Oxygen		Low	6 Miles	
					Source Unknown			
3	R	Watsonville Slough	30510030					
				Pathogens		Medium	6.2 Miles	
					Urban Runoff/Storm Sewers			
					Source Unknown			
					Nonpoint Source			
				Pesticides		Low	6.2 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Nonpoint Source			
				Sedimentation/Siltation		Medium	6.2 Miles	
					Agriculture			
					Irrigated Crop Production			
					Agriculture-storm runoff			
					Nonpoint Source			
3	R	Zayante Creek	30412040					
				Sedimentation/Siltation		Low	9.2 Miles	
					Agriculture			
					Silviculture			
					Road Construction			
					Disturbed Sites (Land Develop.)			
					Erosion/Siltation			
					Nonpoint Source			
4	C	Abalone Cove Beach	40511000					
				Beach Closures		High	1.1 Miles	2002
					Nonpoint Source			
				DDT (sediment)		Low	1.1 Miles	
					Nonpoint Source			
				PCBs		Low	1.1 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Aliso Canyon Wash	40521000					
				Selenium		High	10 Miles	2003
					Nonpoint Source			
4	C	Amarillo Beach	40431000					
				DDT *Fish Consumption Advisory for DDT.*		Low	0.64 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	0.64 Miles	
					Nonpoint Source			
4	R	Arroyo Seco Reach 1 (LA River to West Holly Ave.)	40515010					
				Algae		High	5.2 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	5.2 Miles	2002
					Nonpoint Source			
				Trash		Low	5.2 Miles	
					Nonpoint Source			
4	R	Arroyo Seco Reach 2 (Figueroa St. to Riverside Dr.)	40515010					
				Algae		High	4.4 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	4.4 Miles	2002
					Nonpoint Source			
				Trash		Low	4.4 Miles	
					Nonpoint Source			
4	R	Ashland Avenue Drain	40513000					
				High Coliform Count		High	2.3 Miles	2002
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Low	2.3 Miles	
					Nonpoint Source			
				Toxicity		Low	2.3 Miles	
					Nonpoint Source			
4	C	Avalon Beach	40511000					
				Bacteria Indicators *Area affected is between Pier and BB restaurant (2/3), between Pier and BB restaurant (1/3), between storm drain and Pier (1/3). and between BB restaurant and the Tuna Club.*		Low	0.67 Miles	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Ballona Creek	40513000					
				Cadmium (sediment)	Nonpoint/Point Source	High	6.5 Miles	2004
				ChemA (tissue)	Source Unknown	High	6.5 Miles	2004
				Chlordane (tissue)	Nonpoint/Point Source	High	6.5 Miles	2004
				Copper, Dissolved	Nonpoint Source	High	6.5 Miles	2004
				DDT (tissue)	Nonpoint/Point Source	High	6.5 Miles	2004
				Dieldrin (tissue)	Nonpoint/Point Source	High	6.5 Miles	2004
				Enteric Viruses	Nonpoint/Point Source	High	6.5 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	6.5 Miles	2003
				Lead, Dissolved	Nonpoint Source	High	6.5 Miles	2004
				PCBs (tissue)	Nonpoint/Point Source	High	6.5 Miles	2004
				pH	Urban Runoff/Storm Sewers Nonpoint Source	Low	6.5 Miles	
				Sediment Toxicity	Nonpoint/Point Source	High	6.5 Miles	2004
				Selenium, Total	Urban Runoff/Storm Sewers Nonpoint Source	Low	6.5 Miles	
				Silver (sediment)	Nonpoint Source	Low	6.5 Miles	
				Toxicity	Nonpoint/Point Source	High	6.5 Miles	2004
				Zinc, Dissolved	Urban Runoff/Storm Sewers Nonpoint Source	Low	6.5 Miles	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Ballona Creek Estuary	40513000					
				Chlordane (tissue & sediment)	Nonpoint/Point Source	High	2.3 Miles	2004
				DDT (sediment)	Nonpoint/Point Source	High	2.3 Miles	2004
				High Coliform Count	Nonpoint/Point Source	High	2.3 Miles	2003
				Lead (sediment)	Nonpoint/Point Source	High	2.3 Miles	2004
				PAHs (sediment)	Nonpoint/Point Source	Low	2.3 Miles	
				PCBs (tissue & sediment)	Nonpoint/Point Source	High	2.3 Miles	2004
				Sediment Toxicity	Nonpoint/Point Source	High	2.3 Miles	2004
				Shellfish Harvesting Advisory	Nonpoint/Point Source	High	2.3 Miles	2003
				Zinc (sediment)	Nonpoint/Point Source	High	2.3 Miles	2003
4	T	Ballona Creek Wetlands	40517000					
				Exotic Vegetation	Nonpoint Source	Low	289 Acres	
				Habitat alterations	Nonpoint Source	Low	289 Acres	
				Hydromodification	Nonpoint Source	Low	289 Acres	
				Reduced Tidal Flushing	Nonpoint Source	Low	289 Acres	
				Trash	Nonpoint Source	Low	289 Acres	
4	R	Bell Creek	40521000					
				High Coliform Count	Nonpoint/Point Source	High	8.9 Miles	2002
4	C	Big Rock Beach	40431000					
				Beach Closures	Nonpoint Source	High	0.74 Miles	2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT		Low	0.74 Miles	
				Fish consumption advisory for DDT.				
					Nonpoint Source			
				High Coliform Count		High	0.74 Miles	2002
					Nonpoint Source			
				PCBs		Low	0.74 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	C	**Bluff Cove Beach**	40511000					
				Beach Closures		High	0.55 Miles	2002
					Nonpoint Source			
				DDT		Low	0.55 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				PCBs		Low	0.55 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	R	**Brown Barranca/Long Canyon**	40321000					
				Nitrate and Nitrite		High	2.6 Miles	2003
					Nonpoint Source			
4	R	**Burbank Western Channel**	40521000					
				Algae		High	13 Miles	2002
					Nonpoint/Point Source			
				Ammonia		High	13 Miles	2002
					Nonpoint/Point Source			
				Cadmium		Low	13 Miles	
					Nonpoint/Point Source			
				Odors		High	13 Miles	2002
					Nonpoint/Point Source			
				Scum/Foam-unnatural		High	13 Miles	2002
					Nonpoint/Point Source			
				Trash		Low	13 Miles	
					Nonpoint/Point Source			
4	C	**Cabrillo Beach (Inner) LA Harbor Area**	40512000					
				Beach Closures (Coliform)		High	0.56 Miles	2004
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT		Medium	0.56 Miles	
				Fish consumption advisory for DDT.				
					Nonpoint Source			
				PCBs		Medium	0.56 Miles	
				Fish consumption advisory for PCBs.				
					Nonpoint Source			
4	C	Cabrillo Beach (Outer)	40512000					
				Beach Closures		High	0.58 Miles	2002
					Nonpoint Source			
				DDT		Low	0.58 Miles	
				Fish consumption advisory for DDT.				
					Nonpoint Source			
				High Coliform Count		High	0.58 Miles	2002
					Nonpoint Source			
				PCBs		Low	0.58 Miles	
				Fish consumption advisory for PCBs.				
					Nonpoint Source			
4	E	Calleguas Creek Reach 1 (was Mugu Lagoon on 1998 303(d) list)	40311000					
				Chlordane (tissue)		Medium	344 Acres	
					Nonpoint Source			
				Copper		Medium	344 Acres	
					Nonpoint/Point Source			
				DDT (tissue & sediment)		Medium	344 Acres	
					Nonpoint Source			
				Endosulfan (tissue)		Medium	344 Acres	
					Nonpoint Source			
				Mercury		Medium	344 Acres	
					Nonpoint/Point Source			
				Nickel		Medium	344 Acres	
					Nonpoint/Point Source			
				Nitrogen		High	344 Acres	2002
					Nonpoint/Point Source			
				PCBs (tissue)		Medium	344 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	344 Acres	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Medium	344 Acres	
					Agriculture Natural Sources			
				Zinc		Medium	344 Acres	
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 2 (estuary to Potrero Rd- was Calleguas Creek Reaches 1 and 2 on 1998 303d list)	40312000					
				Ammonia		High	4.3 Miles	2002
					Nonpoint/Point Source			
				ChemA (tissue) *Historical use of pesticides and lubricants.*		Medium	4.3 Miles	
					Nonpoint Source			
				Chlordane (tissue)		Medium	4.3 Miles	
					Nonpoint Source			
				Copper, Dissolved		Low	4.3 Miles	
					Nonpoint Source			
				DDT		Low	4.3 Miles	
					Nonpoint Source			
				DDT (tissue & sediment)		Medium	4.3 Miles	
					Nonpoint Source			
				Endosulfan (tissue)		Medium	4.3 Miles	
					Nonpoint Source			
				Fecal Coliform *Area affected is at the mouth of the creek.*		Low	4.3 Miles	
					Nonpoint/Point Source			
				Nitrogen		High	4.3 Miles	2002
					Nonpoint/Point Source			
				PCBs (tissue)		Medium	4.3 Miles	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	4.3 Miles	
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	4.3 Miles	
					Agriculture Natural Sources			
				Toxaphene (tissue & sediment)		Low	4.3 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)	40312000					
				Chloride		Medium	3.5 Miles	
					Nonpoint/Point Source			
				Nitrate and Nitrite		High	3.5 Miles	2002
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	3.5 Miles	
					Agriculture Natural Sources			
				Total Dissolved Solids		High	3.5 Miles	2003
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 4 (was Revolon Slough Main Branch: Mugu Lagoon to Central Avenue on 1998 303d list)	40311000					
				Algae		High	7.2 Miles	2002
					Nonpoint Source			
				Boron *This listing was made by USEPA.*		Medium	7.2 Miles	
					Nonpoint Source			
				ChemA (tissue) *Historical use of pesticides and lubricants.*		Medium	7.2 Miles	
					Nonpoint Source			
				Chlordane (tissue & sediment)		Medium	7.2 Miles	
					Nonpoint Source			
				Chlorpyrifos (tissue)		Medium	7.2 Miles	
					Nonpoint Source			
				DDT (tissue & sediment)		Medium	7.2 Miles	
					Nonpoint Source			
				Dieldrin (tissue)		Medium	7.2 Miles	
					Nonpoint Source			
				Endosulfan (tissue & sediment)		Medium	7.2 Miles	
					Nonpoint Source			
				Fecal Coliform		Low	7.2 Miles	
					Nonpoint/Point Source			
				Nitrate as Nitrate (NO3)		Low	7.2 Miles	
					Nonpoint/Point Source			
				Nitrogen		High	7.2 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (tissue)		Medium	7.2 Miles	
					Nonpoint Source			
				Sedimentation/Siltation		Low	7.2 Miles	
					Agriculture Natural Sources			
				Selenium		Medium	7.2 Miles	
					Nonpoint Source			
				Sulfates *This listing was made by USEPA.*		Medium	7.2 Miles	
					Nonpoint Source			
				Total Dissolved Solids *This listing was made by USEPA.*		Medium	7.2 Miles	
					Nonpoint Source			
				Toxaphene (tissue & sediment)		Medium	7.2 Miles	
					Nonpoint Source			
				Toxicity		High	7.2 Miles	2004
					Nonpoint Source			
				Trash		Low	7.2 Miles	
					Nonpoint Source			
4	R	Calleguas Creek Reach 5 (was Beardsley Channel on 1998 303d list)	40311000					
				Algae		High	4.3 Miles	2002
					Nonpoint Source			
				ChemA (tissue)		Medium	4.3 Miles	
					Nonpoint Source			
				Chlordane (tissue & sediment)		Medium	4.3 Miles	
					Nonpoint Source			
				Chlorpyrifos (tissue)		High	4.3 Miles	2003
					Nonpoint Source			
				Dacthal (sediment)		Medium	4.3 Miles	
					Nonpoint Source			
				DDT (tissue & sediment)		Medium	4.3 Miles	
					Nonpoint Source			
				Dieldrin (tissue)		Medium	4.3 Miles	
					Nonpoint Source			
				Endosulfan (tissue & sediment)		Medium	4.3 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nitrogen		High	4.3 Miles	2002
					Nonpoint Source			
				PCBs (tissue)		Medium	4.3 Miles	
					Nonpoint Source			
				Sedimentation/Siltation		Low	4.3 Miles	
					Agriculture			
					Natural Sources			
				Toxaphene (tissue & sediment)		Medium	4.3 Miles	
					Nonpoint Source			
				Toxicity		High	4.3 Miles	2004
					Nonpoint Source			
				Trash		Low	4.3 Miles	
					Nonpoint Source			
4	R	Calleguas Creek Reach 6 (was Arroyo Las Posas Reaches 1 and 2 on 1998 303d list)	40362000					
				Ammonia		High	15 Miles	2002
					Nonpoint/Point Source			
				Chloride		Medium	15 Miles	
					Nonpoint/Point Source			
				DDT (sediment)		Medium	15 Miles	
					Nonpoint Source			
				Fecal Coliform		Low	15 Miles	
					Nonpoint/Point Source			
				Nitrate and Nitrite		High	15 Miles	2002
					Nonpoint/Point Source			
				Nitrate as Nitrate (NO3)		High	15 Miles	2002
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	15 Miles	
					Agriculture			
					Natural Sources			
				Sulfates		High	15 Miles	2003
					Nonpoint/Point Source			
				Total Dissolved Solids		High	15 Miles	2003
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 7 (was Arroyo Simi Reaches 1 and 2 on 1998 303d list)	40367000					
				Ammonia		High	14 Miles	2002
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Boron		High	14 Miles	2003
					Nonpoint Source			
				Chloride		Medium	14 Miles	
					Nonpoint Source			
				Fecal Coliform		Low	14 Miles	
					Nonpoint Source			
				Organophosphorus Pesticides		Low	14 Miles	
					Municipal Point Sources Agriculture			
				Sedimentation/Siltation		Low	14 Miles	
					Agriculture Natural Sources			
				Sulfates		High	14 Miles	2003
					Nonpoint Source			
				Total Dissolved Solids		High	14 Miles	2003
					Nonpoint Source			
4	R	Calleguas Creek Reach 8 (was Tapo Canyon Reach 1)	40366000					
				Boron		High	7.2 Miles	2003
					Nonpoint/Point Source			
				Chloride		High	7.2 Miles	2002
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	7.2 Miles	
					Nonpoint Source			
				Sulfates		High	7.2 Miles	2003
					Nonpoint/Point Source			
				Total Dissolved Solids		High	7.2 Miles	2003
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 9A (was lower part of Conejo Creek Reach 1 on 1998 303d list)	40312000					
				Algae		High	1.7 Miles	2002
					Nonpoint/Point Source			
				ChemA (tissue)		Low	1.7 Miles	
					Nonpoint Source			
				Chlordane (tissue) *Historical use of pesticides and lubricants.*		Low	1.7 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT (tissue)		Low	1.7 Miles	
					Nonpoint Source			
				Dieldrin (tissue)		Low	1.7 Miles	
				Historical use of pesticides and lubricants.				
					Nonpoint Source			
				Endosulfan (tissue)		Low	1.7 Miles	
					Nonpoint Source			
				Fecal Coliform		Low	1.7 Miles	
					Nonpoint/Point Source			
				Hexachlorocyclohexane/HCH (tissue)		Low	1.7 Miles	
				Historical use of pesticides and lubricants.				
					Nonpoint Source			
				Nitrate as Nitrate (NO3)		Low	1.7 Miles	
					Nonpoint/Point Source			
				Nitrate as Nitrogen		Low	1.7 Miles	
					Nonpoint/Point Source			
				Nitrite as Nitrogen		Low	1.7 Miles	
					Nonpoint/Point Source			
				PCBs (tissue)		Low	1.7 Miles	
				Historical use of pesticides and lubricants.				
					Nonpoint Source			
				Sulfates		High	1.7 Miles	2003
					Nonpoint/Point Source			
				Total Dissolved Solids		High	1.7 Miles	2003
					Nonpoint/Point Source			
				Toxaphene (tissue & sediment)		Medium	1.7 Miles	
					Nonpoint Source			
4	R	Calleguas Creek Reach 9B (was part of Conejo Creek Reaches 1 and 2 on 1998 303d list)	40363000					
				Algae		High	6.2 Miles	2002
					Nonpoint/Point Source			
				Ammonia		High	6.2 Miles	2002
					Nonpoint/Point Source			
				ChemA (tissue)		Low	6.2 Miles	
					Nonpoint Source			
				Chloride		Medium	6.2 Miles	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT (tissue)	Nonpoint Source	Low	6.2 Miles	
				Endosulfan (tissue)	Nonpoint Source	Low	6.2 Miles	
				Fecal Coliform	Nonpoint/Point Source	Low	6.2 Miles	
				Sulfates	Nonpoint/Point Source	High	6.2 Miles	2003
				Total Dissolved Solids	Nonpoint/Point Source	High	6.2 Miles	2003
				Toxaphene (tissue & sediment)	Nonpoint Source	Medium	6.2 Miles	
				Toxicity	Nonpoint/Point Source	High	6.2 Miles	2004
4	R	Calleguas Creek Reach 10 (Conejo Creek (Hill Canyon)-was part of Conejo Crk Reaches 2 & 3, and lower Conejo Crk/Arroyo Conejo N Fk on 1998 303d list)	40364000					
				Algae	Nonpoint/Point Source	High	3 Miles	2002
				Ammonia	Nonpoint/Point Source	High	3 Miles	2002
				ChemA (tissue)	Nonpoint Source	Medium	3 Miles	
				Chloride	Nonpoint/Point Source	Medium	3 Miles	
				DDT (tissue)	Nonpoint Source	Medium	3 Miles	
				Endosulfan (tissue)	Nonpoint Source	Medium	3 Miles	
				Fecal Coliform	Nonpoint Source	Low	3 Miles	
				Nitrite as Nitrogen	Nonpoint/Point Source	Low	3 Miles	
				Sulfates	Nonpoint Source	High	3 Miles	2003
				Total Dissolved Solids	Nonpoint/Point Source	High	3 Miles	2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Toxaphene (tissue & sediment)		Medium	3 Miles	
					Nonpoint Source			
				Toxicity		High	3 Miles	2004
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 11 (Arroyo Santa Rosa, was part of Conejo Creek Reach 3 on 1998 303d list)	40365000					
				Algae		High	8.7 Miles	2002
					Nonpoint/Point Source			
				Ammonia		High	8.7 Miles	2002
					Nonpoint/Point Source			
				ChemA (tissue)		Medium	8.7 Miles	
					Nonpoint Source			
				DDT (tissue)		Medium	8.7 Miles	
					Nonpoint Source			
				Endosulfan (tissue)		Medium	8.7 Miles	
					Nonpoint Source			
				Fecal Coliform		Low	8.7 Miles	
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	8.7 Miles	
					Agriculture Natural Sources			
				Sulfates		High	8.7 Miles	2003
					Nonpoint/Point Source			
				Total Dissolved Solids		High	8.7 Miles	2003
					Nonpoint/Point Source			
				Toxaphene (tissue & sediment)		Medium	8.7 Miles	
					Nonpoint/Point Source			
				Toxicity		High	8.7 Miles	2004
					Nonpoint/Point Source			
4	R	Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork on 1998 303d list)	40364000					
				Ammonia		High	5.5 Miles	2002
					Nonpoint/Point Source			
				Chlordane (tissue)		Medium	5.5 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT (tissue)	Nonpoint Source	Medium	5.5 Miles	
				Sulfates	Nonpoint/Point Source	High	5.5 Miles	2003
				Total Dissolved Solids	Nonpoint/Point Source	High	5.5 Miles	2003
4	R	Calleguas Creek Reach 13 (Conejo Creek South Fork, was Conejo Cr Reach 4 and part of Reach 3 on 1998 303d list)	40368000					
				Algae	Nonpoint/Point Source	High	17 Miles	2002
				Ammonia	Nonpoint/Point Source	High	17 Miles	2002
				ChemA (tissue)	Nonpoint Source	Medium	17 Miles	
				Chloride	Nonpoint/Point Source	Medium	17 Miles	
				DDT (tissue)	Nonpoint Source	Medium	17 Miles	
				Endosulfan (tissue)	Nonpoint Source	Medium	17 Miles	
				Sulfates	Nonpoint/Point Source	High	17 Miles	2003
				Total Dissolved Solids	Nonpoint/Point Source	High	17 Miles	2003
				Toxaphene (tissue & sediment)	Nonpoint Source	Medium	17 Miles	
				Toxicity	Nonpoint/Point Source	High	17 Miles	2004
4	R	Canada Larga (Ventura River Watershed)	40210010					
				Fecal Coliform *Horse stables, land use, cattle, and wildlife may be sources.*	Nonpoint Source	Low	8 Miles	
				Low Dissolved Oxygen	Nonpoint Source	Low	8 Miles	
4	C	Carbon Beach	40416000					
				Beach Closures	Nonpoint Source	High	1.5 Miles	2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT *Fish consumption advisory for DDT.*	Nonpoint Source	Low	1.5 Miles	
				PCBs *Fish consumption advisory for PCBs.*	Nonpoint Source	Low	1.5 Miles	
4	C	Castlerock Beach	40513000					
				Bacteria Indicators	Nonpoint/Point Source	Low	0.21 Miles	
				Beach Closures	Nonpoint Source	High	0.21 Miles	2002
				DDT *Fish Consumption Advisory for DDT.*	Nonpoint Source	Low	0.21 Miles	
				PCBs *Fish Consumption Advisory for PCBs.*	Nonpoint Source	Low	0.21 Miles	
4	B	Channel Islands Harbor	40311000					
				Lead (sediment)	Nonpoint Source	Medium	209 Acres	
				Zinc (sediment)	Nonpoint Source	Medium	209 Acres	
4	C	Channel Islands Harbor Beach	40311000					
				Bacteria Indicators	Nonpoint/Point Source	Low	0.08 Miles	
4	T	Colorado Lagoon	40512000					
				Chlordane (tissue & sediment)	Nonpoint Source	Medium	13 Acres	
				DDT (tissue)	Nonpoint Source	Medium	13 Acres	
				Dieldrin (tissue)	Nonpoint Source	Medium	13 Acres	
				Lead (sediment)	Nonpoint Source	Medium	13 Acres	
				PAHs (sediment)	Nonpoint Source	Medium	13 Acres	
				PCBs (tissue)	Nonpoint Source	Medium	13 Acres	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sediment Toxicity	Nonpoint Source	Medium	13 Acres	
				Zinc (sediment)	Nonpoint Source	Medium	13 Acres	
4	R	Compton Creek	40515010					
				Copper	Nonpoint/Point Source	High	8.5 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	8.5 Miles	2002
				Lead	Nonpoint/Point Source	High	8.5 Miles	2003
				pH	Nonpoint/Point Source	High	8.5 Miles	2002
4	R	Coyote Creek	40515010					
				Abnormal Fish Histology	Nonpoint/Point Source	Medium	13 Miles	
				Algae	Nonpoint/Point Source	High	13 Miles	2003
				Copper, Dissolved	Nonpoint Source	Low	13 Miles	
				High Coliform Count	Nonpoint/Point Source	High	13 Miles	2003
				Lead, Dissolved	Nonpoint Source	Low	13 Miles	
				Selenium, Total	Nonpoint Source	Low	13 Miles	
				Toxicity *This listing was made by USEPA.*	Point Source	Medium	13 Miles	
				Zinc, Dissolved	Nonpoint Source	Low	13 Miles	
4	L	Crystal Lake	40543000					
				Organic Enrichment/Low Dissolved Oxygen	Nonpoint Source	Medium	3.7 Acres	
4	C	Dan Blocker Memorial (Coral) Beach	40431000					
				High Coliform Count	Nonpoint Source	High	2.1 Miles	2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	C	Dockweiler Beach	40512000					
				Beach Closures		High	4.6 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	4.6 Miles	2002
					Nonpoint Source			
4	R	Dominguez Channel (above Vermont)	40512000					
				Aldrin (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Ammonia		Medium	6.7 Miles	
					Nonpoint/Point Source			
				ChemA (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Chlordane (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Chromium (sediment)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Copper		Medium	6.7 Miles	
					Nonpoint/Point Source			
				DDT (tissue & sediment)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Dieldrin (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				High Coliform Count		High	6.7 Miles	2003
					Nonpoint/Point Source			
				Lead (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				PAHs (sediment)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				PCBs (tissue)		Medium	6.7 Miles	
					Nonpoint/Point Source			
				Zinc (sediment)		Low	6.7 Miles	
					Nonpoint/Point Source			
4	R	Dominguez Channel (Estuary to Vermont)	40512000					
				Aldrin (tissue)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				Ammonia		Medium	8.3 Miles	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Benthic Community Effects		Medium	8.3 Miles	
					Nonpoint/Point Source			
				ChemA (tissue)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				Chlordane (tissue)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				Chromium (sediment)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				DDT (tissue & sediment)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				Dieldrin (tissue)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				High Coliform Count		High	8.3 Miles	2003
					Nonpoint/Point Source			
				Lead (tissue)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				PAHs (sediment)		Medium	8.3 Miles	
					Nonpoint/Point Source			
				Zinc (sediment)		Medium	8.3 Miles	
					Nonpoint/Point Source			
4	R	Dry Canyon Creek	40521000					
				Fecal Coliform		Low	3.9 Miles	
					Urban Runoff/Storm Sewers Natural Sources			
				Selenium, Total		Low	3.9 Miles	
					Nonpoint Source			
4	R	Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	40311000					
				ChemA (tissue)		Medium	12 Miles	
					Nonpoint Source			
				Chlordane (tissue)		Medium	12 Miles	
					Nonpoint Source			
				DDT (tissue & sediment)		Medium	12 Miles	
					Nonpoint Source			
				Nitrogen		High	12 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sediment Toxicity		Medium	12 Miles	
					Nonpoint Source			
				Toxaphene (tissue)		Medium	12 Miles	
					Nonpoint Source			
				Toxicity		High	12 Miles	2004
					Nonpoint Source			
4	L	Echo Park Lake	40515010					
				Algae		Low	13 Acres	
					Nonpoint Source			
				Ammonia		Low	13 Acres	
					Nonpoint Source			
				Copper		Low	13 Acres	
					Nonpoint Source			
				Eutrophic		Low	13 Acres	
					Nonpoint Source			
				Lead		Low	13 Acres	
					Nonpoint Source			
				Odors		Low	13 Acres	
					Nonpoint Source			
				PCBs (tissue)		Low	13 Acres	
					Nonpoint Source			
				pH		Low	13 Acres	
					Nonpoint Source			
4	L	El Dorado Lakes	40515010					
				Algae		Medium	35 Acres	
					Nonpoint Source			
				Ammonia		Medium	35 Acres	
					Nonpoint Source			
				Copper		Medium	35 Acres	
					Nonpoint Source			
				Eutrophic		Medium	35 Acres	
					Nonpoint Source			
				Lead		Medium	35 Acres	
					Nonpoint Source			
				Mercury (tissue)		Medium	35 Acres	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				pH		Medium	35 Acres	
					Nonpoint Source			
4	L	Elizabeth Lake	40351000					
				Eutrophic		Medium	123 Acres	
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Medium	123 Acres	
					Nonpoint Source			
				pH		Medium	123 Acres	
					Nonpoint Source			
				Trash		Medium	123 Acres	
					Nonpoint Source			
4	C	Escondido Beach	40434000					
				Beach Closures		High	1.2 Miles	2002
					Nonpoint Source			
				DDT *Fish consumption advisory for DDT.*		Low	1.2 Miles	
					Nonpoint Source			
				PCBs *Fish consumption advisory for PCBs.*		Low	1.2 Miles	
					Nonpoint Source			
4	C	Flat Rock Point Beach Area	40511000					
				Beach Closures		High	0.11 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	0.11 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	0.11 Miles	
					Nonpoint Source			
4	R	Fox Barranca (tributary to Calleguas Creek Reach 6)	40362000					
				Boron		High	6.7 Miles	2003
					Nonpoint Source			
				Nitrate and Nitrite		High	6.7 Miles	2002
					Nonpoint Source			
				Sulfates		High	6.7 Miles	2003
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Total Dissolved Solids		**High**	**6.7 Miles**	**2003**
					Nonpoint Source			
4	**C**	**Hermosa Beach**	**40512000**					
				Beach Closures		**High**	**2 Miles**	**2002**
					Nonpoint Source			
4	**C**	**Hobie Beach (Channel Islands Harbor)**	**40311000**					
				Bacteria Indicators		**Low**	**0.06 Miles**	
					Nonpoint/Point Source			
4	**R**	**Hopper Creek**	**40341000**					
				Sulfates		**Low**	**13 Miles**	
					Nonpoint/Point Source			
				Total Dissolved Solids		**Low**	**13 Miles**	
					Nonpoint/Point Source			
4	**C**	**Inspiration Point Beach**	**40511000**					
				Beach Closures		**High**	**0.14 Miles**	**2002**
					Nonpoint Source			
				DDT		**Low**	**0.14 Miles**	
				Fish Consumption Advisory for DDT.	**Nonpoint Source**			
				PCBs		**Low**	**0.14 Miles**	
				Fish Consumption Advisroy for PCBs.	**Nonpoint Source**			
4	**C**	**La Costa Beach**	**40416000**					
				Beach Closures		**High**	**0.74 Miles**	**2002**
					Nonpoint Source			
				DDT		**Low**	**0.74 Miles**	
				Fish Consumption Advisory for DDT.	**Nonpoint Source**			
				PCBs		**Low**	**0.74 Miles**	
				Fish Consumption Advisory for PCBs.	**Nonpoint Source**			
4	**L**	**Lake Calabasas**	**40521000**					
				Ammonia		**Low**	**18 Acres**	
					Nonpoint Source			
				DDT (tissue)		**Low**	**18 Acres**	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Eutrophic		Low	18 Acres	
					Nonpoint Source			
				Odors		Low	18 Acres	
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Low	18 Acres	
					Nonpoint Source			
				pH		Low	18 Acres	
					Nonpoint Source			
4	L	Lake Hughes	40351000					
				Algae		Medium	21 Acres	
					Nonpoint Source			
				Eutrophic		Medium	21 Acres	
					Nonpoint Source			
				Fish Kills		Medium	21 Acres	
					Nonpoint Source			
				Odors		Medium	21 Acres	
					Nonpoint Source			
				Trash		Medium	21 Acres	
					Nonpoint Source			
4	L	Lake Lindero	40423000					
				Algae		High	15 Acres	2002
					Nonpoint Source			
				Chloride		Low	15 Acres	
					Nonpoint Source			
				Eutrophic		High	15 Acres	2002
					Nonpoint Source			
				Odors		High	15 Acres	2002
					Nonpoint Source			
				Specific conductivity		Low	15 Acres	
					Nonpoint Source			
				Trash		Medium	15 Acres	
					Nonpoint Source			
4	L	Lake Sherwood	40426000					
				Algae		High	135 Acres	2003
					Nonpoint Source			
				Ammonia		High	135 Acres	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Eutrophic		High	135 Acres	2002
					Nonpoint Source			
				Mercury (tissue)		High	135 Acres	2004
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		High	135 Acres	2002
					Nonpoint Source			
4	C	Las Flores Beach	40415000					
				DDT *Fish Consumption Advisory for DDT.*		Low	1.1 Miles	
					Nonpoint Source			
				High Coliform Count		High	1.1 Miles	2002
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1.1 Miles	
					Nonpoint Source			
4	C	Las Tunas Beach	40412000					
				Beach Closures		High	1.2 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1.2 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1.2 Miles	
					Nonpoint Source			
4	R	Las Virgenes Creek	40422010					
				High Coliform Count		High	12 Miles	2003
					Nonpoint Source			
				Nutrients (Algae)		High	12 Miles	2003
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		High	12 Miles	2002
					Nonpoint Source			
				Scum/Foam-unnatural		High	12 Miles	2002
					Nonpoint Source			
				Sedimentation/Siltation		Low	12 Miles	
					Source Unknown			
				Selenium		High	12 Miles	2004
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Trash		Medium	12 Miles	
					Nonpoint Source			
4	L	Legg Lake	40531000					
				Ammonia		Medium	25 Acres	
					Nonpoint Source			
				Copper		Medium	25 Acres	
					Nonpoint Source			
