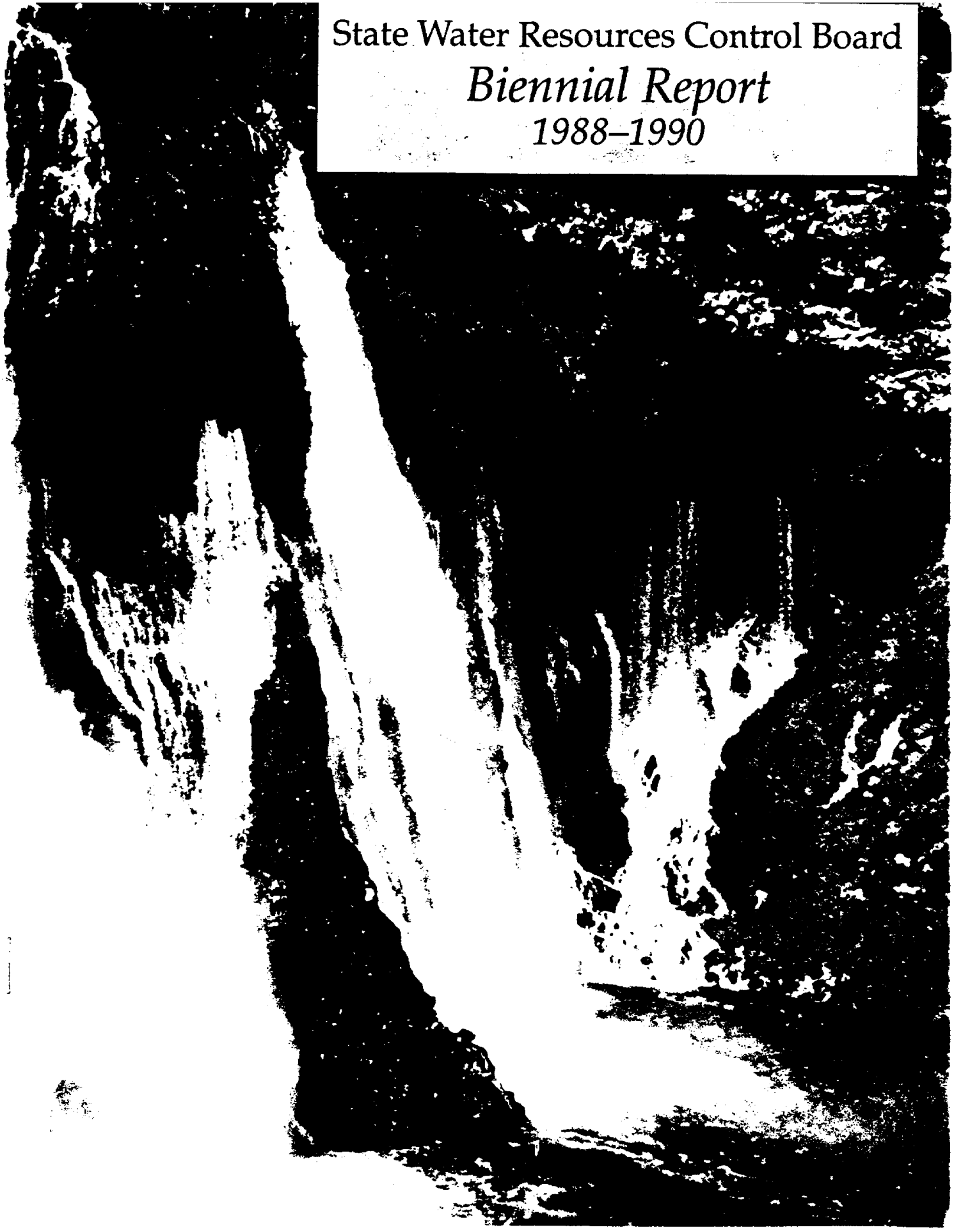
State Water Resources Control Board

Biennial Report

1988–1990



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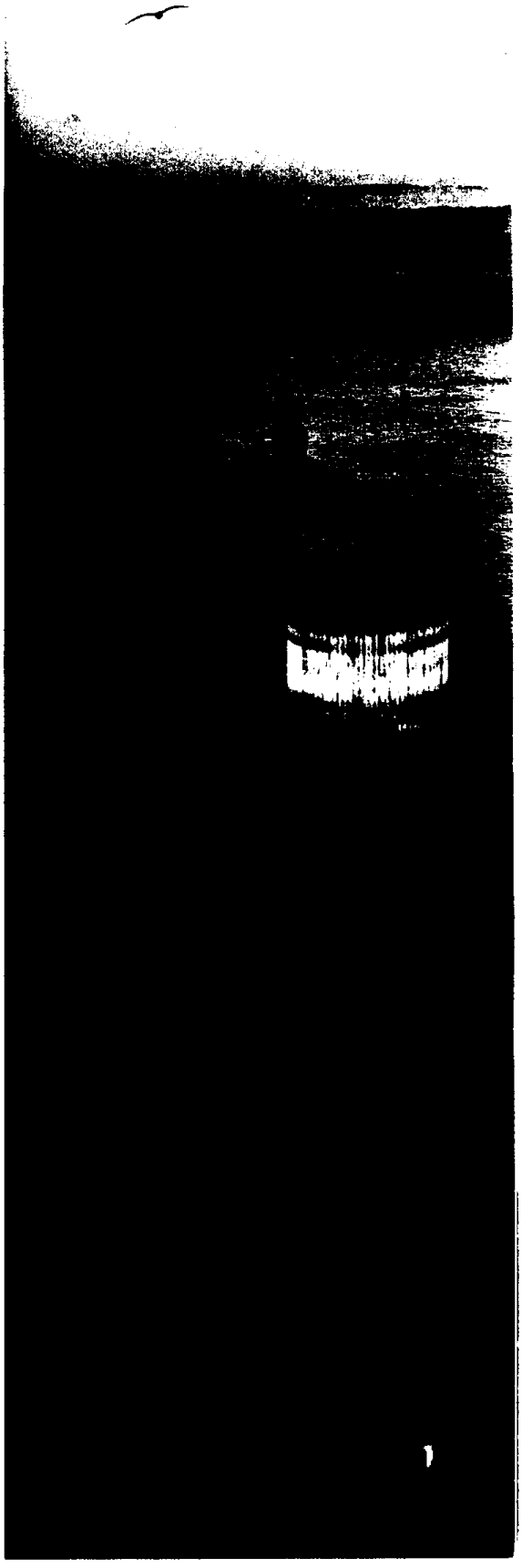
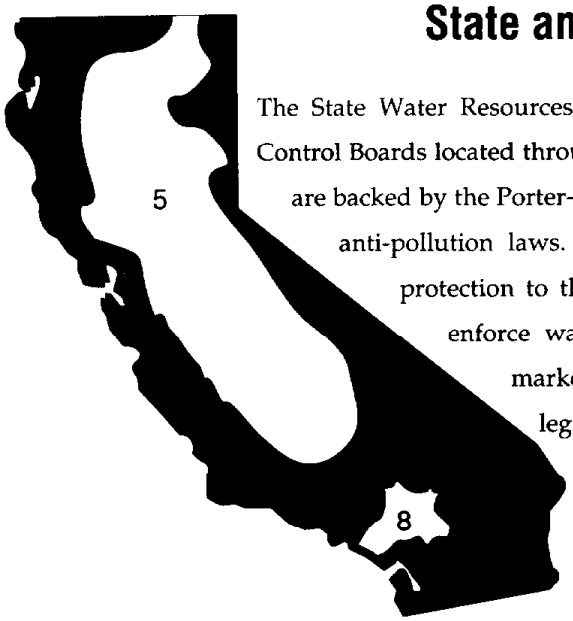
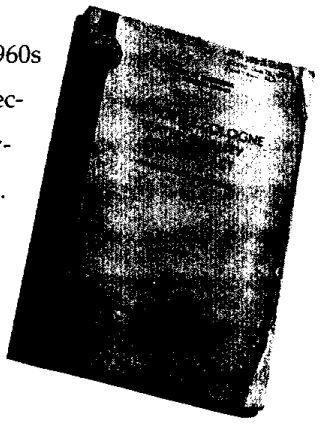


Overview of State and Regional Boards



The State Water Resources Control Board together with the nine Regional Water Quality Control Boards located throughout California work together to protect the State's waters. They are backed by the Porter-Cologne Water Quality Control Act, one of this country's strongest anti-pollution laws. Porter-Cologne assigns overall responsibility for water quality protection to the State Board and directs the Regional Boards to establish and enforce water quality standards within their individual boundaries. 1989 marked the 40th anniversary of the Dickey Water Pollution Act, the legislation which created the Regional Boards.

Happy Birthday, Porter-Cologne!



The history of the Porter-Cologne Water Quality Control Act goes back to the late 1960s when public dissatisfaction was growing over existing and future water quality protection. In answer to these concerns, Assemblyman Carly V. Porter asked the newly-created Water Resources Control Board to form a study panel to examine the problem. The panel's report, given to the 1969 Legislature, spelled out major changes needed to protect California's waters in the years to come.

Governor Ronald Reagan subsequently signed into law the Porter-Cologne Act (named for the Assemblyman and Senator Gordon Cologne, the Senate sponsor), a piece of legislation substantially identical to the panel's report.

Since its enactment in 1970, Porter-Cologne has become recognized as one of the most rigorous and workable pieces of anti-pollution legislation in the nation. It was the model for the Federal Clean Water Act of 1972 and continues to be a model for other states as well.

A MESSAGE FROM THE CHAIRMAN

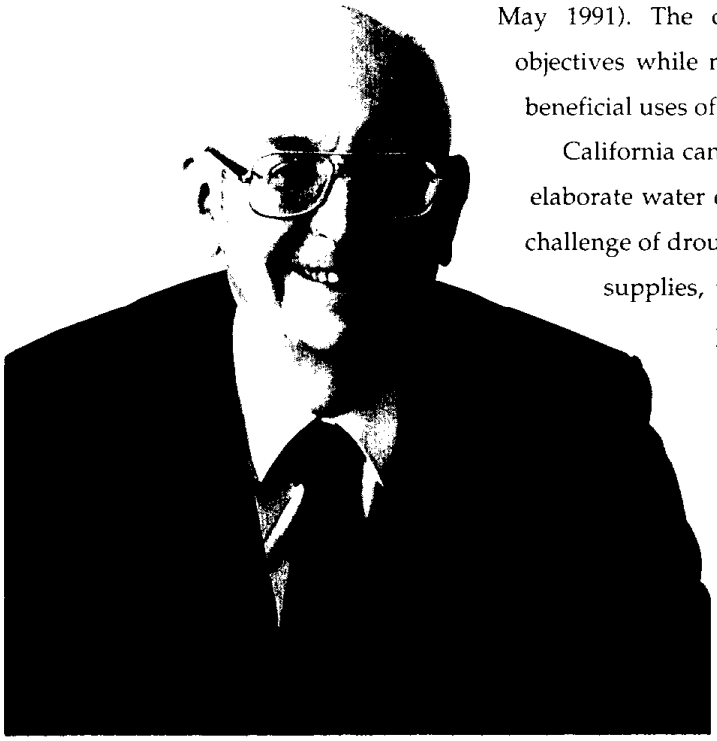
It's a Different California

Between 1988 and 1990 two phenomena – a multi-year drought and a rapidly increasing population, put strains on California's water resources never before experienced.

Twenty-two million people lived here during the 1976-77 drought; by 1990 there were almost 30 million. There could easily be 36 million by the turn of the century. Coupled with this were skies which literally dried up since the torrential rains of 1986.

Adding to the severity of these phenomena was the knowledge that present surface water sources are decreasing. Southern California's previously reliable allotment of Colorado River water will drop sizeably when Arizona takes its full entitlement decreed by the Supreme Court. Rights to another important Southern California water source, Mono Lake Basin, are also in doubt. Under a 1989 court order, the State Board is reviewing Basin water rights and use to set requirements for Basin water diversions on a long-term basis. In the meantime, the Superior Court has set interim flow requirements to protect fish in the four Mono Lake Basin streams from which Los Angeles diverts water.

In yet another arena, the State Board enters its final years of the Bay-Delta proceedings. A plan setting salinity objectives for the Sacramento-San Joaquin Delta estuary was released in June 1990 (Note: This plan was adopted by the State Board in May 1991). The challenge now becomes how to enforce the objectives while maintaining sufficient water supplies for all the beneficial uses of water across our State.



California cannot be a world class power without a viable and elaborate water distribution system. If this state is to survive the challenge of drought, increasing population and decreasing water supplies, those of us entrusted with its well being must put aside our historical roles and plan well for the future of a California which promises to be far different from the California of past years.

