



SENT VIA E-MAIL

September 17, 2012

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: Repeating History: Water Quality Control Planning Then and Now

Dear Members of the Board:

The San Joaquin Tributaries Authority (“SJTA”) has communicated with the State Water Resources Control Board (“State Water Board”) and the State Water Board staff over the past two years on a great many factual and legal issues regarding the review of the San Joaquin River water quality objectives. Many of our comments touched upon the troubled process the State Water Board is currently using in order to review the San Joaquin River water quality objectives. The ongoing process encouraged me to revisit the legal opinions that reviewed the State Water Board’s previous water quality control planning processes. I was struck by the similarities between the process the State Water Board used to develop the 1978 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and the current process the State Water Board is using to review the San Joaquin River objectives. The 1978 process was the subject of review in *United States v. State Water Resources Control Board* (1986) 182 Cal.App.3d 82 (“*Racanelli*”), attached hereto.

In 1978, the State Water Board developed water quality objectives based upon water available prior to the construction and operation of the State Water Project (“SWP”) and Central Valley Project (“CVP”) facilities. The objectives proposed were referred to as “without project” standards. Currently, the State Water Board is proposing to develop water quality objectives based on water available prior to the construction and operation of the rim dams. These proposed objectives are being referred to as “unimpaired flow” standards.

Another key similarity between the current process and the process of 1978 is the State Water Board’s narrow focus on regulating facility operators. In 1978, the State Water Board proposed to regulate

only the SWP and CVP. Currently, the State Water Board is proposing to regulate only the entities operating the three tributary reservoirs.

The process used by the State Water Board in 1978 was struck down and found to violate the requirements of the Porter-Cologne Act for both procedural and substantive defects. The main procedural flaw stemmed from the overlap or combination of the legislative and adjudicative steps in the water quality planning process. The *Racanelli* holding made clear the State Water Board's legislative and adjudicative duties are distinct and must be kept separate. (*Racanelli*, at 115.) Specifically, the *Racanelli* court determined the "without project" protections developed in the legislative process were so narrowly focused on CVP and SWP operations, that they amounted to a water right action, rather than a water quality action, i.e. the State Water Board was performing adjudicatory actions in the legislative phase. (*Id.*, at 115-17.) *Racanelli* prohibited this action, describing it as "seriously flawed." (*Id.*, at 118.)

The substantive defect of the 1978 process stemmed from the "without project" focus on regulating only the SWP and CVP, without considering the impact or contribution of upstream water users. The *Racanelli* court held this approach violated the requirements of the Porter-Cologne Act by failing to consider the water quality degradation by other users (namely upstream diverters or polluters) and establishing water quality standards only at a level which could be enforced against the projects. (*Id.*, at 118-19.) The approach was also held to violate the rules of water right priority by unjustifiably assuming upstream users retained unlimited access to upstream waters, while the projects were entitled only to share the remaining water flows. (*Ibid.*)

The similarities between the "without project" standards in 1978 and the "unimpaired flow" standards proposed today are uncanny. History seems to be repeating itself. The SJTA requests the State Water Board review the holdings of the *Racanelli* decision in light of its current review of the San Joaquin River objectives and ask its staff whether the current process is defensible.

Very truly yours,
O'LAUGHLIN & PARIS LLP



TIM O'LAUGHLIN

TO/tb
Attachment
cc: San Joaquin Tributaries Authority

182 Cal.App.3d 82

Court of Appeal, First District, Division 1, California.

UNITED STATES of America
et al., Plaintiffs and Appellants,

v.

STATE WATER RESOURCES CONTROL
BOARD, Defendant and Appellant;
California Department of Water Resources,
Metropolitan Water District of Southern
California, and Contra Costa Water
District, Intervenor and Appellants.

(And 7 other cases) *

AO 27690, AO 30014. | May 28, 1986. |
As Modified on Denial of Rehearing June
25, 1986. | Review Denied Sept. 18, 1986.

State Water Resources Control Board adopted water quality control plan, establishing new water quality standards for salinity control and for protection of fish and wildlife. Board also modified permits held by United States Bureau of Reclamation and California Department of Water Resources, compelling agencies to operate water projects they managed and controlled in accordance with water quality standards set out in plan. Agencies and private parties whom they supplied petitioned for writ of mandamus. The Superior Court, City and County of San Francisco, Richard P. Figone, J., granted petition, and Board appealed. The Court of Appeal, Racanelli, P.J., held that: (1) water quality standards adopted by Board, which sought to protect delta waters from degradation only by projects and not by preexisting riparian and other users, were not established in manner required by law; (2) Board had reserved and inherent authority to modify water project permits; (3) limitations imposed on federally operated water project did not clash with expressly or clearly implied congressional intent of Water Pollution Control Act, so that limitations were not on that basis invalid; and (4) water quality standards imposed by Board did not substantially impair water projects' contracts with users whom they supplied.

Reversed.

West Headnotes (29)

[1] Water Law

🔑 Administrative Bodies, in General

In exercising its permit power, State Water Resources Control Board's first concern is recognition and protection of prior rights to beneficial use of water stream. West's Ann.Cal.Water Code § 1375.

2 Cases that cite this headnote

[2] Water Law

🔑 Determination

State Water Resources Control Board's estimate of whether there is sufficient surplus water to issue water permit is in no way adjudication of rights of riparians and senior appropriators.

3 Cases that cite this headnote

[3] Water Law

🔑 Correlative Rights of Riparian Owners

Riparians have no right to specific amount of water, but enjoy as incident of common ownership with other riparians on stream a correlative share of natural flow.

2 Cases that cite this headnote

[4] Water Law

🔑 States

No water rights are inviolable, but are subject to governmental regulation.

[5] Administrative Law and Procedure

🔑 Arbitrary, unreasonable or capricious action; illegality

Environmental Law

🔑 Water pollution

In performing its regulatory function of ensuring water quality by establishing water quality objectives, State Water Resources Control Board acts in legislative capacity, and its decisions may be reversed only if arbitrary, capricious, lacking in evidentiary support, or otherwise in violation of procedures required by law.

1 Cases that cite this headnote

[6] Administrative Law and Procedure

🔑 Determination supported by evidence in general

Water Law

🔑 Judicial review

In undertaking to allocate water rights by providing for modification of appropriation permits, State Water Resources Control Board performs adjudicatory function, and its decisions will be upheld on review if supported by precise and specific reasons founded on tangible record evidence.

[7] Administrative Law and Procedure

🔑 Limitation of scope of review in general

Water Law

🔑 Judicial review

Deferential latitude should be accorded to State Water Resources Control Board's judgment involving valuable water resources. West's Ann.Cal.Water Code § 1253.

[8] Environmental Law

🔑 Water Quality Standards or Plans

In its water quality role of setting level of water quality protection, State Water Resources Control Board's task is not to protect preexisting water rights, but to protect "beneficial uses" as that term is used in state Water Code. West's Ann.Cal.Water Code § 13241.

2 Cases that cite this headnote

[9] Water Law

🔑 Rights as to purity of water

Water Law

🔑 Nature and Extent of Rights Acquired

Common-law water rights of riparians and appropriators do not include salinity control through curtailment of upstream diversions, even though curtailment of upstream diversions is necessary to leave enough water in stream to resist saltwater intrusion.

5 Cases that cite this headnote

[10] Administrative Law and Procedure

🔑 Validity

Environmental Law

🔑 Antidegradation policies and rules

Water quality objectives established by State Water Resources Control Board for delta, which sought to protect water in delta from degradation only by those water projects to which it had issued permits and not by upstream riparian users, were not established in manner required by law. West's Ann.Cal.Water Code §§ 13000, 13241(a, c).

6 Cases that cite this headnote

[11] Administrative Law and Procedure

🔑 Validity

Environmental Law

🔑 Water Quality Standards or Plans

Water quality standards formulated by State Water Resources Control Board, to extent that they set only such standards as could be achieved by modification of permits presently before Board in its adjudicatory capacity as allocator of water rights, were not established in manner required by law. West's Ann.Cal.Water Code §§ 13000, 13241(a, c).

[12] Environmental Law

🔑 Conditions and limitations

State Water Resources Control Board had authority to modify appropriative rights of United States Bureau of Reclamation, by imposing conditions for salinity control on water project operated by Bureau, where Board had reserved jurisdiction to impose conditions for salinity in at least one of project permits, and where Board, in issuing permits, expressly reserved jurisdiction to coordinate their terms. West's Ann.Cal.Water Code §§ 1394, 12202, 12205.

4 Cases that cite this headnote

[13] Water Law

🔑 Limitation to reasonable amount and beneficial purpose

Water Law

🔑 Reasonable use

Water Law

🔑 Waste

All water rights, including appropriative rights, are subject to overriding constitutional limitation that water use must be reasonable. West's Ann.Cal. Const. Art. 10, § 2.

4 Cases that cite this headnote

[14] **Water Law**

🔑 Permit Pending Diversion of Waters and Application to Beneficial Use in General

All permits issued by State Water Resources Control Board are subject to continuing authority of Board to prevent unreasonable use. West's Ann.Cal. Const. Art. 10, § 2.

1 Cases that cite this headnote

[15] **Environmental Law**

🔑 Conditions and limitations

Conditions imposed by State Water Resources Control Board on federal agency operating water project pursuant to Board permit, which curtailed project's storage activities by requiring that additional water be discharged to prevent ocean water from flowing into delta and increasing salinity levels, were imminently reasonable and proper pursuant to Board's continuing authority to prevent unreasonable uses. West's Ann.Cal. Const. Art. 10, § 2.

4 Cases that cite this headnote

[16] **Water Law**

🔑 Powers and authority

State Water Resources Control Board's power to prevent unreasonable methods of use would be broadly interpreted. West's Ann.Cal. Const. Art. 10, § 2.

1 Cases that cite this headnote

[17] **Environmental Law**

🔑 Modification or amendment

State Water Resources Control Board's reserved authority to modify water project permits included authority to impose on projects equal responsibility to maintain water quality of stream, though Board thereby altered historic rule of "first in time, first in right," where permits were issued subject to reserved jurisdiction of Board to "coordinate" project operations. West's Ann.Cal. Water Code §§ 1253, 1257, 1381, 1391, 1394.

2 Cases that cite this headnote

[18] **Environmental Law**

🔑 Water Quality Standards or Plans

State Water Resources Control Board, though obliged to consider "economic effects" in setting water quality standards, is not obliged to consider costs of monitoring activities in imposing monitoring responsibilities on users. West's Ann.Cal. Water Code § 13241(d).

[19] **States**

🔑 Environment; nuclear projects

Salinity control requirements imposed by State Water Resources Control Board on federally financed water project did not clash with express or clearly implied congressional intent in enacting Water Pollution Control Act, so that requirements were valid, as federal act provided that reservoir should primarily be used for "river regulation," and as "river regulation" included salinity control. Act Aug. 26, 1937, § 1 et seq., 50 Stat. 850.

3 Cases that cite this headnote

[20] **Environmental Law**

🔑 Modification or amendment

Under its reserved jurisdiction to modify water project permits, State Water Resources Control Board was authorized to impose water quality standards at whatever level of protection Board found reasonable, whether at a "without project"

or greater level. West's Ann.Cal.Water Code §§ 1394, 13241.

[21] **Environmental Law**

🔑 Modification or amendment

State Water Resources Control Board could exercise reserved jurisdiction to modify water project permits, in order to impose on projects duty to maintain quality of water at level higher than if projects had never existed, only after balancing interest of preexisting users of stream and interest of those to whom water was exported pursuant to projects.

[22] **Constitutional Law**

🔑 Application in general

In determining whether state regulation substantially impairs contract for purpose of constitutional challenge, trial court may consider variety of factors, including whether industry has been so regulated in past that contracting parties had notice that further state restrictions applied.

[23] **Constitutional Law**

🔑 Existence and extent of impairment

State regulation that merely restricts party to gains reasonably expected from contract does not constitute substantial impairment of contract, for purpose of constitutional challenge.

[24] **Constitutional Law**

🔑 Police power; purpose of regulation

Contract rights, like other property rights, may be altered by exercise of state's inherent police power to safeguard public welfare.

[25] **Constitutional Law**

🔑 Grants and sales in general

Water quality standards imposed by State Water Resources Control Board on federally financed water projects did not substantially impair projects' contracts with users projects supplied,

though standards reduced amount of water available for exportation to users by requiring that greater quantities be discharged to maintain salinity levels in stream, where water supply contracts reflected parties' understanding that availability of water was uncertain and expressly provided for governmental immunity or pro rata curtailment in event of water shortages.

3 Cases that cite this headnote

[26] **Constitutional Law**

🔑 Grants and sales in general

Water quality standards imposed by State Water Resources Control Board on federally financed water projects were justified as valid exercise of state police power, even assuming that standards substantially impaired projects' contracts with users they supplied, where standards were necessary in order to prevent salinity levels in delta from rising.

5 Cases that cite this headnote

[27] **Administrative Law and Procedure**

🔑 Findings

Environmental Law

🔑 Water Quality Standards or Plans

State Water Resources Control Board's promulgation of water quality standards was quasi-legislative action for which findings of fact were not required.

[28] **Administrative Law and Procedure**

🔑 Necessity and purpose

Water Law

🔑 Findings

Water rights decision of State Water Resources Control Board, though quasi-judicial in nature, did not have to be supported by specific factual finding showing source of Board's legal authority.

[29] **Administrative Law and Procedure**

🔑 Power and discretion to order rehearing

Water Law

🔑 Powers and authority

State Water Resources Control Board had power and duty to reopen water project permits to protect fish and wildlife, even without express reservation of jurisdiction.

1 Cases that cite this headnote

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Opinion

RACANELLI, Presiding Justice.