				Lead		Medium	25 Acres	
					Nonpoint Source			
				Odors		Medium	25 Acres	
					Nonpoint Source			
				pH		Medium	25 Acres	
					Nonpoint Source			
				Trash		Low	25 Acres	
					Nonpoint Source			
4	C	Leo Carillo Beach (South of County Line)	40444000					
				Beach Closures		High	1.8 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	1.8 Miles	2002
					Nonpoint Source			
4	L	Lincoln Park Lake	40515010					
				Ammonia		Low	3.8 Acres	
					Nonpoint Source			
				Eutrophic		Low	3.8 Acres	
					Nonpoint Source			
				Lead		Low	3.8 Acres	
					Nonpoint Source			
				Odors		Low	3.8 Acres	
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Low	3.8 Acres	
					Nonpoint Source			
4	R	Lindero Creek Reach 1	40423000					
				Algae		High	3 Miles	2003
					Nonpoint Source			
				High Coliform Count		High	3 Miles	2003
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Scum/Foam-unnatural		High	3 Miles	2002
					Nonpoint Source			
				Selenium		High	3 Miles	2004
					Nonpoint Source			
				Trash		Medium	3 Miles	
					Nonpoint Source			
4	R	Lindero Creek Reach 2 (Above Lake)	40425000					
				Algae		High	4.5 Miles	2003
					Nonpoint Source			
				High Coliform Count		High	4.5 Miles	2003
					Nonpoint Source			
				Scum/Foam-unnatural		High	4.5 Miles	2002
					Nonpoint Source			
				Selenium		High	4.5 Miles	2004
					Nonpoint Source			
				Trash		Medium	4.5 Miles	
					Nonpoint Source			
4	B	Long Beach Harbor Main Channel, SE, W Basin, Pier J, Breakwater	40518000					
				Benthic Community Effects		Medium	1076 Acres	
					Nonpoint Source			
				DDT (tissue) *Fish Consumption Advisory.*		Medium	1076 Acres	
					Nonpoint Source			
				PAHs (sediment)		Medium	1076 Acres	
					Nonpoint Source			
				PCBs (tissue) *Fish Consumption Advisory.*		Medium	1076 Acres	
					Nonpoint Source			
				Sediment Toxicity		Medium	1076 Acres	
					Nonpoint Source			
4	C	Long Point Beach	40511000					
				DDT *Fish Consumption Advisory for DDT.*		Low	0.7 Miles	
					Nonpoint Source			
				High Coliform Count		High	0.7 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		Low	0.7 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	B	Los Angeles Fish Harbor	40518000					
				DDT		Medium	34 Acres	
					Nonpoint Source			
				PAHs		Medium	34 Acres	
					Nonpoint Source			
				PCBs		Medium	34 Acres	
					Nonpoint Source			
4	B	Los Angeles Harbor Consolidated Slip	40512000					
				Benthic Community Effects		Medium	36 Acres	
					Nonpoint Source			
				Cadmium (sediment)		Low	36 Acres	
				Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.				
					Nonpoint Source			
				Chlordane (tissue & sediment)		Medium	36 Acres	
					Nonpoint Source			
				Chromium (sediment)		Medium	36 Acres	
					Nonpoint Source			
				Copper (sediment)		Low	36 Acres	
					Nonpoint Source			
				DDT (tissue & sediment)		Medium	36 Acres	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				Dieldrin (tissue)		Low	36 Acres	
				Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.				
					Nonpoint Source			
				Lead (sediment)		Medium	36 Acres	
					Nonpoint Source			
				Mercury (sediment)		Low	36 Acres	
				Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.				
					Nonpoint Source			
				Nickel (sediment)		Low	36 Acres	
					Nonpoint Source			
				PAHs (sediment)		Medium	36 Acres	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (tissue & sediment) *Fish Consumption Advisory for PCBs.*		Medium	36 Acres	
					Nonpoint Source			
				Sediment Toxicity		Medium	36 Acres	
					Nonpoint Source			
				Toxaphene (tissue)		Low	36 Acres	
					Nonpoint Source			
				Zinc (sediment) *Historical use of pesticides and lubricants, stormwater runoff, aerial deposition, and historical discharges for metals.*		Low	36 Acres	
					Nonpoint Source			
4	B	Los Angeles Harbor Inner Breakwater	40512000					
				DDT		Medium	74 Acres	
					Nonpoint Source			
				PAHs		Medium	74 Acres	
					Nonpoint Source			
				PCBs		Medium	74 Acres	
					Nonpoint Source			
4	B	Los Angeles Harbor Main Channel	40518000					
				Beach Closures		High	279 Acres	2004
					Nonpoint/Point Source			
				Copper (tissue & sediment)		Medium	279 Acres	
					Nonpoint/Point Source			
				DDT (tissue & sediment) *Fish Consumption Advisory for DDT.*		Medium	279 Acres	
					Nonpoint/Point Source			
				PAHs (tissue & sediment)		Medium	279 Acres	
					Nonpoint/Point Source			
				PCBs (tissue & sediment) *Fish Consumption Advisory for PCBs.*		Medium	279 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	279 Acres	
					Nonpoint/Point Source			
				Zinc (tissue & sediment)		Medium	279 Acres	
					Nonpoint/Point Source			
4	B	Los Angeles Harbor Southwest Slip	40512000					
				DDT *Fish Consumption Advisory for DDT.*		Medium	63 Acres	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		Medium	63 Acres	
				Fish Consumption Advisory for PCBs.	Nonpoint Source			
				Sediment Toxicity		Medium	63 Acres	
					Nonpoint Source			
4	E	Los Angeles River Estuary (Queensway Bay)	40512000					
				Chlordane (sediment)		Low	261 Acres	
				Historical use of pesticides and lubricants.	Nonpoint Source			
				DDT (sediment)		Low	261 Acres	
				Historical use of pesticides and lubricants.	Nonpoint Source			
				Lead (sediment)		Low	261 Acres	
				Historical use of pesticides and lubricants.	Nonpoint Source			
				PCBs (sediment)		Low	261 Acres	
				Historical use of pesticides and lubricants.	Nonpoint Source			
				Zinc (sediment)		Low	261 Acres	
				Historical use of pesticides and lubricants.	Nonpoint Source			
4	R	Los Angeles River Reach 1 (Estuary to Carson Street)	40512000					
				Aluminum, Total		Low	3.4 Miles	
					Nonpoint/Point Source			
				Ammonia		High	3.4 Miles	2003
					Nonpoint/Point Source			
				Cadmium, Dissolved		Low	3.4 Miles	
					Nonpoint/Point Source			
				Copper, Dissolved		High	3.4 Miles	2003
					Nonpoint/Point Source			
				High Coliform Count		High	3.4 Miles	2003
					Nonpoint/Point Source			
				Lead		High	3.4 Miles	2003
					Nonpoint/Point Source			
				Nutrients (Algae)		High	3.4 Miles	2003
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				pH	Nonpoint/Point Source	High	3.4 Miles	2003
				Scum/Foam-unnatural	Nonpoint/Point Source	High	3.4 Miles	2003
				Zinc, Dissolved	Nonpoint/Point Source	High	3.4 Miles	2003
4	R	Los Angeles River Reach 2 (Carson to Figueroa Street)	40515010					
				Ammonia	Nonpoint/Point Source	High	19 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	19 Miles	2003
				Lead	Nonpoint/Point Source	High	19 Miles	2003
				Nutrients (Algae)	Nonpoint/Point Source	High	19 Miles	2003
				Odors	Nonpoint/Point Source	High	19 Miles	2003
				Oil	Nonpoint/Point Source	Low	19 Miles	
				Scum/Foam-unnatural	Nonpoint/Point Source	High	19 Miles	2002
4	R	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	40521000					
				Ammonia	Nonpoint/Point Source	High	7.9 Miles	2003
				Nutrients (Algae)	Nonpoint/Point Source	High	7.9 Miles	2003
				Odors	Nonpoint/Point Source	High	7.9 Miles	2003
				Scum/Foam-unnatural	Nonpoint/Point Source	High	7.9 Miles	2003
4	R	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	40521000					
				Ammonia	Nonpoint/Point Source	High	11 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	11 Miles	2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Lead	Nonpoint/Point Source	High	11 Miles	2003
				Nutrients (Algae)	Nonpoint/Point Source	High	11 Miles	2003
				Odors	Nonpoint/Point Source	High	11 Miles	2003
				Scum/Foam-unnatural	Nonpoint/Point Source	High	11 Miles	2003
4	R	Los Angeles River Reach 5 (within Sepulveda Basin)	40521000					
				Ammonia	Nonpoint/Point Source	High	5.4 Miles	2003
				Nutrients (Algae)	Nonpoint/Point Source	High	5.4 Miles	2003
				Odors	Nonpoint/Point Source	High	5.4 Miles	2003
				Oil	Nonpoint/Point Source	Low	5.4 Miles	
				Scum/Foam-unnatural	Nonpoint/Point Source	High	5.4 Miles	2003
4	R	Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin)	40521000					
				Dichloroethylene/1,1-DCE	Nonpoint Source	Low	7 Miles	
				High Coliform Count	Nonpoint Source	High	7 Miles	2003
				Tetrachloroethylene/PCE	Nonpoint Source	Low	7 Miles	
				Trichloroethylene/TCE	Nonpoint Source	Low	7 Miles	
4	T	Los Cerritos Channel	40515010					
				Ammonia	Nonpoint Source	Medium	31 Acres	
				Chlordane (sediment)	Source Unknown	Low	31 Acres	
				Copper	Nonpoint Source	Medium	31 Acres	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				High Coliform Count		Medium	31 Acres	
					Nonpoint Source			
				Lead		Medium	31 Acres	
					Nonpoint Source			
				Zinc		Medium	31 Acres	
					Nonpoint Source			
4	C	Lunada Bay Beach	40511000					
				Beach Closures		Low	0.63 Miles	
					Nonpoint Source			
4	L	Machado Lake (Harbor Park Lake)	40512000					
				Algae		Low	45 Acres	
					Nonpoint Source			
				Ammonia		Low	45 Acres	
					Nonpoint Source			
				ChemA (tissue) *Historical use of pesticides and lubricants.*		Medium	45 Acres	
					Nonpoint Source			
				Chlordane (tissue) *Fish Consumption Advisory.*		Low	45 Acres	
					Nonpoint Source			
				DDT (tissue) *Fish Consumption Advisory.*		Low	45 Acres	
					Nonpoint Source			
				Dieldrin (tissue)		Low	45 Acres	
					Nonpoint Source			
				Eutrophic		Low	45 Acres	
					Nonpoint Source			
				Odors		Low	45 Acres	
					Nonpoint Source			
				PCBs (tissue)		Low	45 Acres	
					Nonpoint Source			
				Trash		Medium	45 Acres	
					Nonpoint Source			
4	C	Malaga Cove Beach	40511000					
				Beach Closures		High	0.39 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT		Low	0.39 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				PCBs		Low	0.39 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	L	Malibou Lake	40424000					
				Algae		High	40 Acres	2002
					Nonpoint Source			
				Eutrophic		High	40 Acres	2002
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		High	40 Acres	2002
					Nonpoint Source			
4	C	Malibu Beach	40421000					
				Beach Closures		High	0.77 Miles	2002
					Nonpoint Source			
				DDT		Low	0.77 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
4	R	Malibu Creek	40421000					
				Fish barriers		Low	11 Miles	
					Dam Construction			
				High Coliform Count		High	11 Miles	2003
					Nonpoint/Point Source			
				Nutrients (Algae)		High	11 Miles	2003
					Nonpoint/Point Source			
				Scum/Foam-unnatural		High	11 Miles	2003
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	11 Miles	
					Source Unknown			
				Trash		Medium	11 Miles	
					Nonpoint Source			
4	E	Malibu Lagoon	40421000					
				Benthic Community Effects		Low	15 Acres	
					Nonpoint/Point Source			
				Enteric Viruses		High	15 Acres	2002
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Eutrophic		High	15 Acres	2002
					Nonpoint/Point Source			
				High Coliform Count		High	15 Acres	2003
					Nonpoint/Point Source			
				pH *Possible sources might be septic systems, storm drains, and birds.*		Low	15 Acres	
					Source Unknown			
				Shellfish Harvesting Advisory		High	15 Acres	2002
					Nonpoint/Point Source			
				Swimming Restrictions		High	15 Acres	2002
					Nonpoint/Point Source			
4	C	Malibu Lagoon Beach (Surfrider)	40421000					
				Beach Closures		High	1 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1 Miles	
					Nonpoint Source			
				High Coliform Count		High	1 Miles	2002
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1 Miles	
					Nonpoint Source			
4	C	Manhattan Beach	40512000					
				Beach Closures		High	2 Miles	2002
					Nonpoint Source			
4	B	Marina del Rey Harbor - Back Basins	40517000					
				Chlordane (tissue & sediment)		Medium	391 Acres	
					Nonpoint Source			
				Copper (sediment)		Low	391 Acres	
					Nonpoint Source			
				DDT (tissue)		Medium	391 Acres	
					Nonpoint Source			
				Dieldrin (tissue)		Medium	391 Acres	
					Nonpoint Source			
				Fish Consumption Advisory		Medium	391 Acres	
					Nonpoint Source			
				High Coliform Count		High	391 Acres	2003
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Lead (sediment)		Medium	391 Acres	
					Nonpoint Source			
				PCBs (tissue & sediment)		Medium	391 Acres	
				Historical use of pesticides, storm water runoff/aerial deposition from urban areas. Shellfish harvesting advisory for PCBs in tissue.				
					Nonpoint Source			
				Sediment Toxicity		Medium	391 Acres	
					Nonpoint Source			
				Zinc (sediment)		Medium	391 Acres	
					Nonpoint Source			
4	C	Marina del Rey Harbor Beach	40517000					
				Beach Closures		High	0.29 Miles	2003
					Nonpoint Source			
				High Coliform Count		High	0.29 Miles	2003
					Nonpoint Source			
4	R	Matilija Creek Reach 1 (Jct. With N. Fork to Reservoir)	40220012					
				Fish barriers		Low	0.63 Miles	
					Dam Construction			
4	R	Matilija Creek Reach 2 (Above Reservoir)	40220010					
				Fish barriers		Low	15 Miles	
					Dam Construction			
4	L	Matilija Reservoir	40220012					
				Fish barriers		Low	121 Acres	
					Dam Construction			
4	R	McCoy Canyon Creek	40521000					
				Fecal Coliform		Low	4 Miles	
					Nonpoint Source			
				Nitrate		Low	4 Miles	
					Nonpoint Source			
				Nitrate as Nitrogen		Low	4 Miles	
					Urban Runoff/Storm Sewers			
					Natural Sources			
				Selenium, Total		Low	4 Miles	
					Urban Runoff/Storm Sewers			
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	C	McGrath Beach	40311000					
				High Coliform Count		High	1.5 Miles	2003
					Nonpoint Source			
4	L	McGrath Lake	40311000					
				Chlordane (sediment)		Medium	20 Acres	
					Nonpoint Source			
				DDT (sediment)		Medium	20 Acres	
					Nonpoint Source			
				Dieldrin (sediment)		Low	20 Acres	
				Historical use of pesticides and lubricants, storm water runoff/aerial deposition from agricultural fields.				
					Nonpoint Source			
				Fecal Coliform		Low	20 Acres	
					Agriculture			
					Landfills			
					Natural Sources			
				PCBs (sediment)		Low	20 Acres	
				Historical use of pesticides and lubricants, storm water runoff/aerial deposition from agricultural fields.				
					Nonpoint Source			
				Sediment Toxicity		Medium	20 Acres	
					Nonpoint Source			
4	R	Medea Creek Reach 1 (Lake to Confl. with Lindero)	40424000					
				Algae		High	2.6 Miles	2003
					Nonpoint Source			
				High Coliform Count		High	2.6 Miles	2003
					Nonpoint Source			
				Sedimentation/Siltation		Low	2.6 Miles	
					Source Unknown			
				Selenium		High	2.6 Miles	2004
					Nonpoint Source			
				Trash		Medium	2.6 Miles	
					Nonpoint Source			
4	R	Medea Creek Reach 2 (Abv Confl. with Lindero)	40423000					
				Algae		High	5.4 Miles	2003
					Nonpoint Source			
				High Coliform Count		High	5.4 Miles	2003
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Low	5.4 Miles	
					Source Unknown			
				Selenium		High	5.4 Miles	2004
					Nonpoint Source			
				Trash		Medium	5.4 Miles	
					Nonpoint Source			
4	R	Mint Canyon Creek Reach 1 (Confl to Rowler Cyn)	40351000					
				Nitrate and Nitrite		High	8.1 Miles	2003
					Nonpoint Source			
4	R	Monrovia Canyon Creek	40531000					
				Lead		High	3.4 Miles	2003
					Nonpoint Source			
4	L	Munz Lake	40351000					
				Eutrophic		Medium	6.6 Acres	
					Nonpoint Source			
				Trash		Medium	6.6 Acres	
					Nonpoint Source			
4	C	Nicholas Canyon Beach	40444000					
				Beach Closures		High	1.7 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1.7 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1.7 Miles	
					Nonpoint Source			
4	C	Ormond Beach	40311000					
				Bacteria Indicators *The areas affected are: a 50 yard area north of Oxnard Industrial Drain and a 50 yard area south of J Street drain.*		Low	1.6 Miles	
					Nonpoint/Point Source			
4	R	Palo Comado Creek	40423000					
				High Coliform Count		High	6.8 Miles	2003
					Nonpoint Source			
4	C	Palo Verde Shoreline Park Beach	40511000					
				Pathogens		High	0.24 Miles	2002
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Pesticides		Low	0.24 Miles	
					Source Unknown			
4	C	Paradise Cove Beach	40435000					
				Beach Closures		High	1.7 Miles	2002
					Nonpoint Source			
				DDT *Fish consumption advisory for DDT.*		Low	1.7 Miles	
					Nonpoint Source			
				High Coliform Count		High	1.7 Miles	2002
					Nonpoint Source			
				PCBs *Fish consumption advisory for PCBs.*		Low	1.7 Miles	
					Nonpoint Source			
4	L	Peck Road Park Lake	40531000					
				Chlordane (tissue)		Low	103 Acres	
					Nonpoint Source			
				DDT (tissue)		Low	103 Acres	
					Nonpoint Source			
				Lead		Low	103 Acres	
					Nonpoint Source			
				Odors		Low	103 Acres	
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Low	103 Acres	
					Nonpoint Source			
4	C	Peninsula Beach	40311000					
				Bacteria Indicators *Area affected is beach area north of South Jetty.*		Low	0.2 Miles	
					Nonpoint/Point Source			
4	R	Pico Kenter Drain	40513000					
				Ammonia		Low	8 Miles	
					Nonpoint Source			
				Copper		Medium	8 Miles	
					Nonpoint Source			
				Enteric Viruses		High	8 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	8 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Lead		Medium	8 Miles	
					Nonpoint Source			
				PAHs		Low	8 Miles	
					Nonpoint Source			
				Toxicity		Medium	8 Miles	
					Nonpoint Source			
				Trash		Low	8 Miles	
					Nonpoint Source			
4	R	Piru Creek (tributary to Santa River Reach 4)	40342000					
				pH		Low	63 Miles	
					Nonpoint Source Conservation Dishcarge Releases			
4	C	Point Dume Beach	40435000					
				Beach Closures		High	2.5 Miles	2002
					Nonpoint Source			
				DDT *Fish consumption advisory for DDT.*		Low	2.5 Miles	
					Nonpoint Source			
				PCBs *Fish consumtiion advisory for PCBs.*		Low	2.5 Miles	
					Nonpoint Source			
4	C	Point Fermin Park Beach	40512000					
				Beach Closures		High	1.6 Miles	2002
					Nonpoint Source			
				DDT *Fish consumption advisory for DDT.*		Low	1.6 Miles	
					Nonpoint Source			
				PCBs *Fish consumption advisory for PCBs.*		Low	1.6 Miles	
					Nonpoint Source			
4	C	Point Vicente Beach	40511000					
				Beach Closures		High	0.63 Miles	2002
					Nonpoint Source			
4	R	Pole Creek (trib to Santa Clara River Reach 3)	40331000					
				Sulfates		Low	9 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Total Dissolved Solids		Low	9 Miles	
					Nonpoint Source			
4	B	Port Hueneme Harbor (Back Basins)	40311000					
				DDT (tissue)		Medium	65 Acres	
					Nonpoint Source			
				PCBs (tissue)		Medium	65 Acres	
					Nonpoint Source			
4	C	Portugese Bend Beach	40511000					
				Beach Closures		High	1.4 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1.4 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCB.*		Low	1.4 Miles	
					Nonpoint Source			
4	C	Promenade Park Beach	40210000					
				Bacteria Indicators *Area affected is at Oak Street , Redwood Apartments, and south of drain at California Street.*		Low	0.37 Miles	
					Nonpoint/Point Source			
4	L	Puddingstone Reservoir	40552000					
				Chlordane (tissue)		Medium	243 Acres	
					Nonpoint Source			
				DDT (tissue)		Medium	243 Acres	
					Nonpoint Source			
				Mercury (tissue)		Medium	243 Acres	
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		Low	243 Acres	
					Nonpoint Source			
				PCBs (tissue)		Low	243 Acres	
					Nonpoint Source			
4	C	Puerco Beach	40431000					
				Beach Closures		High	0.5 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	0.5 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		Low	0.5 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	C	Redondo Beach	40512000					
				Beach Closures		High	1.5 Miles	2002
					Nonpoint Source			
				DDT		Low	1.5 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				High Coliform Count		High	1.5 Miles	2002
					Nonpoint Source			
				PCBs		Low	1.5 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	C	Resort Point Beach	40511000					
				Beach Closures		High	0.15 Miles	2002
					Nonpoint Source			
4	C	Rincon Beach	40100010					
				Bacteria Indicators		Low	0.09 Miles	
				Area affected is 50 and 150 yards south of mouth of Rincon Creek, and at the end of the footpath.				
					Nonpoint/Point Source			
4	R	Rio De Santa Clara/Oxnard Drain No. 3	40311000					
				ChemA (tissue)		Medium	1.9 Miles	
					Nonpoint Source			
				Chlordane (tissue)		Medium	1.9 Miles	
					Nonpoint Source			
				DDT (tissue)		Medium	1.9 Miles	
					Nonpoint Source			
				Nitrogen		High	1.9 Miles	2002
					Nonpoint Source			
				PCBs (tissue)		Medium	1.9 Miles	
					Nonpoint Source			
				Sediment Toxicity		Medium	1.9 Miles	
					Nonpoint Source			
				Toxaphene (tissue)		Medium	1.9 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Rio Hondo Reach 1 (Confl. LA River to Snt Ana Fwy)	40515010					
				Copper	Nonpoint/Point Source	High	4.6 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	4.6 Miles	2002
				Lead	Nonpoint/Point Source	High	4.6 Miles	2003
				pH	Nonpoint/Point Source	High	4.6 Miles	2002
				Trash	Nonpoint/Point Source	Low	4.6 Miles	
				Zinc	Nonpoint/Point Source	High	4.6 Miles	2003
4	R	Rio Hondo Reach 2 (At Spreading Grounds)	40515010					
				High Coliform Count	Nonpoint/Point Source	High	4.9 Miles	2002
4	C	Robert H. Meyer Memorial Beach	40441000					
				Beach Closures	Nonpoint Source	High	1.2 Miles	2002
				DDT *Fish Consumption Advisory for DDT.*	Nonpoint Source	Low	1.2 Miles	
				PCBs *Fish Consumption Advisory for PCBs.*	Nonpoint Source	Low	1.2 Miles	
4	C	Rocky Point Beach	40511000					
				Beach Closures	Nonpoint Source	High	0.49 Miles	2002
4	C	Royal Palms Beach	40511000					
				Beach Closures	Nonpoint Source	High	1.1 Miles	2002
				DDT *Fish consumption advisory for DDT.*	Nonpoint Source	Low	1.1 Miles	
				PCBs *Fish consumption advisory for PCBs.*	Nonpoint Source	Low	1.1 Miles	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	San Antonio Creek (Tributary to Ventura River Reach 4)	40220023					
				Nitrogen		Low	9.8 Miles	
					Nonpoint Source			
4	C	San Buenaventure Beach	40210000					
				Bacteria Indicators		Low	0.3 Miles	
				Area affected is south of drain at Kalorama Street and south of drain at San Jon Road.				
					Nonpoint/Point Source			
4	R	San Gabriel River Estuary	40516000					
				Abnormal Fish Histology		Medium	3.4 Miles	
					Nonpoint/Point Source			
4	R	San Gabriel River Reach 1 (Estuary to Firestone)	40515010					
				Abnormal Fish Histology		Medium	6.4 Miles	
					Nonpoint/Point Source			
				Algae		High	6.4 Miles	2003
					Nonpoint/Point Source			
				High Coliform Count		High	6.4 Miles	2003
					Nonpoint/Point Source			
				Toxicity		Medium	6.4 Miles	
				This listing was made by USEPA.				
					Point Source			
4	R	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam	40515010					
				Copper, Dissolved		Low	12 Miles	
					Nonpoint Source			
				High Coliform Count		High	12 Miles	2003
					Nonpoint/Point Source			
				Lead		Medium	12 Miles	
					Nonpoint/Point Source			
				Zinc, Dissolved		Low	12 Miles	
					Nonpoint Source			
4	R	San Gabriel River Reach 3 (Whittier Narrows to Ramona)	40531000					
				Toxicity		Medium	7.2 Miles	
				This listing was made by USEPA.				
					Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	San Jose Creek Reach 1 (SG Confluence to Temple St.)	40531000					
				Algae	Nonpoint/Point Source	Low	2.7 Miles	
				High Coliform Count	Nonpoint/Point Source	Low	2.7 Miles	
4	R	San Jose Creek Reach 2 (Temple to I-10 at White Ave.)	40531000					
				Algae	Nonpoint/Point Source	High	17 Miles	2003
				High Coliform Count	Nonpoint/Point Source	High	17 Miles	2003
4	B	San Pedro Bay Near/Off Shore Zones	40512000					
				Chromium (sediment)	Nonpoint/Point Source	Low	5758 Acres	
				Copper (sediment)	Nonpoint/Point Source	Low	5758 Acres	
				DDT (tissue & sediment) *Fish Consumption Advisory for DDT.*	Nonpoint/Point Source	Medium	5758 Acres	
				PAHs (sediment)	Nonpoint/Point Source	Medium	5758 Acres	
				PCBs *Fish consumption advisory for PCBs.*	Nonpoint/Point Source	Medium	5758 Acres	
				Sediment Toxicity	Nonpoint/Point Source	Medium	5758 Acres	
				Zinc (sediment)	Nonpoint/Point Source	Low	5758 Acres	
4	E	Santa Clara River Estuary	40311000					
				ChemA	Source Unknown	Medium	49 Acres	
				High Coliform Count	Nonpoint Source	Medium	49 Acres	
				Toxaphene	Nonpoint Source	Medium	49 Acres	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
4	R	Santa Clara River Reach 3 (Freeman Diversion to A Street)	40321000					
				Ammonia	Nonpoint/Point Source	High	31 Miles	2003
				Chloride	Nonpoint/Point Source	High	31 Miles	2002
				Total Dissolved Solids	Nonpoint/Point Source	Low	31 Miles	
4	R	Santa Clara River Reach 7 (Blue Cut to West Pier Hwy 99 Bridge)	40351000					
				Chloride *Chloride was relisted by USEPA.*	Nonpoint/Point Source	High	9.4 Miles	2002
				High Coliform Count	Nonpoint/Point Source	Medium	9.4 Miles	
				Nitrate and Nitrite	Nonpoint/Point Source	Low	9.4 Miles	
4	R	Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd.)	40351000					
				Chloride *Chloride was relisted by USEPA.*	Nonpoint/Point Source	High	5.2 Miles	2002
				High Coliform Count	Nonpoint/Point Source	Medium	5.2 Miles	
4	R	Santa Clara River Reach 9 (Bouquet Canyon Rd to above Lang Gaging Station)	40351000					
				High Coliform Count	Nonpoint/Point Source	Medium	21 Miles	
4	L	Santa Fe Dam Park Lake	40531000					
				Copper	Nonpoint Source	Medium	20 Acres	
				Lead	Nonpoint Source	Medium	20 Acres	
				pH	Nonpoint Source	Medium	20 Acres	
4	B	Santa Monica Bay Offshore/Nearshore	40513000					
				Chlordane (sediment)	Nonpoint/Point Source	Medium	146645 Acres	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT (tissue & sediment) *Centered on Palos Verdes Shelf.*	Nonpoint/Point Source	Low	146645 Acres	
				Debris	Nonpoint/Point Source	Low	146645 Acres	
				Fish Consumption Advisory	Nonpoint/Point Source	Low	146645 Acres	
				PAHs (sediment)	Nonpoint/Point Source	Low	146645 Acres	
				PCBs (tissue & sediment)	Nonpoint/Point Source	Low	146645 Acres	
				Sediment Toxicity	Nonpoint/Point Source	Low	146645 Acres	
4	C	Santa Monica Beach	40513000					
				Beach Closures	Nonpoint Source	High	3 Miles	2002
				High Coliform Count	Nonpoint Source	High	3 Miles	2002
4	R	Santa Monica Canyon	40513000					
				High Coliform Count	Nonpoint Source	High	2.7 Miles	2002
				Lead	Nonpoint Source	Medium	2.7 Miles	
4	C	Sea Level Beach	40441000					
				Beach Closures	Nonpoint Source	High	0.21 Miles	2002
				DDT *Fish Consumption Advisory for DDT.*	Nonpoint Source	Low	0.21 Miles	
				PCBs *Fish Consumption Advisory for PCBs.*	Nonpoint Source	Low	0.21 Miles	
4	R	Sepulveda Canyon	405.13					
				Ammonia	Nonpoint Source	Low	0.83 Miles	
				High Coliform Count	Nonpoint Source	High	0.83 Miles	2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Lead		Medium	0.83 Miles	
					Nonpoint Source			
4	R	Sespe Creek (tributary to Santa Clara River Reach 3)	40332020					
				Chloride		Low	63 Miles	
					Nonpoint Source			
				pH		Low	63 Miles	
					Nonpoint Source			
4	R	Stokes Creek	40422020					
				High Coliform Count		High	4.7 Miles	2002
					Nonpoint Source			
4	C	Surfers Point at Seaside	40210000					
				Bacteria Indicators		Low	0.53 Miles	
				Area affected is the end of the access path via a wooden gate.				
					Nonpoint/Point Source			
4	C	Topanga Beach	40413000					
				Beach Closures		High	2.5 Miles	2002
					Nonpoint Source			
				DDT		Low	2.5 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				High Coliform Count		High	2.5 Miles	2002
					Nonpoint Source			
				PCBs		Low	2.5 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
4	R	Topanga Canyon Creek	40411000					
				Lead		Medium	8.6 Miles	
					Nonpoint Source			
4	C	Torrance Beach	40512000					
				Beach Closures		High	1.1 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	1.1 Miles	2002
					Nonpoint Source			
4	R	Torrance Carson Channel	40512000					
				Copper		Medium	3.4 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				High Coliform Count		High	3.4 Miles	2003
					Nonpoint Source			
				Lead		Medium	3.4 Miles	
					Nonpoint Source			
4	R	Torrey Canyon Creek	40341000					
				Nitrate and Nitrite		High	1.7 Miles	2003
					Nonpoint Source			
4	C	Trancas Beach (Broad Beach)	40437000					
				Beach Closures		High	1.7 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1.7 Miles	
					Nonpoint Source			
				High Coliform Count		High	1.7 Miles	2002
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1.7 Miles	
					Nonpoint Source			
4	R	Triunfo Canyon Creek Reach 1	40424000					
				Lead		High	2.5 Miles	2004
					Nonpoint Source			
				Mercury		High	2.5 Miles	2004
					Nonpoint Source			
				Sedimentation/Siltation		Low	2.5 Miles	
					Source Unknown			
4	R	Triunfo Canyon Creek Reach 2	40424000					
				Lead		High	3.3 Miles	2004
					Nonpoint Source			
				Mercury		High	3.3 Miles	2004
