COMMENTS

Section 303 Of The Clean Water Act — Will It Hold Water In The Delta?

INTRODUCTION

Correspondence between the United States Environmental Protection Agency (EPA) and the State Water Resources Control Board (Board) over the last fourteen years reveals intractability on the part of the state and inaction on the part of the EPA—all to the severe detriment of the public trust resources of the Sacramento-San Joaquin Delta (Delta). The following correspondence is on file at the San Joaquin College of Law, Law Review Office:

Letter from Paul De Falco, Jr., Regional Administrator, EPA, Region IX, to Carla M. Bard, Chairwoman, State Water Resources Control Board (hereafter SWRCB) (Aug. 28, 1980);

Letter from Carla M. Bard, Chairwoman, SWRCB, to Sheila M. Prindiville, Acting Regional Administrator, EPA, Region IX (Nov. 21, 1980);

Letter from Raymond Walsh, Interim Executive Director, SWRCB, to Judith E. Ayres, Regional Administrator, EPA, Region IX (June 23, 1986);

Letter from Judith E. Ayres, Regional Administrator, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (June 29, 1987);

Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Feb. 23, 1990);

Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Sept. 3, 1991);

Letter from W. Don Maughan, Chairman, SWRCB, to Daniel W. McGovern, Regional Administrator, EPA, Region IX (Feb. 10, 1992);

Letter from Harry Seraydarian, Director, Water Management Division, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Aug. 24, 1992);

Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to Eliseo Samaniego, Acting Chairman, SWRCB (Jan. 13, 1993).
promulgation of standards, as required under the Federal Clean Water Act (CWA or the Act).²

Under the Act, states are to adopt designated uses for water and set standards which will adequately protect the most sensitive of those uses.³ California has adopted categories of beneficial uses (analogous to the Act's designated uses) including fish and wildlife, agricultural, and municipal/industrial.⁴ Protection of the environment (habitat) is a beneficial use.⁵ The EPA has determined that state standards do not protect the Delta environment from saltwater intrusion (from the ocean and bays) and other injuries and has, since about 1980, “threatened” to step in and set standards for California. It is empowered, indeed required, to do so under section 303.⁶ So far, the EPA has not acted. Although the agency says it is working on standards for the Delta, no deadline exists.⁷ California has adopted the 1991 Water Quality Control Plan (Bay/Delta Plan)⁸ deemed inadequate by EPA but because

² 33 U.S.C.S. §§ 1251-1387 (Law. Co-op. 1986 & Supp. 1993), (CWA §§ 101 et seq.) is known both as the Federal Water Pollution Control Act and the Clean Water Act. The name Clean Water Act generally refers to the Federal Water Pollution Control Act amendments of 1972. This comment follows the popular practice of referring to the Clean Water Act section numbers.


⁴ California's beneficial uses include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves, CAL. WATER CODE § 13050(f) (West 1992 & Supp. 1993).

⁵ SWRCB, TECHNICAL APPENDIX, WATER QUALITY CONTROL PLAN FOR SALINITY, SAN FRANCISCO BAY/SACRAMENTO - SAN JOAQUIN DELTA ESTUARY, 91-16WR (May 1991) (hereinafter TECHNICAL APPENDIX, BAY/DELTA PLAN), at 4.0-8, 4.0-10.

⁶ 33 U.S.C.S. §§ 1313(c)(3) and (4) (Law. Co-op. 1987 & Supp. 1993); CWA §§ 303(c)(3) and (4). Pursuant to this section, the (EPA) Administrator must either approve the state's water quality standards within 60 days of submission, or disapprove within 90 days of submission and specify what changes are necessary to meet the requirements of the Act. If the state has not adopted the changes within another 90 days, the Administrator is to promptly prepare and publish proposed regulations. Not later than 90 days after the proposed standards are published, the Administrator is to promulgate the revised or new standard unless the state has adopted standards which are in accordance with the Act.

⁷ Generally, correspondence supra note 1; Russell Clemings, Suit filed over delta water rules, FRESNO BEE, April 16, 1993, at B1. But see Postscript to this comment.

⁸ SWRCB, WATER QUALITY CONTROL PLAN FOR SALINITY, SAN FRANCISCO BAY/SACRAMENTO - SAN JOAQUIN DELTA ESTUARY, 91-15WR (May 1991) (hereinafter BAY/DELTA PLAN). Pursuant to 40 C.F.R. § 131.21(c) (1992), a state's disapproved water quality standards remain in effect until the state adopts adequate standards or such are promulgated by the EPA.
no corresponding water rights decision has been adopted, this plan has not been implemented. Water quality standards currently in force for the Delta are those set by the 1978 Water Quality Control Plan (Delta Plan).\footnote{SWRCB, \textit{Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh} (August, 1978) (hereinafter Delta Plan).}

When the EPA does issue standards, the state almost surely will not comply. Water quality standards advocated by the EPA since 1978 would require that less water be diverted and more water be allowed to flow through the Delta. Because California has sole authority to decide water rights issues, it asserts that it can ignore EPA standards affecting those rights.\footnote{33 U.S.C.S. § 1251(g) (Law. Co-op. 1987); CWA § 101(g); generally, correspondence, \textit{supra} note 1.} This assertion does not relieve the conflict, however. As flow is decreased, primarily through diversion, dissolved oxygen content decreases, and saltwater intrusion and temperature increase, degrading the water quality on a grand scale. Because in these respects, increased flow is increased quality, it is not possible to separate decisions affecting water quality from those affecting water quantity.

The problem resembles the ongoing struggle by states to assert authority in areas where the federal government claims supremacy, yet the conflict here is unique. The CWA under which the EPA could act to set water quality standards does not contain any enforcement authority for implementation of the standards. The legal issue is whether EPA authority to set water quality standards can usurp California’s authority to make all water rights decisions within the state.