This appeal raises a number of novel and complex questions concerning the interrelationship of the law of water quality and the law of water rights. The coordinated cases arise out of efforts by the State Water Resources Control Board (the Board) to set new water quality standards for the Sacramento-San Joaquin Delta in order to take account of the combined effects upon the Delta of the state's two massive water projects: the Central Valley Project (CVP) and the State Water Project (SWP), operated by the U.S. Bureau of Reclamation (U.S. Bureau or Bureau) and the California Department of Water Resources (DWR), respectively.

The Sacramento-San Joaquin Delta serves as a conduit for the transfer of water by the statewide water projects. Both the CVP and the SWP divert water from the rivers that flow into the Delta and store the water in reservoirs. Quantities of this stored water are periodically released into the Delta. Pumps situated at the southern edge of the Delta eventually lift the water into canals for transport south to the farmers of the Central Valley and the municipalities of Southern California. Water which is neither stored nor exported south passes through the Delta where it is used by local farmers, industries and municipalities. The excess flows out into the San Francisco Bay.

The U.S. Bureau and the DWR hold a combined total of 34 permits for various units of the CVP and SWP to authorize diversion and use of the Delta's waters. These permits were issued by the Board and its predecessors over a period of years extending through 1970.

In 1976 the Board convened a hearing for two declared purposes: to formulate a water quality control plan for the Sacramento-San Joaquin Delta and to determine whether the water use permits held by the U.S. Bureau and the DWR should be amended to implement the plan. In August 1978, **166 following an extensive evidentiary hearing over an 11-month period, the Board adopted the "Water Quality Control Plan for the Sacramento-San *98 Joaquin Delta and Suisun Marsh" (hereafter sometimes called the Plan) and "Water Right Decision 1485" (hereafter sometimes called the Decision or D 1485).

In the Plan the Board established new water quality standards for salinity control and for protection of fish and wildlife in the Delta and Suisun Marsh. In D 1485 the Board modified the permits held by the U.S. Bureau and the DWR, compelling the operators of the projects to adhere to the water quality standards as set out in the Plan. In this appeal we are requested to review the validity of those actions: namely, the Board's establishment of water quality objectives in the Plan and its modification of the water use permits in the Decision.

We will conclude, inter alia, that the modification of the projects' permits in order to implement the water quality standards was a proper exercise of the Board's water rights authority. We will also conclude that in establishing only such water quality standards as will protect Delta water users against the effects of project activities, the Board misconceived the scope of its water quality planning function. Finally, we will determine that the Board has the power and duty to provide water quality protection to the fish and wildlife that make up the delicate ecosystem within the Delta.

BACKGROUND

The Water Projects

The history of California water development and distribution is a story of supply and demand. California's critical water problem is not a lack of water but uneven distribution of water resources. The state is endowed with flowing rivers, countless lakes and streams and abundant winter rains and snowfall. But while over 70 percent of the stream flow

lies north of Sacramento, nearly 80 percent of the demand for water supplies originates in the southern regions of the state. And because of the semi-arid climate, rainfall is at a seasonal low during the summer and fall when the demand for water is greatest; conversely, rainfall and runoff from the northern snowpacks occur in late winter and early spring when user demand is lower. (See 1 Rogers & Nichols, *Water for California* (1967) pp. 20, 26–33, 43–46 [hereafter Rogers & Nichols].) Largely to remedy such seasonal and geographic maldistribution, while simultaneously providing relief from devastating floods and droughts, the California water projects were ultimately conceived and formed.

In 1933 the California Legislature adopted a plan for transfer of surplus water from the Sacramento River and its northern tributaries to the water- *99 deficient areas of the San Joaquin Valley through construction of a "Central Valley Project": Shasta Dam, the central feature, to store and regulate waters of the Sacramento River; Friant Dam, on the western edge of the Sierra, to divert water from the San Joaquin River to southern regions of the valley; and various other units designed to transfer water from the Sacramento River system to the San Joaquin Valley. (Wat.Code, § 11100 et seq.)¹ However, due to the pervasive unfavorable economic conditions during the Great Depression, the state turned to the federal government to finance and construct the massive project.

Construction of the CVP began in 1937. It is now one of the world's most extensive water transport systems. As noted, Shasta Dam on the upper Sacramento River is the focal point of the CVP. Shasta Dam was completed in 1945 but began storing water and generating electric power in 1944. The waters of the Sacramento River which flow past the Shasta Dam are augmented by additional water supplies brought through a tunnel from the Trinity River and from reservoirs formed by Folsom and Nimbus Dams on the American River. About 30 miles south of Sacramento, the Delta Cross **167 Channel regulates the passage of Sacramento River water through the Delta to the Tracy Pumping Plant.

At Rock Slough, a portion of the water is pumped into the Contra Costa Canal for municipal uses in Contra Costa County. At the Tracy Pumping Plant, the water is lifted nearly 200 feet above sea level into the Delta Mendota Canal and flows 117 miles southward to the Mendota Pool. Here, the waters from the north replace the natural flow of the San Joaquin River. At Friant Dam, the flow of the San Joaquin River is impounded and diverted through the Friant-Kern Canal 152 miles south to the southern reaches of the San

Joaquin Valley. (See generally Rogers & Nichols, *op. cit.*, *supra*, pp. 42–62; Engle, Central Valley Project Documents (1956); see also Commentary, Craig, California Water Law in Perspective, 68 West's Ann. Water Code (1971 ed.) pp. LXXVII–LXXIX; *U.S. v. Gerlach Live Stock Co.* (1950) 339 U.S. 725, 728–730, 70 S.Ct. 955, 957–58, 94 L.Ed. 1231; *Ivanhoe Irrig. Dist. v. McCracken* (1958) 357 U.S. 275, 280–283, 78 S.Ct. 1174, 1178–79, 2 L.Ed.2d 1313.)

Following World War II, state authorities renewed their efforts to develop a comprehensive statewide water plan. In 1951 the Legislature authorized the Feather River and Sacramento-San Joaquin Delta Diversion Project. *100 § 11260.)² This project—referred to as the SWP—began operations in 1967 under management of the DWR. Water from the Feather River is stored behind Oroville Dam and is released into the Feather River and its eventual confluence with the Sacramento River. The water flow continues through the Delta to the Clifton Court Forebay where a portion of it enters the South Bay Aqueduct for delivery to the Santa Clara Valley. A much greater portion is lifted into the California Aqueduct for transport through the San Joaquin Valley and eventually again lifted by a series of pumping stations over the Tehachapi Mountains for delivery and use in the Southern California region. (See generally Rogers & Nichols, *op. cit.*, *supra*, pp. 64–82.)

At least one authoritative treatise has noted the numerous legal questions presented by the formation of these water projects.

“The statewide coordinated development of California's water resources poses many complex legal problems. These problems are further complicated by: inadequacies and uncertainties of present state statutes generally: available procedures for acquisition of water rights; the nature and extent of vested rights in the use of surface and ground water: preferential rights of areas in which water originates: questions of the effectiveness of contract rights in assuring deficient areas of a dependable water supply; and questions of relations between the state and other agencies.”

(Rogers & Nichols, *op. cit.*, *supra*, pp. 114–115.) Virtually all of the problems catalogued by the authors are at issue in this appeal.

The Law of Water Rights

It is a fundamental principle of water law that one may not withdraw water from its source without first acquiring “water rights.” (§§ 102, 1052.) Conceptually, what is meant by a water right is the right to *use* the water—to divert it from its natural course.

“It is laid down by our law writers, that the right of property in water is usufructuary, and consists not so much of the fluid itself as the advantage of its ****168** use.” (*Eddy v. Simpson* (1853) 3 Cal. 249, 252.) Hence, the cases do not speak of the ownership of water, but only of the right to its use. (*Rancho Santa Margarita v. Vail* (1938) 11 Cal.2d 501, 554–555 [81 P.2d 553]; see generally Hutchins, *The *101* Cal. Law of Water Rights (1956) pp. 36–38; 1 Rogers & Nichols, *Water for Cal.* (1967) p. 191.) Accordingly, Water Code section 102 provides that “[a]ll water within the State is the property of the people of the State, but the right to the use of water may be acquired by appropriation in the manner provided by law.”

(*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 441, 189 Cal.Rptr. 346, 658 P.2d 709, cert. den., 464 U.S. 977, 104 S.Ct. 413, 78 L.Ed.2d 351; see generally Rogers & Nichols, *op. cit.*, *supra*, p. 191; Hutchins, *The California Law of Water Rights* (1956) pp. 36–38, 120, 181–182.) It is equally axiomatic that once rights to use water are acquired, they become vested property rights. As such, they cannot be infringed by others or taken by governmental action without due process and just compensation. (*Ivanhoe Irri. Dist. v. All Parties* (1957) 47 Cal.2d 597, 623, 306 P.2d 824, revd. on other grounds in *Ivanhoe Irrig. Dist. v. McCracken*, *supra*, 357 U.S. 275, 78 S.Ct. 1174; *U.S. v. Gerlach Live Stock Co.*, *supra*, 339 U.S. 725, 752–754, 70 S.Ct. 955, 969–70; Rogers & Nichols, *op. cit.*, *supra*, pp. 189–190, 496–497, 523–527; Hutchins, *op. cit.*, *supra*, pp. 120–124, 183–186.)

California operates under a “dual” or hybrid system of water rights which recognizes both doctrines of riparian rights and appropriation rights. (*People v. Shirokow* (1980) 26 Cal.3d 301, 307, 162 Cal.Rptr. 30, 605 P.2d 859.) When California achieved statehood, the Legislature adopted the common law of England and thereby incorporated the *riparian* doctrine. (*Lux v. Haggin* (1886) 69 Cal. 255, 361–409, 4 P. 919.) The riparian doctrine confers upon the owner of land the right to divert the water flowing by his land for use upon his land, without regard to the extent of such use or priority in time. (*Miller & Lux v. Enterprise C. etc. Co.* (1915) 169 Cal. 415,

147 P. 567.) All riparians on a stream system are vested with a common ownership such that in times of water shortage all riparians must reduce their usage proportionately. (*Prather v. Hoberg* (1944) 24 Cal.2d 549, 559–560, 150 P.2d 405; see generally *Rogers & Nichols, op. cit., supra*, pp. 216–251; *Hutchins, op. cit., supra*, pp. 40–41, 52–55, 218–230.)

Upon discovery of gold and the development of the California mining industry, water was often diverted from streams passing through government lands to be used on nonriparian lands. To accommodate this usage, the doctrine of *appropriation* originated and was incorporated in California water law. (*Irwin v. Phillips* (1855) 5 Cal. 140.) The appropriation doctrine confers upon one who actually diverts and uses water the right to do so provided that the water is used for reasonable and beneficial uses and is surplus to that used by riparians or earlier appropriators. Appropriators need not own land contiguous to the watercourse, but appropriation rights are subordinate to riparian rights so that in times of shortage riparians are *102 entitled to fulfill their needs before appropriators are entitled to any use of the water. (*Meridian, Ltd. v. San Francisco* (1939) 13 Cal.2d 424, 445–447, 90 P.2d 537, 91 P.2d 105.) And, as between appropriators, the rule of priority is “first in time, first in right.” (See *Irwin v. Phillips, supra*, 5 Cal. at p. 147.) The senior appropriator is entitled to fulfill his needs before a junior appropriator is entitled to use any water. (See generally *Rogers & Nichols, op. cit., supra*, pp. 254–304, 472–480; *Hutchins, op. cit., supra*, pp. 40–51.)

Initially, rights to appropriate water were acquired by actual diversion and use of the water. Beginning in 1914, however, a statutory scheme has provided the exclusive method of acquiring appropriation rights. (*People v. Shirokow, supra*, 26 Cal.3d 301, 308, 162 Cal.Rptr. 30, 605 P.2d 859.) Thus, an application for appropriative rights must now be made to the Board for a permit authorizing construction of **169 necessary water works and the taking and use of a specified quantity of water. (§ 1201 et seq.; see generally *Hutchins, op. cit., supra*, pp. 94–112.) Riparian rights, however, continue to be acquired through ownership of land contiguous to the watercourse.

Once an appropriative water right permit is issued, the permit holder has the right to take and use the water according to the terms of the permit. (§§ 1381, 1455.) Upon compliance with the permit terms, a license—the final document in the permit process—is issued and the appropriative rights become confirmed. (§§ 1600–1610.) Until the license is issued, the Board may reserve jurisdiction to amend the terms

of the permit. (§ 1394.) If the permit holder or license holder violates any of the terms or conditions or fails to apply the water to a beneficial purpose, the Board may revoke the permit or license. (§§ 1410, 1611.) In 1980, the Board was given increased powers to enforce terms and conditions of an appropriation permit. (§ 1825 et seq. [authorizing cease and desist orders and actions for injunctive relief].)

In its role of issuing appropriation permits, the Board has two primary duties: 1) to determine if surplus water is available and 2) to protect the public interest.

Available Water Supply

[1] [2] Section 1375 declares the basic principle that: “As a prerequisite to the issuance of a permit to appropriate water ... [t]here must be unappropriated water available to supply the applicant.” (Subd. (d).) Accordingly, in reviewing the permit application, the Board must first determine whether surplus water is available, a decision requiring an examination of prior riparian and appropriative rights. (*Temescal Water Co. v. Dept. Public Works* (1955) 44 Cal.2d 90, 280 P.2d 1.) In exercising its permit power, the Board's first concern is recognition and protection of prior rights to beneficial use of the water stream. (*Meridian, Ltd. v. San Francisco, supra*, 13 Cal.2d 424, 450, 90 P.2d 537, 91 P.2d 105.) Yet, the Board's estimate of available surplus water is in no way an adjudication of the rights of other water right holders (*103 *Temescal Water Co. v. Dept. Public Works, supra*, 44 Cal.2d at p. 103, 280 P.2d 1); the rights of the riparians and senior appropriators remain unaffected by the issuance of an appropriation permit. (*Duckworth v. Watsonville Water etc. Co.* (1915) 170 Cal. 425, 431, 150 P. 58.)