					Nonpoint Source			
				Sedimentation/Siltation		Low	3.3 Miles	
					Source Unknown			
4	R	Tujunga Wash (LA River to Hansen Dam)	40521000					
				Ammonia		High	9.7 Miles	2002
					Nonpoint Source			
				Copper		High	9.7 Miles	2003
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				High Coliform Count		High	9.7 Miles	2002
					Nonpoint Source			
				Odors		High	9.7 Miles	2002
					Nonpoint Source			
				Scum/Foam-unnatural		High	9.7 Miles	2002
					Nonpoint Source			
				Trash		Low	9.7 Miles	
					Nonpoint Source			
4	C	Venice Beach	40513000					
				Beach Closures		High	2.5 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	2.5 Miles	2002
					Nonpoint Source			
4	B	Ventura Harbor: Ventura Keys	40311000					
				High Coliform Count		Medium	179 Acres	
					Nonpoint Source			
4	R	Ventura River Estuary	40210011					
				Algae		Medium	0.2 Miles	
					Nonpoint/Point Source			
				Eutrophic		Medium	0.2 Miles	
					Nonpoint/Point Source			
				Fecal Coliform		Low	0.2 Miles	
				Stables and horse property may be the sources.				
					Nonpoint Source			
				Total Coliform		Low	0.2 Miles	
				Stables and horse property may be the sources.				
					Nonpoint Source			
				Trash		Medium	0.2 Miles	
					Nonpoint/Point Source			
4	R	Ventura River Reach 1 and 2 (Estuary to Weldon Canyon)	40210011					
				Algae		Medium	4.5 Miles	
					Nonpoint/Point Source			
4	R	Ventura River Reach 3 (Weldon Canyon to Confl. w/ Coyote Cr)	40210011					
				Pumping		Medium	2.8 Miles	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Water Diversion		Medium	2.8 Miles	
					Nonpoint Source			
4	R	Ventura River Reach 4 (Coyote Creek to Camino Cielo Rd)	40220021					
				Pumping		Medium	19 Miles	
					Nonpoint Source			
				Water Diversion		Medium	19 Miles	
					Nonpoint Source			
4	R	Verdugo Wash Reach 1 (LA River to Verdugo Rd.)	40521000					
				Algae		High	2 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	2 Miles	2002
					Nonpoint Source			
				Trash		Low	2 Miles	
					Nonpoint Source			
4	R	Verdugo Wash Reach 2 (Above Verdugo Road)	40524000					
				Algae		High	7.6 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	7.6 Miles	2002
					Nonpoint Source			
				Trash		Low	7.6 Miles	
					Nonpoint Source			
4	R	Walnut Creek Wash (Drains from Puddingstone Res)	40531000					
				pH		High	12 Miles	2003
					Nonpoint/Point Source			
				Toxicity		High	12 Miles	2003
					Nonpoint/Point Source			
4	L	Westlake Lake	40425000					
				Algae		High	119 Acres	2003
					Nonpoint Source			
				Ammonia		High	119 Acres	2002
					Nonpoint Source			
				Eutrophic		High	119 Acres	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Lead		High	119 Acres	2004
					Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		High	119 Acres	2002
					Nonpoint Source			
4	R	Wheeler Canyon/Todd Barranca	40321000					
				Nitrate and Nitrite		High	10 Miles	2003
					Nonpoint Source			
				Sulfates		Low	10 Miles	
					Nonpoint Source			
				Total Dissolved Solids		Low	10 Miles	
					Nonpoint Source			
4	C	Whites Point Beach	40511000					
				Beach Closures		High	1.1 Miles	2002
					Nonpoint Source			
				DDT *Fish Consumption Advisory for DDT.*		Low	1.1 Miles	
					Nonpoint Source			
				PCBs *Fish Consumption Advisory for PCBs.*		Low	1.1 Miles	
					Nonpoint Source			
4	C	Will Rogers Beach	40513000					
				Beach Closures		High	3 Miles	2002
					Nonpoint Source			
				High Coliform Count		High	3 Miles	2002
					Nonpoint Source			
4	R	Wilmington Drain	40342000					
				Ammonia		Medium	0.56 Miles	
					Nonpoint Source			
				Copper		Medium	0.56 Miles	
					Nonpoint Source			
				High Coliform Count		High	0.56 Miles	2003
					Nonpoint Source			
				Lead		Medium	0.56 Miles	
					Nonpoint Source			
4	C	Zuma Beach (Westward Beach)	40436000					
				Beach Closures		High	1.6 Miles	2002
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				DDT		Low	1.6 Miles	
				Fish Consumption Advisory for DDT.				
					Nonpoint Source			
				PCBs		Low	1.6 Miles	
				Fish Consumption Advisory for PCBs.				
					Nonpoint Source			
5	R	American River, Lower (Nimbus Dam to confluence with Sacramento River)	51921000					
				Mercury		Low	27 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Unknown Toxicity		Low	27 Miles	
					Source Unknown			
5	R	Arcade Creek	51921000					
				Chlorpyrifos		High	9.9 Miles	2003
					Urban Runoff/Storm Sewers			
				Copper		Low	9.9 Miles	
					Urban Runoff/Storm Sewers			
				Diazinon		High	9.9 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	Avena Drain	53140000					
				Ammonia		Low	6.4 Miles	
					Agriculture			
					Dairies			
				Pathogens		Low	6.4 Miles	
					Agriculture			
					Dairies			
5	R	Bear Creek	51320023					
				Mercury		Medium	15 Miles	
					Resource Extraction			
5	R	Bear River, Lower (below Camp Far West Reservoir)	51510000					
				Diazinon		Medium	21 Miles	
					Agriculture			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Bear River, Upper	51633010					
				Mercury		Medium	10 Miles	
					Resource Extraction			
5	L	Berryessa, Lake	51221010					
				Mercury		Low	19083 Acres	
					Resource Extraction			
5	L	Black Butte Reservoir	50432000					
				Mercury		Medium	4507 Acres	
					Resource Extraction			
5	R	Butte Slough	52030000					
				Diazinon		Medium	8.9 Miles	
					Crop-Related Sources			
5	R	Cache Creek, Lower (Clear Lake Dam to Cache Creek Settling Basin near Yolo Bypass)	51120000					
				Mercury		Medium	96 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Unknown Toxicity		Low	96 Miles	
					Source Unknown			
5	R	Calaveras River, Lower	54400000					
				Diazinon		Low	5.8 Miles	
					Urban Runoff/Storm Sewers			
				Organic Enrichment/Low Dissolved Oxygen		Low	5.8 Miles	
					Urban Runoff/Storm Sewers			
				Pathogens		Low	5.8 Miles	
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			
5	L	Camanche Reservoir	53120000					
				Copper		Low	7389 Acres	
					Resource Extraction			
				Zinc		Low	7389 Acres	
					Resource Extraction			
5	L	Camp Far West Reservoir	51631013					
				Mercury		Medium	1945 Acres	
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Chicken Ranch Slough	51921000					
				Chlorpyrifos		High	8 Miles	2003
					Urban Runoff/Storm Sewers			
				Diazinon		High	8 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	L	Clear Lake	51352000					
				Mercury		High	40070 Acres	2002
					Resource Extraction			
				Nutrients		Medium	40070 Acres	
					Source Unknown			
5	R	Clover Creek	50732000					
				Fecal Coliform		Low	11 Miles	
					Agriculture-grazing			
					Other			
5	R	Colusa Basin Drain	52010000					
				Azinphos-methyl		Medium	49 Miles	
					Agriculture			
				Carbofuran/Furadan		Low	49 Miles	
					Agriculture			
				Diazinon		Medium	49 Miles	
					Agriculture			
				Group A Pesticides		Low	49 Miles	
					Agriculture			
				Malathion		Low	49 Miles	
					Agriculture			
				Methyl Parathion		Low	49 Miles	
					Agriculture			
				Molinate/Odram		Low	49 Miles	
					Agriculture-irrigation tailwater			
				Unknown Toxicity		Low	49 Miles	
					Agriculture			
5	L	Combie, Lake	51633011					
				Mercury		Medium	362 Acres	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	L	Davis Creek Reservoir	51332010					
				Mercury		Low	163 Acres	
					Resource Extraction			
5	R	Deer Creek (Yuba County)	51712014					
				pH		Low	4.3 Miles	
					Internal Nutrient Cycling (primarily lakes)			
5	R	Del Puerto Creek	54110000					
				Chlorpyrifos		Low	6.5 Miles	
					Agriculture			
				Diazinon		Low	6.5 Miles	
					Agriculture			
5	E	Delta Waterways (eastern portion)	51000000					
				Chlorpyrifos		High	20135 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			
				DDT		Low	20135 Acres	
					Agriculture			
				Diazinon		High	20135 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			
				Group A Pesticides		Low	20135 Acres	
					Agriculture			
				Mercury		Medium	20135 Acres	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Unknown Toxicity		Low	20135 Acres	
					Source Unknown			
5	E	Delta Waterways (Stockton Ship Channel)	54400000					
				Chlorpyrifos		High	952 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			
				DDT		Low	952 Acres	
					Agriculture			
				Diazinon		High	952 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Group A Pesticides		Low	952 Acres	
					Agriculture			
				Mercury		Medium	952 Acres	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Organic Enrichment/Low Dissolved Oxygen		High	952 Acres	2004
					Municipal Point Sources			
					Urban Runoff/Storm Sewers			
				Unknown Toxicity		Low	952 Acres	
					Source Unknown			
5	E	Delta Waterways (western portion)	51000000					
				Chlorpyrifos		High	22904 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			
				DDT		Low	22904 Acres	
					Agriculture			
				Diazinon		High	22904 Acres	2004
					Agriculture			
					Urban Runoff/Storm Sewers			
				Electrical Conductivity		Medium	22904 Acres	
					Agriculture			
				Group A Pesticides		Low	22904 Acres	
					Agriculture			
				Mercury		Medium	22904 Acres	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Unknown Toxicity		Low	22904 Acres	
					Source Unknown			
5	R	Dolly Creek	51854030					
				Copper		Low	1.5 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	1.5 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	L	Don Pedro Lake	53632010					
				Mercury		Low	11056 Acres	
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Dunn Creek (Mt Diablo Mine to Marsh Creek)	54300021					
				Mercury		Low	0.7 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Metals		Low	0.7 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Elder Creek	51911000					
				Chlorpyrifos		High	11 Miles	2003
					Urban Runoff/Storm Sewers			
				Diazinon		High	11 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	Elk Grove Creek	51911000					
				Diazinon		High	6.9 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	L	Englebright Lake	51714013					
				Mercury		Medium	754 Acres	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Fall River (Pit)	52641031					
				Sedimentation/Siltation		Low	8.6 Miles	
					Agriculture-grazing			
					Silviculture			
					Highway/Road/Bridge Construction			
5	R	Feather River, Lower (Lake Oroville Dam to Confluence with Sacramento River)	51922000					
				Diazinon		High	42 Miles	2003
					Agriculture			
					Urban Runoff/Storm Sewers			
				Group A Pesticides		Low	42 Miles	
					Agriculture			
				Mercury		Medium	42 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Unknown Toxicity		**Low**	**42 Miles**	
					Source Unknown			
5	**R**	**Five Mile Slough (Alexandria Place to Fourteen Mile Slough)**	**54400000**					
				Chlorpyrifos		**Medium**	**1.6 Miles**	
					Urban Runoff/Storm Sewers			
				Diazinon		**Medium**	**1.6 Miles**	
				The agricultural source of diazinon for this waterbody is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
				Organic Enrichment/Low Dissolved Oxygen		**Low**	**1.6 Miles**	
					Urban Runoff/Storm Sewers			
				Pathogens		**Low**	**1.6 Miles**	
					Other Urban Runoff			
					Recreational and Tourism Activities (non-boating)			
5	**R**	**French Ravine**	**51632011**					
				Bacteria		**Low**	**1.7 Miles**	
					Land Disposal			
5	**W**	**Grasslands Marshes**	**54120000**					
				Electrical Conductivity		**Low**	**7962 Acres**	
					Agriculture			
5	**R**	**Harding Drain (Turlock Irrigation District Lateral #5)**	**53550000**					
				Ammonia		**Low**	**8.3 Miles**	
					Municipal Point Sources			
					Agriculture			
				Chlorpyrifos		**Low**	**8.3 Miles**	
					Agriculture			
				Diazinon		**Low**	**8.3 Miles**	
					Agriculture			
				Unknown Toxicity		**Low**	**8.3 Miles**	
					Agriculture			
5	**R**	**Harley Gulch**	**51332022**					
				Mercury		**Medium**	**6 Miles**	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Horse Creek (Rising Star Mine to Shasta Lake)	50610000					
				Cadmium		Low	0.52 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		Low	0.52 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Lead		Low	0.52 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	0.52 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Humbug Creek	51732030					
				Copper		Low	2.2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Mercury		Low	2.2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Sedimentation/Siltation		Low	2.2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	2.2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Ingram/Hospital Creek	54110000					
				Chlorpyrifos		Low	1 Miles	
					Agricultural Return Flows			
				Diazinon		Low	1 Miles	
					Agricultural Return Flows			
5	R	Jack Slough	51540000					
				Diazinon		Medium	14 Miles	
					Agriculture			
5	R	James Creek	51224010					
				Mercury		Low	6.3 Miles	
				Resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nickel		**Low**	**6.3 Miles**	
				Resource extraction sources are abandoned mines.				
					Resource Extraction			
5	**R**	**Kanaka Creek**	**51742022**					
				Arsenic		**Low**	**9.7 Miles**	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	**L**	**Keswick Reservoir (portion downstream from Spring Creek)**	**52440013**					
				Cadmium		**Low**	**135 Acres**	
					Resource Extraction			
				Copper		**Low**	**135 Acres**	
					Resource Extraction			
				Zinc		**Low**	**135 Acres**	
					Resource Extraction			
5	**R**	**Kings River, Lower (Island Weir to Stinson and Empire Weirs)**	**55190000**					
				Electrical Conductivity		**Low**	**36 Miles**	
					Agriculture			
				Molybdenum		**Low**	**36 Miles**	
					Agriculture			
				Toxaphene		**Low**	**36 Miles**	
					Agriculture			
5	**R**	**Little Backbone Creek, Lower**	**50620010**					
				Acid Mine Drainage		**Low**	**0.95 Miles**	
					Resource Extraction			
				Cadmium		**Low**	**0.95 Miles**	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		**Low**	**0.95 Miles**	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		**Low**	**0.95 Miles**	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Little Cow Creek (downstream from Afterthought Mine)	50733023					
				Cadmium		Low	1.1 Miles	
				Resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		Low	1.1 Miles	
				Resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	1.1 Miles	
				Resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Little Deer Creek	51720012					
				Mercury		Low	4.1 Miles	
					Resource Extraction			
5	R	Little Grizzly Creek	51854031					
				Copper		Medium	9.4 Miles	
					Mine Tailings			
				Zinc		Medium	9.4 Miles	
					Mine Tailings			
5	R	Lone Tree Creek	53140000					
				Ammonia		Low	15 Miles	
					Dairies			
				Biological Oxygen Demand		Low	15 Miles	
					Dairies			
				Electrical Conductivity		Low	15 Miles	
					Dairies			
5	R	Marsh Creek (Dunn Creek to Marsh Creek Reservoir)	54300023					
				Metals		Low	11 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	Marsh Creek (Marsh Creek Reservoir to San Joaquin River)	54400000					
				Mercury		Low	10 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Metals		Low	10 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	L	Marsh Creek Reservoir	54300023					
				Mercury		Low	278 Acres	
					Resource Extraction			
5	W	Mendota Pool	55120000					
				Selenium		Low	3045 Acres	
					Agriculture			
					Agricultural Return Flows			
					Groundwater Withdrawal			
					Other			
5	R	Merced River, Lower (McSwain Reservoir to San Joaquin River)	53550000					
				Chlorpyrifos		Medium	50 Miles	
					Agriculture			
				Diazinon		Medium	50 Miles	
					Agriculture			
				Group A Pesticides		Low	50 Miles	
					Agriculture			
5	R	Middle River	54400000					
				Low Dissolved Oxygen		Low	9.7 Miles	
					Hydromodification			
					Source Unknown			
5	R	Mokelumne River, Lower	54400000					
				Copper		Low	29 Miles	
					Resource Extraction			
				Zinc		Low	29 Miles	
					Resource Extraction			
5	R	Mormon Slough (Commerce Street to Stockton Deep Water Channel)	54400000					
				Organic Enrichment/Low Dissolved Oxygen		Low	0.93 Miles	
					Urban Runoff/Storm Sewers			
				Pathogens		Medium	0.93 Miles	
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			
5	R	Mormon Slough (Stockton Diverting Canal to Commerce Street)	53130000					
				Pathogens		Medium	5.2 Miles	
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Morrison Creek	51911000					
				Diazinon		High	21 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	Mosher Slough (downstream of I-5)	54400000					
				Chlorpyrifos		Medium	1.3 Miles	
					Urban Runoff/Storm Sewers			
				Diazinon		Medium	1.3 Miles	
				The agricultural source of diazinon for this waterbody is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
				Organic Enrichment/Low Dissolved Oxygen		Low	1.3 Miles	
					Urban Runoff/Storm Sewers			
				Pathogens		Low	1.3 Miles	
					Urban Runoff/Storm Sewers			
5	R	Mosher Slough (upstream of I-5)	54400000					
				Pathogens		Low	3.5 Miles	
					Urban Runoff/Storm Sewers			
5	R	Mud Slough	54120000					
				Boron		Low	13 Miles	
					Agriculture			
				Electrical Conductivity		Low	13 Miles	
					Agriculture			
				Pesticides		Low	13 Miles	
					Agriculture			
				Selenium		Medium	13 Miles	
					Agriculture			
				Unknown Toxicity		Low	13 Miles	
					Agriculture			
5	R	Natomas East Main Drainage Canal (aka Steelhead Creek, downstream of confluence with Arcade Creek)	51921000					
				Diazinon		Medium	3.5 Miles	
				The agricultural source is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		Low	3.5 Miles	
					Industrial Point Sources			
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	Natomas East Main Drainage Canal (aka Steelhead Creek, upstream of confluence with Arcade Creek)	51921000					
				PCBs		Low	12 Miles	
					Industrial Point Sources			
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	Newman Wasteway	54120000					
				Chlorpyrifos		Low	8.3 Miles	
					Agriculture			
				Diazinon		Low	8.3 Miles	
					Agriculture			
5	R	Oak Run Creek	50733000					
				Fecal Coliform		Low	5.6 Miles	
					Combined Sewer Overflow			
					Agriculture			
					Grazing-Related Sources			
					Pasture Grazing-Upland			
					Natural Sources			
5	R	Old River (San Joaquin River to Delta-Mendota Canal)	54400000					
				Low Dissolved Oxygen		Low	15 Miles	
					Hydromodification			
					Source Unknown			
5	R	Orestimba Creek (above Kilburn Road)	54110000					
				Azinphos-methyl		Medium	9.1 Miles	
					Agriculture			
				Chlorpyrifos		Medium	9.1 Miles	
					Agriculture			
				DDE *Historical agricultural use.*		Low	9.1 Miles	
					Agriculture			
				Diazinon		Medium	9.1 Miles	
					Agriculture			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Orestimba Creek (below Kilburn Road)	54110000					
				Azinphos-methyl		Medium	2.7 Miles	
					Agriculture			
				Chlorpyrifos		Medium	2.7 Miles	
					Agriculture			
				DDE		Low	2.7 Miles	
				Historical agricultural use.				
					Agriculture			
				Diazinon		Medium	2.7 Miles	
					Agriculture			
				Unknown Toxicity		Low	2.7 Miles	
					Agriculture			
5	R	Panoche Creek (Silver Creek to Belmont Avenue)	55112000					
				Mercury		Low	18 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Sedimentation/Siltation		Low	18 Miles	
					Agriculture			
					Agriculture-grazing			
					Highway/Road/Bridge Construction			
				Selenium		Low	18 Miles	
					Agriculture			
					Agriculture-grazing			
					Highway/Road/Bridge Construction			
5	R	Pit River	52661080					
				Nutrients		Low	123 Miles	
					Agriculture			
					Agriculture-grazing			
				Organic Enrichment/Low Dissolved Oxygen		Low	123 Miles	
					Agriculture			
					Agriculture-grazing			
				Temperature		Low	123 Miles	
					Agriculture			
					Agriculture-grazing			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Putah Creek, Lower	51120000					
				Mercury		Low	28 Miles	
				Impairment due to Mercury is on lower reach below Lake Solano.				
					Resource Extraction			
					Source Unknown			
5	L	Rollins Reservoir	51634033					
				Mercury		Medium	774 Acres	
					Resource Extraction			
5	R	Sacramento River (Keswick Dam to Cottonwood Creek)	52440014					
				Unknown Toxicity		Low	15 Miles	
					Source Unknown			
5	R	Sacramento River (Cottonwood Creek to Red Bluff)	50810000					
				Unknown Toxicity		Low	16 Miles	
					Source Unknown			
5	R	Sacramento River (Red Bluff to Knights Landing)	50420070					
				Unknown Toxicity		Low	82 Miles	
					Source Unknown			
5	R	Sacramento River (Knights Landing to the Delta)	51000000					
				Diazinon		High	16 Miles	2003
					Agriculture			
				Mercury		Medium	16 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Unknown Toxicity		Low	16 Miles	
					Source Unknown			
5	R	Sacramento Slough	51922000					
				Diazinon		Medium	1.7 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
				Mercury		Low	1.7 Miles	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Salt Slough (upstream from confluence with San Joaquin River)	54120000					
				Boron		Low	17 Miles	
					Agriculture			
				Chlorpyrifos		Low	17 Miles	
					Agriculture			
				Diazinon		Low	17 Miles	
					Agriculture			
				Electrical Conductivity		Low	17 Miles	
					Agriculture			
				Unknown Toxicity		Low	17 Miles	
					Agriculture			
5	R	San Carlos Creek (downstream of New Idria Mine)	55911085					
				Mercury		Low	5.1 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
					Acid Mine Drainage			
5	R	San Joaquin River (Bear Creek to Mud Slough)	53570000					
				Boron		High	14 Miles	2003
					Agriculture			
				Chlorpyrifos		High	14 Miles	2004
					Agriculture			
				DDT		Low	14 Miles	
					Agriculture			
				Diazinon		High	14 Miles	2004
					Agriculture			
				Electrical Conductivity		High	14 Miles	2003
					Agriculture			
				Group A Pesticides		Low	14 Miles	
					Agriculture			
				Mercury		Medium	14 Miles	
					Resource Extraction			
				Unknown Toxicity		Low	14 Miles	
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	San Joaquin River (Mendota Pool to Bear Creek)	53570000					
				Boron	Agriculture	High	67 Miles	2003
				Chlorpyrifos	Agriculture	High	67 Miles	2004
				DDT	Agriculture	Low	67 Miles	
				Diazinon	Agriculture	High	67 Miles	2004
				Electrical Conductivity	Agriculture	High	67 Miles	2003
				Group A Pesticides	Agriculture	Low	67 Miles	
				Unknown Toxicity	Source Unknown	Low	67 Miles	
5	R	San Joaquin River (Merced River to South Delta Boundary)	54400000					
				Boron	Agriculture	High	43 Miles	2003
				Chlorpyrifos	Agriculture	High	43 Miles	2004
				DDT	Agriculture	Low	43 Miles	
				Diazinon	Agriculture	High	43 Miles	2004
				Electrical Conductivity	Agriculture	High	43 Miles	2003
				Group A Pesticides	Agriculture	Low	43 Miles	
				Mercury	Resource Extraction	Medium	43 Miles	
				Unknown Toxicity	Source Unknown	Low	43 Miles	
5	R	San Joaquin River (Mud Slough to Merced River)	53570000					
				Boron	Agriculture	High	3 Miles	2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Chlorpyrifos		High	3 Miles	2004
					Agriculture			
				DDT		Low	3 Miles	
					Agriculture			
				Diazinon		High	3 Miles	2004
					Agriculture			
				Electrical Conductivity		High	3 Miles	2003
					Agriculture			
				Group A Pesticides		Low	3 Miles	
					Agriculture			
				Mercury		Medium	3 Miles	
					Resource Extraction			
				Selenium		Low	3 Miles	
					Agriculture			
				Unknown Toxicity		Low	3 Miles	
					Source Unknown			
5	L	Scotts Flat Reservoir	51720011					
				Mercury		Medium	660 Acres	
					Resource Extraction			
5	L	Shasta Lake (area where West Squaw Creek enters)	50620010					
				Cadmium		Low	20 Acres	
					Resource Extraction			
				Copper		Low	20 Acres	
					Resource Extraction			
				Zinc		Low	20 Acres	
					Resource Extraction			
5	R	Smith Canal	54400000					
				Organic Enrichment/Low Dissolved Oxygen		Low	2.4 Miles	
					Urban Runoff/Storm Sewers			
				Organophosphorus Pesticides		Medium	2.4 Miles	
					Urban Runoff/Storm Sewers			
				Pathogens		Low	2.4 Miles	
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	South Cow Creek	50731000					
				Fecal Coliform		Low	7.9 Miles	
					Agriculture Grazing-Related Sources Other			
5	R	Spring Creek, Lower (Iron Mountain Mine to Keswick Reservoir)	52440010					
				Acid Mine Drainage		Low	2.6 Miles	
				All resource extraction sources are abandoned mines.	Resource Extraction			
				Cadmium		Low	2.6 Miles	
				All resource extraction sources are abandoned mines.	Resource Extraction			
				Copper		Low	2.6 Miles	
				All resource extraction sources are abandoned mines.	Resource Extraction			
				Zinc		Low	2.6 Miles	
				All resource extraction sources are abandoned mines.	Resource Extraction			
5	R	Stanislaus River, Lower	53530000					
				Diazinon		Medium	59 Miles	
					Agriculture			
				Group A Pesticides		Low	59 Miles	
					Agriculture			
				Mercury		Low	59 Miles	
					Resource Extraction			
				Unknown Toxicity		Low	59 Miles	
					Source Unknown			
5	R	Stockton Deep Water Channel, Upper (Port Turning Basin)	54400000					
				Dioxin		Low	3.3 Miles	
				This listing was made by USEPA.	Point Source			
				Furan Compounds		Low	3.3 Miles	
					Contaminated Sediments			
				Pathogens		Medium	3.3 Miles	
					Urban Runoff/Storm Sewers Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs		Low	3.3 Miles	
				This listing was made by USEPA.				
					Point Source			
5	R	**Strong Ranch Slough**	51921000					
				Chlorpyrifos		High	6.4 Miles	2003
					Urban Runoff/Storm Sewers			
				Diazinon		High	6.4 Miles	2003
				The agricultural source of diazinon for these waterbodies is from aerial deposition.				
					Agriculture			
					Urban Runoff/Storm Sewers			
5	R	**Sulphur Creek (Colusa County)**	51320024					
				Mercury		Medium	14 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	**Sutter Bypass**	52030000					
				Diazinon		Medium	19 Miles	
					Agriculture			
5	R	**Temple Creek**	53140000					
				Ammonia		Low	10 Miles	
					Dairies			
				Electrical Conductivity		Low	10 Miles	
					Dairies			
5	R	**Town Creek**	50620010					
				Cadmium		Low	0.98 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		Low	0.98 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Lead		Low	0.98 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	0.98 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	R	**Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River)**	53550000					
				Diazinon		Medium	60 Miles	
					Agriculture			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Group A Pesticides		Low	60 Miles	
					Agriculture			
				Unknown Toxicity		Low	60 Miles	
					Source Unknown			
5	R	Walker Slough	53140000					
				Pathogens		Medium	2.3 Miles	
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			
5	R	West Squaw Creek (below Balaklala Mine)	50620010					
				Cadmium		Low	2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		Low	2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Lead		Low	2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	2 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
5	L	Whiskeytown Reservoir (areas near Oak Bottom, Brandy Creek Campgrounds and Whiskeytown)	52463010					
				High Coliform Count		Low	98 Acres	
					Septage Disposal			
5	R	Willow Creek (Shasta County, below Greenhorn Mine to Clear Creek)	52463010					
				Acid Mine Drainage		Low	4 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Copper		Low	4 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			
				Zinc		Low	4 Miles	
				All resource extraction sources are abandoned mines.				
					Resource Extraction			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
5	R	Wolf Creek	51632010					
				Fecal Coliform		Low	23 Miles	
					Agriculture			
					Urban Runoff/Storm Sewers			
					Recreational and Tourism Activities (non-boating)			
6	R	Aspen Creek	63210080					
				Metals		Low	0.93 Miles	
				Affected by acid mine drainage from Leviathan Mine. TMDL to be coordinated with Regional Board /CERCLA remediation programs.				
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint Source			
6	R	Aurora Canyon Creek	63030040					
				Habitat alterations		Low	8.1 Miles	
				Since creek is not impaired by pollutants, a TMDL may not be required under pending revisions to federal regulations.				
					Range Grazing-Riparian and/or Upland			
6	R	Bear Creek (Placer County)	63520010					
				Sedimentation/Siltation		Medium	3 Miles	
				Creek affected by hydrologic modification for ski resort/snow making pond.				
					Hydromodification			
					Nonpoint Source			
6	R	Big Meadow Creek	63410011					
				Pathogens		Low	1.4 Miles	
					Range Grazing-Riparian and/or Upland			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	R	Blackwood Creek	63420021					