\section{Scope}

This comment is concerned with salinity, temperature, and dissolved oxygen standards, and related flow and constraints on diversion. Other forms of pollution are not discussed.\footnote{While the Board formerly had responsibility for other pollutants, the Department of Health Services now has charge of toxic discharges and the Department of Food and Agriculture is charged with controlling pesticide use.} Some statistics apply to the Delta, while some apply to the greater San Francisco Bay/Sacramento-San Joaquin Delta Estuary area. Where possible, only Delta statistics were used. If separation was not possible, the reader is alerted to the fact that the information applies to the Bay/Delta Estuary.
II. BACKGROUND

California's water law is based primarily on a "dual" system including both riparian and prior appropriation doctrines. Upon statehood having been attained, the state legislature adopted riparianism which was the common law of England. This doctrine confers on the owner of land the right to divert and use water on that land water flowing by or through it. The right does not depend on the extent of use or priority in time of diversion. All riparians on a stream are vested with common ownership so that each must reduce use proportionately during water shortages.

The appropriation doctrine grew out of the gold rush and mining in California when it was common for miners to divert water some distance to work their claims. An appropriative right is perfected through actual diversion and reasonable or beneficial use (although now, in California, the Board must grant a permit for appropriation, excepting only prescriptive rights which still must be confirmed by a permit issued by the Board). This doctrine is subject to the rule, "first in time, first in right." During times of shortage, riparians are entitled to fulfill all of their needs before appropriators may use any of the water. Between appropriators, priority in time governs entitlement. A senior appropriator is entitled to fulfill all of his or her needs before a junior appropriator is entitled to any water.

Area of origin, or watershed, rights are a limitation on the appropriation doctrine developed to protect an area at the source of the water from being completely deprived of that water, as was the Owens Valley in the early part of this century. This doctrine provides that the area of origin will be able to recall as much of its water as is needed to meet

14 But pursuant to California's Constitution the use must be reasonable, CAL. CONST. art. X, § 2 (1928, amended 1976).
15 227 Cal. Rptr. at 168.
16 The entire Owens River was tapped by Los Angeles and diverted to that city through an aqueduct completed in 1913. Owens Lake dried up completely and the farming and economic bases of the valley were ruined. Most residents were forced to move away. HUNDLEY, supra note 12, at 139-168.
The two largest diverters holding appropriative rights to Delta tributaries are the State Water Project (SWP) operated by the California Department of Water Resources, and the Central Valley Project (CVP) operated by the U.S. Bureau of Reclamation. These are known as "the projects." The projects divert water which is used for agricultural, municipal, and industrial uses—by far the greatest amount goes to agriculture. In protecting their interests, farmers have brought considerable political pressure to bear on the Board in opposition to the EPA's attempts at improving water quality.

The inflow to the Delta is from two major sources: the Sacramento and San Joaquin Rivers. The water naturally flowing in these two rivers and their tributaries is joined by water imported from the Trinity River in Northern California by the CVP, and water stored in upstream reservoirs also part of the CVP. This water continues through the Delta to Suisun Bay, San Pablo Bay, San Francisco Bay, and on into the Pacific Ocean.

Diversion of much of the Delta's annual inflow has resulted in an intrusion of saltwater from the bays and ocean, which poisons, damages, and kills Delta biota, and contaminates water used for drinking, irrigation, and municipal/industrial purposes. Salinity was noted as a problem in the Delta as long ago as the early 1930's. In addition to intrusion, salt is loaded into the San Joaquin River by agricultural runoff. Low water flows resulting from diversion also cause high water temperatures, which are stressful and ultimately lethal to fish. Low dissolved oxygen content in the water has blocked migration for

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17 227 Cal. Rptr. at 193.


20 Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Sept. 3, 1991) supra note 1, at 7; Letter from W. Don Maughan, Chairman, SWRCB, to Daniel W. McGovern, Regional Administrator, EPA, Region IX (Feb. 10, 1992), supra note 1, at 7.

21 E.g., chinook salmon require temperatures below 60 degrees F. for spawning, survival, and growth of eggs and fry. When temperatures rise above 60 degrees, the virulence of many diseases affecting the salmon is increased. Sublethal temperatures can cause increased susceptibility to disease, predation, and entrainment. In addition, food supplies for the salmon have been reduced, resulting in a lowered tolerance of elevated temperatures. TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 5.3-1.
spawning. The warmer the water, the lower the dissolved oxygens, which are needed for decomposition of organic material. Water diversion by the projects, and other Delta users, also contributes to the "reverse flow" phenomenon. Reverse flows occur when insufficient outflow causes water in Delta channels and the San Joaquin River to flow upstream, resulting in disorientation and mortality of fish. These ills contribute to the poor water quality which is decimating the Delta's delicate ecosystem.

The present pollution problems in the Delta area, although certainly not caused exclusively by water diversion, are in large part the result of the pumping and appropriation of vast amounts of water. Currently more than 16 million acre feet (maf) per year are diverted. In some years, this is more than 50% of the annual average inflow to the Delta. The CVP and SWP together divert a total of nearly 10 maf from the Estuary watershed area; 85% going to agriculture with the remaining 15% used for municipal/industrial purposes.

California farmers and ranchers have, since the projects' earliest days, received accommodation from the SWP and CVP. In addition to lower rates from the projects, water for San Joaquin Valley farms has