W. Don Maughan
Chairman

A MESSAGE FROM THE EXECUTIVE DIRECTOR

Putting First Things First

Protecting California's water quality is a monumental challenge. There are so many statutes and regulations, plans, policies and programs that fitting it all together is a complex task. And when money is limited and water quality problems mount, just how many problems do we try to solve? And which ones do we try to solve first?

The Clean Water Strategy was conceived to answer these questions.

The Strategy will be an organized, open, and practical way to approach the complex subject of water quality protection in California. It is a way of "putting first things first".

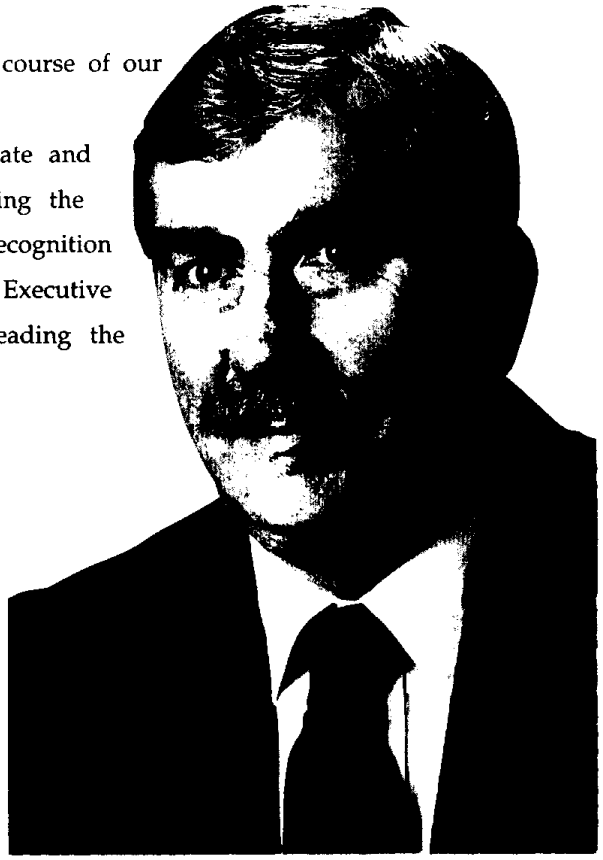
It will use the best available data to identify and rank our water quality problems. It will give us a comprehensive management plan with goals and an organized method for allocating funds to support those goals.

The Strategy will rely on the expertise of our scientific and technical staff including engineers, environmental scientists, and geologists. State and Regional Board members will sift through all the data and make decisions within the Strategy's framework. To the maximum extent possible, all bias, guess work and spot remedies will be eliminated.

The Clean Water Strategy will clearly chart the course of our water quality program for the years to come.

Thanks should be given to the staff of the State and Regional Boards for their professional work during the challenging period covered by this report. Special recognition also should be given to James W. Baetge, former Executive Director (1988-1991), who was instrumental in leading the development of the Clean Water Strategy.

Walt Pettit
Executive Director



WATER QUALITY

Water Quality Assessment

California places high value on its water resources. Mountain lakes, lush rivers and streams, spectacular coastal waters and bays, complex wetlands and estuaries – all comprise the waterscape. Beyond these which are visible are those which are hidden from view – California's great underground aquifers – providing ground water for California.

During 1988-90, the State Board conducted an assessment of the State's waterbodies, critical to planning and management of the State's liquid assets. The Water Quality Assessment is a compendium of data concerning the waterscape. It classifies over 2,500 waterbodies by their water quality condition, and, where available, discusses the nature and source of impairments. Based on a variety of criteria, each waterbody is classified as "good", "intermediate", "impaired" or "unknown".

In regards to the Board's long term planning efforts, the Assessment provides the foundation for identifying high priority waterbodies where corrective and/or preventive actions are needed.

In addition to individual waterbody evaluations, the Assessment also includes a detailed appraisal of one of California's most important waterbodies, the San Francisco Bay-Sacramento/San Joaquin Delta Estuary.

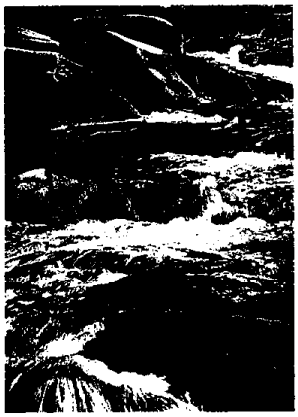
Fact sheets on other waterbodies of concern have also been developed, providing additional detail on the nature and extent of water quality problems throughout the State.

According to the Assessment, the State's waterbodies are affected by both conventional pollutants, such as suspended solids, grease and oil and toxics, such as copper and lead. Toxics, however, affect a greater proportion of the State's waterbodies than do conventional pollutants.

Point sources, such as sewage treatment plants and industrial discharges, although still important, have been the subject of stringent controls developed over the last 20 years. Nonpoint source pollution, such as urban runoff and agricultural drainage, is now considered the greatest water quality threat and will be the challenge of the decade.

California Water Bodies: How Healthy Are They?

(Based on April 1990 Water Quality Assessment)

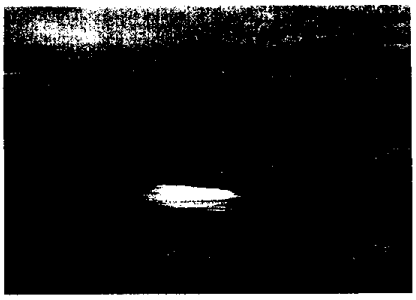


Rivers and Streams

Total Miles Assessed: 14,998
Good..... 31%
Intermediate... 40%
Impaired..... 15%
Unknown..... 14%

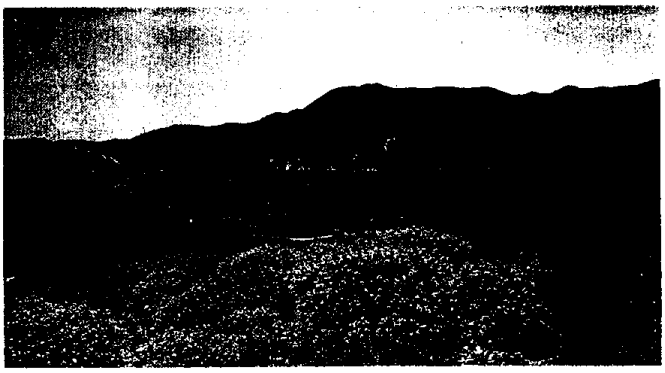
Ocean Shoreline

Total Miles Assessed: 1,118
Good..... 94%
Intermediate... 4%
Impaired..... 2%
Unknown..... 0%



Lakes

Total Acres Assessed:
1, 326,104
Good..... 13%
Intermediate... 27%
Impaired..... 47%
Unknown..... 13%



Bays and Harbors

Total Acres Assessed: 737,424
Good..... 23%
Intermediate... 2%
Impaired..... 75%
Unknown..... Less than 1%

- Good: Waters support and enhance their uses.
- Intermediate: Good quality, with occasional degradation.
- Impaired: Water cannot meet water quality standards.
- Unknown: Data insufficient to classify water body.

Bays and Harbors

Bay Protection and Toxic Cleanup:

The Bay Protection and Toxic Cleanup Program, established by 1989 legislation, brought a new focus to the Board's effort to control toxic pollution of the State's bays and estuaries. The legislation provides $5 million dollars for the first two years.

The Program has five major goals: (1) provide protection of existing and future beneficial uses of bay and estuarine waters; (2) identify and characterize toxic hot spots (THS) in marine sediments; (3) plan for cleanup or other remedial actions; and (4) develop strategies to control and halt further pollution at existing THS; and develop sediment quality objectives.

During its first year of operation the Board began to draft a Bays and Estuaries Plan and a workplan for the development of sediment quality objectives.

In the next four years, the program will develop a comprehensive data base of THS for each Regional Board, develop THS ranking criteria and develop a plan for THS cleanup by the Regional Boards.

The Ocean Plan:

During 1990, the State Board adopted amendments to the California Ocean Plan which establishes water quality objectives for coastal waters. The Plan establishes the basis for regulating wastes discharged into coastal waters and applies to both point and nonpoint discharges.

For the first time, the amendments set water quality objectives for dioxin, tributyltin (TBT), endosulfan and selenium, constituents known to degrade water quality.

The amendments also contain objectives to prevent human health impacts from accumulation of toxics in fish tissue. A new effluent chronic toxicity objective will protect against sublethal effects on marine life.

To better protect those participating in coastal water-contact recreation, the Plan establishes a new bacterial assessment requirement to identify contamination sources and require monitoring at designated stations.

The San Francisco Estuary Project

The beautiful and productive San Francisco Bay/Sacramento/San Joaquin Delta Estuary is home to [illegible] million people. The Estuary drains 40 percent of the state and is the largest estuarine system on the west coast of the United States. In the Estuary, the fresh water of the Sacramento and San Joaquin Rivers mixes with the salt water of the Pacific Ocean. This environment is home to unique plants, fish and wildlife and is vitally important to all Californians.

Growing public concern for the health of the Bay and Delta prompted the State Board and the Environmental [illegible] Estuary Project.

Over the next several years, the Project will develop strategies to maintain the Estuary's natural resources, balance its competing uses and maintain water quality protective of the many beneficial uses being made of its waters.

The Project offers scientists, business, labor, fishermen, environmentalists, sports enthusiasts, government and citizens the opportunity to work toward a healthier Estuary for future generations of Californians.

The Santa Monica Bay Restoration Project

Santa Monica Bay is one of the most intensely used bodies of water in the nation. Approximately eight million people live near the Bay and use it for bathing, boating, sport fishing and other forms of recreation. Many marine species, including at least five on the list of endangered species, may be impacted by current activities in the Bay.

The Bay is also used as an industrial water supply and as the area's principal repository for treated sewage effluent, treated industrial wastewater, and power generation cooling water discharge. In addition, the Bay receives pollutants from dozens of unregulated storm drains. Significant problems remain from past discharge practices and the lack of adequate control on nonpoint discharges.

The Santa Monica Bay Restoration Project was created in 1988 to address these concerns. A joint Federal-State-local effort, the Project has made important strides toward accomplishment of its mission.

During its first year ending June 1990, the Project initiated early action programs, undertook contracts for technical studies, created a Santa Monica Bay Restoration Foundation and established a broad-based public outreach program.

Ground Water Protection

Protecting the State's ground water is of major importance to the State Board. Ground water basins underlie half of the State's land area. Total useable storage is estimated at 250 million acre-feet, several times the amount stored in all the State's surface reservoirs.

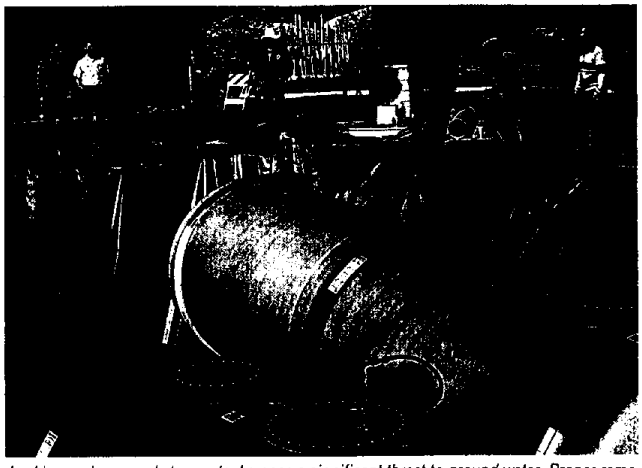
Because ground water accounts for about 40 percent of all water used in the State, its protection is paramount. Once a ground water supply is contaminated, it is difficult and expensive to clean up.

Aboveground Storage Tanks:

State legislation, effective January 1, 1990, created a new program which regulates aboveground petroleum storage tanks. The legislation resulted from the 1988 Shell oil spill in Martinez (Contra Costa County). Under the program, owners or operators will be required to file a storage statement, pay fees, take specific action to prevent spills and, in certain cases, implement a ground water monitoring program.

As of July 1, 1990, the State Board had collected $140,000 in biennial fees and 1,230 sites had filed.

The program is funded primarily through a facility fee on tank owners. However, to help the program in its early stages, $700,000 of the Shell oil spill penalties were allocated by the legislation to the aboveground tank program.



Leaking underground storage tanks pose a significant threat to ground water. Proper remedial controls must be used when placing an underground tank.

Underground Storage Tanks:

California has more than 140,000 underground storage tanks (UST). The vast majority contain fuel. As of June 1990, 14,000 tank sites had been confirmed as leaking.

Assuring the competency of those who test tanks for structural integrity is an important new facet of the Board's program, added through 1987 legislation. During the 1988-90 period, the State Board tested 376 applicants and certified 340 as competent. Complaints about improper practices led three tank testers to surrender their licenses. Six additional enforcement cases were pending by mid-1990.