				Iron		Low	5.9 Miles	
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Nitrogen		Low	5.9 Miles	
				Nitrogen loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Blackwood Creek.				
					Silviculture			
					Resource Extraction			
					Hydromodification			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
				Phosphorus		Low	5.9 Miles	
				Phosphorus loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL for creek may be needed.				
					Grazing-Related Sources			
					Silviculture			
					Resource Extraction			
					Hydromodification			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Natural Sources			
					Nonpoint Source			
				Sedimentation/Siltation		Medium	5.9 Miles	
				Creek affected by past gravel quarry operations and other watershed disturbance including grazing and timber harvest.				
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Construction/Land Development			
					Surface Runoff			
					Resource Extraction			
					Hydromodification			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Bodie Creek	63020031					
				Metals		Medium	11 Miles	
				Affected by drainage from inactive mines, mine tailings in creek.				
					Resource Extraction			
					Mine Tailings			
					Inactive Mining			
					Nonpoint Source			
6	L	Bridgeport Reservoir	63030050					
				Nitrogen		Medium	2614 Acres	
					Grazing-Related Sources			
					Pasture Grazing-Riparian and/or Upland			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Wastewater - land disposal			
					Flow Regulation/Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Marinas and Recreational Boating			
					Atmospheric Deposition			
					Internal Nutrient Cycling (primarily lakes)			
					Sediment Resuspension			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
				Phosphorus		Medium	2614 Acres	
					Grazing-Related Sources			
					Pasture Grazing-Riparian and/or Upland			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Wastewater - land disposal			
					Flow Regulation/Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Marinas and Recreational Boating			
					Atmospheric Deposition			
					Internal Nutrient Cycling (primarily lakes)			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Sedimentation/Siltation		Medium	2614 Acres	
					Grazing-Related Sources			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Sediment Resuspension			
6	R	Bronco Creek	63520053					
				Sedimentation/Siltation		Medium	1.3 Miles	
				Watershed disturbance in naturally highly erosive watershed.				
					Silviculture			
					Natural Sources			
					Nonpoint Source			
6	R	Bryant Creek	63210080					
				Metals		Low	5.2 Miles	
				Affected by acid mine drainage from Leviathan Mine. Problem being addressed through RWQCB and CERCLA remediation programs.				
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Nonpoint Source			
6	R	Buckeye Creek	63040022					
				Pathogens		Low	17 Miles	
					Grazing-Related Sources			
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	R	Carson River, West Fork (Headwaters to Woodfords)	63320014					
				Nitrogen		Low	18 Miles	
					Silviculture			
					Onsite Wastewater Systems (Septic Tanks)			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		**Low**	**18 Miles**	
				Revision of standard may be considered.				
					Silviculture			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
				Sodium		**Low**	**18 Miles**	
					Onsite Wastewater Systems (Septic Tanks)			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	**R**	**Carson River, West Fork (Paynesville to State Line)**	**63310013**					
				Pathogens		**Low**	**3.3 Miles**	
					Pasture Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Carson River, West Fork (Woodfords to Paynesville)	63310012					
				Nitrogen		Low	3.6 Miles	
				Revision of standards may be considered.				
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Agriculture-storm runoff			
					Agriculture-subsurface drainage			
					Agriculture-irrigation tailwater			
					Silviculture			
					Wastewater - land disposal			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
				Pathogens		Low	3.6 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Agricultural Return Flows			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
				Sodium		Low	3.6 Miles	
					Agriculture-storm runoff			
					Agriculture-irrigation tailwater			
					Agriculture-grazing			
					Wastewater - land disposal			
					Onsite Wastewater Systems (Septic Tanks)			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	W	Cinder Cone Springs	63520010					
				Nutrients		Medium	1 Acres	
				Springs tributary to Truckee River, affected by subsurface drainage from former wastewater disposal area (disposal discontinued 1978). Further monitoring may support delisting.				
					Wastewater - land disposal			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Salinity/TDS/Chlorides		Medium	1 Acres	
				Subsurface drainage from former wastewater disposal area. Has not been monitored routinely in recent years; further monitoring may support delisting.				
					Wastewater - land disposal			
6	R	Clark Canyon Creek	63030041					
				Habitat alterations		Low	5 Miles	
				Creek may be placed on list of waters impaired by pollution and not requiring TMDLs under pending changes in federal regulations.				
					Range Grazing-Riparian and/or Upland			
6	R	Clearwater Creek	63040051					
				Sedimentation/Siltation		Medium	12 Miles	
				Listed on basis of limited information; additional monitoring may support delisting.				
					Range Grazing-Riparian and/or Upland			
					Construction/Land Development			
					Highway Maintenance and Runoff			
6	R	Cottonwood Creek (below LADWP diversion)	60330000					
				Flow alterations		Low	1.8 Miles	
				Creek may be placed on list of waters impaired by pollution and not requiring TMDLs under pending changes to federal regulations.				
					Water Diversions			
6	L	Crowley Lake	60310090					
				Nitrogen		Medium	4861 Acres	
				TMDL expected to use data from ongoing Section 319-funded study of nutrient loading and salary-savings funded study of internal nutrient cycling.				
					Grazing-Related Sources			
					Atmospheric Deposition			
					Internal Nutrient Cycling (primarily lakes)			
					Natural Sources			
					Nonpoint Source			
				Phosphorus		Medium	4861 Acres	
				TMDL expected to use data from ongoing Section 319 -funded study of nutrient loading and salary-savings funded study of internal nutrient cycling.				
					Grazing-Related Sources			
					Erosion/Siltation			
					Internal Nutrient Cycling (primarily lakes)			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	L	Donner Lake	63520021					
				Priority Organics		Low	819 Acres	
				PCBs in fish and sediment exceed Maximum Tissue Residue Level criteria; unknown nonpoint sources. Additional monitoring/study necessary to determine sources/cleanup potential for priority organics. TMDLs for organics to be addressed during years 6-13 of 13 years of the TMDL development process, resources permitting.				
					Source Unknown			
6	L	Eagle Lake (Lassen County)	63732000					
				Nitrogen		Low	20704 Acres	
					Agriculture			
					Grazing-Related Sources			
					Silviculture			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Wastewater			
					Onsite Wastewater Systems (Septic Tanks)			
					Marinas and Recreational Boating			
					Atmospheric Deposition			
					Internal Nutrient Cycling (primarily lakes)			
					Sediment Resuspension			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			
				Phosphorus		Low	20704 Acres	
					Grazing-Related Sources			
					Silviculture			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Wastewater			
					Onsite Wastewater Systems (Septic Tanks)			
					Marinas and Recreational Boating			
					Atmospheric Deposition			
					Internal Nutrient Cycling (primarily lakes)			
					Sediment Resuspension			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	East Walker River, above Bridgeport Reservoir	63030050					
				Pathogens		Low	7.2 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Other Urban Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	R	East Walker River, below Bridgeport Reservoir	63030050					
				Nitrogen		Low	8 Miles	
					Grazing-Related Sources			
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Highway/Road/Bridge Runoff			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
				Phosphorus		Low	8 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
				Sedimentation/Siltation		Low	8 Miles	
					Grazing-Related Sources			
					Highway/Road/Bridge Runoff			
					Urban Runoff--Erosion and Sedimentation			
					Upstream Impoundment			
					Erosion/Siltation			
6	R	General Creek	63420030					
				Iron		Low	9.1 Miles	
					Silviculture			
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Low	9.1 Miles	
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
6	R	Goodale Creek	60330112					
				Sedimentation/Siltation		Low	12 Miles	
				Potential for delisting following further monitoring.				
					Range Grazing-Riparian and/or Upland			
6	R	Gray Creek (Nevada County)	63520052					
				Sedimentation/Siltation		Medium	2.8 Miles	
				Sediment from disturbance of naturally highly erosive watershed.				
					Silviculture			
					Natural Sources			
					Nonpoint Source			
6	R	Green Creek	63030050					
				Habitat alterations		Low	16 Miles	
				Creek listed due to impacts of hydromodification by Dynamo Pond facility. May be placed on separate list of waters impaired by pollution and not requiring TMDLs if pending revisions to TMDL regulations take effect.				
					Range Grazing-Riparian and/or Upland			
					Hydromodification			
6	R	Green Valley Lake Creek	62820000					
				Priority Organics		Medium	3.8 Miles	
				Priority organics (source unknown) were detected in stream in 1980s; no monitoring since. Stream needs reevaluation to determine need for listing.				
					Source Unknown			
6	L	Haiwee Reservoir	62410071					
				Copper		High	1703 Acres	2003
				Copper problems related to algicide used to prevent taste/odor problems in drinking water supplies. TMDL development in progress. A determination of whether or not this water body is a "water of the United States" will be made by the Regional Water Quality Control Board.				
					Other			
6	R	Heavenly Valley Creek (source to USFS boundary)	63410031					
				Chloride		Low	2 Miles	
				Chloride standard may be revised.				
					Highway/Road/Bridge Runoff			
					Atmospheric Deposition			
					Natural Sources			
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Low	2 Miles	
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	R	Heavenly Valley Creek (USFS boundary to Trout Creek)	63410031					
				Chloride		Low	1.4 Miles	
					Highway/Road/Bridge Runoff			
					Atmospheric Deposition			
					Natural Sources			
					Source Unknown			
				Sedimentation/Siltation		Low	1.4 Miles	
					Construction/Land Development			
					Land Development			
					Hydromodification			
					Habitat Modification			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			
6	S	Honey Lake	63710060					
				Arsenic		Low	57756 Acres	
				Arsenic is ultimately from natural sources, but lake is affected by geothermal discharges. Further study needed to determine need for TMDL.				
					Geothermal Development			
					Flow Regulation/Modification			
					Natural Sources			
					Nonpoint Source			
				Salinity/TDS/Chlorides		Low	57756 Acres	
				Further study needed to determine extent of impairment and need for TMDL.				
					Agriculture			
					Agricultural Return Flows			
					Geothermal Development			
					Agricultural Water Diversion			
					Sediment Resuspension			
					Natural Sources			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	W	Honey Lake Area Wetlands	63710060					
				Metals		Low	62590 Acres	
				Additional monitoring needed to determine extent of impairment and need for TMDL				
					Agriculture			
					Geothermal Development			
					Natural Sources			
					Nonpoint Source			
6	S	Honey Lake Wildfowl Management Ponds	63720095					
				Flow alterations		Low	665 Acres	
				Ponds may be placed on separate list of waters impaired by pollution and not needing TMDLs under pending changes to federal regulations.				
					Agricultural Water Diversion			
				Metals		Low	665 Acres	
				Further monitoring needed to determine extent of impairment and need for TMDL.				
					Agriculture			
					Geothermal Development			
					Natural Sources			
				Salinity/TDS/Chlorides		Low	665 Acres	
				Further monitoring needed to determine extent of impairment and need for TMDL.				
					Agriculture			
					Geothermal Development			
					Natural Sources			
				Trace Elements		Low	665 Acres	
				Further monitoring needed to determine extent of impairment and need for TMDL.				
					Geothermal Development			
					Nurseries			
6	L	Horseshoe Lake (San Bernardino County)	62820000					
				Sedimentation/Siltation		Medium	31 Acres	
				Further monitoring may permit delisting.				
					Construction/Land Development			
6	R	Hot Springs Canyon Creek	63030042					
				Sedimentation/Siltation		Medium	2.9 Miles	
				Listed on basis of limited data; further monitoring may support delisting.				
					Range Grazing-Riparian and/or Upland			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Indian Creek (Alpine County)	63220010					
				Habitat alterations		Low	13 Miles	
				Creek may be placed on list of water bodies impaired by pollution and not requiring TMDLs if pending revisions to regulations take effect.				
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Agriculture-irrigation tailwater			
					Upstream Impoundment			
					Flow Regulation/Modification			
					Agricultural Water Diversion			
				Pathogens		Low	13 Miles	
					Grazing-Related Sources			
					Pasture Grazing-Riparian and/or Upland			
6	L	Indian Creek Reservoir	63220010					
				Phosphorus		High	164 Acres	2002
				Reservoir is eutrophic. Most significant source of nutrient loading is release of phosphorus from sediment. Draft phosphorus TMDL, first released in 2000, is planned for revision and recirculation, with Regional Board consideration in July 2002. Reductions in phosphorus loading are expected to ameliorate other problems associated with eutrophication.				
					Pasture Grazing-Riparian and/or Upland			
					Wastewater			
					Flow Regulation/Modification			
					Erosion/Siltation			
					Internal Nutrient Cycling (primarily lakes)			
6	R	Lassen Creek	63720082					
				Flow alterations		Low	8 Miles	
				Under pending revisions to regulations, creek could be placed on a separate list of waters impaired by pollution rather than pollutants, and no TMDL would be developed.				
					Flow Regulation/Modification			
6	R	Lee Vining Creek	60100035					
				Flow alterations		Low	9 Miles	
				Under pending revisions to regulations, creek could be placed on a separate list of waters impaired by pollution but not requiring TMDLs.				
					Flow Regulation/Modification			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	**Leviathan Creek**	63210080					
				Metals		Low	3.2 Miles	
				TMDL development to be coordinated with ongoing Regional Board and CERCLA remediation activities at Leviathan Mine site.				
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Erosion/Siltation			
6	R	**Mammoth Creek**	60310053					
				Metals		Low	12 Miles	
				Needs monitoring to determine current extent of impairment and need for TMDL.				
					Other Urban Runoff			
					Natural Sources			
					Nonpoint Source			
6	R	**Mill Creek (Modoc County)**	64130011					
				Sedimentation/Siltation		Low	4.2 Miles	
				Creek needs monitoring to determine current extent of impairment and need for TMDL.				
					Range Grazing-Riparian and/or Upland			
6	R	**Mill Creek (Mono County)**	60100080					
				Flow alterations		Low	12 Miles	
				Under pending revisions to regulations, creek could be placed on a separate list of water bodies impaired by pollution and not requiring TMDLs.				
					Water Diversions			
6	R	**Monitor Creek**	63210070					
				Aluminum		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint/Point Source			
				Iron		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Manganese		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint/Point Source			
				Silver		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint Source			
				Sulfates		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Nonpoint/Point Source			
				Total Dissolved Solids		Low	4 Miles	
				TMDL to be coordinated with CERCLA remediation.				
					Mill Tailings			
					Mine Tailings			
					Acid Mine Drainage			
					Inactive Mining			
					Natural Sources			
					Nonpoint/Point Source			
6	R	Owens River (Long HA)	60310090					
				Habitat alterations		Low	26 Miles	
				River may be placed on separate list of waters impaired by pollution and not needing TMDLS under pending changes to federal regulations.				
					Agriculture			
					Grazing-Related Sources			
					Hydromodification			
					Flow Regulation/Modification			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Owens River (Lower)	60330000					
				Habitat alterations		Low	53 Miles	
				River may be placed on separate list of waters impaired by pollution and not needing TMDLs under pending changes in federal regulations.				
					Agriculture			
					Hydromodification			
6	R	Owens River (Upper)	60320000					
				Habitat alterations		Low	69 Miles	
				River may be placed on separate list of waters impaired by pollution and not needing TMDLs under pending changes to federal regulations.				
					Agriculture			
					Hydromodification			
6	R	Pine Creek (Lassen County)	63720010					
				Sedimentation/Siltation		Low	55 Miles	
				Creek may be placed on seperate list of waters impaired by pollution and not needing TMDLs under pending changes in federal regulations.				
					Grazing-Related Sources			
					Silviculture			
					Highway/Road/Bridge Construction			
					Hydromodification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
6	L	Pleasant Valley Reservoir	60320000					
				Organic Enrichment/Low Dissolved Oxygen		Medium	99 Acres	
					Flow Regulation/Modification			
					Nonpoint Source			
6	R	Robinson Creek (Hwy 395 to Bridgeport Res)	63030050					
				Pathogens		Low	1.8 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Agricultural Return Flows			
					Onsite Wastewater Systems (Septic Tanks)			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Robinson Creek (Twin Lakes to Hwy 395)	63030050					
				Pathogens		Low	9.1 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Onsite Wastewater Systems (Septic Tanks)			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
6	R	Rough Creek	63020013					
				Habitat alterations		Low	15 Miles	
				Creek may be placed on list of waters impaired by pollution and not needing TMDLs under pending changes to federal regulations.				
					Range Grazing-Riparian and/or Upland			
6	R	Skedaddle Creek	63710054					
				High Coliform Count		Medium	18 Miles	
				USBLM program to mitigate grazing impacts has been implemented. Further study may lead to delisting.				
					Range Grazing-Riparian and/or Upland			
6	R	Squaw Creek	63520011					
				Sedimentation/Siltation		Medium	5.8 Miles	
					Construction/Land Development			
					Other Urban Runoff			
					Hydromodification			
					Drainage/Filling Of Wetlands			
					Highway Maintenance and Runoff			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			
6	R	Susan River	63720095					
				Unknown Toxicity		Low	58 Miles	
					Source Unknown			
6	R	Swauger Creek	63040012					
				Pathogens		Low	14 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Onsite Wastewater Systems (Septic Tanks)			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Low	14 Miles	
					Pasture Grazing-Riparian and/or Upland			
					Range Grazing-Riparian and/or Upland			
					Highway/Road/Bridge Runoff			
					Surface Runoff			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
					Nonpoint Source			
6	L	Tahoe, Lake	63430010					
				Nitrogen		Medium	85364 Acres	
					Grazing-Related Sources			
					Silviculture			
					Construction/Land Development			
					Land Development			
					Urban Runoff/Storm Sewers			
					Urban Runoff--Non-industrial Permitted			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Surface Runoff			
					Urban Runoff--Erosion and Sedimentation			
					Hydromodification			
					Habitat Modification			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Drainage/Filling Of Wetlands			
					Channel Erosion			
					Erosion/Siltation			
					Marinas and Recreational Boating			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Internal Nutrient Cycling (primarily lakes)			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Golf course activities			
					Groundwater Loadings			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Medium	85364 Acres	
					Grazing-Related Sources			
					Silviculture			
					Highway/Road/Bridge Construction			
					Land Development			
					Urban Runoff/Storm Sewers			
					Urban Runoff--Non-industrial Permitted			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Urban Runoff--Erosion and Sedimentation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Internal Nutrient Cycling (primarily lakes)			
					Sediment Resuspension			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			
				Sedimentation/Siltation		Medium	85364 Acres	
					Grazing-Related Sources			
					Silviculture			
					Highway/Road/Bridge Construction			
					Land Development			
					Urban Runoff/Storm Sewers			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Urban Runoff--Erosion and Sedimentation			
					Hydromodification			
					Channelization			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Sediment Resuspension			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Tallac Creek (below Hwy 89)	63410041					
				Pathogens		Low	1.3 Miles	
					Grazing-Related Sources			
					Pasture Grazing-Riparian			
6	L	Tinemaha Reservoir	60320000					
				Metals		Medium	984 Acres	
				Metals concern related to use of copper sulfate algicide. Further monitoring and assessment needed to determine extent of impairment.				
					Other			
6	L	Topaz Lake	63110010					
				Sedimentation/Siltation		Medium	928 Acres	
				Additional monitoring and assessment needed to document extent of impairment.				
					Agriculture			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Nonpoint Source			
6	R	Trout Creek (above Hwy 50)	63410020					
				Iron		Low	10 Miles	
				Standards revision to be considered				
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Natural Sources			
				Nitrogen		Low	10 Miles	
				Nitrogen loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Trout Creek.				
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Atmospheric Deposition			
				Pathogens		Low	10 Miles	
					Source Unknown			
				Phosphorus		Low	10 Miles	
				Phosphorus loading from creek to be considered during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Trout Creek.				
					Pasture Grazing-Riparian and/or Upland			
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Atmospheric Deposition			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Trout Creek (below Hwy 50)	63410042					
				Iron		Low	0.78 Miles	
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Natural Sources			
				Nitrogen		Low	0.78 Miles	
				Nitrogen loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Trout Creek.				
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Atmospheric Deposition			
				Pathogens		Low	0.78 Miles	
					Pasture Grazing-Riparian			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Transient encampments			
				Phosphorus		Low	0.78 Miles	
				Phosphorus loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Trout Creek.				
					Urban Runoff--Non-industrial Permitted			
					Erosion/Siltation			
					Atmospheric Deposition			
6	R	Truckee River	63510010					
				Sedimentation/Siltation		Medium	39 Miles	
				Watershed disturbance including ski resorts, silvicultural activities, urban development, reservoir construction and management; highly erosive subwatersheds.				
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Construction/Land Development			
					Highway/Road/Bridge Construction			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
					Snow skiing activities			
					Nonpoint Source			
6	R	Truckee River, Upper (above Christmas Valley)	63410010					
				Iron		Low	4.5 Miles	
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Pathogens		**Low**	**4.5 Miles**	
					Grazing-Related Sources			
					Natural Sources			
					Recreational and Tourism Activities (non-boating)			
				Phosphorus		**Low**	**4.5 Miles**	
				Phosphorus loading from river to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for the Upper Truckee River.				
					Grazing-Related Sources			
					Silviculture			
					Natural Sources			
6	**R**	**Truckee River, Upper (below Christmas Valley)**	**63410042**					
				Iron		**Low**	**11 Miles**	
					Erosion/Siltation			
					Natural Sources			
					Unknown Nonpoint Source			
				Phosphorus		**Low**	**11 Miles**	
				Phosphorus loading from river to be addressed in development of Lake Tahoe TMDL, but a more specific TMDL may be needed for the Upper Truckee River.				
					Silviculture			
					Construction/Land Development			
					Hydromodification			
					Channelization			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Erosion/Siltation			
					Atmospheric Deposition			
					Highway Maintenance and Runoff			
					Natural Sources			
					Unknown Nonpoint Source			
6	**R**	**Tuttle Creek**	**60330140**					
				Habitat alterations		**Low**	**13 Miles**	
				Creek may be placed on separate list of waters impaired by pollution and not needing TMDLs under pending changes in federal regulations.				
					Range Grazing-Riparian and/or Upland			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	L	Twin Lakes (Owens HU)	60310051					
				Nitrogen		Low	26 Acres	
				Monitoring needed to confirm extent of impairment and need for TMDL.				
					Agriculture			
					Grazing-Related Sources			
					Construction/Land Development			
					Land Development			
					Other Urban Runoff			
					Atmospheric Deposition			
				Phosphorus		Low	26 Acres	
				Monitoring needed to confirm degree of impairment and need for TMDL.				
					Agriculture			
					Grazing-Related Sources			
					Construction/Land Development			
					Land Development			
					Other Urban Runoff			
6	R	Ward Creek	63420020					
				Iron		Low	5.7 Miles	
					Silviculture			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Channel Erosion			
					Erosion/Siltation			
					Natural Sources			
				Nitrogen		Low	5.7 Miles	
				Nitrogen loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Ward Creek.				
					Silviculture			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Phosphorus		Low	5.7 Miles	
				Phosphorus loading from creek to be addressed during development of Lake Tahoe TMDL, but a more specific TMDL may be needed for Ward Creek.				
					Silviculture			
					Other Urban Runoff			
					Highway/Road/Bridge Runoff			
					Urban Runoff--Erosion and Sedimentation			
					Channel Erosion			
					Erosion/Siltation			
					Atmospheric Deposition			
					Natural Sources			
				Sedimentation/Siltation		Medium	5.7 Miles	
				The University of California Davis Tahoe Research Group is currently researching sediment sources in the Ward Creek watershed.				
					Silviculture			
					Land Development			
					Urban Runoff/Storm Sewers			
					Highway/Road/Bridge Runoff			
					Channel Erosion			
					Nonpoint Source			
6	R	West Walker River	63110060					
				Sedimentation/Siltation		Low	49 Miles	
					Agriculture			
					Pasture Grazing-Riparian and/or Upland			
					Removal of Riparian Vegetation			
					Streambank Modification/Destabilization			
					Channel Erosion			
					Erosion/Siltation			
					Nonpoint Source			
6	R	Wolf Creek (Alpine County)	63210031					
				Sedimentation/Siltation		Low	12 Miles	
					Range Grazing-Riparian and/or Upland			
					Silviculture			
					Nonpoint Source			
7	R	Alamo River	72310000					
				Pesticides		Low	57 Miles	
				Pesticides may be contained in agricultural return flows. Elevated fish tissue levels. Toxic bioassay results.				
					Agricultural Return Flows			
				Selenium		Low	57 Miles	
				Selenium originates from Upper Basin Portion of Colorado River. Elevated fish tissue levels.				
					Agricultural Return Flows			