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22 Bay/Delta Plan, supra note 8, at 5-23.
24 San Francisco Estuary Project, Comprehensive Conservation and Management Plan, June 1993 (hereinafter CCMP), at 29. San Francisco Estuary Project (hereinafter SFEP) is an environmental management project of over 150 members jointly sponsored by US EPA, Region IX and the State of California. Members represent federal, state, and local agencies, environmental groups, and the private sector. The CCMP was prepared in response to CWA § 320 directing that such a plan be prepared for each estuary in the National Estuary Program, created by Congress in 1987. The Bay/Delta Estuary, being the largest estuarine system on the west coast of the United States (CCMP, at 1), is subject to the requirement of a plan. SFEP was established by EPA in 1987 to respond to this directive.
25 An acre foot of water is the amount which would cover one acre one foot deep, or, approximately 326,000 gallons. The typical California family of five uses an acre foot of water in and around the home each year, CCMP, supra note 24, at B-1.
26 Id. at 13.
27 Id.
28 In late 1990, agricultural rates for water ranged from $2.50 to $19.31 per acre foot from the CVP, and from $22.00 to $47.00 per acre foot from the SWP. The Metropolitan Water District, a municipal/industrial user in Southern California paid $233.00 per acre foot for its water. Hundley, supra note 12, at 385.
been heavily subsidized by users in Southern California cities. For many years while Southern California's Metropolitan Water District (MWD) did not need SWP water, it contracted for and purchased it to preserve future rights. Then, forming an alliance with San Joaquin Valley agribusiness, the MWD sold to farmers who refused to pay more than their reduced rate, resulting in huge subsidies to the farmers. Further, due to federal winking at noncompliance with the Reclamation Act, this cheap water was available to all farms regardless of size. Initially, no holdings over 160 acres, and later 960 acres, were to receive subsidized federal water, the idea being to encourage and promote small family farms. These acreage restrictions were circumvented in many ways and never enforced.

Despite the government's attempt to populate the West by increasing the appeal of family farming, most Sacramento and San Joaquin Valley land has been held by a few powerful landowners. A pattern begun in the early 1900's continues to the present day. By the early 1980's, although two-thirds of California's farms were one hundred acres or less, 80% of the total farmland was in holdings of over one thousand acres, and 10% of the farms accounted for 75% of production and income.

Before its construction, proponents of the SWP stated that the water would not be used to develop new crops, only to irrigate existing crops.

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29 Generally, Hundley, supra note 12. Other substantial elements of subsidy are referred to in United States v. Tulare Lake Canal Co., 535 F.2d 1093, 1120-1121 and n.103, 1120 (9th Cir. 1976).
31 Generally, Hundley, supra note 12.
32 Id.; United States v. Tulare Lake Canal Co., 535 F.2d 1093, 1119-1120 (9th Cir. 1976).
33 Generally, Hundley, supra note 12.
34 E.g., when the SWP was being contemplated, an area on the valley's west side which stood to benefit, contained some of the largest corporate landholdings in the United States: Standard Oil with 89,810 acres (94% irrigable); Kern County Land Company, 223,534 acres (99% irrigable); Buena Vista Associates, 25,254 acres (100% irrigable); Belridge Oil, 24,627 acres (100% irrigable); Tidewater Oil, 23,009 acres (99% irrigable); General Petroleum, 16,619 acres (99% irrigable); Shell Oil, 15,353 acres (99% irrigable); Occidental Land and Development Company, 14,452 acres (98% irrigable); E.M. and E.C. Still, 13,039 (98% irrigable); Richfield Oil, 12,395 acres (98% irrigable); Southern Pacific Company, 11,605 acres (100% irrigable); Southern Pacific Land Company, 15,060 acres (100% irrigable); Allison Honer Company, 10,240 acres (100% irrigable); and Tejon Ranch (whose principal stockholder was, and is, the Times Mirror Company, publisher of the Los Angeles Times), 38,689 acres (96% irrigable); id. at 273.
35 Id. at 381.
Agribusiness ignored this restriction and used the excess project water, which neither it nor Southern California needed at the time, primarily to develop new crops. Existing crops were maintained by pumping seriously depleted groundwater. This practice continued despite the fact that many of the crops grown had been declared surplus or were low yield. With cheap, abundant water, farmers have had little or no incentive to conserve. Irrigation methods are generally wasteful and outdated.

The state's beneficial uses are in conflict with one another. The major battle lines have been drawn between agriculture and healthful/healthy environment. Municipal and industrial users, though benefiting from water quality standards, have stayed out of the fray because these rights are secure, and they do not account for a major portion of the state's water. (Also, the alliance between agribusiness and the MWD allows the cities to benefit from the more sympathetic farmers' objection to restrictions on diversion, at least for the time being.) Simply put, agriculture does not want to give up any of its 85% share of Delta water. After recent drought-related cutbacks to agriculture, a large sign went up on eastbound Highway 152 just west of Interstate 5 and the town of Los Banos warning: NO WATER, NO FARMING — NO FARMING, NO FOOD.

86 By the 1920's the declining water table had led to the death of native flora, including great numbers of ancient oak trees. By the early 1950's, just after CVP deliveries began, the surface of the land had subsided as much as thirty feet due to pumping leaving collapsed, useless aquifers which could never again be refilled. Id. at 235, 274.

87 Four crops (rice, alfalfa, cotton, and irrigated pasture) account for an incredible one-third of the entire state's water use while contributing less than 17% of the state's economy. Rice alone loses more water to evaporation than is used in Los Angeles each year. Id. at 385.

88 Id. at 314; ENVIRONMENTAL LAW SECTION, STATE BAR OF CALIFORNIA, ENVIRONMENTAL LAW NEWS Vol. 2, No. 1 (Spring 1993) at 5, quoting a speech by Daniel W. McGovern, Regional Administrator, EPA, Region IX: "A report issued a year ago by the United States General Accounting Office [stated]:

The irrigation practices of farmers in the [Central Valley Project], have contributed to environmental problems in the San Joaquin Valley. Agricultural drainage has degraded the quality of the area's water supply and soil, poisoning wildlife and threatening agricultural productivity with selenium accumulation and increasing salinity. If current irrigation practices continue, problems will expand."

89 This sentiment is representative of that expressed on similar signs located on Interstate 5 north of Sacramento.
III. Importance of Delta Area

A. Agriculture

Much of the Delta is farmland and comprises one of the richest agricultural areas in the state and the nation. Ninety-two percent of original Delta wetlands, as they existed in the mid-1800's, have been converted to farmland. Of an approximate total of 738,000 acres in the Delta, about 515,000 are utilized for agriculture. Corn and grain are the principal crops.