The Regional Water Quality Control Boards and local agencies continue to supervise leak cleanup. The State Board's Local Oversight Program, formerly known as the Pilot Program, provides State and Federal funding together with Regional Board technical assistance to local agencies for cleanup oversight. During the 1988-90 period, the State Board negotiated new contracts with eight local agencies, bringing the total number of contracts to 18. Local agencies are now overseeing 4,620 sites and have achieved cleanup at 821 sites.

During 1989, the State Board incorporated the Federal financial responsibility requirement into its tank program. All owners/operators of petroleum USTs must now show evidence of financial responsibility for corrective action ranging up to $1 million per occurrence and up to $2 million aggregate coverage. A newly established Underground Storage Tank Cleanup Fund funded through petroleum storage fees will assist petroleum tank owners in meeting the financial responsibility requirements.

Toxic Pits:

The Toxic Pits Cleanup Act (TPCA) prohibits improper storage, treatment, and disposal of liquid hazardous wastes in surface impoundments after December 31, 1988. Unless exempted in accordance with the law, each surface impoundment must have a Hydrogeological Assessment Report (HAR). If an impoundment has leaked it must be either closed or cleaned up and retrofit with double-liners and a leachate collection system before continuing discharge.

As of mid 1990, 199 facilities were within the program's reach. Forty-one facilities have met all the Act's requirements and have no further TPCA liability. Eighty-one facilities have approved HARs. A total of 38 facilities continue to discharge in violation of the law.

Enforcement actions taken against non-complying facilities have included cease and desist orders, cleanup and abatement orders, administrative civil liability actions and referrals to the Attorney General.

The San Gabriel Valley Challenge

The Well Investigation Program determines sources of ground water contamination in public drinking water wells. Since the program's inception in 1985, it has been working to resolve contamination around the State. The Board's work in the San Gabriel Valley (Los Angeles County) has been especially noteworthy.

The San Gabriel Valley Ground Water Basin is a large structural basin which underlies approximately 167 square miles of heavily industrialized eastern Los Angeles County. The basin has a maximum depth of over 4,000 feet, and is filled with permeable water-bearing alluvial deposits. Water from the basin satisfies the needs of over a million people.

Ground water pollution was first discovered in the basin in 1979. Volatile organic compounds, often coming from industrial sources, are the primary contaminants. Nitrates from past agricultural practices and septic tanks pose another serious problem. In 1984, the U.S. Environmental Protection Agency (EPA) placed four large areas of the basin on the Federal National Priorities list, which made the sites eligible for funding under the Federal Superfund Program.

Since 1986, the State Board and the Los Angeles Regional Board have been working with concerned agencies to clean up and preserve the basin for Southern Californians.

In early 1990, the State and Regional Boards, in conjunction with the EPA, completed a policy paper outlining institutional and financial strategies to address the basin's water quality issues.

Among other things, the paper recommended the creation of a local agency to oversee cleanup of the basin. For many years, the basin was managed strictly for water supply purposes with water quality considerations playing a secondary role. The State and Regional Boards will continue to press the view that water quality requirements must drive water supply decisions in the basin.

Nonpoint Source Pollution: A Problem As Big As All Outdoors

Nonpoint source (NPS) pollution has been long recognized as a major contributor to water quality problems in California. In fact, our most recent surveys indicate that it is now the greatest source of pollution in California.

Historically, water quality protection programs have emphasized reduction of point source pollution – visible, discrete sources, easy to trace to their source and therefore comparatively easy to control through the permitting process. But the challenge of nonpoint source pollution lies in its very nature: diffuse, sporadic and difficult to trace to its sources, and thus nearly impossible to regulate through the permitting process.

In addition, most nonpoint source problems are the direct result of land use decisions and, therefore, solutions lie in finding more rational ways to manage the land, rather than manage the waterscape.

While the State Board has had a NPS program in place for some time, its efforts have been hampered by the lack of financial resources. Two events brought much needed resources to the Board's effort. First, 1987 amendments to the Clean Water Act required each state to prepare a NPS assessment and management plan and have made follow-up grant monies available. Second, the recently established State Revolving Fund (See Funding Section) has made loan monies available to a broad range of eligible projects, including NPS pollution control projects.

The State Board adopted its Nonpoint Source Management Plan in 1988 and by early 1990 had organized a multifaceted NPS program focused on agriculture, mining, urban runoff, construction and pesticides.

Successful implementation of the program will require broad-based public awareness, development of practical solutions and effective coordination among numerous agencies. By mid-1990, the Board had begun to develop a public outreach program to identify worthwhile projects in need of financial assistance. $1.2 million in Federal grant assistance was committed to improvement projects that were designed to alleviate NPS impacts on watersheds throughout the state.

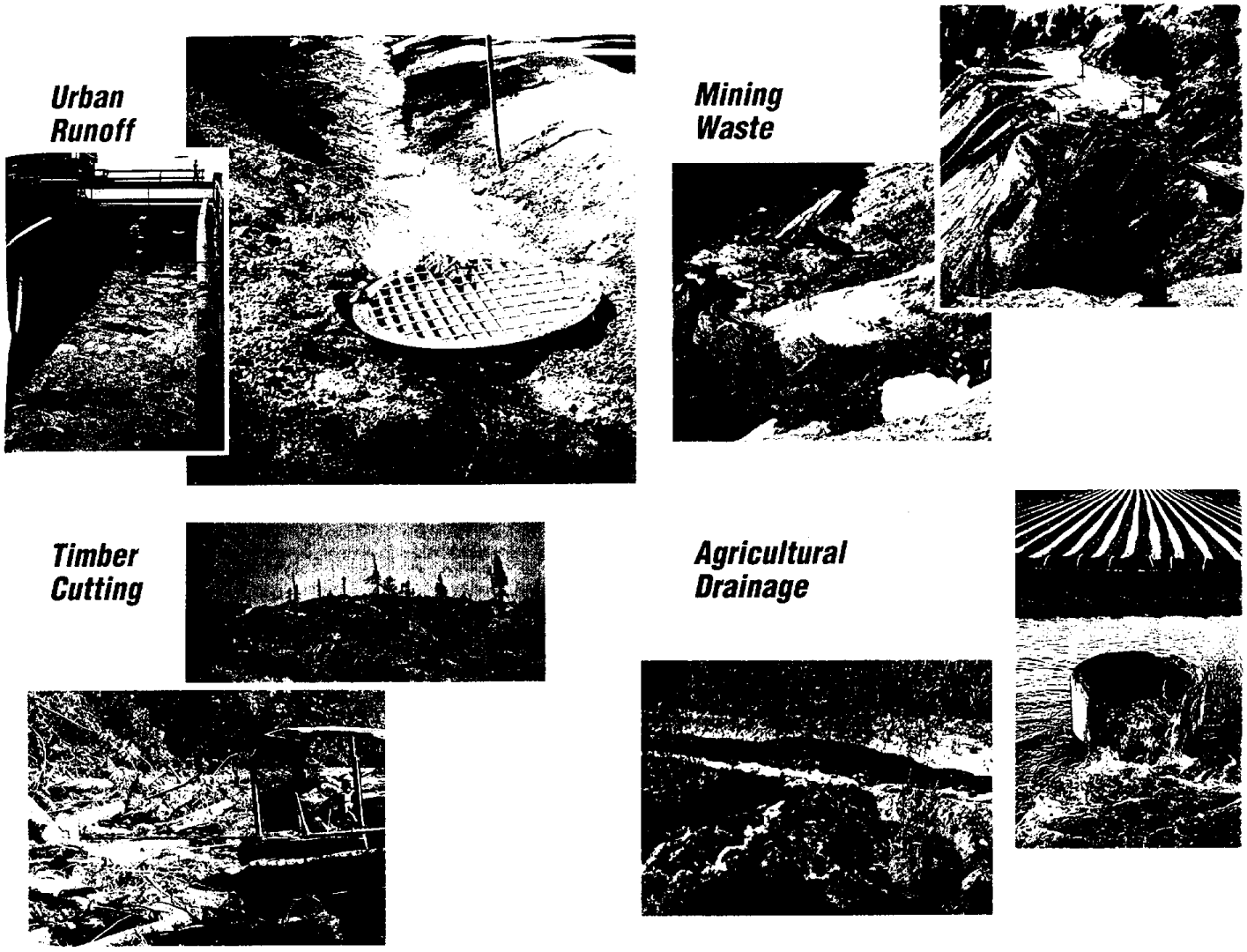
Consolidation of Water Quality Control Plans

One of the State Board's primary means for addressing water pollution is the adoption of water quality control plans. These plans establish the beneficial uses of the waters to be protected, contain numeric and/or descriptive water quality objectives and spell out a program by which these objectives can be achieved.

Over the years, different plans have been adopted – each addressing a separate issue and containing separate requirements. In 1988, the State Board began to consolidate existing plans into two statewide documents: inland surface waters and enclosed bays and estuaries. The consolidation for inland waters included adoption of water quality objectives for 68 priority pollutants affecting California lakes, rivers and streams. The 68 pollutants include trace metals such as copper and zinc, pesticides such as DDT and endosulfan, and other organic compounds such as benzene and halomethanes.

Establishing numeric controls for the 68 represents a new frontier and new science continuing the Board's pioneering tradition.

The consolidation will clarify water quality requirements for the discharger, the regulator and the interested public.



Timber Harvesting:

The State Board, the State Board of Forestry (BOF), the California Department of Forestry and Fire Protection (CDF) entered into an agreement in 1988 to address the effects of logging activities on drinking water supplies, fisheries, wildlife and other beneficial water uses. The State Board certified the forest practice rules to be best management practices (BMPs) and also identified additional issues requiring consideration and improvements in the BOF forest practice rules.

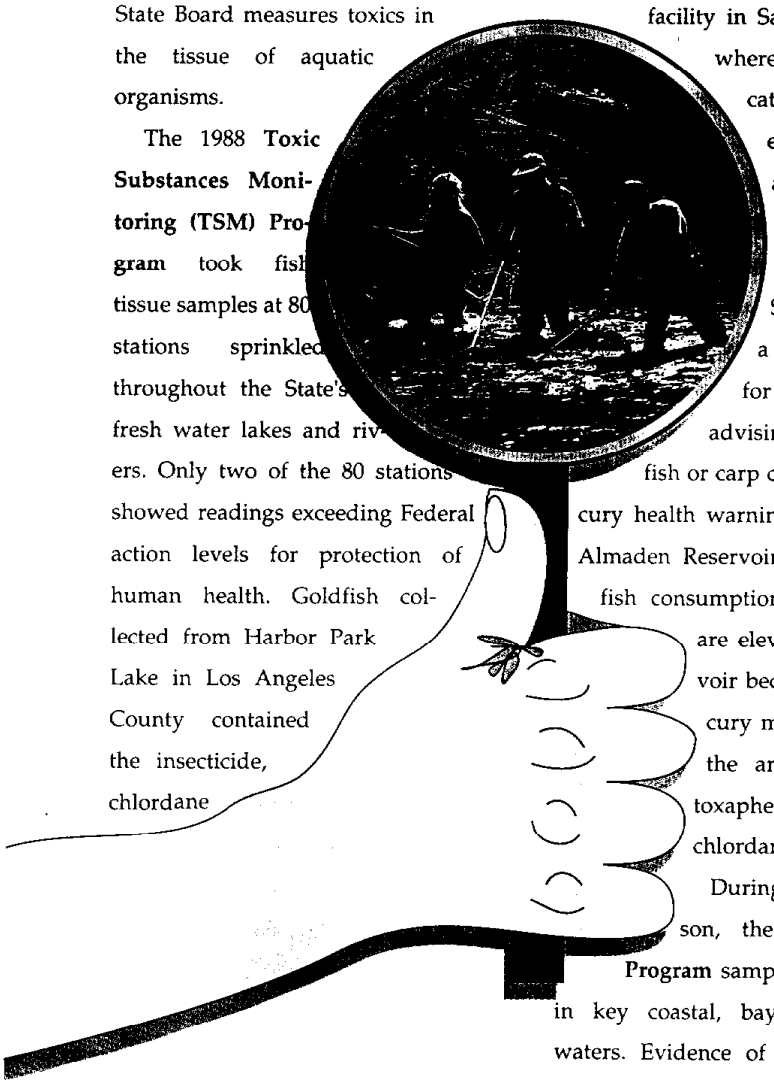
The BOF has since adopted major new rule packages directed at (1) maintenance of erosion controls; (2) site preparation; (3) cumulative watershed effects; and (4) timber operator licensing and training. New rules regarding logging roads and landings as well as watercourse and lake protection are also being prepared by the BOF.

The CDF established a program to audit compliance with the State Board- certified BMPs and the BOF is also developing a program to assess the effectiveness of the BMPs in protecting beneficial water uses.