2002 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
7	R	Coachella Valley Storm Channel	71947000					
				Pathogens		Medium	69 Miles	
					Source Unknown			
7	R	Imperial Valley Drains	72310000					
				Pesticides		Low	1222 Miles	
				Elevated fish tissue levels and toxic bioassay results				
					Agricultural Return Flows			
				Sedimentation/Siltation		High	1222 Miles	2004
					Agricultural Return Flows			
				Selenium		Low	1222 Miles	
				Selenium originates from Upper basin Portion of colorado River. Elevated fish tissue levels.				
					Agricultural Return Flows			
7	R	New River (Imperial)	72310000					
				1,2,4-trimethylbenzene		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				Chloroform		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				m,p,-Xylenes		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				Nutrients		Low	66 Miles	
				Regional Board proposes to establish TMDL in cooperation with U.S. EPA and Mexico.				
					Major Municipal Point Source-dry and/or wet weather discharge			
					Agricultural Return Flows			
					Out-of-state source			
				Organic Enrichment/Low Dissolved Oxygen		Medium	66 Miles	
					Wastewater			
					Inappropriate Waste Disposal/Wildcat Dumping			
					Out-of-state source			
					Unknown point source			
				o-Xylenes		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				p-Cymene		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				p-Dichlorobenzene (DCB)		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				Pesticides		Low	66 Miles	
					Agricultural Return Flows			
					Out-of-state source			
				Sedimentation/Siltation		High	66 Miles	2002
					Agricultural Return Flows			
				Toluene		Low	66 Miles	
					Industrial Point Sources			
					Out-of-state source			
				Trash		Medium	66 Miles	
					Out-of-state source			
7	R	Palo Verde Outfall Drain	71540000					
				Pathogens		High	7.4 Miles	2003
					Source Unknown			
7	S	Salton Sea	72800000					
				Nutrients		High	233340 Acres	2004
					Major Industrial Point Source			
					Agricultural Return Flows			
					Out-of-state source			
				Salinity		Low	233340 Acres	
				TMDL development will not be effective in addressing this problem, which will require an engineering solution with federal, local, and state cooperation.				
					Agricultural Return Flows			
					Out-of-state source			
					Point Source			
				Selenium		Medium	233340 Acres	
					Agricultural Return Flows			
8	B	Anaheim Bay	80111000					
				Copper		Low	402 Acres	
				This listing was made by USEPA.				
					Source Unknown			
				Dieldrin (tissue)		Low	402 Acres	
				This listing was made by USEPA.				
					Source Unknown			
				Nickel		Low	402 Acres	
				This listing was made by USEPA.				
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				PCBs (tissue)		Low	402 Acres	
				This listing was made by USEPA.				
					Source Unknown			
8	L	Big Bear Lake	80171000					
				Copper		Medium	2865 Acres	
					Resource Extraction			
				Mercury		Medium	2865 Acres	
					Resource Extraction			
				Metals		Medium	2865 Acres	
					Resource Extraction			
				Noxious aquatic plants		High	2865 Acres	2004
					Construction/Land Development			
					Unknown point source			
				Nutrients		High	2865 Acres	2004
					Construction/Land Development			
					Snow skiing activities			
				Sedimentation/Siltation		High	2865 Acres	2004
					Construction/Land Development			
					Snow skiing activities			
					Unknown Nonpoint Source			
8	C	Bolsa Chica State Beach	80111000					
				Copper		Low	2.6 Miles	
				This listing was made by USEPA.				
					Source Unknown			
				Nickel		Low	2.6 Miles	
				This listing was made by USEPA.				
					Source Unknown			
8	R	Buck Gully Creek	80111000					
				Fecal Coliform		Low	0.3 Miles	
				Listing is downstream of Pacific Coast Highway.				
					Source Unknown			
				Total Coliform		Low	0.3 Miles	
				Listing is downstream of Pacific Coast Highway.				
					Source Unknown			
8	L	Canyon Lake (Railroad Canyon Reservoir)	80211000					
				Nutrients		Low	453 Acres	
					Nonpoint Source			
				Pathogens		Low	453 Acres	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
8	R	Chino Creek Reach 1	80121000					
				Nutrients		Medium	7.8 Miles	
					Agriculture			
					Dairies			
				Pathogens		High	7.8 Miles	2004
					Agriculture			
					Dairies			
					Urban Runoff/Storm Sewers			
8	R	Chino Creek Reach 2	80121000					
				High Coliform Count		Medium	2.5 Miles	
					Unknown Nonpoint Source			
8	R	Cucamonga Creek, Valley Reach	80121000					
				High Coliform Count		High	9.6 Miles	2004
					Unknown Nonpoint Source			
8	L	Elsinore, Lake	80231000					
				Nutrients		High	2431 Acres	2003
					Unknown Nonpoint Source			
				Organic Enrichment/Low Dissolved Oxygen		High	2431 Acres	2004
					Unknown Nonpoint Source			
				Sedimentation/Siltation		High	2431 Acres	2003
					Urban Runoff/Storm Sewers			
				Unknown Toxicity		High	2431 Acres	2004
					Unknown Nonpoint Source			
8	L	Fulmor, Lake	80221000					
				Pathogens		Low	4.2 Acres	
					Unknown Nonpoint Source			
8	R	Grout Creek	80171000					
				Metals		Medium	3.5 Miles	
					Unknown Nonpoint Source			
				Nutrients		High	3.5 Miles	2004
					Unknown Nonpoint Source			
8	C	Huntington Beach State Park	80111000					
				Enterococci		Low	5.8 Miles	
				Impaired 50 yards around drain at Magnolia.				
					Source Unknown			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
8	B	Huntington Harbour	80111000					
				Copper *This listing was made by USEPA.*	Source Unknown	Low	221 Acres	
				Dieldrin (tissue) *This listing was made by USEPA.*	Source Unknown	Low	221 Acres	
				Nickel *This listing was made by USEPA.*	Source Unknown	Low	221 Acres	
				Pathogens	Urban Runoff/Storm Sewers	Low	221 Acres	
				PCBs (tissue) *This listing was made by USEPA.*	Source Unknown	Low	221 Acres	
8	R	Knickerbocker Creek	80171000					
				Metals	Unknown Nonpoint Source	Medium	2 Miles	
				Pathogens	Unknown Nonpoint Source	High	2 Miles	2004
8	R	Los Trancos Creek (Crystal Cove Creek)	80111000					
				Fecal Coliform *Listing is downstream of Pacific Coast Highway.*	Source Unknown	Low	0.19 Miles	
				Total Coliform *Listing is downstream of Pacific Coast Highway.*	Source Unknown	Low	0.19 Miles	
8	R	Lytle Creek	80141000					
				Pathogens	Unknown Nonpoint Source	Low	41 Miles	
8	R	Mill Creek (Prado Area)	80121000					
				Nutrients	Agriculture Dairies	Medium	1.6 Miles	
				Pathogens	Dairies	High	1.6 Miles	2004
				Suspended solids	Dairies	Medium	1.6 Miles	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
8	R	Mill Creek Reach 1	80156000					
				Pathogens		Low	12 Miles	
					Unknown Nonpoint Source			
8	R	Mill Creek Reach 2	80158000					
				Pathogens		Low	12 Miles	
					Unknown Nonpoint Source			
8	R	Mountain Home Creek	80158000					
				Pathogens		Low	3.7 Miles	
					Unknown Nonpoint Source			
8	R	Mountain Home Creek, East Fork	80158000					
				Pathogens		Low	5.1 Miles	
					Unknown Nonpoint Source			
8	B	Newport Bay, Lower	80114000					
				Metals		Medium	767 Acres	
					Urban Runoff/Storm Sewers			
					Contaminated Sediments			
					Boatyards			
				Pesticides		High	767 Acres	2003
					Agriculture			
					Contaminated Sediments			
				Priority Organics		Medium	767 Acres	
					Contaminated Sediments			
					Unknown Nonpoint Source			
8	E	Newport Bay, Upper (Ecological Reserve)	80111000					
				Metals		Medium	653 Acres	
					Urban Runoff/Storm Sewers			
				Pesticides		High	653 Acres	2003
					Agriculture			
					Unknown Nonpoint Source			
8	L	Prado Park Lake	80121000					
				Nutrients		Low	90 Acres	
					Nonpoint Source			
				Pathogens		High	90 Acres	2004
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
8	R	Rathbone (Rathbun) Creek	80171000					
				Nutrients		High	4.7 Miles	2004
					Snow skiing activities			
					Unknown Nonpoint Source			
				Sedimentation/Siltation		High	4.7 Miles	2004
					Snow skiing activities			
					Unknown Nonpoint Source			
8	R	San Diego Creek Reach 1	80111000					
				Fecal Coliform		Low	7.8 Miles	
					Urban Runoff/Storm Sewers			
					Other Urban Runoff			
				Pesticides		High	7.8 Miles	2003
					Unknown Nonpoint Source			
8	R	San Diego Creek Reach 2	80111000					
				Metals		Medium	6.3 Miles	
					Urban Runoff/Storm Sewers			
				Unknown Toxicity		Low	6.3 Miles	
					Unknown Nonpoint Source			
8	R	Santa Ana River, Reach 3	80121000					
				Pathogens		High	26 Miles	2004
					Dairies			
8	R	Santa Ana River, Reach 4	80127000					
				Pathogens		Low	14 Miles	
					Nonpoint Source			
8	R	Santiago Creek, Reach 4	80112000					
				Salinity/TDS/Chlorides		Low	9.8 Miles	
					Source Unknown			
8	C	Seal Beach	80111000					
				Enterococci		Low	0.53 Miles	
				Impaired 50 yards around drain at 1st Street.				
					Source Unknown			
8	R	Silverado Creek	80112000					
				Pathogens		Low	11 Miles	
					Unknown Nonpoint Source			
				Salinity/TDS/Chlorides		Low	11 Miles	
					Unknown Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
8	R	Summit Creek	80171000					
				Nutrients		High	1.5 Miles	2004
					Construction/Land Development			
9	R	Agua Hedionda Creek	90431000					
				Total Dissolved Solids		Low	7 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
9	E	Agua Hedionda Lagoon	90431000					
				Bacteria Indicators		Low	6.8 Acres	
					Nonpoint/Point Source			
				Sedimentation/Siltation		Low	6.8 Acres	
					Nonpoint/Point Source			
9	R	Aliso Creek	90113000					
				Bacteria Indicators		Medium	19 Miles	
					Urban Runoff/Storm Sewers Unknown point source Nonpoint/Point Source			
				Phosphorus *Impairment located at lower 4 miles.*		Low	19 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
				Toxicity		Low	19 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
9	E	Aliso Creek (mouth)	90113000					
				Bacteria Indicators		Medium	0.29 Acres	
					Nonpoint/Point Source			
9	E	Buena Vista Lagoon	90421000					
				Bacteria Indicators		Low	202 Acres	
					Nonpoint/Point Source			
				Nutrients *Estimated size of impairment is 150 acres located in upper portion of lagoon.*		Low	202 Acres	
					Nonpoint/Point Source			
				Sedimentation/Siltation		Medium	202 Acres	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	R	Chollas Creek	90822000					
				Bacteria Indicators		Medium	1.2 Miles	
					Nonpoint/Point Source			
				Cadmium		High	1.2 Miles	2004
					Nonpoint/Point Source			
				Copper		High	1.2 Miles	2004
					Nonpoint/Point Source			
				Diazinon		High	1.2 Miles	2002
					Nonpoint/Point Source			
				Lead		High	1.2 Miles	2004
					Nonpoint/Point Source			
				Zinc		High	1.2 Miles	2004
					Nonpoint/Point Source			
9	R	Cloverdale Creek	90532000					
				Phosphorus		Low	1.2 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
				Total Dissolved Solids		Low	1.2 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
9	B	Dana Point Harbor	90114000					
				Bacteria Indicators		Medium	119 Acres	
				Impairment located at Baby Beach.				
					Urban Runoff/Storm Sewers Marinas and Recreational Boating Unknown Nonpoint Source Unknown point source			
9	E	Famosa Slough and Channel	90711000					
				Eutrophic		Low	32 Acres	
					Nonpoint Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	R	Felicita Creek	90523000					
				Total Dissolved Solids		Low	0.92 Miles	
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Forester Creek	90712000					
				Fecal Coliform		Medium	6.4 Miles	
				Impairment Located at lower 1 mile.				
					Urban Runoff/Storm Sewers			
					Spills			
					Unknown Nonpoint Source			
					Unknown point source			
				pH		Low	6.4 Miles	
				Impairment Located at upper 3 miles.				
					Industrial Point Sources			
					Habitat Modification			
					Spills			
					Unknown Nonpoint Source			
					Unknown point source			
				Total Dissolved Solids		Low	6.4 Miles	
				Impairment Located at lower 1 mile.				
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Green Valley Creek	90511000					
				Sulfates		Low	1.2 Miles	
					Urban Runoff/Storm Sewers			
					Natural Sources			
					Unknown Nonpoint Source			
					Unknown point source			
9	L	Guajome Lake	90311000					
				Eutrophic		Low	33 Acres	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	L	Hodges, Lake	90521000					
				Color		Low	1104 Acres	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Nitrogen		Low	1104 Acres	
					Agriculture			
					Dairies			
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Phosphorus		Low	1104 Acres	
					Agriculture			
					Dairies			
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Total Dissolved Solids		Low	1104 Acres	
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Natural Sources			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Kit Carson Creek	90521000					
				Total Dissolved Solids		Low	0.99 Miles	
					Agricultural Return Flows			
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Unknown Nonpoint Source			
					Unknown point source			
9	E	Loma Alta Slough	90410000					
				Bacteria Indicators		Low	8.2 Acres	
					Nonpoint Source			
				Eutrophic		Low	8.2 Acres	
					Nonpoint Source			
9	E	Los Penasquitos Lagoon	90610000					
				Sedimentation/Siltation		Low	469 Acres	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	**B**	**Mission Bay**	**90640000**					
				Bacteria Indicators		**Medium**	**2032 Acres**	
				Impairment located along entire bay shoreline.				
					Nonpoint/Point Source			
				Eutrophic		**Low**	**2032 Acres**	
				Estimated area of impairment of 0.5 acres located at mouth of Rose Creek and 0.5 acres located at mouth of Tecolote Creek.				
					Nonpoint/Point Source			
				Lead		**Low**	**2032 Acres**	
				Estimated area of impairment of 0.5 acres located at mouth of Rose Creek and 0.5 acres located at mouth of Tecolote Creek.				
					Nonpoint/Point Source			
9	**R**	**Murrieta Creek**	**90252000**					
				Phosphorus		**Low**	**12 Miles**	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
9	**C**	**Pacific Ocean Shoreline, Aliso HSA**	**90113000**					
				Bacteria Indicators		**Medium**	**0.65 Miles**	
				Impairment located at Laguna Beach at Lagunita Place / Blue Lagoon Place, Aliso Beach.				
					Nonpoint/Point Source			
9	**C**	**Pacific Ocean Shoreline, Buena Vista Creek HA**	**90421000**					
				Bacteria Indicators		**Low**	**1.2 Miles**	
				Impairment located at Buena Vista Creek, Carlsbad City Beach at Carlsbad Village Drive, Carlsbad State Beach at Pine Avenue.				
					Nonpoint/Point Source			
9	**C**	**Pacific Ocean Shoreline, Dana Point HSA**	**90114000**					
				Bacteria Indicators		**Medium**	**2 Miles**	
				Impairment located at Aliso Beach at West Street, Aliso Beach at Table Rock Drive, 1000 Steps Beach at Pacific Coast Hwy (Hospital, 9th Ave), Salt Creek (large outlet), Salt Creek Beach at Salt Creek service road, Salt Creek Beach at Dana Strand Road.				
					Nonpoint/Point Source			
9	**C**	**Pacific Ocean Shoreline, Escondido Creek HA**	**90461000**					
				Bacteria Indicators		**Low**	**0.44 Miles**	
				Impairment located at San Elijo Lagoon outlet.				
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	C	Pacific Ocean Shoreline, Laguna Beach HSA	90112000	Bacteria Indicators *Impairment located at Main Laguna Beach, Laguna Beach at Ocean Avenue, Laguna Beach at Laguna Avenue, Laguna Beach at Cleo Street, Arch Cove at Bluebird Canyon Road, Laguna Beach at Dumond Drive.*	Nonpoint/Point Source	Medium	1.8 Miles	
9	C	Pacific Ocean Shoreline, Loma Alta HA	90410000	Bacteria Indicators *Impairment located at Loma Alta Creek Mouth.*	Nonpoint/Point Source	Low	1.1 Miles	
9	C	Pacific Ocean Shoreline, Lower San Juan HSA	90120000	Bacteria Indicators *Impairment located at North Beach Creek, San Juan Creek (large outlet), Capistrano Beach, South Capistrano Beach at Beach Road.*	Nonpoint/Point Source	Medium	1.2 Miles	
9	C	Pacific Ocean Shoreline, Miramar Reservoir HA	90610000	Bacteria Indicators *Impairment located at Torrey Pines State Beach at Del Mar (Anderson Canyon).*	Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source	Low	0.39 Miles	
9	C	Pacific Ocean Shoreline, San Clemente HA	90130000	Bacteria Indicators *Impairment located at Poche Beach (large outlet), Ole Hanson Beach Club Beach at Pico Drain, San Clemente City Beach at El Portal St. Stairs, San Clemente City Beach at Mariposa St., San Clemente City Beach at Linda Lane, San Clemente City Beach at South Linda Lane, San Clemente City Beach at Lifeguard Headquarters, Under San Clemente Municipal Pier, San Clemente City Beach at Trafalgar Canyon (Trafalgar Ln.), San Clemente State Beach at Riviera Beach, San Clemente State Beach at Cypress Shores.*	Nonpoint/Point Source	Medium	3.7 Miles	
9	C	Pacific Ocean Shoreline, San Diego HU	90711000	Bacteria Indicators *Impairment located at San Diego River Mouth (aka Dog Beach).*	Nonpoint/Point Source	Medium	0.37 Miles	
9	C	Pacific Ocean Shoreline, San Diequito HU	90511000	Bacteria Indicators *Impairment located at San Dieguito Lagoon Mouth, Solana Beach.*	Nonpoint/Point Source	Low	0.86 Miles	