Public Interest

When the water commission was first created in 1914 its duties were largely ministerial, its only task to determine whether there was surplus water available for appropriation by the applicant. (*Tulare Water Co. v. State Water Com.* (1921) 187 Cal. 533, 537–538, 202 P. 874.) However, the Board's powers have been expanded to allow appropriation for beneficial purposes “under such terms and conditions as in its judgment ... will best develop, conserve, and utilize [the water] *in the public interest* ...” (§ 1253, emphasis added; see generally *Bank of America v. State Water Resources Control Bd.* (1974) 42 Cal.App.3d 198, 116 Cal.Rptr. 770; *Johnson Rancho County Water Dist. v. State Water Rights Board* (1965) 235 Cal.App.2d 863, 45 Cal.Rptr. 589.)

The nature of the public interest to be served by the Board is reflected throughout the statutory scheme. As a matter of state policy, water resources are to be used “to the fullest extent ... capable” (§ 100) with development undertaken “for the greatest public benefit” (§ 105). And in determining whether to grant or deny a permit application in the public interest, the Board is directed to consider “any general or co-ordinated plan ... toward the control, protection, development ... and conservation of [state] water resources ...” (§ 1256), as well as the “relative benefits” of competing beneficial uses (§ 1257). Finally, the Board's actions are to be guided by the legislative policy that the favored or “highest” use is domestic, and irrigation the next highest. (§ 1254.)

Nonconsumptive or “instream uses,” too, are expressly included within the category ****170** of beneficial uses to be protected in the public interest. Thus, the Board must likewise consider the amounts of water required “for recreation and the preservation and enhancement of fish and wildlife resources” (§ 1243) and needed “to remain in the source for protection of beneficial uses, including any uses ... protected in any relevant water quality control plan ...” (§ 1243.5). Thus, when determining appropriative water rights, ***104** the Board is expressly empowered to protect water quality as a matter of statewide interest (§§ 1258, 13000 et seq.) and major environmental concern (Pub.Resources Code, §§ 21000, 21001).

Yet notwithstanding its power to protect the public interest, the Board plays a limited role in resolving disputes and enforcing rights of water rights holders, a task mainly left to the courts. Because water rights possess indicia of property rights, water rights holders are entitled to judicial protection against infringement, e.g., actions for quiet title, nuisance, wrongful diversion or inverse condemnation. (See generally, Hutchins, *op. cit., supra*, pp. 262–282, 348–356; Rogers & Nichols, *op. cit., supra*, pp. 530–534, 545–547.) It bears reemphasis that the Board's role in examining existing water rights to estimate the amount of surplus water available for appropriation does *not* involve adjudication of such rights. (*Temescal Water Co. v. Dept. Public Works, supra*, 44 Cal.2d 90, 103–106, 280 P.2d 1; Hutchins, *op. cit., supra*, pp. 98–99.)³

Unlike real property rights, usufructuary water rights are limited and uncertain. The available supply of water is largely determined by natural forces.

[3] Riparians have no rights to a specific amount of water. Rather they enjoy as an incident of common ownership with other riparians on the stream a correlative share of the natural flow. Thus, in times of water shortage, all riparians must curtail their usage in order that they share the available water. Similarly, all riparians may be required to share expenses or inconvenience for the common good to enable all riparians to use the water. (*Rancho Santa Margarita v. Vail* (1938) 11 Cal.2d 501, 560–562, 81 P.2d 533; see *People ex rel. State Water Resources Control Bd. v. Forni* (1976) 54 Cal.App.3d 743, 126 Cal.Rptr. 851.)

***105** In contrast, limitations on appropriators are more visible since appropriative rights are governed by the terms of the issued permit: the quantity of permitted water is specified together with other terms and conditions imposed by the Board. Moreover, appropriators are limited by priorities in time; their rights are subordinate to the rights of preexisting holders, i.e., riparians and senior appropriators.

Furthermore, superimposed on those basic principles defining water rights is the overriding constitutional limitation that the water be used as reasonably required for the beneficial use to be served. (Cal. Const., art. X, § 2.) Historically, appropriators, but *not* riparians, were limited to reasonable and beneficial uses of the water; riparians were subject only to the needs of other riparians on the same stream, frequently with wasteful results. ****171** This marked disparity between riparian and appropriation rights was dramatically illustrated in *Herminghaus v. South. California Edison Co.* (1926) 200 Cal. 81, 252 P. 607, appeal dismissed 275 U.S. 486, 48 S.Ct. 27, 72 L.Ed. 387, where the court held that under the riparian doctrine the riparian owner was entitled to the full flow of the stream even though the water was used wastefully to flood her lands, thus depriving an upstream appropriator of needed water for a power plant.

In response to *Herminghaus*, a constitutional amendment was enacted in 1928 subjecting all water users—riparians and appropriators alike—to the universal limitation that water use must be reasonable and for a beneficial purpose. (Cal. Const., art. X, § 2.)⁴ This “*rule of reasonable use*” is now the cardinal principle of California's water law. (§ 100; see generally Rogers & Nichols, *op. cit., supra*, pp. 497–500; Hutchins, *op. cit., supra*, pp. 12–20, 230–234.)

[4] ***106** The courts have construed this rule as a valid exercise of the police power of the state to regulate the use and enjoyment of water rights for the public benefit. (*People*

ex rel. State Water Resources Control Bd. v. Forni, supra, 54 Cal.App.3d 743, 753, 126 Cal.Rptr. 851; see also *Gin S. Chow v. City of Santa Barbara* (1933) 217 Cal. 673, 701–703, 22 P.2d 5; *East Bay M.U. Dist. v. Dept. of P. Wks.* (1934) 1 Cal.2d 476, 479–482, 35 P.2d 1027; *Joslin v. Marin Mun. Water Dist.* (1967) 67 Cal.2d 132, 138, 60 Cal.Rptr. 377, 429 P.2d 889.) And this paramount limitation applies “to all water rights enjoyed or asserted in this state, whether the same be grounded on the riparian right or ... the appropriative right.” (*Peabody v. City of Vallejo* (1935) 2 Cal.2d 351, 383, 40 P.2d 486.) Thus, no water rights are inviolable; all water rights are subject to governmental regulation. (Rogers & Nichols, *op. cit.*, *supra*, pp. 501–509.)

More recently, in *National Audubon Society v. Superior Court, supra*, 33 Cal.3d 419, 189 Cal.Rptr. 346, 658 P.2d 709, the California Supreme Court underscored a further significant limitation on water rights: the “public trust” doctrine. The court there held that the state's navigable waters are subject to a public trust and that the state, as trustee, has a duty to preserve this trust property from harmful diversions by water rights holders. Thus, the court determined that no one has a vested right to use water in a manner harmful to the state's waters. (*Id.*, at pp. 445–448, 189 Cal.Rptr. 346, 658 P.2d 709.)

The Projects' Water Rights

Construction of the CVP, initially authorized in 1935 (49 Stat. 1028, 1038), was reauthorized in 1937 by the Secretary of the Interior and expressly made subject to the federal reclamation laws. (50 Stat. 844, 850.) Under section 8 of the Reclamation Act of 1902 (43 U.S.C. § 383) the U.S. Bureau **172 is required to comply with state law and to acquire water rights for diversion and storage of water by the CVP.

For their initial operations in the Sacramento Valley and the Delta, federal authorities acquired appropriative rights. In 1927, the California Legislature had authorized the DWR's predecessor agency to file applications to appropriate water for use in the contemplated CVP. (§§ 10500–10506.) Upon the federal government's assumption of the project, the DWR assigned its applications to the U.S. Bureau. The CVP was actually completed and in operation before permits were issued: the first permits were issued to the U.S. Bureau in 1958 (Decision 893), and the principal permits were issued in 1961 (Decision 990).

The DWR, too, obtained appropriative rights for operation of the SWP through the permit process, the permits being issued by the Board in 1967 (Decisions 1275 and 1291).

*107 One of the distinctive features of the statewide projects is the great distance between the point of storage and the point of diversion from the watercourse. On the San Joaquin River, the CVP's diversion of water is made at the point of storage—the Friant Dam. In contrast, on the Sacramento River, the water is stored at the CVP's Shasta Dam and on the Feather River, at the SWP's Oroville Dam. This stored water, upon release, flows some 300 miles into the Delta where it is diverted for transport to the San Joaquin Valley and Southern California. Along that extended watercourse, a multitude of water users abound with individual rights to divert water. Thus, as a practical matter, the quantity of water available to the projects for export from the Delta largely depends upon the quantity diverted by the upstream users.

Water Quality in the Delta

The Sacramento-San Joaquin Delta generally describes a large lowland area with a labyrinth of natural channels in and around the confluence of the Sacramento and San Joaquin Rivers. The combined river water passes through the Delta into Suisun Bay and then into San Francisco Bay. In 1959, the legal boundaries of the Delta were fixed by the Legislature. (§ 12220.) The bounded area is roughly triangular, with Sacramento at the north, Vernalis at the south and Pittsburg at the west.

The major factor affecting water quality in the Delta is saltwater intrusion. Delta lands, situated at or below sea level, are constantly subject to ocean tidal action. Salt water entering from San Francisco Bay extends well into the Delta, and intrusion of the saline tidal waters is checked only by the natural barrier formed by fresh water flowing out from the Delta.

But as fresh water was increasingly diverted from the Delta for agricultural, industrial and municipal development, salinity intrusion intensified, particularly during the dry summer months and in years of low precipitation and runoff into the river systems. One of the major purposes of the projects was containment of maximum salinity intrusion into the Delta. By storing waters during periods of heavy flow and releasing water during times of low flow, the freshwater barrier could be maintained at a constant level.

Water quality is controlled by both federal and state legislation. Until 1972, the Federal Water Pollution Control Act relied upon state-formulated ambient water quality standards as the means of ensuring water purity. (79 Stat. 907, as amended; formerly 33 U.S.C. § 1151 et seq.) This approach proved ineffective and difficult to enforce against individual polluters. Consequently, in 1972 Congress substantially amended the act, declaring the ***108** national objective of eliminating discharges of pollutants. (33 U.S.C. § 1251(a)(1); see generally *EPA v. State Water Resources Control Board* (1976) 426 U.S. 200, 204–206, 96 S.Ct. 2022, 2024–25, 48 L.Ed.2d 578.)

Under the revised legislation now denominated the Clean Water Act, Congress made significant changes in the methods of controlling water pollution. First, the focus shifted from overall water quality measurement standards to “end-of-the-pipe” ****173** discharge restrictions whereby water quality is monitored through measurement of a particular discharge against prescribed effluent limitations. Second, the amendments establish a permit system prohibiting any discharge of pollutants without first obtaining, and complying with, a permit issued by the state water pollution control agency. (33 U.S.C. §§ 1311, 1342.)

However, it does not appear that excess salinity due to tidal water intrusion falls within the federal regulatory scheme, which defines a “pollutant” essentially in terms of waste material,⁵ and the “discharge” thereof as “any addition of any pollutant to navigable waters from any point source, ...” (33 U.S.C. § 1362(12).) The intrusion of salt water is neither a discharge from a point source nor a discharge of a pollutant. (See *U.S. ex rel. TVA v. Tenn. Water Quality Control Bd.* (6th Cir.1983) 717 F.2d 992, cert. den., 446 U.S. 937, 104 S.Ct. 1909, 80 L.Ed.2d 458; *State of Mo. ex rel. Ashcroft v. Dept. of the Army* (8th Cir.1982) 672 F.2d 1297, 1304; *National Wildlife Federation v. Gorsuch* (D.C.Cir.1982) 693 F.2d 156 [water quality changes from operation of dam were not discharges of pollutants].)

Significantly, water quality standards are retained under the Act as a supplement to the discharge limitations. (33 U.S.C. §§ 1311(b)(1)(C), 1313.) The federal statutes require each state to engage in “a continuing planning process” and to identify those waters within its boundaries for which discharge restrictions are inadequate to achieve the water quality standards. (33 U.S.C. § 1313(d)(1)(A), (e)(1).) Additionally, every state water pollution control agency must conduct a triennial review of its water quality standards and

submit proposed revisions to the Environmental Protection Agency for approval. (33 U.S.C. § 1313(c)(1).)⁶

***109** A further aspect of each state’s “continuing planning process” is the identification of so-called nonpoint source pollution. (33 U.S.C. §§ 1281, 1288.) *The Act expressly recognizes saltwater intrusion as a form of nonpoint source pollution.* (33 U.S.C. §§ 1288(b)(2)(I) [states must prepare plans for areawide waste treatment management, including identification of saltwater intrusion], 1314(f)(E) [EPA must issue information for controlling nonpoint source pollution, including saltwater intrusion].) And the term “pollution” is broadly defined to mean “man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” (33 U.S.C. § 1362(19).)

Thus, the federal act mandates certain planning responsibilities including formulation of water quality standards to provide salinity control. But the act contains no provision for either implementation of water quality standards or regulation of nonpoint pollution sources, matters of enforcement relegated to the states.

In California, the Porter-Cologne Water Quality Control Act (§ 13000 et seq.) establishes a comprehensive statewide program for water quality control administered by nine regional boards and coordinated by the State Board. The regional boards are primarily responsible for formulation and adoption of water quality control plans covering the state’s sixteen planning basins (§ 13240) subject to the Board’s review and approval (§ 13245). But the Board alone is ****174** responsible for setting statewide policy concerning water quality control (§§ 13140–13147).

And in its capacity as the designated state water pollution control agency for purposes of the Federal Water Pollution Control Act (§ 13160), the Board is empowered to formulate its own water quality control plans which supersede conflicting regional basin plans. (§ 13170.) The Water Quality Control Plan under review in this appeal was adopted pursuant to that authority.