B. Wetlands

Wetlands are those areas which are inundated or saturated by surface or groundwater and, under normal circumstances, support a prevalence of vegetation adapted for life in saturated soils. In addition to habitat for fish and wildlife, the wetlands of the Delta and Estuary provide flood control, groundwater recharge, shoreline stabilization, and water quality maintenance. The Bay/Delta Plan affirms, "Wildlife habitat is the most significant actual and potential beneficial use of wetlands."  

C. Open Space/Wildlife Habitat

The Estuary's remaining open space is one of the most important wetland areas on the west coasts of the Americas, providing vital habitat for shorebirds, migratory waterfowl, mammals, fish, and other wildlife. The Delta supports thousands of shorebirds and wading birds. During the winter months, 450,000 to 600,000 migratory waterfowl make a temporary home in the Estuary. Bay area wetlands as a whole support over half of the Pacific Flyway's wintering population of some bird species. Nearly one million waterfowl and one million shorebirds use the Estuary's open water and wetland habitats at different times of the year. As their habitat dwindles in other parts of the state, this area is of increasingly vital importance for maintaining bird

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40 CCMP, supra note 24, at 9.
41 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-32.
42 Id. at 4.0-4.
43 Id. at 4.0-32.
44 CCMP, supra note 24, at 9.
45 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-32.
46 CCMP, supra note 24, at 9.
47 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-32.
48 Id. at 4.0-34.
Recognizing that a decrease in any species produces effects throughout the ecosystem, the Bay/Delta Plan says, "To the degree that mollusk and fish species and aquatic habitat productivity changes in the Bay, the value of the adjacent marshes and beaches for sensitive wildlife, such as rails, terns, and pelicans, may change." Over 230 species of birds, 43 species of mammals, 15 species of reptile, and 8 species of amphibian live or are thought to live in the Delta. Many uncommon animals are officially identified as rare, threatened, or endangered. Federal and state governments have designated over 130 species of fish, insects, amphibians, reptiles, birds, mammals, and plants in the Estuary as deserving of special protection or monitoring. Several species of plants also are candidates for listing as threatened or endangered.

D. Fishing

The Delta is home to what was formerly a great abundance of fish, both freshwater and anadromous (fish which live most of their lives in the ocean but must spawn in fresh water). Nearly 150 species of fish live in the Estuary today, although many of these are in decline. Several species are fished recreationally and commercially. At present, natural production of salmon in streams is inadequate to sustain the commercial and sport fishing industries. The alarming declines in various fish populations in recent years is largely attributable to diversion of tremendous quantities of water and concomitant reduced flows, entrainment (being swept along in high velocity flows and, often, drawn into pumps), high water temperatures, high salinity, pollution, and a seri-

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48 CCMP, supra note 24, at 9.
49 TECHNICAL APPENDIX, BAY/Delta PLAN, supra note 5, at 4.0-35.
50 Under state and federal Endangered Species Acts, native species are identified. Those listed are determined to be in immediate jeopardy of extinction ("endangered") or present in such small numbers throughout their range that they may become endangered if their present environment worsens ("rare" or "threatened" species), CAL. FISH AND GAME CODE § 2068 (West 1984 & Supp. 1993), 16 U.S.C.S. §§ 1531-1544 (Law. Co-op. 1984 & Supp. 1993); TECHNICAL APPENDIX, BAY/Delta PLAN supra note 5, at 4.0-26. "Sensitive plants" include state rare and federal candidate [for listing] species, Id. at 4.0-32.
51 CCMP, supra note 24, at vi-vii.
52 TECHNICAL APPENDIX, BAY/Delta PLAN, supra note 5, at 4.0-35.
53 Id. at 4.0-10; SFEP places this figure at 130 species (CCMP, supra note 24, at 1).
54 CCMP, supra note 24, at 11.
55 Id. generally and at B-3, 9-11, 13-14.
ous reduction in some species’ food sources. CVP and SWP pumping facilities entrain and destroy millions of fish eggs, larvae, juveniles, and some adults, as well as food sources like nutrients, phytoplankton, and zooplankton. (These critical food sources for several species of young fish have been in decline since the mid-1970’s.) Screens and salvage facilities at pumping plants have proven ineffective at saving the fish from entrainment. Some fish, which survive the pumps, are collected for trucking downstream to be placed back into the Delta, but many of these die during handling and trucking.

E. Recreation

The Delta provides extensive recreational opportunities, including camping, boating, swimming, and recreational fishing, not only to residents but vacationers as well. It supports about twelve million user days per year.

F. Shipping

The Sacramento River and the Delta are of major importance to shipping, with six million tons of cargo transported annually in the Stockton and Sacramento deep-water ship channels.

G. Drinking/Domestic Use

Cities and towns of the Delta utilize water for domestic uses. The cities of Tracy, Antioch, Pittsburg, and Oakley make the major municipal water demands. Sacramento maintains a standby diversion facility in the upper Delta but usually diverts farther upstream. Other Delta communities rely to various degrees on groundwater.

H. Industry

Several major water users are located at or near the water’s edge, such as Fibreboard Louisiana-Pacific Corporation, a large kraft paper mill, Shell Oil Company, H. J. Heinz Company, Laprino Cheese, and

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87 Free-floating aquatic plants, BAY/DELTA PLAN, supra note 8, Appendix C at 23.
88 Free-floating aquatic animals, id., Appendix C at 35.
89 CCMP, supra note 24, at 9.
90 20% to 60% die, id. at 30.
91 CALIFORNIA DEPARTMENT OF WATER RESOURCES, DELTA ATLAS (1993), at 9. A visit of 12 hours or longer by one person equals a user day.
92 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-36.
93 Id. at 4.0-2 through 4.0-3.
Laura Scudder’s.  

I. Diversion Uses

Mining operations in the mid to late 1800’s began diverting water which caused harm downstream in the form of saltwater intrusion. Now, water is diverted from this system, which drains more than 40% of the state, at more than 7000 points for agricultural and other uses.