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	C	Pacific Ocean Shoreline, San Joaquin Hills HSA	90111000					
				Bacteria Indicators		Low	0.63 Miles	
				Impairment located at Cameo Cove at Irvine Cove Dr./Riviera Way, Heisler Park-North				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
9	C	Pacific Ocean Shoreline, San Luis Rey HU	90311000					
				Bacteria Indicators		Low	0.49 Miles	
				Impairment located at San Luis Rey River Mouth.				
					Nonpoint/Point Source			
9	C	Pacific Ocean Shoreline, San Marcos HA	90451000					
				Bacteria Indicators		Low	0.5 Miles	
				Impairment located at Moonlight State Beach.				
					Nonpoint/Point Source			
9	C	Pacific Ocean Shoreline, Scripps HA	90630000					
				Bacteria Indicators		Medium	3.9 Miles	
				Impairment located at La Jolla Shores Beach at El Paseo Grande, La Jolla Shores Beach at Caminito Del Oro, La Jolla Shores Beach at Vallecitos, La Jolla Shores Beach at Ave de la Playa, Casa Beach (Childrens Pool), South Casa Beach at Coast Blvd., Whispering Sands Beach at Ravina St., Windansea Beach at Vista de la Playa, Windansea Beach at Bonair St., Windansea Beach at Playa del Norte, Windansea Beach at Palomar Ave., Tourmaline Surf Park, Pacific Beach at Grand Ave.				
					Nonpoint/Point Source			
9	C	Pacific Ocean Shoreline, Tijuana HU	91111000					
				Bacteria Indicators		Low	3 Miles	
				Impairment located from the border, extending north along the shore.				
					Nonpoint/Point Source			
9	R	Pine Valley Creek (Upper)	91141000					
				Enterococci		Medium	2.9 Miles	
					Grazing-Related Sources			
					Concentrated Animal Feeding Operations (permitted, point source)			
					Transient encampments			
9	R	Prima Deshecha Creek	90130000					
				Phosphorus		Low	1.2 Miles	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Turbidity		Low	1.2 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
9	R	Rainbow Creek	90222000					
				Nitrogen		High	5 Miles	2003
					Agricultural Return Flows Other Urban Runoff Nurseries Onsite Wastewater Systems (Septic Tanks) Nonpoint/Point Source			
				Phosphorus		High	5 Miles	2003
					Agricultural Return Flows Other Urban Runoff Nurseries Onsite Wastewater Systems (Septic Tanks) Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, 32nd St San Diego Naval Station	90822000					
				Benthic Community Effects		Medium	103 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	103 Acres	
					Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, between Sampson and 28th Streets	90822000					
				Copper		High	55 Acres	2003
					Nonpoint/Point Source			
				Mercury		High	55 Acres	2003
					Nonpoint/Point Source			
				PAHs		High	55 Acres	2003
					Nonpoint/Point Source			
				PCBs		High	55 Acres	2003
					Nonpoint/Point Source			
				Zinc		High	55 Acres	2003
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	C	San Diego Bay Shoreline, Chula Vista Marina	90912000					
				Bacteria Indicators		Low	0.41 Miles	
					Urban Runoff/Storm Sewers Marinas and Recreational Boating Boatyards Boat Discharges/Vessel Wastes			
9	B	San Diego Bay Shoreline, Downtown Anchorage	90821000					
				Benthic Community Effects		Medium	7.4 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	7.4 Acres	
					Nonpoint/Point Source			
9	C	San Diego Bay Shoreline, G Street Pier	90821000					
				Bacteria Indicators		Low	0.42 Miles	
					Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown point source			
9	B	San Diego Bay Shoreline, near Chollas Creek	90822000					
				Benthic Community Effects		Medium	15 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	15 Acres	
					Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, near Coronado Bridge	90822000					
				Benthic Community Effects		Medium	37 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity *Includes Crosby Street/Cesar Chavez Park area, that will receive additional monitoring.*		Medium	37 Acres	
					Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, near sub base	90810000					
				Benthic Community Effects		Medium	16 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	16 Acres	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	B	San Diego Bay Shoreline, near Switzer Creek	90821000					
				Chlordane		Medium	5.5 Acres	
					Urban Runoff/Storm Sewers			
					Other			
					Boatyards			
					Nonpoint/Point Source			
				Lindane		Medium	5.5 Acres	
					Urban Runoff/Storm Sewers			
					Other			
					Boatyards			
					Nonpoint/Point Source			
				PAHs		Medium	5.5 Acres	
					Urban Runoff/Storm Sewers			
					Other			
					Boatyards			
					Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, North of 24th Street Marine Terminal	90832000					
				Benthic Community Effects		Medium	9.5 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	9.5 Acres	
					Nonpoint/Point Source			
9	B	San Diego Bay Shoreline, Seventh Street Channel	90831000					
				Benthic Community Effects		Medium	9 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	9 Acres	
					Nonpoint/Point Source			
9	C	San Diego Bay Shoreline, Shelter Island Shoreline Park	90810000					
				Bacteria Indicators		Low	0.42 Miles	
					Unknown Nonpoint Source			
					Unknown point source			
9	C	San Diego Bay Shoreline, Tidelands Park	91010000					
				Bacteria Indicators		Low	0.38 Miles	
					Unknown Nonpoint Source			
					Unknown point source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	B	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	90821000					
				Bacteria Indicators		Low	9.9 Acres	
				Estimated size of impairment is 0.4 miles around the shoreline of the bay.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Benthic Community Effects		Medium	9.9 Acres	
					Nonpoint/Point Source			
				Sediment Toxicity		Medium	9.9 Acres	
					Nonpoint/Point Source			
9	B	San Diego Bay, Shelter Island Yacht Basin	90810000					
				Copper, Dissolved		High	153 Acres	2003
					Nonpoint/Point Source			
9	R	San Diego River (Lower)	90711000					
				Fecal Coliform		Low	12 Miles	
				Lower 6 miles.				
					Urban Runoff/Storm Sewers			
					Wastewater			
					Nonpoint/Point Source			
				Low Dissolved Oxygen		Low	12 Miles	
				Impairment transcends adjacent Calwater wtareshed 90712.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Phosphorus		Low	12 Miles	
				Impairment transcends adjacent Calwater watershed 90712.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Total Dissolved Solids		Low	12 Miles	
				Impairment transcends adjacent Calwater watershed 90712.				
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Natural Sources			
					Unknown Nonpoint Source			
					Unknown point source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	E	San Elijo Lagoon	90461000					
				Bacteria Indicators		Low	566 Acres	
				Estimated size of impairment is 150 acres.				
					Nonpoint/Point Source			
				Eutrophic		Low	566 Acres	
				Estimated size of impairment is 330 acres.				
					Nonpoint/Point Source			
				Sedimentation/Siltation		Medium	566 Acres	
				Estimated size of impairment is 150 acres.				
					Nonpoint/Point Source			
9	R	San Juan Creek	90120000					
				Bacteria Indicators		Medium	1 Miles	
					Nonpoint/Point Source			
9	E	San Juan Creek (mouth)	90120000					
				Bacteria Indicators		Medium	6.3 Acres	
					Nonpoint/Point Source			
9	R	San Luis Rey River	90311000					
				Chloride		Low	19 Miles	
				Impairment located at lower 13 miles.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Total Dissolved Solids		Low	19 Miles	
					Industrial Point Sources			
					Agriculture-storm runoff			
					Urban Runoff/Storm Sewers			
					Surface Mining			
					Flow Regulation/Modification			
					Natural Sources			
					Golf course activities			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Sandia Creek	90222000					
				Total Dissolved Solids		Low	1.5 Miles	
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Natural Sources			
					Unknown Nonpoint Source			
					Unknown point source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	E	Santa Margarita Lagoon	90211000					
				Eutrophic		Low	28 Acres	
					Nonpoint/Point Source			
9	R	Santa Margarita River (Upper)	90222000					
				Phosphorus		Low	18 Miles	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Segunda Deshecha Creek	90130000					
				Phosphorus		Low	0.92 Miles	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Turbidity		Low	0.92 Miles	
					Construction/Land Development			
					Urban Runoff/Storm Sewers			
					Channelization			
					Flow Regulation/Modification			
					Unknown Nonpoint Source			
					Unknown point source			
9	L	Sutherland Reservoir	90553000					
				Color		Low	561 Acres	
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
9	R	Tecolote Creek	90650000					
				Bacteria Indicators		Medium	6.6 Miles	
					Nonpoint/Point Source			
				Cadmium		Low	6.6 Miles	
					Nonpoint/Point Source			
				Copper		Low	6.6 Miles	
					Nonpoint/Point Source			
				Lead		Low	6.6 Miles	
					Nonpoint/Point Source			
				Toxicity		Low	6.6 Miles	
					Nonpoint/Point Source			
				Zinc		Low	6.6 Miles	
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
9	R	Tijuana River	91111000					
				Bacteria Indicators		Low	5.8 Miles	
					Nonpoint/Point Source			
				Eutrophic		Low	5.8 Miles	
					Nonpoint/Point Source			
				Low Dissolved Oxygen		Low	5.8 Miles	
					Nonpoint/Point Source			
				Pesticides		Low	5.8 Miles	
					Nonpoint/Point Source			
				Solids		Low	5.8 Miles	
					Nonpoint/Point Source			
				Synthetic Organics		Low	5.8 Miles	
					Nonpoint/Point Source			
				Trace Elements		Low	5.8 Miles	
					Nonpoint/Point Source			
				Trash		Low	5.8 Miles	
					Nonpoint/Point Source			
9	E	Tijuana River Estuary	91111000					
				Bacteria Indicators		Low	1319 Acres	
				Estimated size of impairment is 150 acres.				
					Nonpoint/Point Source			
				Eutrophic		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			
				Lead		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			
				Low Dissolved Oxygen		Low	1319 Acres	
					Urban Runoff/Storm Sewers			
					Wastewater			
					Unknown Nonpoint Source			
					Unknown point source			
				Nickel		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			
				Pesticides		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
				Thallium		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			
				Trash		Low	1319 Acres	
				Estimated size of impairment is 1 acre.				
					Nonpoint/Point Source			