In formulating a water quality control plan, the Board is invested with wide authority “to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.” (§ 13000.) In fulfilling its statutory imperative, ***110** the Board is required to “establish such water quality objectives ... as in its judgment

will ensure the reasonable protection of beneficial uses ...” (§ 13241), a conceptual classification far-reaching in scope. “ ‘Beneficial uses’ of the waters of the state that may be protected against quality degradation include, but are not necessarily 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.” (§ 13050, subd. (f).) Thus, in carrying out its water quality planning function, the Board possesses broad powers and responsibilities in setting water quality standards. The formulation of salinity levels to protect the beneficial uses listed falls well within that authorized function.

Comprehensive water quality standards for the Delta—the so-called “Tracy standards”—were first formulated on November 19, 1965, through the combined efforts of the Sacramento River and Delta Water Association, the San Joaquin Water Rights Committee, the DWR, and the U.S. Bureau. In 1967 the Board issued Decision 1275 which approved the permits for operation of the SWP. In that decision the Board imposed as a condition of the permits compliance with the established water quality criteria. The U.S. Bureau voluntarily complies with the Tracy standards to meet its contractual obligations to water supply agencies who purchase water from the CVP.

Also in 1967, in compliance with the provisions of the Federal Water Pollution Control Act, the Board submitted the adopted standards, which were eventually approved by the Secretary upon the condition that the Board consider imposition of more stringent Delta salinity controls. In 1971, the Board issued Decision 1379 establishing new water quality standards purportedly applicable to both the CVP and the SWP. The decision was stayed as a result of litigation challenging the Board's authority to impose conditions on permits held by a federal agency.

At about the same time, the regional water quality control boards (see § 13240) formulated plans for the 16 “basins” of the state, including the Delta and the Suisun Marsh. The Basin 5B Plan, setting water quality standards for the Delta, and the Basin 2 Plan, setting standards for the San Francisco Bay Basin, were finally approved by the Board in 1975.

In approving the Basin 5B Plan, the Board indicated its intention to convene hearings no later than July 1, 1978, for the purpose of receiving further evidence relating to salinity control and protection of fish and wildlife. As earlier noted, the Board held an extended evidentiary hearing culminating

in adoption of the 1978 Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh. The Plan is intended to remain in effect for 10 years with new hearings to be scheduled in 1986 to reevaluate the Delta standards.

In conducting the 1978 proceedings, the Board for the first time acted pursuant to its combined authority to determine water rights and to establish water quality standards. (§ 174.) In discharging its dual functions, the Board reconsidered existing water quality standards in light of current data concerning the effects on the Delta of the operations of the two water projects—the users with the greatest impact. The Board also undertook to modify the existing water rights permits of the projects—the water rights holders with the lowest seniority—in order to implement the enacted water quality standards.

The final product of the Board's efforts was the Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh and Water Right Decision 1485. In the Plan, the Board set new water quality standards to protect fish and wildlife and to protect agricultural, industrial and municipal uses of Delta waters. In the Decision, the Board modified the permits held by the U.S. Bureau and the DWR to compel the projects to release enough water into the Delta or to reduce their exports from the Delta so as to maintain the water quality standards set in the Plan.

Trial Court Proceedings

No less than eight petitions for writ of mandate were filed by interested parties seeking to invalidate the water quality Plan and the water rights Decision. The petitions were “coordinated” and assigned to San Francisco Superior Court Judge Figone, who—in light of the voluminous administrative record—ordered the parties to brief certain “key legal issues” for decision. The core of the trial court's written decision upholds the authority of the Board to impose the water quality standards upon the projects but rejects the standards as inadequate. The trial court issued a peremptory writ of mandate commanding the Board to set aside its Plan and Decision.

Virtually all the parties have appealed, challenging one or more aspects of the trial court's decision. These consolidated appeals require us to determine the scope of the Board's dual responsibility to regulate water quality and to supervise appropriation permits. Some parties, principally the U.S. Bureau and those who purchase exported water from the

CVP, contend that the Board exceeded its authority in requiring the CVP to release more water into the Delta and to curtail exports, thus infringing vested appropriative water rights of the CVP.

*112 Others, notably the Delta riparians, claim the Board's actions were inadequate in failing to provide more stringent water quality standards to protect their existing rights to use the Delta waters.

Subsumed in these several arguments is a central dispute concerning who should bear the financial burden for the additional water needed to maintain the water quality standards. The Delta riparians contend they are entitled to the free use of water flowing by their land while the projects argue that the riparians who benefit from the enhanced water quality should pay the cost of the added water supply.

Standard of Review

The standard of review to be applied is complicated by two factors. First, the Board's exercise of authority involved both quasi-legislative and quasi-judicial functions invoking different standards for review. Additionally, the trial court did not review the lengthy administrative record or make factual findings⁷ but rendered its decision upon what it perceived to be solely questions of law.

Dual Functions

As noted, the Board performed both adjudicatory and regulatory functions in allocating water rights and ensuring water quality. (§ 174.) The Board established water quality objectives in the Plan and at the same time implemented those objectives in the Decision by modifying the projects' appropriation permits to compel **176 the projects to maintain the established water quality standards. Although the two functions are merged under a single board, each has distinct attributes.

[5] In performing its regulatory function of ensuring water quality by establishing water quality objectives, the Board acts in a legislative capacity. The Water Quality Control Plan itself is thus a quasi-legislative document. Accordingly, great deference must be given to the Board's determination, and appellate review thereof is narrowly limited:

“A reviewing court will ask three questions: first, did the agency act within the scope of its delegated authority; second, did the

agency employ fair procedures; and third, was the agency action reasonable.²⁹ Under the third inquiry, a reviewing court *113 will not substitute its independent policy judgment for that of the agency on the basis of an independent trial de novo. A court will uphold the agency action unless the action is arbitrary, capricious, or lacking in evidentiary support. (7) A court must ensure that an agency has adequately considered all relevant factors, and has demonstrated a rational connection between those factors, the choice made, and the purposes of the enabling statute.”

(*California Hotel & Motel Assn. v. Industrial Welfare Com.* (1979) 25 Cal.3d 200, 212, 157 Cal.Rptr. 840, 599 P.2d 31.) Moreover, absent any indication of arbitrariness or evidentiary or procedural defect, “ ‘... in these technical matters requiring the assistance of experts and the collection and study of statistical data, courts let administrative boards and officers work out their problems with as little judicial interference as possible.’ ” (*Industrial Welfare Com. v. Superior Court* (1980) 27 Cal.3d 690, 702, 166 Cal.Rptr. 331, 613 P.2d 579, cert. den. 449 U.S. 1029, 101 S.Ct. 602, 66 L.Ed.2d 492.)

[6] [7] In contrast, in undertaking to allocate water rights, the Board performs an adjudicatory function. (*Temescal Water Co. v. Dept. Public Works, supra*, 44 Cal.2d 90, 100–106, 280 P.2d 1.) Thus, D 1485, providing for modification of the permits of the projects, is a quasi-judicial document, and review is governed under the provisions of Code of Civil Procedure section 1094.5. (*Id.*, at p. 100, 280 P.2d 1; *Bank of America v. State Water Resources Control Bd., supra*, 42 Cal.App.3d 198, 207, 116 Cal.Rptr. 770.) Nevertheless, deferential latitude should be accorded to the Board's judgment involving valuable water resources. Indeed, the Legislature has conferred broad discretion upon the Board to impose terms and conditions upon appropriation permits which “*in its judgment* will best develop, conserve, and utilize in the public interest the water sought to be appropriated.” (§ 1253, emphasis added.)

Our conclusion finds further support in the reasons advanced by the court in *Ferrante v. Fish & Game Commission* (1946) 29 Cal.2d 365, 374, 175 P.2d 222 [issuance of fishing permits by Fish and Game Commission]: “The Legislature has entrusted the supervision and protection of this valuable resource of the state to the respondent commission, not to

the courts. The commission must be presumed to have a knowledge of the conditions which underlie and motivate its regulatory actions and unless it is demonstrated that those actions are not grounded upon any reasonable factual basis the courts should not interfere with the exercise of the discretion vested in it by the Legislature, nor lightly substitute their judgment for that of the commission.” (See also *Bank of America v. State Water Resources Control Bd.*, *supra*, 42 Cal.App.3d at pp. 208, 212, 116 Cal.Rptr. 770.) In the final analysis, the touchstone for the Board's actions is the “public interest.” (*Ibid*; *Johnson Rancho County *114 Water Dist. v. State Water Rights Board*, *supra*, 235 Cal.App.2d 863, 45 Cal.Rptr. 589.)

Mountain Defense League v. Board of Supervisors (1977) 65 Cal.App.3d 723, 135 Cal.Rptr. 588, cited by South Delta Water Agency, is procedurally distinguishable. There, the court held that where an administrative agency, acting in both capacities, reaches the required determination in a single **177 decision, “review of that determination must be by the more stringent standard [for quasi-judicial acts].” (*Id.*, at p. 729, 135 Cal.Rptr. 588.) But in that case the agency rendered only *one* decision: an amendment of the general plan with the concomitant approval of a private development plan. Here, in contrast, the Board made two separate and distinct dispositions: adoption of the quasi-legislative Plan containing water quality objectives for the Delta and issuance of the quasi-judicial Decision determining specific water rights of the projects. The two documents, of course, serve entirely different functions: the Plan is concerned only with water quality standards while the Decision allocates water rights. As a consequence, the two administrative actions must be reviewed under differing standards.

Factual Review

As earlier discussed, the Plan is quasi-legislative in nature and thus entitled to great deference. Our review is limited to whether the Board's actions are arbitrary, capricious, or lacking in evidentiary support, or otherwise in violation of procedures required by law.

However, since the trial court omitted review of the evidentiary administrative record, grounding its decision solely on matters of law, the only question before us with respect to the validity of the Plan is whether the Board acted in the manner required by law. The established procedures for quasi-legislative acts are few. There is no requirement that “the agency prepare findings in support of its quasi-legislative decision. [Citations.] It is only when an administrative agency

renders an *adjudicatory* decision that findings are required in order ‘to bridge the analytic gap between the raw evidence and ultimate decision’ (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515 [113 Cal.Rptr. 836, 522 P.2d 12].)” (*Stauffer Chemical Co. v. Air Resources Board* (1982) 128 Cal.App.3d 789, 794, 180 Cal.Rptr. 550; see also *McKinny v. Board of Trustees* (1982) 31 Cal.3d 79, 88, 181 Cal.Rptr. 549, 642 P.2d 460.)

The remaining issues on appeal are directly related to the Board's adjudicatory decision imposing new conditions upon the appropriation permits *115 of the projects in order to implement water quality standards contained in the Plan. In assessing the validity of permit conditions, courts ordinarily apply the conventional “substantial evidence” rule. (*Bank of America v. State Water Resources Control Bd.*, *supra*, 42 Cal.App.3d 198, 212, 116 Cal.Rptr. 770.) In the context of water rights issues, the rule has been interpreted to require a search of the record for a “reasonable factual basis” for the Board's action. (*Id.*, at p. 208, 116 Cal.Rptr. 770.) Accordingly, in reviewing the challenged conditions, courts must determine whether the conditions are supported by “precise and specific reasons founded on tangible record evidence.” (*Id.*, at p. 213, 116 Cal.Rptr. 770; see also *Johnson Rancho County Water Dist. v. State Water Rights Board*, *supra*, 235 Cal.App.2d 863, 866, 876, 45 Cal.Rptr. 589.) But again, since neither evidentiary review nor factual resolution was undertaken by the trial court, necessarily we confine our examination to the legal determination whether the Board properly acted within the scope of its authority.

In short, the scope of our review is essentially twofold: 1) with respect to D 1485, the only question before us is whether the Board acted within its jurisdiction in imposing the water quality standards upon the projects; 2) with respect to the Plan, the only question is whether the Board acted contrary to procedures required by law. From that perspective, we turn to the parties' several contentions.

I.

Water Quality Standards for Consumptive Uses

A.

Use of “without project” standards for the Central and Western Delta

The primary purpose underlying the revised water quality standards contained in ****178** the Sacramento-San Joaquin Delta Plan was salinity control in order to protect consumptive uses (agricultural, industrial and municipal) of the Delta waters. In adopting water quality standards designed to protect those uses, the Board employed a so-called “without project” level of protection: a water quality measurement utilizing the number of days in a year that water of suitable quality would be available at various points in the Delta based on calculated conditions that would (hypothetically) occur without the projects. The objectives, clearly, are to maintain the predicted levels of water quality in the Delta which would theoretically exist had the projects never been constructed.

***116** The trial court concluded that the without project standards were invalid. While we reach a similar conclusion, our analysis focuses upon two erroneous assumptions made by the Board in establishing the qualitative standards.

First, the Board viewed “without project” as the measure of water flows necessary to protect the existing *water rights* in the Delta against impairment by the projects.⁸ The approach taken is fundamentally defective.

[8] In its *water quality* role of setting the level of water quality protection, the Board's task is not to protect water rights, but to protect “beneficial uses.” The Board is obligated to adopt a water quality control plan consistent with the overall statewide interest in water quality (§ 13240) which will ensure “the reasonable protection of *beneficial uses*” (§ 13241, emphasis added). Its legislated mission is to protect the “quality of all the waters of the state ... for use and enjoyment by the people of the state.” (§ 13000, 1st para., emphasis added.)

The Board's attachment to the concept of protecting “rights” rather than “beneficial uses” apparently stems from the assumption that protection of beneficial uses will require maintenance of constant flow levels in the Delta even during water shortages, whereas protection of water rights will permit some variations in water flow depending upon availability since riparians are entitled only to the natural flow. But such a view overlooks the Board's statutory commitment to establish objectives assuring the “*reasonable protection of beneficial uses*.” (§ 13241; emphasis added.) We think this statutory charge grants the Board broad discretion to establish reasonable standards consistent with overall statewide interest. The Board's obligation is to attain the

highest reasonable water quality “*considering all demands being made and to be made on those waters* and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.” (§ 13000, emphasis added.)