1. Irrigation

Much of California’s farmland—the Sacramento Valley, the San Joaquin Valley, the Delta—is irrigated by water which is diverted upstream or pumped from the Delta for riparian use. These regions provide food for consumption in California, the United States, and the world. Of the three regions, the San Joaquin Valley uses most of the agricultural export water from the Delta.

2. Drinking/Domestic Use

Some of the remaining 15% of water not used by agriculture provides for drinking and other municipal/industrial uses around the San Francisco Bay Area, Alameda, Contra Costa, San Mateo, Santa Clara, Solano, and Napa counties, the Central Valley, and huge population centers in Southern California. Two-thirds of the state, some twenty million people, rely on the Estuary for drinking water. A growing population places increasing demand on the state’s waters. Projects currently planned by CVP and SWP require another 1.1 maf in Delta

64 Id. at 4.0-3 through 4.0-4.
65 CCMP, supra note 24, at 13.
66 California agriculture’s consumptive use (evaporated, transpired by plants, or “lost” to the ocean or an unusable aquifer) accounts for about 90% of the state’s water supply, compared with 8% used by metropolitan Los Angeles for all purposes. MARC REISNER & SARAH BATES, OVERTAPPED OASIS (Island Press 1990), at 30.
67 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-41.
68 The Sacramento Valley in the north and San Joaquin Valley in the south combine to form the Central Valley.
69 TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-37.
70 CCMP, supra note 24, at 12.
71 Municipal and industrial deliveries from CVP in 1986 were an estimated 381,204 acre feet (af). Project delivery in 2010 is estimated at 936,072 af. SWP delivered approximately 1,008,000 af to municipal/industrial users in 1985. Projected statistics are not available for SWP. TECHNICAL APPENDIX, BAY/DELTA PLAN, supra note 5, at 4.0-37.
IV. STATE WATER RESOURCES CONTROL BOARD

The Board makes all water quality and water allocation decisions in the state. It is expressly commissioned to carry out the policy that all California water rights are subject to the overriding constitutional limitation that use must be reasonable. California is unusual, if not unique among the western states, in combining these two functions in the same body. The present Board, consisting of five appointed members, was created and given this dual authority in 1967. The 1978 water rights and water quality decisions, essentially still in effect, were the first action taken by the Board in this role.

A. D1485

The water rights decision presently in effect in California is Water Rights Decision 1485, amended in 1985 (D1485). The decision was adopted in 1978 in order to implement the water quality control plan adopted the same year (Delta Plan).

B. D1630

A water rights decision is necessary to implement the Bay/Delta Plan of 1991. Water Rights Decision 1630 (D1630), the result of many months of hearings, was intended as an interim decision toward this end. Draft D1630 was withdrawn by the Board in April, 1993, after a request from Governor Wilson to discontinue interim decision efforts. There is no deadline for adoption of a final water rights deci-

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72 Id. at 4.0-41; CCMP, supra note 24, at 13.
74 The former State Water Rights Board and State Water Quality Control Board were combined to form the present Board. Stats. 1967, c. 284; WATER CODE, art. 3, ch. 2., div. 1.
76 SWRCB, WATER RIGHT DECISION 1485, SACRAMENTO-SAN JOAQUIN DELTA and Suisun Marsh (August 1978).
77 supra note 9.
78 SWRCB, DRAFT WATER RIGHT DECISION 1630, SAN FRANCISCO BAY/SACRAMENTO - SAN JOAQUIN DELTA ESTUARY (April, 1993).
79 SWRCB, NOTICE OF FURTHER PROCEEDINGS, WATER RIGHT PHASE OF THE BAY-Delta ESTUARY PROCEEDINGS at 1 (April 22, 1993).
sion. This means that the Delta is not being protected even at the inadequate level required by the Bay/Delta Plan.

V. CVP IMPROVEMENT ACT

While D1485 (water rights) and the Bay/Delta Plan (water quality) are controlling in California, the Bureau of Reclamation must now also operate the CVP in compliance with the CVP Improvement Act of 1992. The CVP Improvement Act requires that environmental impact statements be prepared for each of its contracting water districts before contracts are renewed, except on a temporary basis. The aim is to ensure habitat protection for the Delta and other areas served by the CVP. The Act also establishes a fund for environmental protection and restoration and pledges 600,000 to 800,000 af per year to remain instream for this purpose.

The CVP Improvement Act permits water transfers from federal project contractors. Farmers can now sell a portion of their allocation of water. To the extent that this may encourage conservation, it will be good for the environment. The effect beyond conservation is that farmers can continue to buy water at a cut rate and may be able to sell it for municipal use at those users' contract rates, making a profit and potentially nullifying the benefit of conservation. If farmers sell conserved water to municipalities, which choose to also receive their contract share directly from the projects, no benefit will accrue to the environment.

Despite the Board's unwillingness to decrease the water allotted to the projects, Congress has taken 600,000 to 800,000 af from the CVP and returned it to the Delta for habitat revitalization. This does not affect the state's right to allocate water, yet it may lead to a Board determination that the CVP has made sufficient contribution to Delta water quality to satisfy more stringent quality standards, thus not jeopardizing the Board's ties to agricultural interests (at least those served by the CVP). A different view of Congress' action would be that it

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82 CVP Improvement Act § 3404(c).
83 Acre feet.
84 CVP Improvement Act § 3406(b)(2).
85 Id. § 3405.
86 Just such a decision was reflected in Draft D1630, supra note 77, at 62.
intended the environment to receive greater attention and resources than in the past, with knowledge and approval of the federal project allocation being subject to further reduction under the CWA.

VI. U.S. ENVIRONMENTAL PROTECTION AGENCY

Following enactment of the National Environmental Policy Act, effective in 1970, the EPA was created in the Executive Branch by Reorganization Plan No. 3. Created as an independent agency which would consolidate the major environmental pollution responsibilities of the federal government, the agency's role is establishment and enforcement of standards, environmental monitoring and analysis, conduct of research and demonstrations, and assistance to state pollution control programs.