Monitoring Programs

The State Board's ongoing monitoring programs provide a valuable first alert for potential problems in California's fresh and marine waters.

Because many toxic pollutants are very difficult to detect in water, the State Board measures toxics in the tissue of aquatic organisms.



The 1988 **Toxic Substances Monitoring (TSM) Program** took fish tissue samples at 80 stations sprinkled throughout the State's fresh water lakes and rivers. Only two of the 80 stations showed readings exceeding Federal action levels for protection of human health. Goldfish collected from Harbor Park Lake in Los Angeles County contained the insecticide, chlordane while Alamitos Creek samples in Santa Clara County contained the metal, mercury.

The 1989 TSM Program took samples at 94 stations. Goldfish tissue at three stations exceeded Federal action levels: Harbor Park Lake; Rio de Santa Clara, an abandoned agricultural drain in Ventura County which yielded fish tissue with elevated levels of chlordane and the insecticide toxaphene; and Almaden Reservoir, a water storage facility in Santa Clara County where samples indicated mercury levels exceeding Federal action levels.

The Department of Health Services has issued a health advisory for Harbor Park Lake advising against goldfish or carp consumption. Mercury health warnings are posted for Almaden Reservoir warning against fish consumption. Mercury levels are elevated at the reservoir because of past mercury mining practices in the area. EPA banned toxaphene in 1983 and chlordane in 1988.

During the 1988-89 season, the **Mussel Watch Program** sampled over 125 sites in key coastal, bays and estuarine waters. Evidence of pollutants above Federal standards was found in two samples of mussel and clam tissue. A total of 443 samples were taken.

Revolon Slough in Ventura County produced levels of DDT above the Federal standard for predator protection while PCBs, or polychlorinated biphenyls, exceeded the same standard at the East Basin commercial storm drain in north San Diego Bay.

During the 1989-90 season, Mussel Watch sampled at 135 stations. None of the 350 samples exceeded the Federal standards for either protection of human health or protection of predatory animals.

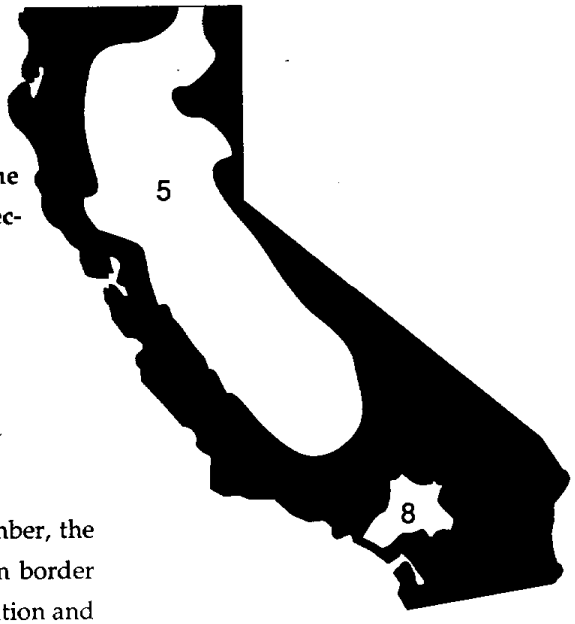
The DDT family of compounds was detected, although below Federal standards, in almost every sample, demonstrating the persistent nature of this pesticide in the aquatic environment despite its ban in 1972. Other constituents found include tributyltin, a boat paint additive used to prevent fouling of hulls by algae and barnacles and known to adversely affect other types of marine life. These samples were taken from harbors and bays heavily used by small and large craft.

Oxadiazon, an herbicide used in landscaping, was found in tissue from Newport Bay and the Upper Newport Bay drainage area. Studies are now underway to evaluate its toxicity to humans, bioaccumulation factors and persistence in the environment.

Samples conducted for the Pacific Gas & Electric Company and the Southern California Edison Company found readings below all Federal and State levels. The samples were taken at sites where cooling water is discharged into the ocean.

REGIONAL WATER QUALITY CONTROL BOARDS

The nine Regional Water Quality Control Boards located throughout California are responsible for protecting surface, ground and coastal waters in their Region. The basis for pollution control in each Region is a Basin Plan which identifies the Region's water bodies, states their beneficial uses and sets objectives to protect those uses.



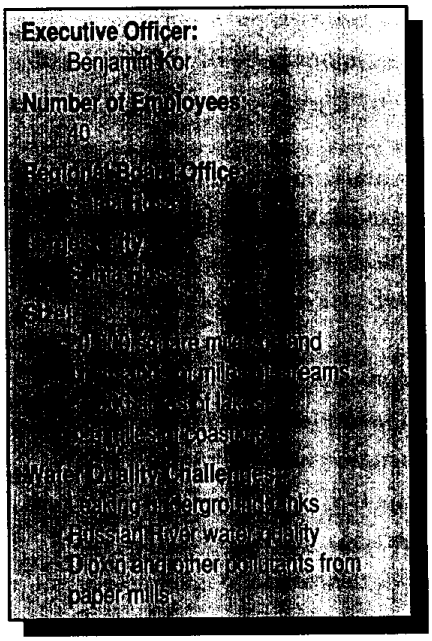
1: North Coast Regional Board

A scenic area of limited population, free-flowing rivers and tall timber, the North Coast Region stretches across most of the California-Oregon border while extending down the Pacific coastline to Marin County. Recreation and tourism are mainstays of the Region's economy as are timber harvesting and commercial and sport fishing.

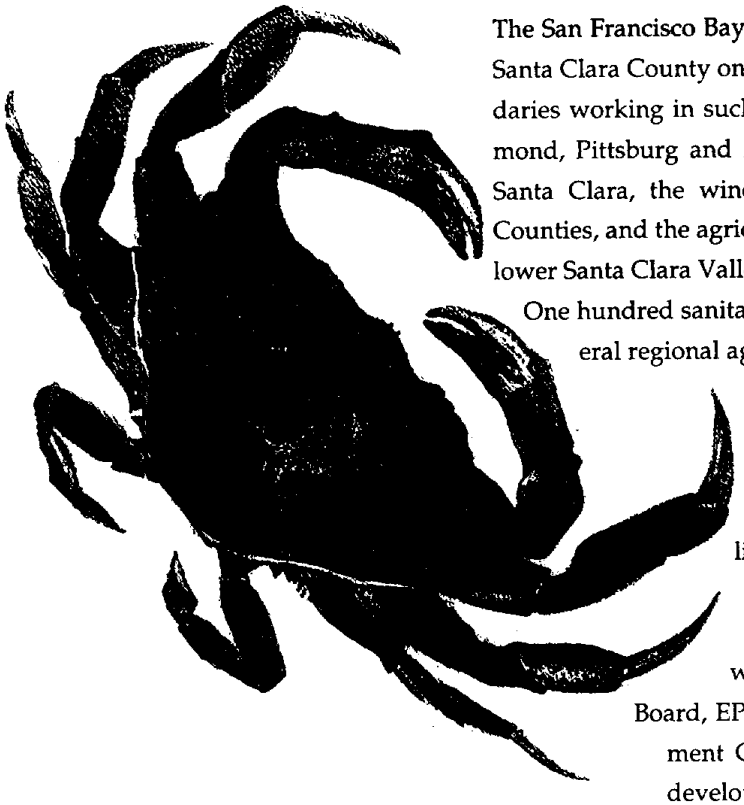
A rapidly increasing population in the Russian River Basin of Sonoma County has threatened this popular river. The Regional Board's Basin Plan prohibits wastewater discharge into the Russian River during low-flow conditions in the summer. During winter months treated effluent discharges are limited to one percent of the stream flow. The City of Santa Rosa provides advanced treatment for all its wastewater which is either reclaimed by irrigation or discharged to the Russian River. All other municipal dischargers in the Russian River basin are on time schedules to provide advanced treatment at the earliest practical date.

Ground water contamination investigation and cleanup efforts continue to grow. Municipal and individual domestic supply wells have been closed due to chlorinated hydrocarbon and other contamination. Contamination sources may relate to leaking underground tanks, poor waste disposal practices, and historical chemical usage.

Two bleach-kraft pulp mills, both of which discharge into the ocean west of Arcata Bay, have been the focus of significant Regional Board monitoring and enforcement activity. Issues involve the regulation of pollutants, including dioxins which are found in the wastewater produced by chlorine bleaching of wood pulp. One of the many dioxin-reducing measures recently employed at the mills has been the use of oxygen for bleaching wood pulp, cutting the chlorine use in half.



2: San Francisco Bay Regional Board



The San Francisco Bay Region stretches from Marin County on the north to Santa Clara County on the south. Five million people reside within its boundaries working in such diverse pursuits as the heavy industry of the Richmond, Pittsburg and Antioch areas, the computer world of San Jose and Santa Clara, the wine industry which flourishes in Napa and Sonoma Counties, and the agricultural fields of eastern Contra Costa County and the lower Santa Clara Valley.

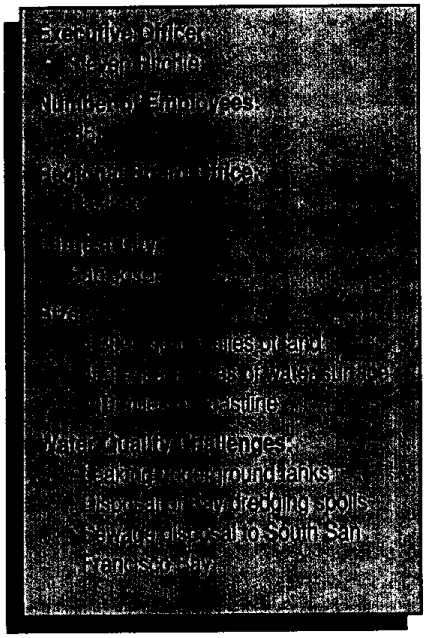
One hundred sanitation agencies, nine counties, numerous cities and several regional agencies surround the Bay and Delta systems. Each has interest in the Bay, either in protecting it, discharging into it, or using it to spur economic growth.

These varied pressures make Bay protection an ongoing challenge. High on the Regional Board's list of concerns is securing safe disposal sites for Bay dredging spoils. After several years of discussion and proposals, the Regional Board is now working with the U.S. Army Corps of Engineers, the State Board, EPA, the San Francisco Bay Conservation and Development Committee and other public and private agencies to develop a long-term management strategy. Securing the money needed for disposal sites is the next frontier.

From 1987-90 the number of leaking underground tanks in the Region grew from 700 to more than 4,000. Regional Board staff struggle to oversee cleanup efforts with limited staff and resources.

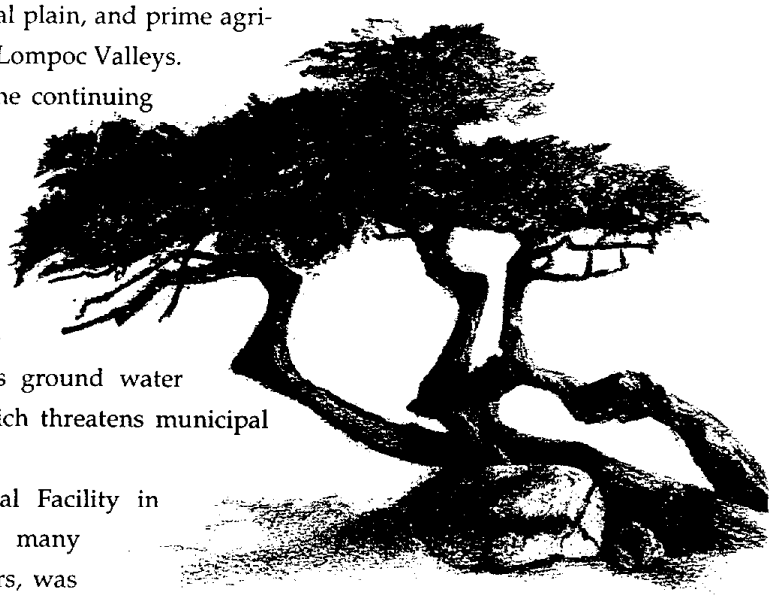
Controversy has surrounded municipal wastewater dischargers in the South Bay which are currently not subject to State water quality objectives. Also, the fresh water coming from the City of San Jose's sewage treatment plant threatened a large salt marsh inhabited by two endangered species. The State and Regional Boards have required the City to create additional acres of new salt marshes. Reclamation appears promising as a way to limit future effects on the salt marsh.

The October 17, 1989 earthquake severely damaged Regional Board offices in Oakland, forcing condemnation of the State building. Fortunately, there were no injuries to staff or their families. New office space was secured within three days.



3: Central Coast Regional Board

A 300-mile-long, 40-mile wide section of California's coastline comes under the jurisdiction of the Central Coast Regional Board. It includes the urbanized Monterey Peninsula and Santa Barbara coastal plain, and prime agricultural lands such as the Salinas, Santa Maria, and Lompoc Valleys.