ABBREVIATIONS

REGIONAL WATER QUALITY CONTROL BOARDS

1	North Coast
2	San Francisco Bay
3	Central Coast
4	Los Angeles
5	Central Valley
6	Lahontan
7	Colorado River Basin
8	Santa Ana
9	San Diego

WATER BODY TYPE

B =	Bays and Harbors
C =	Coastal Shorelines/Beaches
E =	Estuaries
L =	Lakes/Reserviors
R =	Rivers and Streams
S =	Saline Lakes
T =	Wetlands, Tidal
W=	Wetlands, Freshwater

CALWATER WATERSHED

"Calwater Watershed" is the State Water Resources Control Board hydrological subunit area or an even smaller area delineation.

GROUP A PESTICIDES OR CHEM A

aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphene

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
1	R	Alder Creek, Mendocino Coast HU, Point Arena HA, Alder Creek HSA	11363011		
				Sediment	45 Miles
				Temperature	45 Miles
1	R	Beith Creek	11000052		
				Sediment	0.37 Miles
1	R	Brush Creek, Mendocino Coast HU, Point Arena HA, Brush Creek HSA	11364011		
				Sediment	27 Miles
1	R	Caspar Creek, Mendocino Coast HU, Big River HA	11330044		
				Pathogens	12 Miles
1	R	Cottaneva Creek, Wages Creek HSA	11312011		
				Sediment	20 Miles
1	R	Dehaven Creek, Wages Creek HSA	11312021		
				Sediment	9.1 Miles
1	R	Elk Creek, Smith River HU	10311013		
				Sediment	5.8 Miles
1	R	Greenwood Creek, Mendocino Coast HU, Point Arena HA, Greenwood Creek HSA	11361011		
				Sediment	34 Miles
				Temperature	34 Miles
1	R	Grotzman Creek	11000052		
				Sediment	0.77 Miles
1	R	Hardy Creek, Wages Creek HSA	11312012		
				Sediment	7.8 Miles
1	R	Howard Creek, Wages Creek HSA	11312020		
				Sediment	6.2 Miles
1	B	Humboldt Bay, Eureka Plain HU	11000000		
				Dieldrin	16075 Acres
				Sediment	16075 Acres
1	R	Juan Creek, Wages Creek HSA	11312013		
				Sediment	9.6 Miles

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
1	R	Klamath River, Klamath River HU, Butte Valley HA	10581023	Sediment	265 Miles
1	R	Klamath River, Klamath River HU, Lost River HA, Clear Lake, Boles HSAs	10593011	Sediment	601 Miles
1	R	Klamath River, Klamath River HU, Lost River HA, Tule Lake and Mt Dome HSAs	10591063	Sediment	612 Miles
1	R	Klamath River, Klamath River HU, Lower HA, Klamath Glen HSA	10511086	Sediment	609 Miles
1	R	Klamath River, Klamath River HU, Middle HA, Iron Gate Dam to Scott River	10535053	Sediment	548 Miles
1	R	Klamath River, Klamath River HU, Middle HA, Oregon to Iron Gate	10537022	Sediment	129 Miles
1	R	Klamath River, Klamath River HU, Middle HA, Scott River to Trinity River	10512050	Sediment	1389 Miles
1	R	Klamath River, Klamath River HU, Salmon River HA	10521034	Sediment	871 Miles
1	R	Laguna de Santa Rosa, Russian River HU, Middle Russian River HA	11421020	Nutrients	96 Miles
1	R	Mad River Slough, Eureka Plain HU	11000052	PCBs	11 Miles
1	R	Mallo Pass Creek, Mendocino Coast HU, Point Arena HA, Alder Creek HSA	11363012	Sediment	6.3 Miles
1	R	Pudding Creek, Mendocino Coast HU, Noyo River HA	11320050	Pathogens	24 Miles
1	R	Russian River, Russian River HU, Lower Russian River HA, Austin Creek HSA	11412013	Diazinon	81 Miles

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
1	R	Russian River, Russian River HU, Lower Russian River HA, Guerneville HSA	11411041	Diazinon	195 Miles
1	R	Russian River, Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA	11426023	Diazinon	85 Miles
1	R	Russian River, Russian River HU, Middle Russian River HA, Dry Creek HSA	11424034	Diazinon	255 Miles
1	R	Russian River, Russian River HU, Middle Russian River HA, Geyserville HSA	11425032	Diazinon	243 Miles
1	R	Russian River, Russian River HU, Middle Russian River HA, Mark West Creek HSA	11423021	Diazinon	99 Miles
1	R	Russian River, Russian River HU, Upper Russian River HA, Coyote Valley HSA	11432060	Diazinon	171 Miles
1	R	Russian River, Russian River HU, Upper Russian River HA, Forsythe Creek HSA	11433040	Diazinon	122 Miles
1	R	Russian River, Russian River HU, Upper Russian River HA, Ukiah HSA	11431071	Diazinon	460 Miles
1	R	Schooner Gulch, Mendocino Coast HU, Garcia River HA	11370030	Sediment	11 Miles
1	R	Shasta River, Klamath River HU, Shasta River HA	10550001	Nutrients *Entire Klamath River Watershed (including Shasta River) is listed for nutrients.*	630 Miles
				Sediment	630 Miles
1	R	Trinity River, East Fork, Trinity River HU, Upper HA	10640030	Mercury	92 Miles

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
1	L	Tule Lake and Lower Klamath Lake National Wildlife Refuge (Klamath River HU)	10591020		
				Low Dissolved Oxygen	26998 Acres
				Unionized Ammonia	26998 Acres
1	R	Usal Creek, Mendocino Coast HU, Rockport HA, Usal Creek HSA	11311011		
				Sediment	37 Miles
1	R	Virgin Creek, Mendocino Coast HU, Noyo River HA	11320057		
				Pathogens	2.9 Miles
1	R	Wages Creek, Mendocino Coast HU, Rockport HA, Wages Creek HSA	11312022		
				Sediment	29 Miles
2	E	Carquinez Strait	20710020		
				Copper	5657 Acres
				Nickel	5657 Acres
				PAHs	5657 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	5657 Acres
2	L	Lakes and Shorelines of San Francisco Bay Region	00000000		
				Trash	0 Acres
2	R	Novato Creek	20620010		
				Sedimentation/Siltation	17 Miles
				This listing applies to the creek below Stafford Dam.	
2	C	Pacific Ocean at Baker Beach	20340010		
				High Coliform Count	0.22 Miles
2	C	Pacific Ocean at San Gregorio Beach	20230014		
				High Coliform Count	0.39 Miles
2	C	Pacific Ocean at Surfers Beach	20221012		
				Total Coliform	1.2 Miles
2	R	Pilarcitos Creek (below Pilarcitos Reservoir)	20222011		
				Sedimentation/Siltation	11 Miles
2	E	Redwood Creek, tidal portion (San Mateo County)	20440040		
				High Coliform Count	141 Acres

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
2	B	Richardson Bay	20312010		
				PAHs	2439 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	2439 Acres
2	E	Sacramento San Joaquin Delta	20710010		
				Copper	41736 Acres
				PAHs	41736 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	41736 Acres
2	B	San Francisco Bay, Central	20312010		
				Copper	70992 Acres
				PAHs	70992 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	70992 Acres
2	B	San Francisco Bay, Lower	20410010		
				Copper	79293 Acres
				PAHs	79293 Acres
2	B	San Francisco Bay, South	20510000		
				Copper	21669 Acres
				Nickel	21669 Acres
				PAHs	21669 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	21669 Acres
2	B	San Pablo Bay	20610010		
				Copper	68349 Acres
				PAHs	68349 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	68349 Acres
2	B	Suisun Bay	20710020		
				Copper	27498 Acres
				PAHs	27498 Acres
				Polybrominated Diphenyl Ethers (PBDEs)	27498 Acres
2	R	Urban Creeks of the San Francisco Bay Region	00000000		
				Trash	0 Miles
3	R	Majors Creek	30411031		
				Turbidity	5.6 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
4	R	Calleguas Creek Reach 9B (was part of Conejo Creek Reaches 1 and 2 on 1998 303d list)	40363000		
				Scum/Foam-unnatural	6.2 Miles
4	R	Cold Creek	40421000		
				Algae	0.85 Miles
4	R	Compton Creek	40515010		
				Trash	8.5 Miles
4	R	Malibu Creek	40421000		
				Selenium, Total	11 Miles
4	R	San Gabriel River Estuary	40516000		
				Trash	3.4 Miles
4	R	Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd.)	40351000		
				Organic Enrichment/Low Dissolved Oxygen	5.2 Miles
5	R	American River, Lower (Nimbus Dam to confluence with Sacramento River)	51921000		
				Pathogens	27 Miles
5	R	Arcade Creek	51921000		
				Malathion	9.9 Miles
5	R	Butte Slough	52030000		
				Malathion	8.9 Miles
				Molinate/Odram	8.9 Miles
				Thiobencarb/Bolero	8.9 Miles
5	L	Camanche Reservoir	53120000		
				Aluminum	7389 Acres
5	R	Colusa Basin Drain	52010000		
				Chlorpyrifos	49 Miles
				Dicamba	49 Miles
5	R	Del Puerto Creek	54110000		
				Malathion	6.5 Miles
5	E	Delta Waterways (eastern portion)	51000000		
				Pathogens	20135 Acres

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
5	E	Delta Waterways (Stockton Ship Channel)	54400000		
				Pathogens	952 Acres
5	R	Delta-Mendota Canal (DMC) (ONeill Forebay to Mendota Pool)	54120000		
				Selenium	38 Miles
5	R	Feather River, Middle Fork (above Cromberg)	51833050		
				Group A Pesticides	29 Miles
5	R	Feather River, North Fork (below Lake Almanor)	51812000		
				Group A Pesticides	49 Miles
5	R	Feather River, North Fork, East Branch	51851030		
				Group A Pesticides	87 Miles
5	R	Feather River, South Fork	51811050		
				Group A Pesticides	33 Miles
5	R	French Camp Slough	53140000		
				Pathogens	6.3 Miles
5	R	Fresno River (below Hensley Reservoir)	54510000		
				Nutrients	50 Miles
				Pathogens	50 Miles
5	L	Hensley Lake	53932010		
				Nutrients	1669 Acres
				Pathogens	1669 Acres
5	R	Ingram/Hospital Creek	54110000		
				Carbaryl	1 Miles
5	L	Isabella Lake	55421010		
				Nutrients	7710 Acres
				Pathogens	7710 Acres
5	L	Kaweah Lake	55344010		
				Nutrients	1702 Acres
				Pathogens	1702 Acres
5	R	Kaweah River, Lower (includes St Johns River)	55810000		
				Nutrients	28 Miles
				Pathogens	28 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
5	R	Kaweah River, Upper (from North Fork to Lake Kaweah)	55341071		
				Nutrients	3.6 Miles
				Pathogens	3.6 Miles
5	R	Kern River, Lower	55890012		
				Nutrients	49 Miles
				Pathogens	49 Miles
5	R	Kern River, North Fork	55421010		
				Nutrients	38 Miles
				Pathogens	38 Miles
5	R	Merced River, Lower (McSwain Reservoir to San Joaquin River)	53550000		
				Mercury	50 Miles
5	R	Merced River, Upper	53730061		
				Mercury	28 Miles
5	R	Mormon Slough (Commerce Street to Stockton Deep Water Channel)	54400000		
				Diazinon	0.93 Miles
5	R	Mormon Slough (Stockton Diverting Canal to Commerce Street)	53130000		
				Diazinon	5.2 Miles
5	R	Orestimba Creek (above Kilburn Road)	54110000		
				Methidathion	9.1 Miles
5	R	Orestimba Creek (below Kilburn Road)	54110000		
				Methidathion	2.7 Miles
5	R	Putah Creek, Lower	51120000		
				Unknown Toxicity *Entire reach impaired for unknown toxicity.*	28 Miles
5	R	Putah Creek, Upper	51230052		
				Unknown Toxicity	24 Miles
5	R	Salt Slough (upstream from confluence with San Joaquin River)	54120000		
				Malathion	17 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
5	L	San Luis Reservoir	54232010		
				Copper	13007 Acres
5	L	Success Lake	55512058		
				Nutrients	2486 Acres
				Pathogens	2486 Acres
5	R	Ten Mile Creek (Kings River, South Fork)	55234280		
				Nutrients	9.3 Miles
				Pathogens	9.3 Miles
5	R	Tule River, Lower	55810000		
				Nutrients	51 Miles
				Pathogens	51 Miles
5	R	Tule River, Upper (includes North,South, and Middle Forks)	55512057		
				Nutrients	78 Miles
				Pathogens	78 Miles
5	R	Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River)	53550000		
				Mercury	60 Miles
5	R	Walker Slough	53140000		
				Diazinon	2.3 Miles
5	R	Yuba River, Lower	51530000		
				Pathogens	10 Miles
5	R	Yuba River, Middle Fork	51751011		
				Pathogens	45 Miles
5	R	Yuba River, North Fork	51751011		
				Pathogens	37 Miles
5	R	Yuba River, South Fork (above Edwards Crossing)	51732031		
				Pathogens	42 Miles
5	R	Yuba River, South Fork (below Edwards Crossing)	51731013		
				Pathogens	15 Miles
6	L	Angora Lake, Upper	63410040		
				Pesticides	14 Acres
				16 different compounds.	