VII. How Will the Quality Standards Be Enforced?

A. Lack Of Enforcement Authority

Even if the EPA does eventually promulgate water quality standards for the Delta, it has no power to enforce them. If California does not adopt the new standards, how will the EPA force compliance? There is, as yet, no case law in this area. The CWA lacks enforcement provisions; no penalties or sanctions are imposed for noncompliance. Three possibilities exist: 1) the EPA will promulgate standards and nothing further will happen; 2) after the EPA promulgates standards, a citizen's suit will be filed against California to force implementation; 3) action will be taken under the Endangered Species Act. The CWA provides that if a state adopts adequate standards as recommended by the EPA at any time during the promulgation process, the EPA's efforts will be discontinued. If not, states are to implement standards imposed by the EPA. Given California's political climate favoring agriculture, the Board will not likely implement standards established by the EPA which would require reduction in diversions from the Delta. Nor does it seem probable that California will adopt stan-

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89 FIRST ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY, at 25.
92 Id.
standards deemed adequate by the EPA. It is very possible that the EPA will promulgate standards, which California will refuse to implement, based on its water rights authority claim.

A citizen’s suit is likely and is discussed further below. Also likely is some form of action under the Endangered Species Act (ESA). Promulgation of water quality standards under the CWA is federal action subject to the Endangered Species Act. As such, the rulemaking effort requires EPA consultation with the National Marine Fisheries Service or the U.S. Fish and Wildlife Service. These two entities are involved, along with the EPA, in making recommendations on Delta water quality for threatened and endangered species. Potential action under the ESA is discussed further below.

B. Congressional Intent

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Primary responsibility for setting water quality standards to fulfill this purpose rests with the states under section 303. Only if the states fail to set standards is the EPA to involve itself in setting standards. Congress also intended, in passing the CWA, that water rights decisions remain within the purview of the states. Section 101(g) of the Act states, “It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated, or otherwise impaired by this [Act].” Yet, Congress’ intent was not to completely override water quality decisions which might affect quantity; e.g., “[s]ection 101(g) was not intended to take precedence over ‘legitimate and necessary water quality considerations’.”

83 Letter from Harry Seraydarian, Director, Water Management Division, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Aug. 24, 1992), supra note 1.
84 See references to testimony and material presented throughout BAY DELTA PLAN, supra note 8, and TECHNICAL APPENDIX, BAY DELTA PLAN, supra note 5;
Letter from W. Don Maughan, Chairman, SWRCB, to Daniel W. McGovern, Regional Administrator, EPA, Region IX (Feb. 10, 1992) supra note 1, at 3, 10 and 11;
Letter from Harry Seraydarian, Director, Water Management Division, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Aug. 24, 1992) supra note 1, at 2, 3, 4, 6 and 7;
Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to Eliseo Samaniego, Acting Chairman, SWRCB (Jan. 13, 1993) supra note 1, at 1, 2, 4 and 5.
86 33 U.S.C.S. § 1251(g) (Law. Co-op. 1987); CWA § 101(g).
87 123 Cong.Rec. 39,212 (1977), 1977 Leg.Hist. 532 (statement of Sen. Wallop, the
Despite comments that incidental effects on water rights were acceptable, Congress expressly declined to require states to regulate saltwater intrusion. When faced with the question of whether salinity control otherwise fell within the Act, the First District Court of Appeals held that saltwater intrusion is regulatable under the Act as nonpoint source pollution since it fits within the Act’s definition of “pollution.” Pollution is defined as “man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” This definition applies as well to temperature and dissolved oxygen (man-induced alteration of the chemical, physical, and biological integrity of water) so, following Racanelli, they should be regulable under the Act as nonpoint source forms of pollution.

C. Enforcement Of Section 303 Standards Under State Law

No federal court has decided whether the EPA can enforce CWA quality standards in contravention of state water allocation authority. Racanelli reviewed both state and federal law applicable to water quality decisions for the Delta, particularly for salinity control. Interpreting the California Water Code, the court found that the Board has the power and a duty to provide water quality protection “to the fish and wildlife that make up the delicate ecosystem within the Delta.” Further, this duty is not dependent in any way on water rights.

Under a different theory, a California Supreme Court decision en-
sured state law protection of the environment through the public trust doctrine. Pursuant to Mono Lake, the state's navigable waters are subject to a public trust which the state, as trustee, has a duty to preserve against harmful diversions by water rights holders. Mono Lake mandates that a balancing process be undertaken when making water allocation decisions, and that non-consumptive, public trust uses (such as wildlife habitat, open space, boating, and swimming) be considered along with other beneficial uses.

If the EPA sets standards for California, the agency should then be able to argue that the state must enforce its own standards based on Racanelli and Mono Lake, since water quality standards promulgated by the EPA under section 303 become the state's standards. Both Racanelli and the legislative history of section 303 say that water rights are not paramount: quality is to be protected regardless of incidental effects on appropriative rights. The Board's contrary assertion is not supported by the law. The Board has relied on section 101(g) of the Act to support its position that the EPA is without authority to impose standards which affect water rights. As discussed supra, Congressional intent was to leave water allocation authority with the states generally but not to foreclose legitimate and necessary water quality decisions, which also happen to affect quantity. Racanelli and legislative intent behind section 303 support water quality protection irrespective of effect on water rights. This does not detract from California's water allocation power. Assuming EPA promulgation of standards, the state has full authority to decide how to implement them but must follow Racanelli's directive that reasonable protection be afforded to all beneficial uses.