No area of California has been harder hit by the continuing drought than the Central Coast. All municipalities in the Region rely on locally developed water supplies. By early 1990, reservoir storage was at an all-time low. Most communities in the Region were forced to set water conservation targets of 20 to 45 percent. The drought has aggravated long-term problems with salt buildup in the Region's ground water basins and has accelerated seawater intrusion which threatens municipal and agricultural water supplies.

Casmalia Resources Hazardous Waste Disposal Facility in northern Santa Barbara County, the source of many Regional Board enforcement actions over past years, was issued two cleanup and abatement orders in late 1989 and early 1990 addressing leachate management and continuing cleanup efforts. Casmalia contested both orders in Superior Court with the court ruling in the Regional Board's favor.

With local surface water in short supply, ground water becomes increasingly important. The U.S. Army's Fort Ord has significant ground water contamination problems. In February 1990, the Fort was placed on the EPA Superfund list. Shortly after, Fort Ord, EPA and the Regional Board signed a negotiated agreement to bring about a resolution of the contamination problems. The agreement includes payment of oversight costs incurred by Regional Board staff. Staff is overseeing cleanup at several other military bases, as well as underground tank leak sites and solvent spill sites.

Staff works continually to protect its world-famous coastal waters. Their Morro Bay Study resulted in physical improvements to Bay dischargers. Cleanup strategies for Monterey Bay "toxic hot spots" are being evaluated. Public concern for protection of Monterey Bay resulted in Congress naming the Bay as a national marine sanctuary. The Regional Board is working with the National Oceanic and Atmospheric Administration on sanctuary implementation.

Executive Officer:
William Leonard

Number of Employees:
37

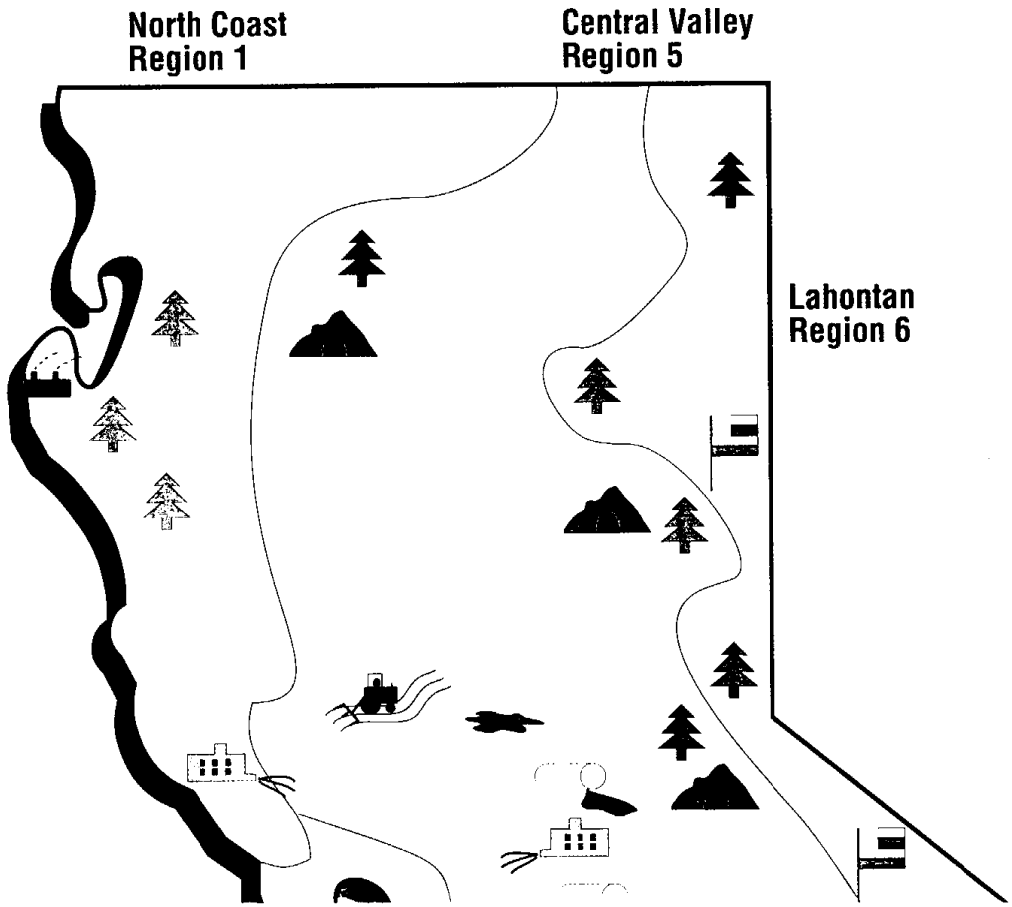
Regional Board Office:
San Luis Obispo

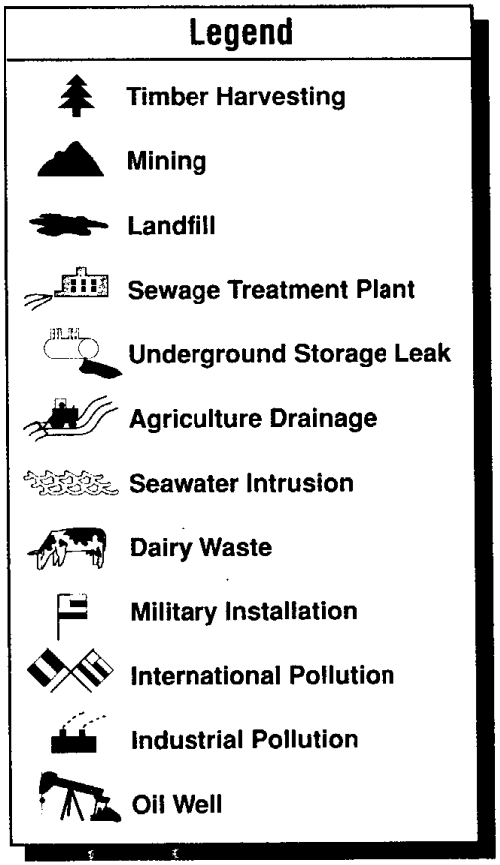
Largest City:
Salinas

Size:
- [illegible] miles of land
- [illegible] streams
- [illegible] lakes
- [illegible] coastline

Water Quality Challenges:
- Ground water basin salt buildup and sea water intrusion
- Bacterial contamination of shellfish
- Casmalia Hazardous Waste Facility
- Ground water contamination from petroleum and solvent spills

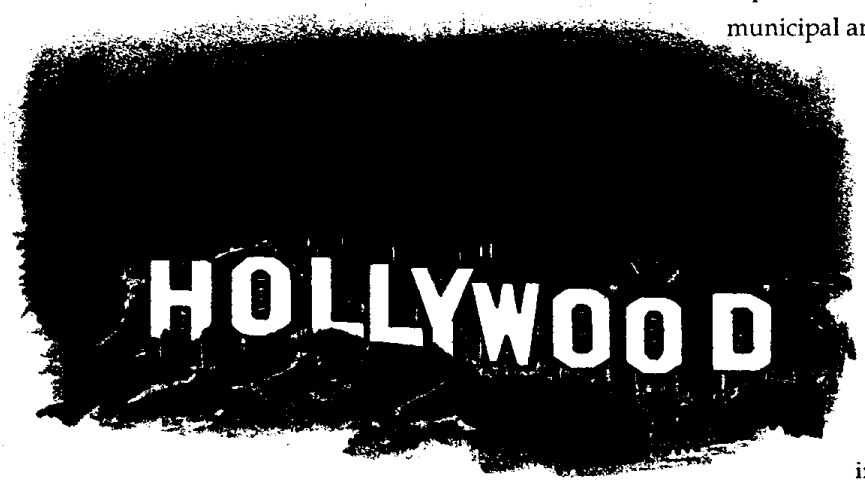
California
Water Quality Issues
1988 – 1990





4: Los Angeles Regional Board

Some ten million people live in this Region, the most densely populated in the State. Burgeoning population, the shortage of flowing streams, heavy industrial development and the importance of the coastline make control of municipal and industrial wastes a high priority.



Following years of discussion and dispute, the City of Los Angeles has agreed to a major wastewater system improvement program to expand and upgrade the Hyperion sewage plant. The City has also stopped its former discharge of sewage sludge to the ocean. In a separate action, the Regional Board and the City settled a two-year old lawsuit for past violations of the City's waste discharge permit. The City will undertake $85 million in capital improvements and environmental enhancement projects in lieu of penalties.

The Regional Board has directed companies operating 18 petroleum refineries and eight tank farms to investigate subsurface hydrocarbon contamination, develop mitigation measures and clean it up. Some 42 million gallons (almost four times the Exxon Valdez spill) of gasoline and other petroleum products have been recovered under Regional Board direction.

In June 1990 the Regional Board adopted a stormwater-urban runoff discharge permit for Los Angeles County to improve the quality of these discharges throughout the Region, with highest priority on the Santa Monica Bay Drainage Basin. This permit, the first of its type in the U.S., emphasizes pollution control through best management practices rather than technology- driven water quality standards.

Approximately 25 percent of all underground storage tanks in California are located in the Los Angeles Region. More than 3,000 unauthorized releases have been reported in the Region. Cleanup for half of the leaks is monitored by Regional Board staff with local agencies overseeing the remainder. More than 230 soil and ground water cases have been prepared for closure. Two underground tank local oversight programs are in operation in Los Angeles and Ventura Counties to accelerate leak detection and cleanup.

Executive Officer:
Robert Ghirelli

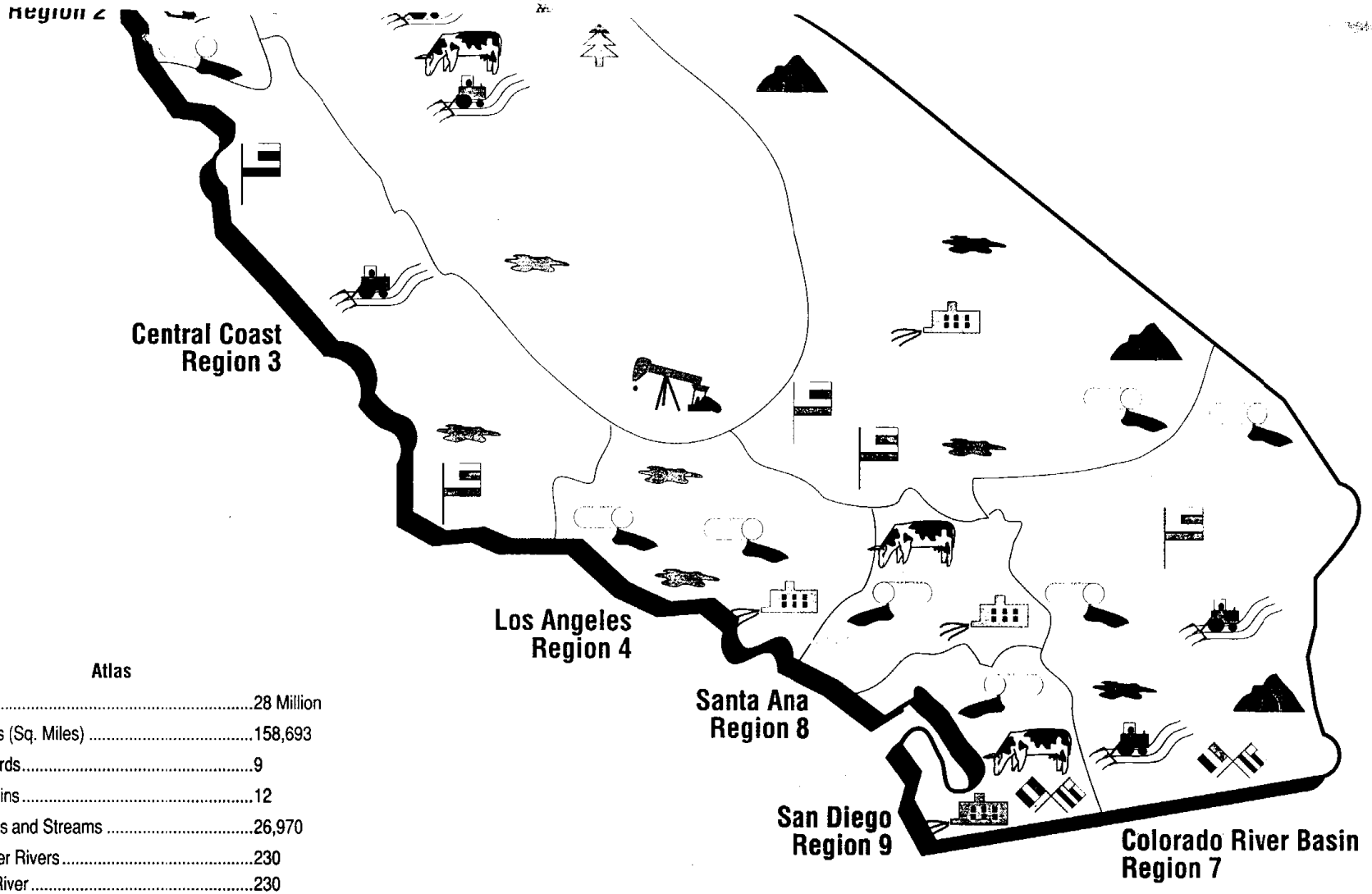
Number of Employees:
100

Regional Board Office:
Monterey Park

Largest City:
Los Angeles

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

Water Quality Challenges:
- San Gabriel and San Fernando ground water contamination
- Sewage discharge to Santa Monica Bay
- Leaking underground tanks
- Urban and stormwater runoff