[9] At common law, holders of water rights were entitled to the natural flow of the water undiminished in quality. (*Meridian, Ltd. v. San Francisco, supra*, 13 Cal.2d 424, 455, 90 P.2d 537, 91 P.2d 105 [riparians]; *Phoenix Water Company v. Fletcher* (1863) 23 Cal. 481, 487 [appropriators].) Accordingly, such holders could ***117** always maintain a nuisance action against upstream polluters. (Civ.Code, § 3479; *Albaugh v. Mt. Shasta Power Corp.* (1937) 9 Cal.2d 751, 770–772, 73 P.2d 217 [riparians]; *Wright v. Best* (1942) 19 Cal.2d 368, 378, 121 P.2d 702 [appropriators]; see generally Rogers & Nichols, *op. cit., supra*, pp. 506–508.) But while common law clearly affords water rights holders relief from pollution, it is debatable whether such protection included the right to require upstream subsequent appropriators to curtail their use of water solely to permit a sufficient flow to resist natural saltwater intrusion.

****179** In the early case of *Antioch v. Williams Irr. Dist.* (1922) 188 Cal. 451, 205 P. 688, the court confronted the issue of saltwater intrusion in the context of appropriators' rights. In that case, the City of Antioch sought to enjoin upstream diversions of the Sacramento River which depleted the freshwater barrier and allowed Bay salt water to flow into the San Joaquin River, rendering Antioch's water supply unfit for domestic use. While recognizing the right of appropriators to water in its natural state free of pollution, the court distinguished the case before it from those granting relief from upstream polluters because “[n]othing has been placed in the stream above by the defendants that in the least affects the purity of the water flowing therein.... The pollution of the water complained of is caused by the fact that the depleted volume of the stream does not hold back the rising tide of salt water from the bay below as effectually as the natural volume might do.” (*Id.*, at p. 460, 205 P. 688.) To allow the freshwater appropriator below to enjoin upstream diversions to maintain a sufficient supply for a hydraulic barrier, the court continued, would be “extremely unreasonable and unjust [to upstream beneficial users] and highly detrimental to the public interests besides.” (*Id.*, at p. 465, 205 P. 688.) The court ultimately concluded that the City's appropriation rights did not include the right to insist that junior appropriators curtail their upstream use so that a sufficient flow remains to hold back tidal intrusion. (*Ibid.*)

Whatever final conclusion is to be drawn from *Antioch* regarding the nature and extent of common law riparian rights to salinity control, existing constitutional and legislative authorities encompass the Board's obligation to protect the quality of the Delta waters from saltwater intrusion. As mentioned above, the water quality legislation unmistakably requires the Board to formulate water quality standards to provide salinity control to "ensure the reasonable protection of beneficial uses" (§ 13241), a statutory classification earlier noted as wide-ranging (§ 13050, subd. (f)). Though there can be no doubt concerning the Board's authority to take action necessary to protect the consumptive *uses* (agricultural, industrial and municipal) in ***118** the Delta, its approach to that task was seriously flawed by equating its water quality planning function with protection of existing water rights.⁹

[10] The second aspect underlying the challenged standards was the Board's perception of "without project" as the appropriate maximum level of protection in order to make the projects solely responsible for the adverse effects of project operations. That is, the without project standards were formulated to protect the quality of the Delta waters only from degradation by the projects; the Board made no effort to protect against water quality degradation by other users—namely, upstream diverters or polluters. As a consequence, the Board erroneously based its water quality objectives upon the unjustified premise that upstream users retained unlimited access to upstream waters, while the projects and Delta parties were entitled only to share the remaining water flows.

The effect of the Board's failure to consider upstream users may be illustrated: If the upstream users left enough water in the stream flow to provide salinity control 300 days a year, then under the Board's approach the objectives would be to maintain that same level of water quality. In contrast, if upstream diversions and pollution effectively reduced salinity control in the Delta to only 200 days a year, the without project standards would maintain that lower level of water quality. We believe such an approach is legally unsupportable.

In performing its dual role, including development of water quality objectives, the Board is directed to consider not only the availability of unappropriated water (§ 174) but also *all* competing demands for water in determining what is a reasonable level of ****180** water quality protection (§ 13000). In addition, the Board must consider "past, present, and probable future beneficial uses of water" (§ 13241, subd. (a)) as well as "[w]ater quality conditions that could

reasonably be achieved through the coordinated control of *all* factors which affect water quality in the area" (§ 13241, subd. (c), emphasis added). Unfortunately, the Board neglected to do so.

In formulating the without project standards, the Board considered only the water use of the Delta parties (denominated "vested water rights") and the needs of the customers served by the projects (denominated "public interest"). No attention was given to water use by the upstream users.

We do not mean to suggest, as some apparently fear, that the Board must first define or quantify existing water rights before adopting a comprehensive ***119** water quality control plan; obviously, such an omnibus assessment would prove too cumbersome and impractical to accomplish the mandated periodic revisions of water quality control plans. (§ 13240; 33 U.S.C. § 1313(c)(1).) Rather, the Board need only take the larger view of the water resources in arriving at a reasonable estimate of all water uses, an activity well within its water rights function to determine the availability of unappropriated water. (*Temescal Water Co. v. Dept. Public Works*, *supra*, 44 Cal.3d 90, 280 P.2d 1.) We think a similar global perspective is essential to fulfill the Board's water quality planning obligations.

A water quality control plan must contain three elements: (1) beneficial uses to be protected; (2) water quality objectives; and (3) a program of implementation. (§ 13050, subd. (j).) Once the Board establishes water quality objectives which ensure reasonable protection of beneficial uses (§ 13241), the Board has the added responsibility to complete the water quality control plan by preparing an implementation program to achieve the water quality objectives. (§§ 13240, 13050, subd. (j).) The program of implementation must include: "(a) A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private. [¶] (b) A time schedule for the actions to be taken. [¶] (c) A description of surveillance to be undertaken to determine compliance with objectives." (§ 13242.)

In the present proceeding, the Board sought to implement the objectives of the Plan through D 1485. That is, in reliance upon its combined water quality and water rights authority, the Board modified the appropriation permits held by the U.S. Bureau and by the DWR to require the projects to release more water into the Delta and to curtail their exports of water from the Delta as necessary to maintain the water quality

standards required under the Plan. It seems obvious that the Board's selection of without project standards was a necessary result of its election to exercise its combined functions in a single proceeding. Stated differently, the Board undertook its planning task under the assumption that implementation of the Delta water quality standards would require assertion of its water rights authority in modifying the water rights permits of the projects. Thus, the water quality standards were established only at a level which could be enforced against the projects.

We think the procedure followed—combining the water quality and water rights functions in a single proceeding—was unwise. The Legislature issued no mandate that the combined functions be performed in a single proceeding. The fundamental defect inherent in such a procedure is dramatically demonstrated: The Board set only such water quality objectives as could be ***120** enforced against the projects. In short, the Board compromised its important water quality role by defining its scope too narrowly in terms of enforceable water rights. In fact, however, the Board's water quality obligations are not so limited.

Congress has declared in part that any revised or new water quality standards “shall be such as to protect the public health or welfare [and] enhance the quality ****181** of water ... taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.” (33 U.S.C. § 1313(c)(2).) Similar legislative goals relating to the Board's broad planning function are to be found in the state statutes discussed. (§§ 13000 [statewide program for water quality control], 13241 [water quality control plan to establish objectives ensuring reasonable protection of beneficial uses and prevention of nuisance].) But nothing in the federal act or California's Porter-Cologne Act allows the Board to limit the scope of its basin planning function to such water quality standards as are enforceable under the Board's water rights authority.

We are quick to add, however, that the without project standards do have a place in the water quality program. As discussed in Part IIA (*infra*), we think the imposition of without project standards *upon the projects* represents one reasonable method of achieving water quality control in the Delta. But in order to fulfill adequately its water quality planning obligations, we believe the Board cannot ignore other actions which could be taken to achieve Delta water

quality, such as remedial actions to curtail excess diversions and pollution by other water users.

In summary, we conclude that the Board failed to carry out properly its water quality planning obligations. Because the water quality objectives set at without project level of protection were not established in the manner required by law, they are found to be invalid.¹⁰ However, since remand to the Board could serve no useful purpose in light of the Board's announced intention to conduct hearings during 1986 to establish new and revised standards, we reverse the trial court's judgment which commands the Board to reconsider the Water Quality Control Plan. Of course, we would expect the renewed proceedings to be conducted in light of the principles and views expressed in this opinion.

***121 B.**

Adequacy of Interim Standard for the Southern Delta

[11] For reasons substantially similar to those expressed regarding the water quality standards for the central and western Delta, we find the Board also erred with respect to the water quality standards designed to protect agricultural uses in the southern Delta.

In this region water quality degradation is caused not by oceanwater intrusion but mainly by upstream depletions of the San Joaquin River and salt infusion from irrigation waste water run-off carried by the San Joaquin River. The SWP has no facilities on the San Joaquin River system. Although the CVP includes the Friant Project on the San Joaquin River and the New Melones Project on the Stanislaus River, the permits for these facilities were not before the Board in the present proceeding. Consequently, the Board believed it could not modify the CVP permits that *were* before the Board to effectively resolve the southern Delta water quality problems.¹¹

Instead, the Board retained the southern Delta agricultural water quality standard formerly adopted in the Basin 5B Plan (the “Vernalis” standard). The Board viewed ****182** the Vernalis standard as a temporary or “interim” level of protection while observing that a more permanent solution would be obtained through construction of physical facilities to provide better circulation and substitute supplies. But even that interim standard was made conditional upon the operation of the New Melones Project.¹²

The trial court invalidated the southern Delta agricultural standard, in part, because it did not provide *full* protection to the southern Delta *122 riparians. In this respect, we think the trial court erred.¹³ As detailed in our earlier discussion, the Board had no obligation to set water quality standards so as to provide salinity control to the southern Delta riparians. The Board's paramount duty was to provide "reasonable protection" to beneficial uses, considering all the demands made upon the water. (§§ 13000, 13241.) Whether the interim standard for the southern Delta provides a reasonable level of protection presented a question of fact requiring review of the administrative record. Since none took place, as explained, the trial court should not have invalidated the southern Delta standard on this ground.

Nevertheless, the approach taken by the Board, replicating the without project model, is similarly flawed. Once again, the Board confused its dual functions. Although the Board instigated a suitable program of implementation focusing on modification of the projects' permits, it set only such standards as could be achieved by such implementation, omitting any standards for the southern Delta because the permits of the projects before the Board were not responsible for the water quality degradation in that region.¹⁴ To repeat our earlier observation, the Board's water quality obligations are much broader both in purpose and in scope. (§§ 13000, 13241.)

Water quality objectives, we realize, may not always be readily enforceable. The statutory factors enumerated in section 13242, particularly the provisions for recommended action and time schedule, reflect the Legislature's recognition that an implementing program may be a lengthy and complex process requiring action by entities over which the Board has little or no control and also requiring significant time intervals. Thus, we do not believe that difficulty in enforcement justifies a bypass of the legislative imperative to establish water quality objectives which in the judgment of the Board will ensure reasonable protection of beneficial uses.¹⁵

*123 **183 In view of the Board's failure to comply with the requirements of the Porter-Cologne Act, we conclude that the agricultural standard for the southern Delta was not established in the manner required by law. However, in light of the Board's announced intention to establish revised standards for the region, we decline to remand for further proceedings.¹⁶ We will reverse the trial court's judgment

commanding the Board to reconsider the Water Quality Control Plan.

II.

Enforcement of Water Quality Standards for Consumptive Uses

A.

Validity of Program Limited to Projects

The issue of appropriate enforcement methods revolves principally about the Board's Water Right Decision 1485 modifying permits of the projects as a means to implement the (without project) water quality standards. We examine that issue and its permutations in the context of the Board's statutory powers and duties and the interests at stake.

Although the Board is obligated to establish a program for implementing the water quality objectives, including a description of necessary actions (§ 13242), one of the major uncertainties in the water quality legislation concerns the scope of the Board's power to take actions necessary to implement the water quality standards.

It is settled law that all property is held subject to the exercise of the police power of the state, which may regulate its use and enjoyment for the public benefit. (See generally, *Penn Central Transp. Co. v. New York City* (1978) 438 U.S. 104, 124–125, 98 S.Ct. 2646, 2659, 57 L.Ed.2d 631; see also *Gin S. Chow v. City of Santa Barbara*, *supra*, 217 Cal. 673, 702–703, 22 P.2d 5; *People ex rel. State Water Resources Control Bd. v. Forni*, *supra*, 54 Cal.App.3d 743, 753, 126 Cal.Rptr. 851.) There is little doubt that the state may undertake to regulate environmental quality notwithstanding the resulting limitation imposed on the free use of property rights. (*124 *Morshead v. California Regional Water Quality Bd.* (1975) 45 Cal.App.3d 442, 449, 119 Cal.Rptr. 586 [limitation on sewer connections until water quality standards met]; *Freeman v. Contra Costa County Water Dist.* (1971) 18 Cal.App.3d 404, 408, 95 Cal.Rptr. 852 [termination of water service until protective device installed to avoid contamination of public water supply]; see also *Lees v. Bay Area Air etc. Control Dist.* (1965) 238 Cal.App.2d 850, 48 Cal.Rptr. 295 [air quality]; *Reed v. California Coastal Zone Conservation Com.* (1975) 55 Cal.App.3d 889, 127 Cal.Rptr. 786 [coastal conservation]; *Georgia-Pacific Corp.*

v. *California Coastal Com.* (1982) 132 Cal.App.3d 678, 183 Cal.Rptr. 395 [same].)