The California Constitution declares that all water rights in the state are limited to reasonable use. Racanelli stated that this limitation requires ongoing evaluation, as times and circumstances change: “[w]e perceive no legal obstacle to the Board’s determination that particular methods of use have become unreasonable by their deleterious effects upon water quality.” The reasonable use doctrine further prohibits unreasonable methods of use. Irrigation is a reasonable use but, under

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108 “Since the Clean Water Act does not address water allocation, it cannot be relied upon to protect all beneficial uses,” letter from W. Don Maughan, Chairman, SWRCB, to Daniel W. McGovern, Regional Administrator, EPA, Region IX (Feb. 10, 1992), supra note 1, at 1; id. at 3.
the constitution and Racanelli, wasteful agricultural practices within
the state are subject to being found unreasonable and hence curtailed,
as a further basis for adjusting water rights.

An alternative argument could be based on a reconsideration of the
issue of appropriative rights based on instream needs, which was de­
cided in California Trout, Inc.\textsuperscript{109} The Third District Court of Appeal
rejected the idea that an appropriative right could arise for non-con­
sumptive purposes. The decision was based on a determination that
water cannot be appropriated within the meaning of California’s Water
Code\textsuperscript{110} without the exercise of some form of physical control or posses­
sion of the water, such as diversion from the stream channel or regula­
tion of the water within the channel.\textsuperscript{111} At least two other western
states have recognized an appropriative right based on a kind of “con­
structive diversion,” leaving water instream to serve beneficial uses.\textsuperscript{112}

Justice Reynoso’s dissent in California Trout argues that the true
basis of an appropriative right is successful application of the water to
a beneficial use. Citing to California cases where an appropriative right
was based on instream use, Justice Reynoso concluded that a diversion
is required only where the contemplated beneficial use requires diver­

\textsuperscript{109} California Trout, Inc. v. State Water Resources Control Board, 153 Cal. Rptr.
672 (1979).

\textsuperscript{110} Especially \textit{CAL. WATER CODE} § 1260 (West 1971).

\textsuperscript{111} California Trout, Inc. v. State Water Resources Control Board, 153 Cal. Rptr.
672, 673-74 (1979).

\textsuperscript{112} Washington, primarily a prior appropriation state, recognizes an appropriative
right without any diversion at all, Bevan v. Department of Ecology, Pollution Control
Hearings Board #48 (1972) (unchallenged in the courts).

Colorado, exclusively a prior appropriation state, vests its Water Conservation Board
(CWCB) with sole authority to appropriate water for instream use without any diver­
sion, storage, or other control being exerted (37-92-102(3), 15 C.R.S. (1990)). The
court, in Board of County Commissioners v. Upper Gunnison River Water Conser­
vancy District, 838 P.2d 840 (Colo. 1992), recognizing that the minimum streamflows
established by CWCB are sufficient only to protect fish for short periods of time, con­
firmed a private right for instream purposes where the water had first been stored in a
reservoir by the appropriator who later released it for fish and recreational pur­
poses—the storage and appropriative use rights being separate.

In City of Thornton v. City of Fort Collins, 830 P.2d 915 (Colo. 1992), the court
recognized a water right for instream purposes where the application proposed a dam
which would “divert” water to return it to its natural course, and on an existing dam, a
fish ladder and boat chute had been constructed. The purpose of the “diversions” was
to benefit “municipal, recreation and piscatory purposes” where the city had designated
a corridor along the river for enhancement of natural, recreational, and fish and wild­
life uses.
When the doctrine of appropriation arose in California, diversion was necessary to put others on notice of prior appropriation. As the dissent states, this notice has become obsolete in modern times.

Recognition of an appropriative right arising from application to instream beneficial uses is consistent with the Water Code and the California Constitution.

The California Trout court emphasized that the requirement of actual diversion is inherent in the appropriation doctrine. Racanelli held that another rule inherent in appropriative rights—"first in time, first in right"—may be altered by the Board in exercising its modern allocation duties. It would be consistent with this decision, and with the recognition of beneficial uses related to public trust resources, to permit vesting of an appropriative right for application to instream use. California Trout frustrates Racanelli and Mono Lake. A right of some type must be recognized for non-consumptive beneficial uses in order to place them on a par with consumptive uses for consideration of the reasonableness of any allocation.

Another way to protect the environment would be to view the public trust uses as more akin to riparian than appropriative rights. This concept would ensure that public trust uses are allocated all necessary water for preservation of habitat and would still be subject to the reasonable use doctrine precluding unreasonable limits on appropriative rights.

D. Potential Action Brought By Citizens' Group Or Standards Set Under The Endangered Species Act

If the EPA does not sue to enforce the standards, a citizens' group can bring suit once the standards have been promulgated. Sierra Club Legal Defense Fund (SCLDF) has recently filed a court action to force the agency to set water quality standards for the Delta. The EPA is currently working closely with the U.S. Fish and Wildlife Service and National Marine Fisheries Service to formulate standards for

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113 153 Cal. Rptr. at 676-677.
114 Id. at 676.
115 Id.
Delta smelt and chinook salmon in the Delta under the ESA.119 These federal agencies are obligated to protect listed species and are given enforcement authority by the ESA.120 Yet, water quality standards enforcement under this Act must be accomplished on a species-by-species basis. Improved water quality for smelt and salmon will possibly, but not necessarily, improve overall quality and benefit other life in the Delta. Because the diverse needs of many plant and animal species will not be specifically addressed, they might continue to decline. The CWA provides for protection of beneficial uses throughout the Delta/Estuary area. This approach requires comprehensive attention to the entire body of water, whereas standards tailored to the needs of endangered species only could prove too limited to assure the health of the Delta as a whole. As SCLDF has recognized, the first step is to force the EPA to set standards. After that, based on California law—the Constitution, the Water Code, Mono Lake, and especially Racanelli—suit can be brought to enforce standards which protect the public trust resources of the Delta.

Such a suit will seek to force the Board to make whatever water allocation decisions and permit adjustments are necessary to implement the state’s standards for Delta water quality. The resulting changes in water rights held by the projects (and pursuant to Racanelli, other appropriators) must be based on the reasonable use doctrine and on a balancing of the uses, always bearing in mind the state’s duty as trustee of its resources.