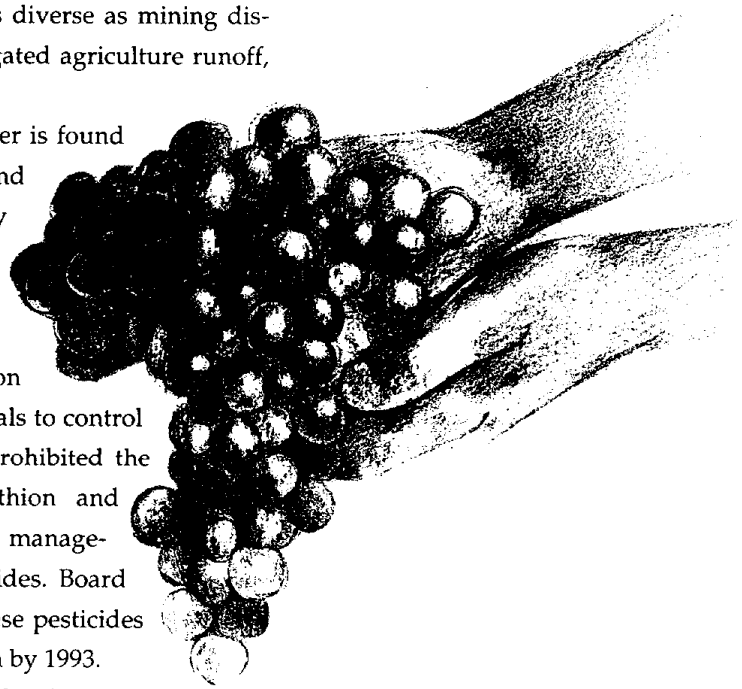


Atlas

Population	28 Million
Surface Areas (Sq. Miles)	158,693
Regional Boards	9
Drainage Basins	12
Miles of Rivers and Streams	26,970
Miles of Border Rivers	230
Colorado River	230
Acres of Lakes and Reservoirs	1,417,540
Miles of Ocean Coastal Shoreline	1,840
Acres of Estuaries and Coastal Wetlands	216,719
Underground Storage Tanks	160,000
Land Disposal Sites	2,242
Active Mines	1,132
Abandoned Mines	20,000
Dairies	2,500
Dischargers Under Permit	7,837

5: Central Valley Regional Board

The Central Valley Region is the State's largest. Thirty-eight of California's 58 counties are either completely or partially within its boundaries. Stretching down the heart of the State from the Oregon border to Los Angeles County, this Region has water quality problems as diverse as mining discharge, timber harvest activities, urban runoff, irrigated agriculture runoff, and petroleum refining.

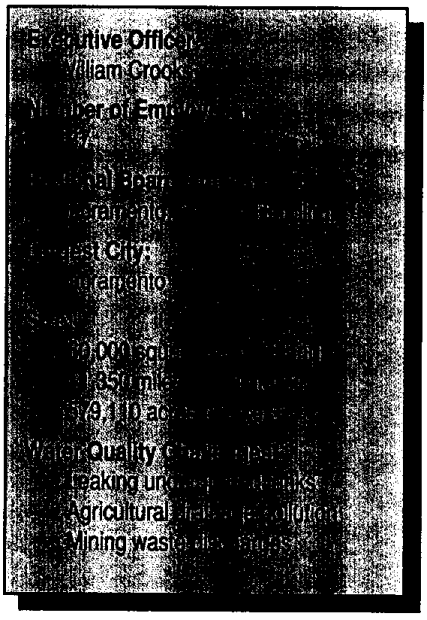


Eighty percent of the State's useable ground water is found in the Central Valley Region. Leaking underground fuel tanks in this Region numbered over 2,000 by mid-1990. Over 42,000 underground tanks are registered in the Region.

In 1990, to protect Sacramento River aquatic life from the effects of pesticide discharge from irrigation runoff, the Regional Board adopted performance goals to control five specific pesticides. The Regional Board also prohibited the use of molinate, thiobencarb, carbofuran, malathion and methyl parathion by 1991 unless Board-approved management practices are used when applying the pesticides. Board staff will continue to examine control efforts for these pesticides and will set specific water quality objectives for them by 1993.

In 1988 the Regional Board approved objectives for the San Joaquin River Basin to protect water from pollutants found in subsurface agricultural drainage. To meet the objectives, Board staff proposes a combination of drainage controls and practices.

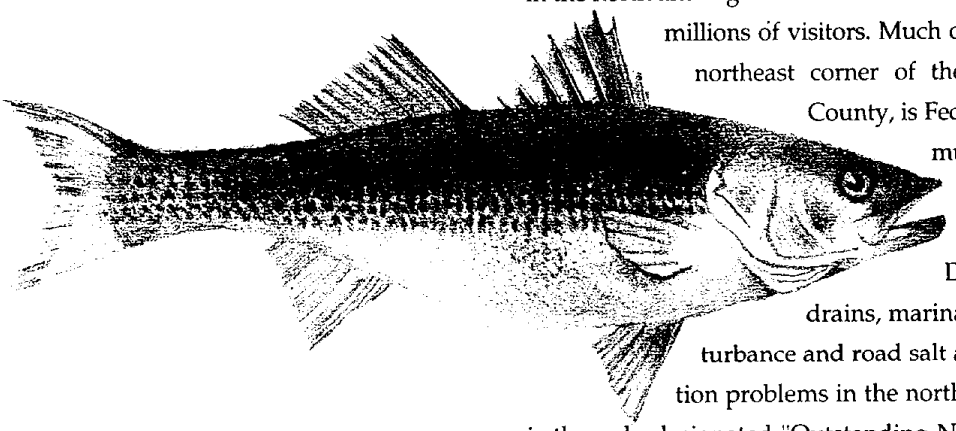
The continuing problem of nitrate contamination of shallow ground water in the Chico area due to extensive use of individual disposal systems led the Regional Board in 1988 to adopt orders prohibiting discharges from these systems and setting dates by which the prohibitions must be in effect. When taken to the State Board for approval, a review committee was set up to decide if enough evidence existed to support the prohibition. The committee concurred with Regional Board findings. Given the delay for committee review, dates were changed with prohibition of waste discharge from new septic systems banned after July 1, 1990 and for existing systems to July 1, 1995.



6: Lahontan Regional Board

Named for prehistoric Lake Lahontan, this Region's closed drainage basins are remnants of several ancient lake systems that include nationally important waters such as Mono Lake, Lake Tahoe and the Owens River system which provides drinking water for 10 million Southern Californians.

Although the Region's resident population is relatively small, the high Sierra in the north and high desert in the south provide recreational opportunities for millions of visitors. Much of the Region, which stretches from the northeast corner of the Oregon border to San Bernardino County, is Federally owned and Regional Board staff must coordinate planning and regulatory activities with Federal agencies and the military.



Domestic wastewater disposal, storm drains, marinas, golf courses, ski areas, wetland disturbance and road salt application all provide potential pollution problems in the northern section of the Region. Lake Tahoe is the only designated "Outstanding National Resource Water" in California. Significant Regional Board time is devoted to planning, regulation/enforcement, monitoring, and remedial project oversight to protect this lake's unique values.

In the southern part of the Region, a major concern is toxic cleanup at six military facilities. Another important task is regulating mining facilities, ranging from relatively small gold processing operations to large chemical manufacturing plants, such as U.S. Borax.

Conditions in the Lahontan Region are unsuitable for high density septic systems. The Regional Board works with local governments to implement a density limit on septic system discharges from both new and existing development.

Although there are localized problems due to naturally occurring high concentrations of salts, metals or radioactive elements, many of the Region's waters are of high natural quality. High elevation waters are poorly buffered and thus easily affected by acid rain. However, other pollution problems, such as heavy nutrient and pesticide levels, are virtually non-existent in most high Sierra lakes.

With water scarce in much of the Region, Regional Board staff is especially concerned with water quality-quantity relationships. Staff participate in the State Board's Mono Lake planning process and take action to prevent and clean up contamination of limited water supplies in the Mojave River Valley, Antelope Valley and other ground water basins.

Executive Officer:
Harold Singer

Number of Employees:
40

Regional Board Offices:
South Lake Tahoe, Victorville

Largest City:
Lancaster

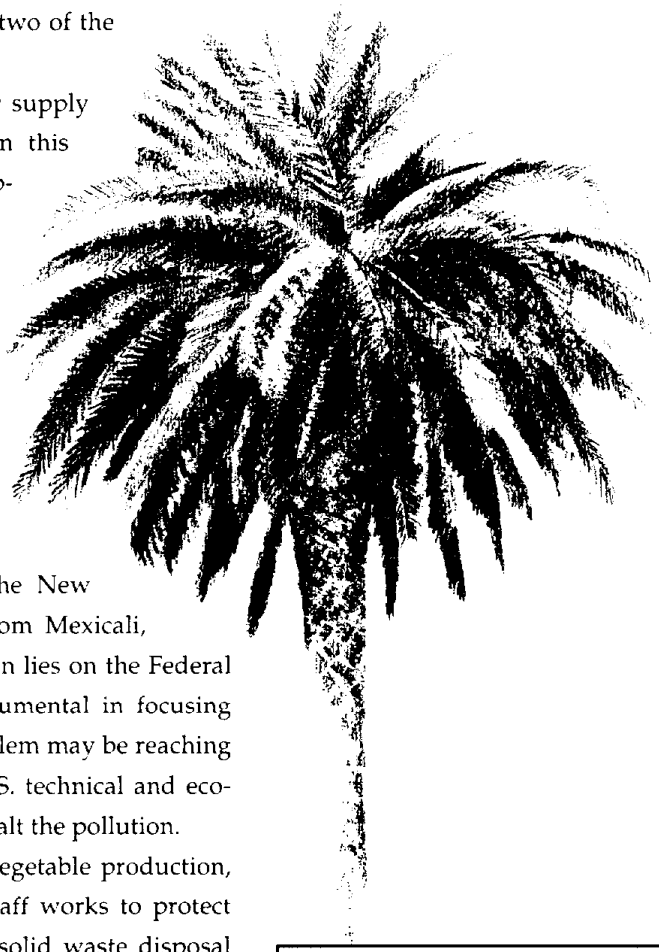
Size:
- 33,131 square miles
- 3,170 miles of streams
- 382,300 acres of lakes

Water Quality Challenges:
- Septic tank disposal
- Military facilities toxic waste cleanup
- Regulation of mining facilities

7: Colorado River Basin Regional Board

Water quality in the southeastern most section of California is under the jurisdiction of the Colorado River Basin Regional Board. Although it has the driest climate of the nine Regional Boards, it contains two of the State's largest and most important inland water bodies.

Foremost is the Colorado River, an essential water supply for much of the southwestern United States. Within this Region it provides water to over 700,000 acres of cropland. Its water quality is generally excellent, although beneficial uses are threatened with increasing salinity.



California's largest inland water body – the Salton Sea – supports a major Federal wildlife refuge inhabited by over 370 species of birds as well as an important sports fishery. Beneficial uses of the Sea are being threatened by increasing salinity, selenium, and eutrophication.

Perhaps the most polluted river in the nation, the New River, is located in this Region. Waste discharges from Mexicali, Mexico, are the source of the problem and its resolution lies on the Federal level, although Regional Board staff have been instrumental in focusing attention to the problem and initiating action. The problem may be reaching resolution as Mexico has recently agreed to accept U.S. technical and economic assistance to implement controls in Mexicali to halt the pollution.

The Coachella Valley, famous for its year-around vegetable production, depends heavily on ground water. Regional Board staff works to protect these aquifers from leaking underground fuel tanks, solid waste disposal sites, septic tanks, and nitrate from landscape and cropland fertilization.