What is uncertain, however, is the nature of the *Board's* power to enforce water quality. The Legislature has not adequately authorized the Board to exercise the state police power to compel compliance with water quality standards. Section 13000 provides, in part, “that activities and factors which may affect the quality of the waters of the state shall be regulated” to attain the highest water quality reasonably possible, and the public welfare requirement for a statewide program invokes a correlative state duty “to exercise its full power ... to protect the quality of waters in the state from degradation ...” (*passim*, emphasis added.) But the nature of the *Board's* authority to regulate activities affecting water quality is unspecified.

The Board is singularly responsible for adopting state *policy* for water quality control (§ 13140), defined to mean “the regulation of *any activity or factor*” affecting water quality, including cure and prevention ****184** of water pollution and nuisance. (§ 13050, subd. (i), emphasis added.) Moreover, the state policy adopted must include “[w]ater quality objectives at key locations for planning *and operation* of water ... projects and for water quality control *activities*.” (§ 13142, subd. (b), emphasis added.) These statutes grant wide authority to the Board in its *planning* role to identify activities of the projects and other water users requiring correction.

In contrast, the Board's enforcement powers are far from clear. Though the Board has been given express statutory authority to regulate waste discharges (§§ 13320–13389), excess salinity due to tidal water intrusion certainly does *not* qualify as “waste.”¹⁷ Apart from regulating waste discharge, the Board's express authority to implement water quality standards seems limited to *recommending* actions by other entities. (§ 13242, subd. (a).) Indeed, the regional boards who ordinarily formulate water quality control plans (§ 13240) are empowered only to “[e]ncourage ***125** regional planning ... for water quality control” and to “[r]equest enforcement by appropriate [public] agencies of their respective water quality control.” (§ 13225, subs. (d), (i), emphasis added.)

Both state and federal acts require their public agency counterparts to comply with state water quality controls. (§ 13247; 33 U.S.C. § 1323.) But the Legislature has thus far denied the Board explicit authority to enforce compliance, a recognized weakness in using water quality standards to control water purity. (*EPA v. State Water Resources Control Board*, *supra*, 426 U.S. 200, 204, 206, 96 S.Ct. 2022, 2024,

2025, 48 L.Ed.2d 578.) Enforcement authority—in the form of clear and direct orders, injunctive relief and civil penalties—is provided only for unauthorized discharge of pollutants. (§§ 13320, 13331, 13340, 13350, 13386.)

In the absence of explicit legislative authority to regulate water users, the principal enforcement mechanism available to the Board is its regulation of water *rights* to control diversions which cause degradation of water quality. Congress has expressly declared a policy of noninterference with state authority “to allocate [water] quantities ... within its jurisdiction” and has declined “to supersede or abrogate [water] rights ... established by any State....” (33 U.S.C. § 1251(g).) This section has been interpreted by at least one federal court to mean that the major responsibility for regulating water quality has been left to the states to permit water quality and water rights decisions to be coordinated. (*National Wildlife Federation v. Gorsuch*, *supra*, 693 F.2d 156, 178–179, and fn. 67.)

California, of course, has already combined both water resource functions within the exclusive jurisdiction of the Board. The stated purpose of this merger was to ensure that “consideration of water pollution and water quality” would become an integral part of the appropriative rights process. (§ 174.)

In the 1978 proceedings the Board, as noted, exercised its water rights authority as a means to implement the water quality standards for the Delta. In D 1485 the Board modified the appropriation permits held by the projects to require them to reduce their exports or release more water into the Delta to maintain the water quality standards contained in the Plan.¹⁸

126** *185** The role of the Board in acting upon permit applications has been aptly described by this court as a “necessary balancing process” requiring “maximum flexibility” in considering competing demands of flows for instream purposes and diversions for agricultural, industrial, domestic and other consumptive uses to arrive at the public interest. (*Fullerton v. State Water Resources Control Bd.* (1979) 90 Cal.App.3d 590, 603, 153 Cal.Rptr. 518.) We think the Board could properly conclude that the public interest in the projects requires that they be held responsible only for water quality degradation resulting from the projects' own operations. Although we hold the without project standards inadequate to fulfill the Board's obligations to set water quality objectives for the Delta (Part IA, *ante*), we nevertheless find no legal impediment to the Board's use of such standards to enforce water quality objectives against

the projects themselves. The implementation program was flawed by reason of the Board's failure, in its water quality role, to take suitable enforcement action against other users as well.

At least with respect to the southern Delta, the Board seemed aware of its obligation: first, in declaring its intent to take appropriate action in the absence of agreement for construction of new facilities;¹⁹ next, in noting the right of the southern Delta riparians to protection against harmful diversions or pollution by upstream users and the conditions subjecting the projects to prior vested rights.²⁰ Yet despite awareness of its "broad enforcement authority" to set and implement suitable water quality objectives ensuring the reasonable protection of beneficial uses in the Delta, the Board—we are advised—took no further action. We presume the Board's scheduled 1986 hearings will not only seek to remedy that glaring omission, but also result in a comprehensive program to implement such objectives which will include the projects *and* other users along the watercourse.

***127 B.**

Authority of Board to Modify Permits To Enforce Water Quality Control Standards

The U.S. Bureau and federal contractors argue strongly that the Board had no authority to modify or interfere with the appropriative rights held by the U.S. Bureau for operation of the CVP.²¹ They contend that once an appropriation permit is issued, it is final and nonmodifiable. We disagree and will conclude that the Board's actions are supported on two independent grounds.

Reserved Jurisdiction

[12] In the present proceedings the Board explicitly grounded its authority to impose water quality standards on the CVP on its reserved jurisdiction. The trial court agreed. The trial court confirmed the Board's authority to modify the appropriation permits of the U.S. Bureau because ****186** the Board expressly reserved jurisdiction in Decision 990 and related decisions affecting the CVP to coordinate the terms and conditions with the SWP. The record of the Board's decisions in issuing permits for each unit of the CVP (reported in the margin) supports the court's determination

that jurisdiction to coordinate the terms of project units was expressly reserved.²²

***128** The Board's authority to reserve jurisdiction to amend permits and to "coordinate" the terms of the permits with those of other units of the projects was expressly conferred by the Legislature in 1959. During that banner year of water resources legislation, section 1394 was enacted granting authority to the Board to reserve jurisdiction in order to impose new terms and conditions as necessary.²³ Review of the statutory language strongly indicates that the section was designed with the major projects uppermost in mind. During the same session of the Legislature, coordination of the SWP and the CVP was a consistent legislative goal.

First, the Legislature enacted the Burns-Porter Act authorizing the SWP, a large-scale project contemplated as part of a "coordinated plan" for the development, utilization or conservation of California's water resources. (§§ 10500, 10504.5.) The DWR was empowered to "co-operate with the United States" for the public benefits to be derived from the project. (§ 11500, subd. (e).)

During the same legislative session, the Delta Protection Act was passed requiring the SWP to provide salinity control in the Delta "in coordination with the activities of the United States ... through operation of the Federal Central Valley Project ..." (§ 12202) and further requiring integration of "the operation and management of [storage] releases ... into the ... Delta ... [for use outside the area of origin] to the maximum extent possible..." (§ 12205.) Thus, there can be little doubt that in enacting section 1394, the Legislature clearly intended to grant the Board the authority it claimed—to reserve jurisdiction over the ****187** projects' permits to enable the Board to coordinate the terms and conditions.

Salinity control in the Delta was unquestionably contemplated by state and federal authorities as one of the purposes to be fulfilled by the statewide ***129** water projects: the U.S. Congress when authorizing the CVP (Sen.Rep. No. 1325, 72d Cong. (1933)); and the California Legislature when authorizing the SWP to function "in coordination with the [CVP] activities ... in providing salinity control for the Delta" (§ 12202). Consequently, in an effort to coordinate the operations of the projects, the Board imposed a new term—"Term 2"—which compels the projects to provide salinity control in the Delta by maintaining the water quality standards contained in the Plan. We have no hesitancy in concluding that such an action was within the Board's authority to amend or modify permit terms and conditions. (§ 1394.) As long as

the Board had reserved jurisdiction to impose conditions for salinity control in at least one of the project permits, it retained the power and jurisdiction to “coordinate” the permits and impose similar conditions upon all. As a pragmatic matter, the operations of the CVP and the SWP are inextricably interrelated. Both projects use portions of the Sacramento River and the many channels of the Delta as conduits for the transfer of water. Such natural conjoint use of the Delta is plainly conducive to the imposition of similar terms and conditions by the single state agency responsible for water quality standards and compliance. Any other conclusion, we think, would be wholly unreasonable and contrary to the public interest.

Unreasonable Use

[13] [14] Independent of its reserved powers, we think the Board was authorized to modify the permit terms under its power to prevent waste or unreasonable use or methods of diversion of water. All water rights, including appropriative, are subject to the overriding constitutional limitation that water use must be reasonable. (Cal. Const., art. X, § 2; § 100; see also *Environmental Defense Fund, Inc. v. East Bay Mun. Utility Dist.* (1980) 26 Cal.3d 183, 161 Cal.Rptr. 466, 605 P.2d 1.) The Board is expressly commissioned to carry out that policy. (§ 1050.) To that end, the Board is empowered to institute necessary judicial, legislative or administrative proceedings to prevent waste or unreasonable use (§ 275; Cal.Admin.Code, tit. 23, § 764.11), including imposition of new permit terms (Cal.Admin.Code, tit. 23, § 761). Moreover, all permits of the projects are subject to the continuing authority of the Board to prevent unreasonable use. (See generally, *People ex rel. State Water Resources Control Bd. v. Forni, supra*, 54 Cal.App.3d 743, 753, 126 Cal.Rptr. 851.)

Determination of reasonable use depends upon the totality of the circumstances presented: “ ‘The scope and technical complexity of issues concerning water resource management are unequalled by virtually any other type of activity presented to the courts. What constitutes reasonable water use is *130 dependent upon not only the entire circumstances presented but varies as the current situation changes.... “[W]hat is a reasonable use of water depends on the circumstances of each case, such an inquiry cannot be resolved *in vacuo* from statewide considerations of transcendent importance.” ’ [Citation.]” (*Environmental Defense Fund, Inc. v. East Bay Mun. Utility Dist., supra*, 26 Cal.3d 183, 194, 161 Cal.Rptr. 466, 605 P.2d 1.)

Here, the Board determined that changed circumstances revealed in new information about the adverse effects of the projects upon the Delta necessitated revised water quality standards. Accordingly, the Board had the authority to modify the projects' permits to curtail their use of water on the ground that the projects' use and diversion of the water had become unreasonable.

[15] Though we are mindful that the Board made no *express* finding of unreasonable use, such underlying finding is implicit in the Board's decision to impose without project standards upon the projects to prevent “any material deterioration of water quality which would impair its usefulness **188 for ... senior right holders.” Curtailment of project activities through reduced storage and export was eminently reasonable and proper to maintain the required level of water quality in the Delta.

[16] We perceive no legal obstacle to the Board's determination that particular methods of use have become unreasonable by their deleterious effects upon water quality. Obviously, some accommodation must be reached concerning the major public interests at stake: the quality of valuable water resources and transport of adequate supplies for needs southward. The decision is essentially a policy judgment requiring a balancing of the competing public interests, one the Board is uniquely qualified to make in view of its special knowledge and expertise and its combined statewide responsibility to allocate the rights to, and to control the quality of, state water resources. (§ 174.) We conclude, finally, that the Board's power to prevent unreasonable methods of use should be broadly interpreted to enable the Board to strike the proper balance between the interests in water quality and project activities in order to objectively determine whether a reasonable method of use is manifested.²⁴

*131 C.

Joint Responsibility to Maintain and Monitor Water Quality

In 1960 the U.S. Bureau and the DWR entered into a preliminary agreement for the coordinated operation of the two projects. That agreement provides for a sharing of water in the Delta in times of shortage “after the consumptive use requirements of the Delta Lowlands are met” and commits the projects to meet certain requirements “for navigation,

fish conservation, outflows from the Delta, and water service through direct diversions from [Feather River waters] ... to the Delta Lowlands.”

In its Plan the Board determined that project operations were to be “coordinated”; thus, in its Decision implementing the Plan involving modification of some 34 permits held by the projects, the Board made the projects equally responsible for maintaining water quality and for monitoring water quality in the Delta. Under the provisions of “Term 2” of the Decision, the required water quality standards are to be maintained by the projects’ reduction at the pumps, release of natural flow or storage, operation of the Delta Cross Channel gates or by any combination thereof. The U.S. Bureau has challenged the Board’s authority to impose joint responsibility, contending that the Board’s action impaired its prior vested water rights.²⁵

In denying reconsideration, the Board disclaimed any intent to alter the relative priorities of the projects. Instead, the Board—aware of project negotiations for a ****189** new joint operating agreement²⁶—committed resolution of the details of implementing the standards to the projects’ cooperative efforts.

The trial court’s determination of this issue was twofold: first, that the Board’s Decision erroneously altered the priority of the CVP permits; ***132** secondly, that by virtue of the 1960 agreement, the U.S. Bureau had waived its priority with respect to *consumptive* uses in the Delta. In essence, the trial court’s ruling invalidated the Board’s Decision with respect to the standards for *non* consumptive uses. We think the trial court erred.

[17] As previously discussed, the projects’ permits were subject to the reserved jurisdiction of the Board to “coordinate” project operations. Those activities are inextricably interrelated: the projects use parts of the Sacramento River and Delta channels in their transfer of water. Such natural intermingling and integrated use plainly requires coordination by the Board, a function clearly contemplated by the Legislature. (§§ 12202, 12205.) Thus, in our view, the Board’s power to modify the permits pursuant to its reserved jurisdiction includes the authority to impose responsibility to maintain water quality upon the projects equally.

Our determination is supported by relevant statutory and case law. The issuance of a permit grants the right to appropriate water “only to the extent ... allowed in the permit” (§

1381) subject to the conditions enumerated therein, (§ 1391) including reserved jurisdiction of the Board (§ 1394).