[T]he public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people’s common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust.121

The state’s argument will be that, after balancing the beneficial uses, and in consideration of its public trust duties, it would be unreasonable to reduce the appropriations of the projects. The favoritism always shown to agriculture will be presented in the context of “jobs and food vs. fish.” This is an erroneous argument based on statistics relative to

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119 Telephone Interview with Patrick Wright, Chief, Bay/Delta Section, EPA, Region IX (July 16, 1993).
120 Letter from Harry Seraydarian, Director, Water Management Division, EPA, Region IX, to W. Don Maughan, Chairman, SWRCB (Aug. 24, 1992), supra note 1.
121 Letter from Daniel W. McGovern, Regional Administrator, EPA, Region IX, to Eliseo Samaniego, Acting Chairman, SWRCB (Jan. 13, 1993), supra note 1.
water use, water waste, size of land holdings, types of crops grown, and
the decimation of the environment with concomitant public trust re­
source loss to California. There is no legal justification for the Board’s
position that the projects’ permits are sacrosanct, or for its continuing
refusal to set standards to protect the Delta.

VIII. REAUTHORIZATION OF THE CLEAN WATER ACT

The Act is up for reauthorization. Although it is too soon to predict
what the new law will be, legislation has been introduced in the Sen­
ate\footnote{S. 1114, June 15, 1993.} which revises section 303. While this version would strike
paragraphs (c)(3) and (4) (delineating EPA procedures as discussed in
this comment) it continues to provide for state adoption of water qual­
ity standards with EPA approval, and for EPA promulgation and im­
plementation in case a state fails to comply. No penalties for non-com­
pliance have been added, but the proposed bill does enhance
enforcement in two ways: 1) it adds the right of a citizen to petition a
state for designation of a particular water as an outstanding national
resource water, making that water body subject to stricter water quality
guarantees,\footnote{Proposed $303(a)(3)(F)$, id.} and 2) it provides that no permitting authority may issue
a permit to any point source (polluter) for new, expanded, and in­
creased discharge without first conducting an antidegradation review
for that water.\footnote{Proposed $303(a)(4)$, S. 1114, supra note 123.} The House has not yet introduced legislation and, so
far, there has been no discussion of either revising section 303 or of
adding enforcement authority.\footnote{Telephone Interview with Scott Slesinger, Assistant Counsel, House Sub-Com­
mittee on Water Resources and Environment (July 19, 1993).}

It would not make sense for Congress to renew the Act absent au­
thority for implementation but it does make sense to conclude that the
Act is intended to be enforced through state law. This interpretation is
consistent with the purposes of the Act (“to restore and maintain the
chemical, physical, and biological integrity of the Nation’s waters”)\footnote{33 U.S.C.S. § 1251(a) (Law. Co-op. 1987 & Supp. 1993); CWA § 101(a).}
and with the water allocation authority of the states.

CONCLUSION

Given the past performances of the Board and the EPA, if left to
their own devices, agricultural interests receiving water from the
projects will not be affected very soon as a result of water quality stan­
dards being established. Court action will be required. If the EPA promulgates standards, and a citizens’ group is successful in suing Cali­
ifornia to implement those standards, the court will have to place a strict
time limit on the Board so the state will not continue to drag the imple­
mentation process out over several more years.

Some contractors are looking ahead and proposing alternative miti­
gating measures now. The Delta-Mendota Water Authority127 has re­
cently conducted an experiment with underwater speakers placed at the
mouth of Georgiana Slough in the hope of keeping outmigrating
salmon in the main channel and heading safely oceanward (without
increasing flow). The speakers emit beeps which it is hoped will repel
the fish, keeping them from swimming into the huge pumps of the
Tracy Pumping Plant.128 In light of the state’s withdrawal of D1630,
the water authority might decide there is no reason to pursue the effort.
At any rate, the measure is of no immediate value, still being in the
early experimental stages and requiring much more study.129 Even if
beepers are successfully implemented, there is no evidence that the ef­
ffects will be more than slight, at best. Quite simply, the projects must
get by with less, and more water must be allowed to flow through the
Delta in order to protect the resources of the public trust.

POSTSCRIPT

On December 16, 1993, after this comment was written, standards
for Delta water quality were announced jointly by four federal agen­
cies: the EPA, National Marine Fisheries Service, U.S. Fish and Wild­
life Service, and U.S. Bureau of Reclamation. These standards address
overall water quality in the Delta and are intended to fully protect
designated uses.130 After publication in the Federal Register, hearings,
and ultimate adoption in some form, the state should prepare an imple­

127 39 member water districts who are federal contractors relying on the Tracy
Pumping Plant and Delta-Mendota Canal. Most members are agricultural users.
(Telephone Interview with Daniel Nelson, Executive Director, Delta-Mendota Water
Authority, July 2, 1993).

128 Mark Grossi, Telling it to the salmon: Turn right, FRESNO BEE, April 23, 1993,
at A1; telephone interview with Daniel Nelson, Executive Director, Delta-Mendota
Water Authority, July 2, 1993.

129 Telephone Interview with Dan Odenweller, Senior Biologist, Inland Fisheries
Division, California Department of Fish and Game (Jan. 6, 1994).

130 Telephone Interview with Patrick Wright, Chief, Bay/Delta Section, EPA, Re­
gion IX (Jan. 4, 1994).
mentation plan to be approved by the EPA. A deadline does not exist, however. The notice and comment period before final adoption of the standards by the EPA could be lengthy. Formulation of an implementation plan by the state (assuming the state undertakes to develop one) could be years away. Since the standards, as currently proposed, require greater flows through the Delta, a new water rights decision must be adopted by the state to implement them. Yet, the state has resolutely maintained for fourteen years that it is not obligated to reduce water allotments to the projects based on standards formulated by the EPA.

Despite these impediments, the adoption of section 303 standards by the EPA clearly shows progress toward improvement of Delta water quality. As discussed, supra, upon adoption of standards, a citizens' suit can be brought to force the state to implement them. This area awaits section 303 litigation.

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131 Id.