Another concern for this Region is the increasing number of waste disposal sites being proposed for handling wastes from the Los Angeles and San Diego areas. Sites already existing or planned in the Region for out-of-Region wastes include sites for disposal of hazardous and low-level radioactive wastes, and sewage sludge.

Protecting its waters from the impacts of economically important agriculture, geothermal energy production, and mining is a continuing challenge to this Region.

Executive Officer:
Philip Gruenberg

Number of Employees:
30

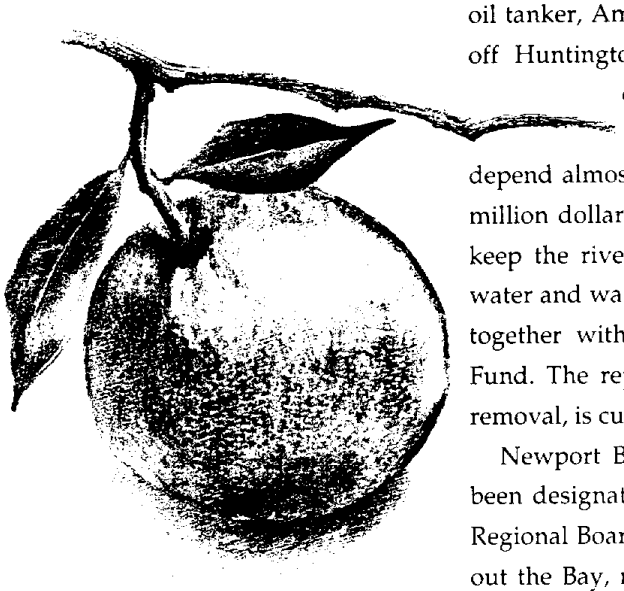
Regional Board Office:
Palm Desert

Largest City:
Palm Springs

Size:
- 20,000 square miles of land
- 900 miles of streams
- 250,000 acres of lakes

Water Quality Challenges:
- New River pollution from Mexicali waste
- Increasing salinity in Salton Sea
- Waste disposal from Los Angeles and San Diego areas

8: Santa Ana Regional Board



The smallest Region, land-wise, is also the fastest growing and one of the most densely populated, with over four million people. The water quality story receiving widest media attention occurred in February 1990 when the oil tanker, American Trader, spilled 380,000 gallons of oil in coastal waters off Huntington Beach. Regional Board staff assisted other agencies in cleanup operations aided by hundreds of area residents.

The Santa Ana River whose dry-weather flows depend almost entirely on wastewater discharges, has been the center of a million dollar study examining nitrogen management measures needed to keep the river in compliance with water quality objectives. Sixteen local water and wastewater management agencies contributed funds to the study together with $100,000 from the State Board's Cleanup and Abatement Fund. The report, which spells out all alternatives available for nitrogen removal, is currently in draft status.

Newport Bay, the largest pleasure boat harbor on the West Coast has been designated a "no-discharge" area for vessel sanitary wastes. Under a Regional Board program, boat wastewater pumpouts are installed throughout the Bay, making the pumpout process easily available to boaters who might otherwise discharge their wastewater directly into the Bay.

1988 legislation mandated preparation of a Newport Bay report addressing water quality issues and a possible action plan. Regional Board staff and involved Orange County agencies participated in the report which has prompted formation of a Newport Bay Coordinating Council to better facilitate a Clean Water Strategy for the Bay.

With the highest concentration of dairy animals in the world, Regional Board staff constantly monitors its dairy facilities to protect Chino Basin ground water from further nitrate contamination by dairy wastes. In November 1989, Regional Board staff held the first in a series of workshops for dairy owners to discuss water quality problems arising from past and present dairy waste disposal practices. A dairy waste regulatory strategy has been drafted which, when completed, will be included in the Region's Basin Plan. A task force of Regional Board, dairy industry, and local agency representatives, has been formed to implement a cleanup strategy for the heavily impacted Chino ground water basin.

Executive Officer:
Gerard Thibeault

Number of Employees:
45

Regional Board Office:
Riverside

Largest City:
Anaheim

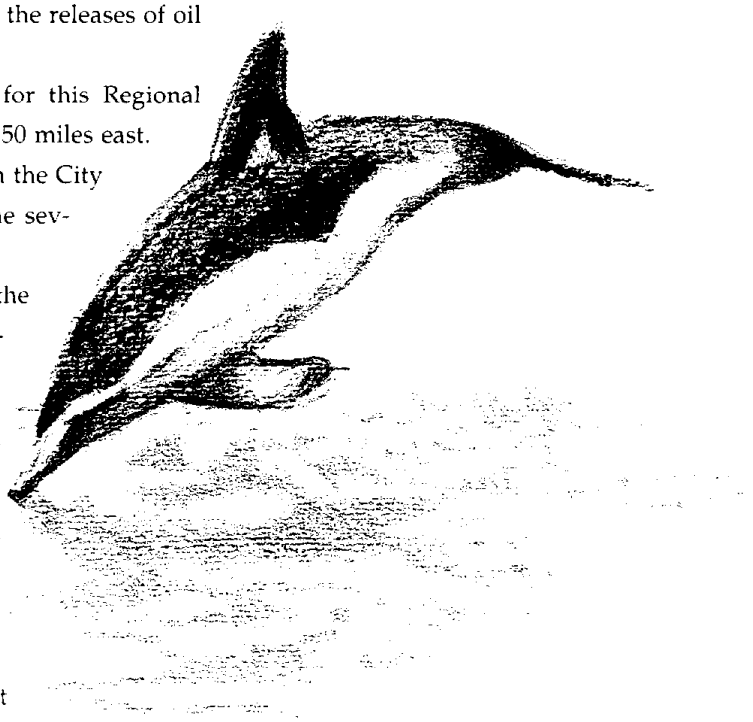
Size:
- 2,800 square miles of land
- 460 miles of streams
- 21,090 acres of lakes
- 24 miles of coastline

Water Quality Challenges:
- Leaking underground tanks
- Dairy waste
- Contamination of ground water
- Newport Bay pollution
- Santa Ana River water quality objectives

9: San Diego Regional Board

A major media event for the San Diego Regional Board occurred in August 1989 when the ill-fated oil tanker, the Exxon Valdez, was towed into San Diego Bay for repairs. Regional Board staff monitored for the releases of oil from the tanker as it entered the Bay.

Monitoring the Valdez was only one responsibility for this Regional Board which stretches from Laguna Beach to Mexico and 50 miles east. The Region's mild climate attracts a large population with the City of San Diego the second largest city in California and the seventh largest in the nation.



After more than 10 years, controversy continues over the City of San Diego's non-compliance with secondary treatment required for its sewage treatment facilities by the Federal Clean Water Act. Although the City of San Diego tentatively agreed in a consent decree with the Regional Board and EPA to provide secondary treatment facilities by the year 2003 and to achieve compliance with the State Ocean Plan by 1992, the U.S. Federal court has not yet approved the consent decree.

In June, 1990, an historic and long-awaited agreement was signed between the U.S. and Mexico for construction of a $200 million binational sewage treatment facility and long, deep ocean outfall to receive wastewater from the City of Tijuana. For over 50 years, raw sewage flows have severely affected water quality and posed a chronic threat to public health. The proposed binational treatment plant and ocean outfall, to be completed by 1996, will be built with a combination of funds from Mexico and the U.S., with U.S. funds to include Federal, State and local contributions.

Leaking underground tanks continue to challenge Regional Board staff. Of the estimated 10,000 tanks in San Diego County, some 30 percent are leaking.

The Regional Board has promoted an ambitious and much-needed water reclamation program for the Region. A number of sewering agencies planning large scale water reuse are working toward using natural watercourses to convey the reclaimed water to potential downstream users. In many of these streams, the instream beneficial uses will be enhanced by reclaimed water. These streams will also serve as disposal options for the winter season when demand for reclaimed water is considerably reduced.

Executive Officer:
Ladin Delaney (retired March 1990)
Arthur Coe (appointed Executive Officer July 1990)

Number of Employees:
34

Regional Board Office:
San Diego

Largest City:
San Diego

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

Water Quality Challenges:
- Raw sewage from Tijuana
- San Diego Bay pollution
- Leaking underground tanks
- Nonpoint source pollution impacts

both north and south San Francisco Bay communities and within the Delta boundaries to four cities, 515,000 acres of farmland, and many industries.

Over the years, the State Board has issued several major water right decisions addressing the Bay/Delta's most pressing problems of water quality and quantity. Decision 1485, adopted in 1978, is based on the principle that Delta water users are entitled to water quality at least as good as they would have without State or Federal water projects.

To consider new hydrological and ecological information needed to update long-range protection for the Delta and Bay, the State Board began a multi-year hearing in 1987. For six months testimony was taken from a broad field of water, fishery and wildlife experts.

The testimony resulted in issuance of two draft documents: a Pollutant Policy Document (PPD) and a Water Quality Control Plan (Plan). The PPD is to be used by the San Francisco and Central Valley Regional Boards as policy direction for revising their basin plans. The PPD was formally adopted by the State Board in June 1990.

The original draft Plan distributed in November 1988 was withdrawn two months later because of objections from factions in California's water community. A revised draft was issued in June 1990 with hearings held in August throughout the State. Adoption of the final Plan is targeted for spring 1991.

Once the Plan is adopted, the State Board will move to the "scoping phase" of the proceedings where alternatives to meet the Plan's objectives will be studied. These will include legislative action, proposed physical facilities, conservation, reclamation and conjunctive use potentials, water right permit manipulation, along with possible actions by other agencies, such as the State Department of Water Resources and the Federal Bureau of Reclamation.

Next will come the water right phase of the proceedings where evidence will be taken on water quantity and quality needs identified in the Plan. At this point water right holders may be required to share the responsibility of meeting the Plans' objectives by modifying their water right permits. The water right decision to follow will spell out flow requirements needed to protect the Bay and Delta. Present plans point to adoption of a new water right decision by late 1992.

The Drought

One of the most important stories in California from 1988-90 was the continuing drought.

Drought-spurred activities of the State Board included:

Participation in a 20-member Drought Task Force of Federal and State agencies to exchange information and coordinate drought-related activities;

Sponsorship of a Drought Hearing in 1988 taking information from over 30 Federal, State and local agencies as to water availability and conservation measures needed;

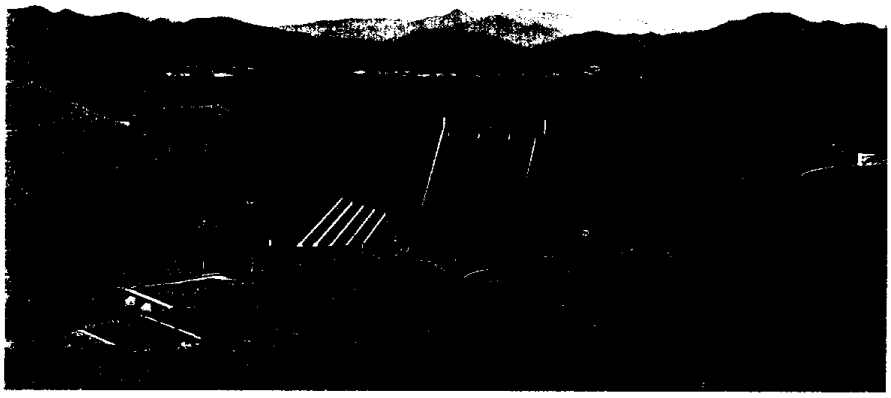
Notification to water diverters of the drought, alerting them to the possible curtailment of water use and to inform them of compliance inspections. This was done in both 1988 and 1990. Those notified were cautioned to divert only within their legal rights and to practice water conservation.

Compliance inspections to identify illegal diverters followed the above notifications. Staff was redirected to compliance inspections during the irrigation season to enforce conditions of water rights permits or licenses. Between July 1, 1988 and June 30, 1990 compliance inspections totaled 506.

Shasta Dam

Water quality and quantity demands meet head on during water short years. A prime example in the 1988-90 span concerned Shasta Dam, the cornerstone of the Federal government's Central Valley Project and largest dam in the State.

Operated by the Bureau of Reclamation, the dam is drawn down in dry years to meet water contract demands of Central Valley farmers. When dam levels are lowered, the resulting warm water proves lethal to the winter chinook salmon run, now an endangered species numbering less than 1,000.



To mitigate the problem, the Bureau has attempted to draw cooler water from lower levels of the reservoir, even though this has reduced hydroelectric revenue by over six million dollars.

In 1988, the Central Valley Regional Water Quality Control Board ordered the Bureau to modify the dam so cooler water could routinely be released to protect the salmon. The Bureau appealed to the State Board to address the issue under the Bureau's water right permit rather than as a pollution violation as the Regional Board had done.

Following almost three years of hearings and reports on the matter, the State Board in May 1990 ordered the Bureau to continue its release of the cool water, making it a condition of the Bureau's permit to dam and distribute water.