Moreover, the power of the Board to set permit terms and conditions (§ 1253) includes the power to consider the “*relative benefit*” to be derived. (§ 1257.) If the Board is authorized to weigh the values of competing beneficial uses, then logically it should also be authorized to alter the historic rule of “first in time, first in right” by imposing permit conditions which give a higher priority to a more preferred beneficial use even though later in time. (See Hutchins, *op cit.*, *supra*, pp. 105–106, 131–132, 173–174.)

East Bay M.U. Dist. v. Dept. of P. Wks., *supra*, 1 Cal.2d 476, 35 P.2d 1027, is instructive. In that case, involving a permit for use of the Mokelumne River for power purposes, the Board imposed the condition that such use “shall not interfere with future appropriations of said water for agricultural or municipal purposes,” the two highest uses of water. (§§ 106, 1254.) Consequently, East Bay MUD’s permit became subordinate to future permits, contrary to the recognized “first-in-time” priority system. The Supreme Court upheld the Board’s action over the objections of East Bay MUD, reasoning as follows: “[U]nless and until the statutory requirements and conditions are met, the applicant obtains no property right or any other right against the state. If the statutory prerequisites are not present, the application may be rejected in its entirety or, as here done, a permit may be issued with qualifications as to use of the water.... Clearly, the manner in which the unappropriated waters of the streams of the state shall be distributed among the applicants therefor involves questions of policy, and the legislature, in ***133** the interest of the public welfare, may prescribe reasonable conditions and priorities in such distribution.... Where the facts justify the action, the water authority should be allowed to impose, in the public interest, the restrictions and conditions provided for in the act.” (1 Cal.2d at pp. 480–481, 35 P.2d 1027.)

Such reasoning is equally applicable here. The scope and priority of appropriative rights are properly defined by the Board acting within its powers to consider the relative benefits of competing interests and to impose such conditions as are necessary to protect the public interest. Here, the projects’ permits were issued subject to the continuing jurisdiction of the Board to ****190** coordinate project operations. D 1485 was an exercise of that continuing jurisdiction. Accordingly, when the Board imposed Term 2—requiring equal responsibility for maintaining the water quality standards—it acted well within its authority and did

not infringe upon or otherwise unlawfully impair the “vested” appropriative rights of the U.S. Bureau, which held its permits subject to the exercise of such authority.²⁷

Monitoring

[18] Although the additional requirement of joint monitoring was not challenged below, the trial court nonetheless held it invalid on the ground that the Board failed to consider the costs of monitoring activities, which the court characterized as “wasteful.” The trial court relied, erroneously we believe, upon the obligation of the Board to consider “economic effects” in setting water quality standards. (§ 13241, subd. (d).) The monitoring provisions are not part of the water quality *objectives* but rather an integral provision of the Board’s Decision concerning implementation of such objectives. Indeed, a program of implementation requires consideration of monitoring activities through “[a] description of surveillance to be undertaken to determine compliance with objectives.” (§ 13242, subd. (c).)

We conclude that the Board acted within its authority in imposing a monitoring condition. Whether the monitoring program chosen is reasonable was a question of fact which could only be decided after review of the administrative record, a procedure not followed below.

***134 D.**

Interference with Congressional Purposes

[19] The U.S. Bureau has consistently resisted efforts by the Board to compel compliance with water quality standards exceeding the so-called “Tracy standards,” the agreed level of water quality under the terms of its contracts with its export customers. At trial the U.S. Bureau argued unsuccessfully that the Board lacked authority to regulate a federal facility. We agree with the trial court’s determination.

When authorized for federal financing, the CVP was made expressly subject to the reclamation laws. Section 8 of the federal Reclamation Act of 1902 (43 U.S.C. § 383)²⁸ has been interpreted by our highest court to require the Bureau, in its operation of the CVP, to abide by state law with respect to the acquisition of water rights. (*California v. United States* (1978) 438 U.S. 645, 98 S.Ct. 2985, 57 L.Ed.2d 1018; see also *South Delta Water Agency v. U.S. Dept. of Int.* (9th Cir.1985) 767 F.2d 531, 536–538.)

In *California v. United States*, the State Water Resources Control Board had approved the application of the U.S. Bureau to appropriate water from the Stanislaus River for operation of the New Melones Project (a unit of the CVP) subject to a number of conditions and limitations. The Bureau sought a judicial declaration that California lacked the authority to impose conditions on the federal project once the Board had determined that unappropriated water was available. In rejecting the argument, the U.S. Supreme Court held that under section 8 of the Reclamation Act of **191 1902, state-imposed conditions were valid as long as such conditions were not “inconsistent with congressional directives.” (438 U.S. at p. 679, 98 S.Ct. at p. 3003.)

On remand for determination whether the conditions imposed were inconsistent with congressional directives, the Ninth Circuit Court of Appeals upheld the challenged conditions. (*U.S. v. State of Cal., State Water Resources* (9th Cir.1982) 694 F.2d 1171 [“New Melones II”].) The Court of Appeals clarified the test for “consistency” as follows: “[A] state limitation *135 or condition on the federal management or control of a federally financed water project is valid unless it clashes with express or clearly implied congressional intent or works at cross-purposes with an important federal interest served by the congressional scheme.” (694 F.2d at p. 1177.)

The U.S. Bureau’s contention that the Board-imposed conditions for salinity control are inconsistent with congressional directives is premised on the following analysis: The early congressional authorization for construction of the CVP provided that “the ... dam and reservoirs shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power.” (50 Stat. 850 (1937)); thus one of the main congressional purposes of the CVP was to provide water for export for irrigation and domestic uses. Salinity control in the Delta was merely an incidental benefit; Congress never intended water quality or salinity control to take priority over exporting water to water-deficient areas in the state.

In response, the Board argues that “river regulation,” the first priority stated, includes salinity control. The trial court adopted this interpretation, which we now approve.

In 1933 a special Senate subcommittee investigation of water shortage problems in the Central Valley noted the problem of saltwater invasion from the bay into the lower river and Delta channels (contaminating irrigation and industrial water) due in part to “*subnormal stream flow during ... drought and ...*

the *reduction in flow* naturally available due to upstream irrigation and storage diversions.” (Engle, *op. cit.*, *supra*, Sen.Rep. No. 1325, 72d Cong. (1933) pp. 495–496, emphasis added.)

In a report by the Corps of Engineers the division engineer noted that a saltwater barrier dam was economically infeasible, and that saltwater incursion in the Delta “can best be prevented and a reasonable restoration of original *stream flow conditions* made, by securing a minimum discharge of 3,300 cubic feet per second at Antioch by the construction of the [Shasta] Reservoir.” The Board of Engineers concurred, concluding that relief from such incursion could best be obtained “from *increased flows* obtained from the [Shasta] Reservoir.” (Engle, *op. cit.*, *supra*, part 1, H.R.Doc. No. 191, 73d Cong., pp. 514, 518 (1933) (emphasis added).)

In authorizing \$20 million of emergency relief funds for the CVP, President Roosevelt declared “[t]he purpose [of the project] is to store and conserve flood and waste waters of the Sacramento and San Joaquin Rivers and their tributaries so that the entire flow can be used for flood control, *136 improvement of navigation, irrigation, the development of hydroelectric power, and the protection of the delta lands at the junction of the two rivers against injury from salt.” (Engle, *op. cit.*, *supra*, part 1 Exec.Order (Sept. 10, 1935) p. 560.)

Under the terms of the federal River and Harbor Act of 1937 authorizing the CVP, the stated purposes included “*regulating the flow* of the San Joaquin River and the Sacramento River, controlling floods, *providing for storage and for the delivery of the stored waters*, thereof, for the reclamation of arid and semiarid lands ... and other beneficial uses, [including electric energy]”²⁹ subject to the proviso that **192 paramount priority be given to river regulation, improvement of navigation, and flood control. (50 Stat. 850, emphasis added.)

Viewed against that historical background, “river regulation” may reasonably be interpreted as authority for storage and release of water in order to maintain necessary consistency in the stream flows. Such a significant purpose includes provision for additional release of stored water to prevent intrusive saltwater damage. We are convinced that salinity control was an integral part of the announced congressional purposes possessing a priority at least equal to that of transport to water-deficient areas. Thus, we conclude that the Board was fully authorized to impose the challenged water quality standards or conditions, a regulatory exercise which we determine to be consistent with congressional directives.

Our conclusion is buttressed by related expressions of congressional intent. The Federal Water Pollution Control Act (FWPCA) commands the states to prepare water quality control plans and to review them periodically. (33 U.S.C. § 1313(c)(1).) Pursuant to these congressional directives, the Board adopted the Delta Plan and revised the water quality objectives to provide for greater salinity control. Moreover, section 313 of the FWPCA requires federal facilities to comply with state water quality controls. (33 U.S.C. § 1323(a).) In light of these circumstances reflecting congressional endorsement of water quality plans and salinity control, we conclude that the conditions imposed upon the CVP permits to further such compatible goals are not facially inconsistent with congressional directives.³⁰

*137 The U.S. Bureau further insists that an evidentiary hearing is necessary to determine whether the effect of the Board's Decision under the CVP *in fact* interferes with congressional purposes. We disagree. Although we recognize that the consistency issue is ordinarily a factual one (see *California v. United States*, *supra*, 438 U.S. 645, 679, 98 S.Ct. 2985, 3003; *New Melones II*, *supra*, 694 F.2d 1171, 1174), in light of the Board's announced intention to establish new water quality standards at its scheduled hearings, we decline to remand the matter for such belated factual determination. At the ensuing Board hearings, the U.S. Bureau will have ample opportunity to present evidence supporting any claim of inconsistency with congressional purposes; and the Board's determination would, of course, be subject to judicial review.³¹ We trust, in parallel expectation, that “[a] spirit of cooperative federalism on both sides may accommodate the inevitable tensions and conflicts incident upon federal operation of an intrastate project, so that the legal question is never presented for adjudication.” (*Id.*, at p. 1182.)

E.

The Contra Costa Canal Standards

Included within the Plan are salinity control standards for the protection of municipal and industrial uses of water taken from the Contra Costa Canal, one of the initial units of the CVP. (§§ 11215–11216.) The Canal provides water for about 240,000 people and a number of industries throughout **193 eastern and central Contra Costa County. Water is diverted from the Delta at Rock Slough, then lifted by pumps into the canal and transported westerly some 47 miles through

Contra Costa County. (See generally Rogers & Nichols, *op. cit.*, *supra*, p. 53.)

The Canal is operated by the Contra Costa Water District under a long-term purchase contract with the U.S. Bureau. (Engle, *op. cit.*, *supra*, part 2, pp. 213–240.) Under the terms of the original agreement, the U.S. Bureau assumed no responsibility with respect to the quality of the water to be furnished but agreed that the District would not be obligated to accept and pay for any water “which contains in excess of twenty-five (25) parts by weight of chloride per one hundred thousand (100,000) parts of water.” *138 Engle, *op. cit.*, *supra*, part 2, p. 220.)³² In 1970, the contract was amended to provide that project operations “shall be performed in such manner as is practicable to maintain the quality of raw water to be delivered hereunder at the highest level reasonably attainable and consistent with M & I [municipal and industrial] use....” However, the quality of water furnished is without warranty as before.

Municipal Uses

As earlier discussed, the Board employed without project standards to protect the existing water rights of Delta water users. The rights purportedly protected by the Board include not only common law water rights (riparian and appropriative) but also certain statutory “watershed” rights.³³

The Contra Costa Water District holds neither riparian nor appropriation rights. Nevertheless, Delta water users enjoy certain statutory protections restricting project exports and requiring the projects to leave enough water in the Delta for purposes of salinity control.

Watershed or area-of-origin protective legislation was enacted during the formative years of the projects in order to alleviate the fear of Northern California interests that local water supplies would become depleted. (See generally Rogers & Nichols, *op. cit.*, *supra*, pp. 115–117; Hutchins, *op. cit.*, *supra*, pp. 143–145.) In 1931 the Legislature enacted section 10505 which prohibits the DWR from assigning appropriative rights which would deprive the county of origin of water necessary for its development.³⁴ In 1933, contemporaneous with legislation authorizing construction of the CVP, the Legislature also enacted the Watershed Protection Act. (§§ 11460–11463.) Under the provisions of section 11460, DWR project operations cannot deprive “a watershed or area wherein water originates, or an area immediately *139

adjacent thereto which can conveniently be supplied with water therefrom, ... of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, ...”³⁵ **194 A similar limitation upon federal agencies was later imposed. (§ 11128.)³⁶

Virtually none of this protective legislation has been interpreted by the courts. (But see generally *City of Fresno v. California* (1963) 372 U.S. 627, 630, 83 S.Ct. 996, 998, 10 L.Ed.2d 28.) The Attorney General, however, has construed the watershed and county-of-origin statutes as having a common purpose: to reserve to the areas of origin an undefined preferential right to future water needs. (25 Ops.Cal.Atty.Gen. 8, 10 (1955).) The established priority does not create an individual “water right” (§ 11462; *id.*, at p. 20) but rather a grant which is wholly inchoate. (*Id.*, at p. 21.) As the needs of a watershed inhabitant develop, he must make and perfect a regular application to appropriate water; the Board must issue the permit despite the needs of the projects, and the water projects must honor the vested water right thus created. (*Ibid.*) The Attorney General further concluded that if such needs can only be met by augmentation of the natural flow, then the watershed inhabitant must pay compensation to the projects. (25 Ops.Cal.Atty.Gen., *supra*, at pp. 23–24.)

In 1959, when the SWP was authorized, the Legislature enacted the Delta Protection Act. (§§ 12200–12220.) The Legislature recognized the unique water problems in the Delta, particularly “salinity intrusion,” which mandates the need for such special legislation “for the protection, conservation, development, control and use of the waters in the Delta for the public good.” (§ 12200.) The act prohibits project exports from the Delta of water necessary to provide water to which the Delta users are “entitled” and water which is needed for salinity control and an adequate supply for Delta users.³⁷ (§§ 12202, 12203, 12204.)