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	L	Arrowhead, Lake	62820000		
				Nutrients	747 Acres
				Petroleum Products	747 Acres
				Boat Fuel Constituents.	
6	L	Asa Lake			
				Nutrients	0 Acres
6	R	Aurora Canyon Creek	63030040		
				Mercury	8.1 Miles
				Nitrogen	8.1 Miles
				Phosphorus	8.1 Miles
				Total Dissolved Solids	8.1 Miles
6	L	Barney Lake	63040030		
				Nitrogen	11 Acres
6	R	Blackwood Creek	63420021		
				Pesticides	5.9 Miles
6	L	Blue Lake (Mono County)	63040052		
				Nitrogen	10 Acres
6	L	Bonnie Lake	63140011		
				Nitrogen	14 Acres
6	R	Buckeye Creek	63040022		
				Phosphorus	17 Miles
				Total Dissolved Solids	17 Miles
6	R	Carson River, West Fork (Headwaters to Woodfords)	63320014		
				Boron	18 Miles
				Sulfates	18 Miles
6	R	Carson River, West Fork (Paynesville to State Line)	63310013		
				Boron	3.3 Miles
				Sodium	3.3 Miles
				Sulfates	3.3 Miles
6	R	Carson River, West Fork (Woodfords to Paynesville)	63310012		
				Boron	3.6 Miles
				Sulfates	3.6 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	L	Chain o Lakes			
				Nitrogen	0 Acres
6	R	Cold Stream	63600011		
				Sediment	4.4 Miles
6	L	Cooney Lake	63040052		
				Nitrogen	8 Acres
6	L	Crown Lake	63040030		
				Nitrogen	7.8 Acres
6	R	Deep Creek (San Bernardino County)	62820000		
				Fluoride	25 Miles
				Sulfates	25 Miles
				Total Dissolved Solids	25 Miles
6	R	Desert Creek	63140042		
				Acid Mine Drainage	13 Miles
				Sulfates	13 Miles
6	L	Diaz Lake	60330000		
				Nutrients	72 Acres
6	R	Donner Creek	63520021		
				Sedimentation/Siltation	2.6 Miles
6	L	Donner Lake	63520021		
				Pathogens	819 Acres
				Petroleum Products	819 Acres
				Boat Fuel Constituents.	
6	R	Eagle Creek			
				Nitrogen	0 Miles
				Phosphorus	0 Miles
6	L	Eagle Lake (Lassen County)	63732000		
				Mercury	20704 Acres
6	L	East Lake	63040040		
				Nitrogen	85 Acres
6	R	East Walker River, above Bridgeport Reservoir	63030050		
				Nickel	7.2 Miles
				Phosphorus	7.2 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	R	East Walker River, below Bridgeport Reservoir	63030050		
				Mercury	8 Miles
				All resource extraction sources are abandoned mines.	
				Metals	8 Miles
				Nickel	8 Miles
				Oil	8 Miles
				Fuel	
6	L	Echo Lake, Lower	63410040		
				Nutrients	252 Acres
6	L	Echo Lake, Upper	63410040		
				Nitrogen	80 Acres
6	R	Emerson Creek	64110011		
				Sediment	8.1 Miles
6	L	Fallen Leaf Lake	63410040		
				Nutrients	1384 Acres
6	R	Fredericksburg Canyon Creek	63310012		
				Sediment	4.6 Miles
6	L	Fremont Lake	63140012		
				Nitrogen	45 Acres
6	L	Frog Lake (Mono County)	63040052		
				Nitrogen	4.6 Acres
6	R	General Creek	63420030		
				Pesticides	9.1 Miles
6	L	George, Lake (Mono County)	60310050		
				Metals	42 Acres
6	L	Gilman Lake	63040040		
				Nitrogen	14 Acres
6	W	Grass Lake Wetlands	63410040		
				Salinity	272 Acres
6	R	Green Creek	63030050		
				Nitrogen	16 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	R	Green Creek, West Fork	63040040		
				Nitrogen	3.4 Miles
				Includes reaches above and below Green Lake.	
6	L	Green Lake	63040040		
				Nitrogen	47 Acres
6	R	Griff Creek	63420010		
				Sediment	4 Miles
6	L	Gull Lake	60100042		
				Nutrients	64 Acres
6	L	Harriet, Lake	63140011		
				Nitrogen	10 Acres
6	R	Heavenly Valley Creek (source to USFS boundary)	63410031		
				Nitrogen	2 Miles
6	R	Heavenly Valley Creek (USFS boundary to Trout Creek)	63410031		
				Nitrogen	1.4 Miles
6	L	Heenan Reservoir	63210070		
				Nutrients	121 Acres
6	L	Helen Lake (on Mill Creek, Mono Co)	60100030		
				Nitrogen	6.4 Acres
6	R	Hidden Valley Creek	63410020		
				Chloride	2.8 Miles
				Phosphorus	2.8 Miles
6	L	Hoover Lakes	63040040		
				Nitrogen	15 Acres
6	R	Horse Creek (Mono County)	63040031		
				Nitrogen	4.4 Miles
6	R	Independence Creek (Inyo Co)	60330124		
				Mercury	13 Miles
6	R	Indian Creek (Alpine County)	63220010		
				Nitrogen	13 Miles
				Phosphorus	13 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	S	Ivanpah Dry Lake	61200000		
				Radiation	8521 Acres
6	L	June Lake	60100042		
				Mercury	294 Acres
				Nutrients	294 Acres
6	L	Koenig Lake	63140020		
				Nutrients	7.7 Acres
6	R	Lassen Creek	63720082		
				Sediment	8 Miles
6	L	Lily Lake (Glen Alpine)	63410040		
				Nutrients	8.1 Acres
6	R	Little Truckee River	63520050		
				Sediment	31 Miles
6	R	Little Walker River	63140032		
				Nitrogen	17 Miles
				Sediment	17 Miles
				Total Dissolved Solids	17 Miles
6	L	Littlerock Reservoir	62680000		
				Iron	100 Acres
				Manganese	100 Acres
				Sediment	100 Acres
6	R	Lonely Gulch	63420032		
				Sediment	1.9 Miles
6	L	Long Lake, Lower			
				Nitrogen	0 Acres
6	L	Long Lake, Upper			
				Nitrogen	0 Acres
6	R	Long Valley Creek (Lassen)	63710060		
				Sediment	57 Miles
6	R	Los Angeles Aqueduct	62650000		
				Copper	181 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	L	Lundy Lake	60100031		
				Acid Mine Drainage	102 Acres
6	R	Madden Creek	63420022		
				Sediment	2.1 Miles
6	R	Markleeville Creek	63210064		
				Chloride	3.5 Miles
				Nitrogen	3.5 Miles
				Phosphorus	3.5 Miles
				Total Dissolved Solids	3.5 Miles
6	R	Martis Creek	63520040		
				Nutrients	11 Miles
6	L	Mary, Lake	60310050		
				Petroleum Products	83 Acres
				Boat Fuel Constituents (including MTBE)	
6	R	McGee Creek (Inyo County)	60320163		
				Acid Mine Drainage	16 Miles
6	R	McKinney Creek	63420023		
				Sediment	3.9 Miles
6	R	Meeks Creek	63420031		
				Sediment	5.8 Miles
6	L	Meiss Lake (Alpine County)	63410010		
				Nutrients	12 Acres
6	R	Mill Creek (Mono County)	60100080		
				Nitrogen	12 Miles
6	R	Mojave River at Dam Forks			
				Sulfates	0 Miles
6	R	Mojave River at Lower Narrows			
				Nutrients	0 Miles
6	R	Mojave River between Upper and Lower Narrows			
				Chloride	0 Miles
				Sulfates	0 Miles
				Tetrachloroethylene/PCE	0 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Total Dissolved Solids	0 Miles
				Trichloroethylene/TCE	0 Miles
6	R	Mojave River, Barstow to Waterman Fault			
				Nitrogen	0 Miles
				Total Dissolved Solids	0 Miles
6	R	Mojave River, West Fork	62820000		
				Nitrogen	7.8 Miles
6	R	Monitor Creek	63210070		
				Nitrogen	4 Miles
				Phosphorus	4 Miles
6	L	Peeler Lake	63040030		
				Nitrogen	69 Acres
6	R	Pine Creek (Lassen County)	63720010		
				Acid Mine Drainage	55 Miles
				Nutrients	55 Miles
				Nitrogen and Phosphorus.	
6	R	Raider Creek	64120023		
				Sedimentation/Siltation	6.7 Miles
6	R	Red Lake Creek	63320013		
				Acid Mine Drainage	5.9 Miles
				Sulfates	5.9 Miles
6	R	Reversed Creek	60100043		
				Nutrients	3.5 Miles
				Sediment	3.5 Miles
6	R	Robinson Creek (above Barney Lake)	63040030		
				Nitrogen	3 Miles
				Phosphorus	3 Miles
				Total Dissolved Solids	3 Miles
6	R	Robinson Creek (Barney Lake to Twin Lakes)	63040032		
				Nitrogen	4 Miles
				Phosphorus	4 Miles
				Total Dissolved Solids	4 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	R	Robinson Creek (Hwy 395 to Bridgeport Res)	63030050		
				Nitrogen	1.8 Miles
				Phosphorus	1.8 Miles
				Total Dissolved Solids	1.8 Miles
6	R	Robinson Creek (Twin Lakes to Hwy 395)	63030050		
				Phosphorus	9.1 Miles
				Total Dissolved Solids	9.1 Miles
6	L	Robinson Lake, Lower	63040030		
				Nitrogen	3.6 Acres
6	L	Robinson Lake, Upper	63040030		
				Nitrogen	1.5 Acres
6	L	Roosevelt Lake	63140021		
				Nitrogen	7.1 Acres
6	L	Ruth, Lake	63140011		
				Nitrogen	14 Acres
6	L	Sawmill Pond (El Dorado County)	63410040		
				Sediment	0.4 Acres
6	L	Scotts Lake	63320012		
				Sediment	26 Acres
6	R	Shake Creek	62820000		
				Boron	2.8 Miles
				Fluoride	2.8 Miles
				Nitrate	2.8 Miles
				Sulfates	2.8 Miles
				Total Dissolved Solids	2.8 Miles
				Unknown Pollutant	2.8 Miles
				Landfill leachate consituents.	
6	R	Sherwin Creek	60310053		
				Nutrients	4.3 Miles
				Sediment	4.3 Miles
6	R	Silver Creek (Alpine County)	63210040		
				Acid Mine Drainage	8.8 Miles
				Metals	8.8 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
6	L	Silver Lake	63720010		
				Nutrients	108 Acres
6	L	Silverwood Lake	62820000		
				Salinity	901 Acres
				Imported water.	
				Trace Elements	901 Acres
				Imported water.	
6	L	Snow Lake (Mono County)	63040030		
				Nitrogen	7.7 Acres
6	L	Spring Valley Lake	62820000		
				Sediment	188 Acres
6	W	Squaw Creek Meadow Wetlands	63520011		
				Pesticides	194 Acres
6	L	Stampede Reservoir	63600060		
				Chlordane	3385 Acres
				Lindane	3385 Acres
6	L	Stella Lake			
				Nitrogen	0 Acres
6	R	Summers Creek	63040034		
				Nitrogen	8.7 Miles
				Total Dissolved Solids	8.7 Miles
6	R	Summit Creek (Nevada County)	63520021		
				Petroleum Products	3.6 Miles
6	L	Summit Lake (Mono County)	63040040		
				Nitrogen	41 Acres
6	R	Susan River	63720095		
				Mercury	58 Miles
				Nickel	58 Miles
				PCBs	58 Miles
				The portion of the river downstream of Susanville will be the focus of monitoring for PCBs.	
6	R	Swauger Creek	63040012		
				Nitrogen	14 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Total Dissolved Solids	14 Miles
6	L	Tahoe Keys Sailing Lagoon	63430010		
				PCBs	0 Acres
				Toxaphene	0 Acres
6	L	Tahoe, Lake	63430010		
				Iron	85364 Acres
				Lead (sediment)	85364 Acres
				Mercury (sediment)	85364 Acres
				Pesticides	85364 Acres
				Petroleum Products	85364 Acres
				Boat Fuel Constituents.	
6	R	Taylor Creek	63410041		
				Pesticides	1.8 Miles
				16 different compounds.	
6	L	Tower Lake	63140010		
				Nitrogen	8.6 Acres
6	R	Truckee River	63510010		
				Chloride	39 Miles
				Total Dissolved Solids	39 Miles
6	R	Truckee River, Upper (above Christmas Valley)	63410010		
				Nitrogen	4.5 Miles
				Pesticides	4.5 Miles
6	R	Truckee River, Upper (below Christmas Valley)	63410042		
				Nitrogen	11 Miles
				Pesticides	11 Miles
6	L	Trumbull Lake	63040052		
				Nitrogen	11 Acres
6	L	Twin Lake, Lower (East Walker River HU)	63040032		
				Nutrients	385 Acres
6	L	Twin Lake, Upper (East Walker River HU)	63040032		
				Nutrients	287 Acres
6	R	Virginia Creek	63040052		
				Nitrogen	17 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Phosphorus	17 Miles
				Sediment	17 Miles
				Total Dissolved Solids	17 Miles
6	L	Virginia Lake, Upper			
				Nitrogen	0 Acres
6	R	Watson Creek	63420011		
				Sediment	3 Miles
6	R	West Walker River	63110060		
				Nitrogen	49 Miles
				Total Dissolved Solids	49 Miles
8	B	Anaheim Bay	80111000		
				Metals	402 Acres
				Pesticides	402 Acres
8	C	Bolsa Chica State Beach	80111000		
				Metals	2.6 Miles
8	R	Chino Creek Reach 1	80121000		
				Metals	7.8 Miles
8	R	Chino Creek Reach 2	80121000		
				Metals	2.5 Miles
8	R	Cucamonga Creek, Mountain Reach	80124020		
				Metals	13 Miles
8	B	Huntington Harbour	80111000		
				Metals	221 Acres
				Pesticides	221 Acres
8	R	Mill Creek (Prado Area)	80121000		
				Metals	1.6 Miles
8	E	Newport Bay, Upper (Ecological Reserve)	80111000		
				Trash	653 Acres
8	C	Orange County Coastline			
				Trash	20 Miles
8	R	San Jacinto River Reach 7 (South Fork)	80221000		
				Salinity	12 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Total Dissolved Solids	12 Miles
8	R	San Jacinto River, Reach 7 (North Fork)	80221000		
				Metals	8.8 Miles
				Salinity/TDS/Chlorides	8.8 Miles
8	R	Santa Ana River, Reach 1	80111000		
				Trash	10 Miles
8	R	Santa Ana River, Reach 4	80127000		
				Metals	14 Miles
8	R	Santa Ana River, Reach 5	80152000		
				Metals	52 Miles
8	R	Strawberry Creek	80221000		
				Salinity/TDS/Chlorides	9.6 Miles
8	R	Temescal Creek, Reach 1A	80125000		
				Metals	2.3 Miles
8	R	Temescal Creek, Reach 1B	80125000		
				Metals	3.8 Miles
9	R	Agua Hedionda Creek	90431000		
				Benthic Community Effects	7 Miles
				Diazinon	7 Miles
				Eutrophic	7 Miles
				Hydromodification	7 Miles
9	E	Agua Hedionda Lagoon	90431000		
				Copper, Dissolved	6.8 Acres
				Selenium	6.8 Acres
9	R	Aliso Creek	90113000		
				Chlordane	19 Miles
				Dieldrin	19 Miles
				Heptachlorepoxide	19 Miles
				PCBs	19 Miles
9	R	Alvarado Creek	90711000		
				Benthic Community Effects	5.1 Miles
				Eutrophic	5.1 Miles
				Sedimentation/Siltation	5.1 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Trash	5.1 Miles
9	C	Beach and Bay Shorelines			
				Unknown Pollutant	0 Miles
9	R	Boulder Creek	90741000		
				Exotic Species	21 Miles
				Hydromodification	21 Miles
9	R	Buena Vista Creek	90421000		
				Benthic Community Effects	11 Miles
				Eutrophic	11 Miles
9	R	Chocolate Creek	90733000		
				Eutrophic	4.5 Miles
				Sedimentation/Siltation	4.5 Miles
9	R	Chollas Creek	90822000		
				Chlordane	1.2 Miles
				PCBs	1.2 Miles
				Trash	1.2 Miles
				Turbidity	1.2 Miles
9	R	Cloverdale Creek	90532000		
				Eutrophic	1.2 Miles
				Sedimentation/Siltation	1.2 Miles
9	R	Cottonwood Cr	91160000		
				Diazinon	53 Miles
				Eutrophic	53 Miles
				Exotic Species	53 Miles
				Hydromodification	53 Miles
9	R	De Luz Creek	90221000		
				Sulfates	14 Miles
				Total Dissolved Solids	14 Miles
9	R	Dulzura Creek	91036000		
				Eutrophic	8.5 Miles
				Hydromodification	8.5 Miles
				Sedimentation/Siltation	8.5 Miles

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
9	R	Encinitas Creek	90451000		
				Diazinon	3 Miles
				Eutrophic	3 Miles
				Malathion	3 Miles
9	R	Escondido Creek	90462000		
				Benthic Community Effects	26 Miles
				Diazinon	26 Miles
				Eutrophic	26 Miles
				Sulfates	26 Miles
				Total Dissolved Solids	26 Miles
9	R	Fallbrook Creek	90213000		
				Iron	3.9 Miles
				Manganese	3.9 Miles
				Phosphorus	3.9 Miles
9	E	Famosa Slough and Channel	90711000		
				Chlordane	32 Acres
				DDT	32 Acres
				Dieldrin	32 Acres
				PCBs	32 Acres
9	R	Forester Creek	90712000		
				Eutrophic	6.4 Miles
				Trash	6.4 Miles
9	R	Green Valley Creek	90511000		
				Benthic Community Effects	1.2 Miles
				Eutrophic	1.2 Miles
				Phosphorus	1.2 Miles
				Sedimentation/Siltation	1.2 Miles
				Trash	1.2 Miles
9	R	Hatfield Creek	90544000		
				Eutrophic	10 Miles
				Hydromodification	10 Miles
9	L	Hodges, Lake	90521000		
				MTBE	1104 Acres

MONITORING LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
9	R	King Creek	90731000		
				Eutrophic	10 Miles
9	L	Laguna Lakes	90112000		
				Bacteria Indicators	8.4 Acres
9	R	Loma Alta Creek	90410000		
				Benthic Community Effects	7.8 Miles
				Eutrophic	7.8 Miles
9	R	Los Penasquitos Creek	90610000		
				Sedimentation/Siltation	12 Miles
9	L	Miramar Reservoir	90610000		
				Bromodichloromethane	138 Acres
				Total Dissolved Solids	138 Acres
9	L	Murray Reservoir	90711000		
				Bromodichloromethane	119 Acres
				Phosphorus	119 Acres
				Sodium	119 Acres
9	R	Murrieta Creek	90252000		
				Iron	12 Miles
				Manganese	12 Miles
				Total Dissolved Solids	12 Miles
9	B	Oceanside Harbor	90211000		
				Copper, Dissolved	52 Acres
9	C	Orange County Coastline			
				Trash	20 Miles
9	R	Oso Creek (at Mission Viejo Golf Course)	90120000		
				Chloride	1 Miles
				Phosphorus	1 Miles
				Sulfates	1 Miles
				Total Dissolved Solids	1 Miles
				Turbidity	1 Miles
9	R	Oso Creek (lower)	90120000		
				Chloride	4 Miles
				Phosphorus	4 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Sulfates	4 Miles
				Total Dissolved Solids	4 Miles
				Turbidity	4 Miles
9	L	Otay Reservoir, Lower	91031000		
				Color	1050 Acres
				Odors	1050 Acres
9	R	Padre Barona Creek	90724000		
				Eutrophic	6.5 Miles
				Hydromodification	6.5 Miles
9	R	Prima Deshecha Creek	90130000		
				Cadmium	1.2 Miles
				Nickel	1.2 Miles
9	R	Proctor Valley Creek	91032000		
				Trash	3.1 Miles
9	R	Rainbow Creek	90222000		
				Sediment Toxicity	5 Miles
				Sulfates	5 Miles
				Total Dissolved Solids	5 Miles
				Trash	5 Miles
9	R	Reidy Canyon Creek	90462000		
				Nitrogen	3.9 Miles
				Phosphorus	3.9 Miles
9	R	Rose Creek	90640000		
				Sedimentation/Siltation	13 Miles
9	B	San Diego Bay Shoreline, at Americas Cup Harbor	90810000		
				Copper, Dissolved	90 Acres
9	B	San Diego Bay Shoreline, at Harbor Island (East Basin)	90821000		
				Arsenic	77 Acres
				Cadmium	77 Acres
				Copper, Dissolved	77 Acres
9	B	San Diego Bay Shoreline, at Harbor Island (West Basin)	90810000		
				Copper, Dissolved	132 Acres

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
9	B	San Diego Bay Shoreline, at Laurel Street	90821000		
				Arsenic	7.6 Acres
				Cadmium	7.6 Acres
				Copper, Dissolved	7.6 Acres
9	B	San Diego Bay Shoreline, at Marriot Marina	90821000		
				Copper, Dissolved	2.9 Acres
9	B	San Diego Bay Shoreline, at North Island Aircraft Platform	91010000		
				Arsenic	99 Acres
				Cadmium	99 Acres
				Copper, Dissolved	99 Acres
9	B	San Diego Bay Shoreline, at South Bay Power Plant	90912000		
				Chlorine	14 Acres
				Copper	14 Acres
				Temperature	14 Acres
				Turbidity	14 Acres
				Zinc	14 Acres
9	B	San Diego Bay, Shelter Island Yacht Basin	90810000		
				Arsenic	153 Acres
				Cadmium	153 Acres
9	R	San Diego River (Lower)	90711000		
				Benthic Community Effects	12 Miles
				Benzene	12 Miles
				Chlordane	12 Miles
				Eutrophic	12 Miles
				Exotic Species	12 Miles
				MTBE	12 Miles
				Trash	12 Miles
9	R	San Diego River (Upper)	90731000		
				Benthic Community Effects	32 Miles
				Benzene	32 Miles
				Chlordane	32 Miles
				Eutrophic	32 Miles
				Exotic Species	32 Miles

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				MTBE	32 Miles
				Trash	32 Miles
9	R	San Juan Creek	90120000		
				Hydromodification	1 Miles
				PCBs	1 Miles
				Sedimentation/Siltation	1 Miles
9	R	San Luis Rey River	90311000		
				Eutrophic	19 Miles
				Magnesium	19 Miles
				Phosphorus	19 Miles
9	L	San Marcos Lake	90452000		
				Low Dissolved Oxygen	17 Acres
9	R	San Mateo Creek	90140000		
				Exotic Species	18 Miles
				Total Dissolved Solids	18 Miles
9	R	Sandia Creek	90222000		
				Lead	1.5 Miles
				Sulfates	1.5 Miles
9	R	Santa Margarita River (Lower)	90211000		
				Iron	19 Miles
				Manganese	19 Miles
				Sedimentation/Siltation	19 Miles
				Sulfates	19 Miles
				Total Dissolved Solids	19 Miles
9	R	Santa Margarita River (Upper)	90222000		
				Iron	18 Miles
				Manganese	18 Miles
				Sedimentation/Siltation	18 Miles
				Sulfates	18 Miles
				Total Dissolved Solids	18 Miles
9	R	Santa Maria Creek	90541000		
				Bacteria Indicators	17 Miles
				Exotic Species	17 Miles

MONITORING LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
9	R	Santa Ysabel Creek	90552000		
				Exotic Species	37 Miles
9	R	Scove Creek	91141000		
				Bacteria Indicators	5 Miles
				Hydromodification	5 Miles
				Nutrients	5 Miles
9	R	Sorrento Valley Creek	90610000		
				Eutrophic	1.1 Miles
9	R	Sycamore Canyon	90712000		
				Eutrophic	16 Miles
				Exotic Species	16 Miles
				Phosphorus	16 Miles
				Trash	16 Miles
9	R	Tecolote Creek	90650000		
				Sedimentation/Siltation	6.6 Miles
9	E	Tijuana River Estuary	91111000		
				Turbidity	1319 Acres

ABBREVIATIONS

REGIONAL WATER QUALITY CONTROL BOARDS

1	North Coast
2	San Francisco Bay
3	Central Coast
4	Los Angeles
5	Central Valley
6	Lahontan
7	Colorado River Basin
8	Santa Ana
9	San Diego

WATER BODY TYPE

B =	Bays and Harbors
C =	Coastal Shorelines/Beaches
E =	Estuaries
L =	Lakes/Reserviors
R =	Rivers and Streams
S =	Saline Lakes
T =	Wetlands, Tidal
W=	Wetlands, Freshwater

CALWATER WATERSHED

"Calwater Watershed" is the State Water Resources Control Board hydrological subunit area or an even smaller area delineation.

GROUP A PESTICIDES OR CHEM A

aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphene

ENFORCEABLE PROGRAMS LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
2	E	Peyton Slough	20733012		
				Cadmium (sediment)	2.5 Acres
				Chlordane (sediment)	2.5 Acres
				Copper (sediment)	2.5 Acres
				PCBs (sediment)	2.5 Acres
				ppDDE (sediment)	2.5 Acres
				Pyrene	2.5 Acres
				Selenium (sediment)	2.5 Acres
				Silver (sediment)	2.5 Acres
				Zinc (sediment)	2.5 Acres
2	E	Stege Marsh	20330011		
				Arsenic (sediment)	29 Acres
				Chlordane (sediment)	29 Acres
				Copper (sediment)	29 Acres
				Dacthal (sediment)	29 Acres
				Dichlorobenzophenone (sediment)	29 Acres
				Dieldrin (sediment)	29 Acres
				Endosulfan 1 (sediment)	29 Acres
				Endosulfan sulfate (sediment)	29 Acres
				Heptachlor epoxide (sediment)	29 Acres
				Hexachlorobenzene (sediment)	29 Acres
				Mercury (sediment)	29 Acres
				Mirex (sediment)	29 Acres

ENFORCEABLE PROGRAMS LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
				Oxidiazon (sediment)	29 Acres
				PCBs (sediment)	29 Acres
				ppDDE (sediment)	29 Acres
				Selenium (sediment)	29 Acres
				Toxaphene (sediment)	29 Acres
				Zinc (sediment)	29 Acres
4	R	Coyote Creek	40515010	Ammonia	13 Miles
4	R	Rio Hondo Reach 1 (Confl. LA River to Snt Ana Fwy)	40515010	Ammonia	4.6 Miles
4	R	Rio Hondo Reach 2 (At Spreading Grounds)	40515010	Ammonia	4.9 Miles
4	R	San Gabriel River Estuary	40516000	Ammonia as Nitrogen	3.4 Miles
4	R	San Gabriel River Reach 1 (Estuary to Firestone)	40515010	Ammonia	6.4 Miles
4	R	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam	40515010	Ammonia	12 Miles
4	R	San Jose Creek Reach 1 (SG Confluence to Temple St.)	40531000	Ammonia	2.7 Miles
4	R	San Jose Creek Reach 2 (Temple to I-10 at White Ave.)	40531000	Ammonia	17 Miles

ENFORCEABLE PROGRAMS LIST 2002

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
4	R	Santa Clara River Reach 7 (Blue Cut to West Pier Hwy 99 Bridge)	40351000		
				Ammonia	9.4 Miles
4	R	Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd.)	40351000		
				Ammonia	5.2 Miles
				Nitrite as Nitrogen	5.2 Miles
6	S	Mono Lake	60100080		
				Salinity/TDS/Chlorides	39743 Acres
6	S	Searles Lake	62110000		
				Petroleum Products *A determination of whether or not this water body is a "water of the United States" will be made by the Regional Water Quality Control Board.*	30211 Acres
				Salinity/TDS/Chlorides *A determination of whether or not this water body is a "water of the United States" will be made by the Regional Water Quality Control Board.*	30211 Acres

ENFORCEABLE PROGRAMS LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED

ABBREVIATIONS

REGIONAL WATER QUALITY CONTROL BOARDS

1	North Coast
2	San Francisco Bay
3	Central Coast
4	Los Angeles
5	Central Valley
6	Lahontan
7	Colorado River Basin
8	Santa Ana
9	San Diego

WATER BODY TYPE

B = Bays and Harbors
C = Coastal Shorelines/Beaches
E = Estuaries
L = Lakes/Reserviors
R = Rivers and Streams
S = Saline Lakes
T = Wetlands, Tidal
W= Wetlands, Freshwater

CALWATER WATERSHED

"Calwater Watershed" is the State Water Resources Control Board hydrological subunit area or an even smaller area delineation.

GROUP A PESTICIDES OR CHEM A

aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphene

TMDL COMPLETED LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
1	R	Garcia River, Mendocino Coast HU	11370026	Sedimentation/Siltation	154 Miles
1	R	Laguna de Santa Rosa, Russian River HU, Middle Russian River HA	11421020	Ammonia	96 Miles
4	R	Ballona Creek	40513000	Trash	6.5 Miles
4	L	Echo Park Lake	40515010	Trash	13 Acres
4	L	Lincoln Park Lake	40515010	Trash	3.8 Acres
4	R	Los Angeles River Reach 1 (Estuary to Carson Street)	40512000	Trash	3.4 Miles
4	R	Los Angeles River Reach 2 (Carson to Figueroa Street)	40515010	Trash	19 Miles
4	R	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	40521000	Trash	7.9 Miles
4	R	Los Angeles River Reach 4 (Sepulveda Dr. to Sepulveda Dam)	40521000	Trash	11 Miles
4	R	Los Angeles River Reach 5 (within Sepulveda Basin)	40521000	Trash	5.4 Miles
4	L	Peck Road Park Lake	40531000	Trash	103 Acres

TMDL COMPLETED LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
4	R	San Gabriel River, East Fork	40543000		
				Trash	5.9 Miles
5	W	Grasslands Marshes	54120000		
				Selenium	7962 Acres
5	R	Sacramento River (Keswick Dam to Cottonwood Creek)	52440014		
				Cadmium	15 Miles
				Copper	15 Miles
				Zinc	15 Miles
5	R	Salt Slough (upstream from confluence with San Joaquin River)	54120000		
				Selenium	17 Miles
5	R	San Joaquin River (Merced River to South Delta Boundary)	54400000		
				Selenium	43 Miles
6	R	Heavenly Valley Creek (source to USFS boundary)	63410031		
				Sedimentation/Siltation	2 Miles
7	R	Alamo River	72310000		
				Sedimentation/Siltation	57 Miles
7	R	New River (Imperial)	72310000		
				Pathogens	66 Miles
8	B	Newport Bay, Lower	80114000		
				Fecal Coliform	767 Acres
				Nutrients	767 Acres
				Sedimentation/Siltation	767 Acres

TMDL COMPLETED LIST 2002

July 2003

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	ESTIMATED SIZE AFFECTED
8	E	Newport Bay, Upper (Ecological Reserve)	80111000		
				Fecal Coliform	653 Acres
				Nutrients	653 Acres
				Sedimentation/Siltation	653 Acres
8	R	San Diego Creek Reach 1	80111000		
				Metals	7.8 Miles
				Nutrients	7.8 Miles
				Sedimentation/Siltation	7.8 Miles
8	R	San Diego Creek Reach 2	80111000		
				Nutrients	6.3 Miles
				Sedimentation/Siltation	6.3 Miles

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