To continue these releases while generating hydroelectricity, the Bureau has been ordered to install a temperature control device to allow water to be drawn from various levels of the reservoir, allowing proper water temperature for fish protection and continued power generation.

In June 1990 the Bureau filed suit against the State Board claiming the Board had failed to comply with environmental review procedures before amending the Bureau's water right permit.

The American River Review

The lower American River is a stretch of exceptionally high quality water which provides drinking water to portions of Sacramento County and is a potential water source for the East Bay Municipal Utility District (EBMUD) and San Joaquin County.

In 1984 the Alameda County Superior Court appointed the State Board as referee in the **Environmental Defense Fund v. EBMUD** lawsuit, a years-long legal battle to decide if EBMUD should be allowed to divert American River water via the Folsom South Canal. The Board's Report of Referee was completed in 1988, and, although concurring with diversion amounts allowed EBMUD, the State Board concluded that existing flows in the lower American do not provide adequate levels of protection for its many uses. The Board then determined to review American River water rights held by the Bureau of Reclamation and the City of Sacramento.

Since the water rights review workplan was adopted in November 1988, significant new developments have occurred, including adoption of a Water Master Plan for Sacramento County and the application by San Joaquin County to divert over 300,000 acre-feet annually from the American.

The present schedule calls for establishment of technical advisory committees, a water right hearing and adoption of an interim order with adoption of the final order scheduled for November 1992.

Mono Lake Update

The City of Los Angeles' water diversions from the Mono Lake Basin have been the subject of litigation since 1979. The lawsuits charge that diversions have lowered the water level of Mono Lake to the injury of various bird species and that diversions from Mono Lake tributaries have injured or eliminated fisheries in these streams. The lawsuits were coordinated for trial in 1989 before the El Dorado County Superior Court.

That same year Mono Basin water diversions became the subject of a State Board review directed at amending Los Angeles' water right licenses. As part of that review, the State Board is preparing an Environmental Impact Report on alternative methods of regulating the diversions.

The Superior Court entered preliminary injunctions requiring specified flows in each of the four tributaries and required Los Angeles to stop diverting water from the Mono Basin any time the Lake's water level is below 6,377 feet. Preliminary injunctions will remain in effect until completion of the State Board proceedings or September 1, 1993, whichever comes first.

Rock Creek... and the Supreme Court

A decision reaching far beyond the center of controversy at tiny Rock Creek near Placerville (El Dorado County), the U.S. Supreme Court unanimously upheld a previous ruling giving the Federal government ultimate authority over hydroelectric projects.

The State of California v. Federal Energy Regulatory Commission (FERC) issued May 1990, the court said the State Board cannot impose flow conditions on the Rock Creek power plant that are any stricter than those required in the plant's FERC license. In 1987, the State Board had determined that it would require more than three times the amount of water specified in the FERC license to maintain the stream's fishery.

California had been joined in the case by the 49 other states in an effort to declare state jurisdiction over the hundreds of projects lining rivers throughout the U.S. Presently California has 492 FERC-licensed projects which, if the State has set standards stricter than those in the projects' FERC licenses, could be affected.

A joint resolution by the California Senate and Assembly petitioning President Bush and the Congress to enact legislation that would restore State control over hydroelectric projects in California was prepared and issued. Similar federal legislation is also in progress, including measures sponsored by the Idaho delegation and California Congressman George Miller.

ENFORCEMENT

A water quality or quantity protection program is only as effective as its enforcement. California has one of the strongest water quality protection programs in the country. Enforcement actions range from administrative letters that notify dischargers of non-compliance to court referrals of the discharger for criminal prosecution and civil liability of up to $25,000 a day.

Water Quality

When a violation is discovered that threatens water quality, the Regional Boards determine the appropriate enforcement actions. Violations are typically discovered through citizens' complaints, reports of spills, dischargers' self monitoring reports, unannounced compliance inspections and water quality monitoring.

Enforcement actions are based on the nature of the violation, the discharger's record and public hearing evidence. Water quality enforcement tools include cleanup and abatement orders, cease and desist orders and imposition of administrative civil liabilities (ACLs).

Since 1985, Regional Boards can impose ACLs ranging from $10 per gallon of discharge and $1,000 to $5,000 per day of violation.

The Regional Boards issue a complaint against a discharger and set the amount of administrative civil liability. The discharger can agree to pay the fine immediately or appear before the full Regional Board at a hearing.

The money collected from the dischargers is deposited into the State Water Pollution Cleanup and Abatement Account to reimburse cleanup costs.

Case in Point: Shell Oil Spill

In April 1988, more than 400,000 gallons of crude oil were released from the Shell Oil Company refinery near Martinez into the Carquinez Strait. San Francisco Bay Regional Water Quality Control Board staff were among the first on the scene. The oil was skimmed from the Strait within several weeks of the accident. However, surrounding marsh systems were severely damaged.

The Regional Board determined that workers at Shell had left levee drain valves open during periods of rainfall. This practice violated Shell's waste discharge requirements and prohibitions contained in the Regional Board's Basin Plan.

California law allows the Regional Boards to impose ACLs of up to $10 for each gallon of waste discharged and $5,000 for each day of violation. However, since several State agencies wanted to recover damages and could not under the ACL process, ACLs did not appear to be the best approach.

At the request of the Regional Board and the other State agencies, the State Attorney General filed suit against Shell.

On November 29, 1989, a historic settlement was reached. Shell agreed to pay over $19 million in damages. Over $11 million would be used to compensate for natural resource damage and to restore and enhance the environment affected by the spill. Shell also paid penalties to the State of California, the United States, and Contra Costa and Solano Counties in the amount of $4.65 million. The State Board has collected over $2.1 million, of which over $1.4 million has been deposited into the Cleanup and Abatement Account.

This settlement was in addition to $8 million Shell spent on cleanup and $2 million spent on spill studies.

Water Rights

It is the State Board's responsibility to assure that California's waters are put to maximum beneficial use. This is especially true during such dry water years as experienced during 1988-1990. Within this timeframe enforcement actions to curtail illegal water diversions, require compliance with permit and license conditions, and prevent waste or unreasonable use of water increased significantly.

Violators of permit or license conditions may have them revoked and thus lose their water rights; cease and desist orders may be issued directing violators to take necessary compliance steps within a closely monitored timeframe. Further, the Board may also refer violators to the courts for injunctions against further violations and may seek court-imposed penalties of up to $1,000 per day for continued violation.

The prospect of such enforcement actions is often sufficient incentive for violators to meet compliance requirements and preserve their water rights. The Board has seldom found it necessary to adopt cease and desist orders or pursue court referrals.

Field inspections play a key role in water right enforcement processes.

Case in Point: Water Exchange Contracts Required

Each year a compliance program is set up to inspect as many water users as possible to determine if the users are in compliance with their water rights requirements. During 1988-90, drought conditions significantly increased the number of compliance inspections.

When dry year conditions occur, water users in critical areas are notified that a shortage of water may occur and to prepare for diversions from alternate sources, such as ground water wells or purchased water. If the water shortage becomes critical, as it did in 1990, they are notified that there is no water available for use under their permits or licenses. They are warned that they cannot continue to divert water unless they have an alternate source.

During the 1988 Dry Year Program, a "Notice of Unavailability of Water" was sent to all water users within the Sacramento and San Joaquin watersheds and Delta channels. Inspections were made throughout the state to check compliance. Two areas where water users were found to be in violation were the Colusa Basin Drain and the Sutter Bypass-Butte slough water system. The State Board notified the water users of their violations, and directed them to make arrangements for the U.S. Bureau of Reclamation (Bureau) to be compensated for the water taken. Water users were also encouraged to seek alternative sources of water for future dry years.

As a result of the State Board's enforcement action, several water users within the Sutter Bypass-Butte Slough system created a new water users association. From this association, the Sutter-Butte Mutual Water Company (Sutter-Butte) was formed. Since its formation in 1989, Sutter-Butte has contracted with the Bureau for the summer months during 1989 and 1990, guaranteeing its members 100 percent delivery in 1989 and 50 percent in 1990. The long-term plan is for Sutter-Butte to obtain a permanent contract with the Bureau.

Sutter-Butte was patterned after the Colusa Drain Mutual Water Company which also contracts with the Bureau.

FUNDING

Historically, California taxpayers have paid for most of the State Board's programs through General Fund financing. Of the State Board's $104 million budget, $40 million is General Fund money. The remaining money comes from Federal, special, and periodic fee-based funds. With the general trend toward less Federal funding, and an over-burdened General Fund, the Board has been searching for a more permanent funding source. That search has pointed to predictable self-supporting annual fee assessments.

In Search of New Funding

Programs entirely or partially fee-based include the Toxic Pits and Underground Storage Tank Programs. However, the State Board's water quality and water right permitting programs, the traditional heart of the regulatory framework and its most expensive aspect, has relied on the State's General Fund.

In 1989, the State Board initiated a new annual fee assessment program for its water quality permits program. The annual waste discharge fee assessment program will assist the Board toward its goal of a permanent, reliable funding base for California's water quality program.

State Revolving Fund

Since 1972 almost every city in California has received a grant for improvement or construction of sewage treatment plants. Federal funding for these projects will soon end. At the same time, the State Board estimates that approximately $8.5 billion will be needed to meet the State's wastewater needs by the year 2008.

The reauthorized Clean Water Act of 1987 converted the grant program to the State Revolving Fund (SRF) Loan Program. The SRF has initially been capitalized by State funds and Federal grants through 1994.

Low interest SRF loans are available for planning, design, and construction of publicly owned wastewater treatment work projects, storm drainage projects, implementation of nonpoint source correction projects, and development of estuary conservation and management plans. Special State grant funds will also be available to small, needy communities for pollution studies and construction of wastewater treatment facilities.

Water Quality Planning

One percent of Clean Water Grant funds are allocated to water quality planning projects addressing a wide variety of surface and groundwater quality problems. For California, Federal funds amounting to about $1.6 million per year pay up to 75 percent of a project's eligible costs.

The goal of these projects is to determine the nature, cause, and scope of water quality problems, and identify practical solutions. Thus far, 48 of the 86 water quality planning projects funded from this program have been completed.

During 1988 through 1990, the State Board awarded over $3.1 million toward 24 new projects for threatened ground and surface water bodies. Projects included bays and estuaries cleanup in San Diego and San Francisco; a nonpoint source bacteria study in Santa Barbara; ground water pollution control projects in Santa Cruz and San Joaquin Counties; and nonpoint source pollution projects in Sacramento and Santa Rosa.

Water Conservation and Water Quality Bond Law of 1986

The Water Conservation and Water Quality Bond Law of 1986 provides $75 million in low-interest loans for construction of agricultural drainage water management projects. Loans may fund up to 100 percent of project design and construction costs of up to $20 million per eligible project. In addition, loans of up to $100,000 may be issued to conduct feasibility studies for potentially eligible projects.

By mid 1990, ten projects totalling $23 million had been approved for funding. They included three disposal projects for deep well injection facilities and evaporation ponds in the Central Valley and Imperial Valley; two cleanup projects for ground water contaminated by past agricultural practices in San Bernardino and Riverside Counties; and one drainage water management project in Yolo County.

Clean Water and Water Conservation Bond Law of 1978

The Clean Water and Water Conservation Bond Law of 1978 created the State Assistance Program (SAP) and authorizes the State Board to provide up to $50 million to municipalities for projects to control water pollution or conserve and reclaim water. Types of projects funded include removal of nitrates from drinking water, abatement of seawater intrusion and ground water overdraft, and on-farm irrigation drainage water management.

Of the original 28 projects funded in 1982, 25 projects have been completed and $2 million identified as project savings. These savings were used to augment or fund new projects such as erosion and sediment control in the Lake Tahoe Basin, seawater intrusion control in the Pajaro River Valley Groundwater Basin (Santa Cruz County) and improved irrigation practices in the San Joaquin River Basin. Findings from these projects will contribute to both water quality control and water conservation efforts of the State Board.

Cleanup and Abatement Account

The State Water Pollution Cleanup and Abatement Account (Account) funds the cleanup, abatement, or remedial work required to remedy a significant unforeseen water pollution problem. If a responsible party is identified,the Regional Boards have the authority to collect administrative civil liabilities (ACLs) up to $10 per gallon of discharge and $5,000 per day of violation. If ACLs will not appropriately address the damages and cleanup costs, the responsible party may face criminal prosecution and civil liabilities of up to $25,000 per day. In either case, monies paid by the discharger are placed back into the Account to help finance future cleanup efforts.

Over $3 million was allocated from July 1988 to June 1990 for such projects as the investigation of the environmental damage caused by the Shell Oil Refinery spill in Martinez and the alleviation of the discharge of untreated sewage from Mexico to the Tijuana River in San Diego County.

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