But the crucial question left unanswered by the protective legislation is exactly *what* level of salinity control the projects must provide. As noted, *140 the Board concluded that the projects are responsible only for maintaining that level of salinity which would exist in the Delta had the projects never been constructed, the so-called “without project” level. The Board declared that if the Delta water users desire a higher level of protection (a greater amount of outflow water), they can purchase such “enhancement water” from the projects.

With respect to the drinking water standards, however, the Board followed a different approach. In formulating the water quality standards to protect municipal uses, the Board

set a minimum level of protection of 250 mg/l chloride concentration, the threshold level required by the federal Safe Drinking Water Act (42 U.S.C. §§ 300f–300j–10) and California's Pure Drinking Water Law (Health & Saf.Code, § 4010 et seq.; Cal.Admin.Code, tit. 22, § 64473). The Board selected the higher standards in order *to ensure the public health*, notwithstanding the recipients' lack of water rights.³⁸ But although the Board determined that the recipients must pay for the additional “enhancement water,” it left the question of compensation for benefits received “for resolution by the project operators and municipalities involved.”

The U.S. Bureau, together with the state and federal contractors, argued below that the Board had no authority to compel the projects to provide extra water in order to ****195** protect the quality of canal waters because the District has no vested water rights. Any additional water, it is argued, must be purchased by the District.

The trial court agreed and held the drinking water standards for the Contra Costa Canal invalid. The court reasoned that since the District had neither riparian, appropriative nor perfected watershed rights, the District was limited to its contractual rights, and it had “bargained away” its right to water of a specified quality.

The question thus presented is troublesome. Yet, a careful analysis impels the conclusion that the court's basic premise—that water quality protection hinges on ownership of water rights—is faulty.

As discussed earlier, in performing its *planning* function, the Board is authorized to establish water quality objectives which in its judgment will ***141** ensure “the reasonable protection of *beneficial uses* ...” (§ 13241, emphasis added), a concept embracing a wide spectrum of consumptive and nonconsumptive, instream uses. (§ 13050, subd. (f).) Thus, the Board's authority in setting water quality standards is *not* limited to the protection of water rights but extends to the protection of *all beneficial uses* from degradation of water quality, even if the resulting level of water quality exceeds that provided by water rights. Accordingly, we conclude that the Board acted within its broad water quality planning authority to set standards to protect municipal or domestic supplies.

Enforcement of the standards, however, presents an entirely different issue. Succinctly stated, the question is whether the Board has authority to compel the projects to comply with such water quality standards. The purpose of the trial court's

ruling, it seems apparent, was not to invalidate the standards themselves but rather to deny the Board's attempt to compel compliance by the projects to supply salinity control water free of charge. We think the court's ruling was incorrect.

[20] Under its reserved jurisdiction to modify the permits (§ 1394), the Board was authorized to impose upon the projects water quality standards at whatever level of protection the Board found reasonable (§ 13241), whether “without project” or greater.³⁹ By the very nature of the reserved jurisdiction, the Board was empowered to impose such terms and conditions upon the project permits as would in its judgment best serve “the public interest.” (§§ 1253, 1257, 1258; *Johnson Rancho County Water Dist. v. State Water Rights Board*, *supra*, 235 Cal.App.2d 863, 45 Cal.Rptr. 589; *Bank of America v. State Water Resources Control Bd.*, *supra*, 42 Cal.App.3d 198, 212, 116 Cal.Rptr. 770.) While the scope of that duty requires consideration of the public benefits derived from the projects (§ 1256), it also requires that water quality needs be taken into account. (§§ 1243.5, 1257, 1258, 13000.) Nothing in the statutory scheme limits the Board's supervisory authority ***142** over appropriation permits to provide a level of water quality protection which exceeds the quality afforded by water rights.

Further, as discussed before, the Board has the separate and additional power to take whatever steps are necessary to prevent unreasonable use or methods of diversion. (Cal. Const., art. X, § 2; §§ 275, ****196** 1050; Cal.Admin.Code, tit. 23, §§ 761, 764.11.) That independent basis of authority vests jurisdiction in the Board to compel compliance with the water quality standards insofar as the projects' diversions and exports adversely affect water quality. Such authority, we think, includes the power to impose related costs on the projects. (Cf. *People ex rel. State Water Resources Control Bd. v. Forni*, *supra*, 54 Cal.App.3d 743, 126 Cal.Rptr. 851 [the Board could require riparian owners to incur reasonable expenses to build water storage facilities].) “[T]he overriding constitutional consideration is to put the water resources of the state to a reasonable use and make them available for the constantly increasing needs of all the people. In order to attain this objective, the riparian owners may properly be required to endure some inconvenience or to incur reasonable expenses (*Rancho Santa Margarita v. Vail* (1938) 11 Cal.2d 501, 561 [81 P.2d 533]; *Waterford I. Dist. v. Turlock I. Dist.* (1920) 50 Cal.App. 213 [194 P. 575]; *Peabody v. City of Vallejo*, *supra*, at p. 376, 40 P.2d 486). Whether the requirement of building water reservoirs in the case at bench is the only feasible method for achieving the constitutional mandate

of reasonableness is manifestly a question of fact.” (54 Cal.App.3d at pp. 751–752, 126 Cal.Rptr. 851.)

Although *Forni* dealt with riparian rights, the same reasoning applies to appropriative rights. The constitutional requirement of reasonable use applies “to all water rights enjoyed or asserted in this state, whether the same be grounded on the riparian right or ... the appropriative right.” (*Peabody v. City of Vallejo*, *supra*, 2 Cal.3d 351, 383, 40 P.2d 486; accord *People ex rel. State Water Resources Control Bd. v. Forni*, *supra*, 54 Cal.App.3d at p. 749, 126 Cal.Rptr. 851; see also *Joslin v. Marin Mun. Water Dist.*, *supra*, 67 Cal.2d 132, 138, 60 Cal.Rptr. 377, 429 P.2d 889; *Gin S. Chow v. City of Santa Barbara*, *supra*, 217 Cal. 673, 703–705, 22 P.2d 5.)

[21] However, we agree with the trial court that the Board failed to make necessary findings reflecting the balancing of interests between the domestic uses of the Canal and the domestic uses of the export recipients in determining the “public interest.” We recognize that such findings need not be stated with the formality required in a judicial proceeding but must be adequate enough to permit a reviewing court “ ‘... to determine whether they are supported by sufficient evidence or a proper principle and to apprise the parties as to the reason for the administrative action in order that they may decide whether, and upon what grounds, additional proceedings should be initiated.’ ” (*143 *Temescal Water Co. v. Department of Public Works*, *supra*, 44 Cal.2d at p. 102 [280 P.2d 1].)” (*Johnson Rancho County Water Dist. v. State Water Rights Board*, *supra*, 235 Cal.App.2d 863, 874, 45 Cal.Rptr. 589; accord *Bank of America v. State Water Resources Control Bd.*, *supra*, 42 Cal.App.3d at p. 208, 116 Cal.Rptr. 770.)

The Board's Decision offers no indication that the Board undertook the required factual analysis. Although the *Plan* contains language that the adopted standards were the result of a “full examination of agricultural, municipal and industrial, and fish and wildlife uses in the Delta; the beneficial uses of water exported from the Delta; and available Delta supplies..,” our concern here is the Board's *enforcement* efforts. Whether the projects should be required to bear the costs of releasing additional water for outflow to ensure salinity control, or whether the release requirements should be conditional upon the execution of a repayment contract by the District, required a factual resolution. Unfortunately, no findings were made in the mistaken assumption that the parties would reach agreement

on the “question of compensation for benefits received....” In this we think the Board erred.

Once again, given the scheduled hearings, a remand on this issue would be futile. At any future hearings regarding implementation of the new standards, the Board should make appropriate findings as to whether it is reasonable and in the public **197 interest to require the projects to provide enhancement water for water quality control for the Contra Costa Canal without a repayment obligation.

Industrial Standards

Under the former Basin 5B Plan, water quality was measured in the western Delta at Antioch. Fibreboard Corporation and Crown Zellerbach Corporation—riparians who manufacture salt-sensitive paper at their plants on the banks of the San Joaquin River east of Antioch—require salinity levels at or below 150 mg/l. When their usual water supply from the San Joaquin River reflects poor water quality, the companies obtain the needed supply from the Contra Costa Water Agency, which in turn purchases the water from the District.

In the 1978 proceedings the Board determined that to maintain “without project” standards of water quality at Antioch to protect the rights of the Antioch riparians would require a wasteful release of 25 acre-feet of outflow for each acre-foot diverted. As an alternative, the Board accepted the offer of DWR to provide a substitute supply to the Antioch riparians through the Contra Costa Canal. Accordingly, the Board eliminated the Antioch standard *144 from the Plan and required the projects only to meet the standards for the Canal.

The paper companies argued that the Board should require the DWR to enter a *binding contract* instead of an “oral commitment” for delivery of the substitute supply before exempting the SWP from the Antioch water quality standards. The trial court agreed and invalidated the western Delta industrial standards. The trial court reasoned that an executory contract for the substitute supply was ineffective; as a result, the Board failed to protect the riparian rights of the paper companies. We cannot agree.

As we have previously discussed, the common law riparian rights of the paper companies do not include salinity control. (*Antioch v. Williams Irr. Dist.*, *supra*, 188 Cal. 451, 205 P. 688.) The trial court, focusing on the Delta Protection Act and its language that “no added financial burden shall be placed upon said Delta water users” for a substitute supply

(§ 12202), reasoned that the expense of litigation necessary to enforce the riparian water rights was inconsistent with the stated legislative intent.

Yet, at the risk of tedious repetition, we reiterate that the Board's obligation, when setting water quality standards, is not to protect water rights but to provide "reasonable protection of beneficial uses." (§ 13241.) The Board implicitly found that the waste associated with protection of the industries' use of Delta water at Antioch would be unreasonable. Under such circumstances, the Board was fully authorized to eliminate the burdensome Antioch standard from the Plan. The statutory proscription against added cost applies, we believe, to expenses directly and solely related to delivery of the substitute supply, not to conjectural litigation costs.

Nor do we find any error in the Board's decision declining to impose the Antioch standards upon the projects. In light of the constitutional mandate proscribing unreasonable or wasteful use of water (Cal. Const., art. X, § 2), the Board had little choice but to exempt the projects from the Antioch standards. In doing so, it properly exercised its broad authority to assure that limited water resources be conserved for appropriate beneficial uses. (See *In re Waters of Long Valley Creek Stream System*, *supra*, 25 Cal.3d 339, 354, 158 Cal.Rptr. 350, 599 P.2d 656.)

We hold that the Board could properly rely on the verbal offer of DWR to provide a substitute supply in lieu of the wasteful outflow requirements.

*145 F.

Impairment of Suppliers' Contract Rights

At trial the federal contractors argued that the Board failed to protect the contractors' rights to use the Delta water for a dependable water supply for the water-deficient **198 areas of the state. The contractors argued that the mandated reduction of export water to achieve and implement the stated water quality standards constituted an unconstitutional taking of property without due process or just compensation as well as an unconstitutional impairment of a contract. (U.S. Const., art. I, § 10; Cal. Const., art. I, § 9.) The trial court rejected the first argument on the basis that the federal contractors have no water rights of their own but are subject to the limitations of the permits held by the CVP. As to the latter issue, the trial court concluded that a potential claim of unconstitutional

impairment of the water supply contracts required a factual determination on the extent of such impairment; accordingly, the court ordered the Board on remand to consider and determine the effects of the Plan and Decision on the rights of the federal contractors. In this appeal, a number of the parties challenge the ruling limited to the contract impairment issues. Since no argument is made concerning the nature of their water rights (as distinguished from contract rights), we confine our discussion to the contract impairment issue alone.

The CVP is a multi-purpose project involving a massive network of reservoirs and canals serving many purposes simultaneously; i.e., flood control, navigation depths, salinity control, irrigation, power generation, recreation, municipal and industrial uses, and preservation of fish and wildlife. However, only some of these activities yield revenues; the remaining uses are subsidized.

In 1935, before President Roosevelt authorized emergency funding for construction of the CVP, the Secretary of the Interior submitted a feasibility report in which estimates were made that the multimillion dollar cost of construction and maintenance would eventually be recovered through "annual revenues from the sale of water and ... electric power..." (Engle, *op. cit.*, *supra*, part 1, Feasibility Report (Nov. 26, 1935) p. 567.) Thus, it was initially contemplated that necessary costs of construction would be recouped through the sale of hydroelectric power and the delivery of water for irrigation and municipal-industrial uses.

Funds allotted for the CVP purpose by presidential proclamation were made "reimbursable in accordance with the reclamation laws" (Engle, *op. cit.*, *supra*, part 1, Exec. Order (Sept. 10, 1935) p. 559); a similar repayment *146 condition was included in the 1937 congressional authorization (50 Stat. 850). However, since the Reclamation Project Act of 1939 excludes costs of flood control and navigation from reimbursement (43 U.S.C. § 485h(a), (b)), repayment revenues are derived solely from the sale of hydroelectric power and water for irrigation and municipal/industrial supplies. (43 U.S.C. § 485h(c), (d), (e); see generally *Ivanhoe Irrig. Dist. v. McCracken*, *supra*, 357 U.S. 275, 78 S.Ct. 1174, 2 L.Ed.2d 1313.)

The other functions of the CVP, notably salinity control, protection of fish and wildlife and recreation, are neither mentioned in the authorizing legislation nor expressly declared nonreimbursable under reclamation laws. Thus, a later report concludes, the lack of available means to collect revenues for these services places the burden of

such costs “upon the revenue-producing functions.” (Engle, *op. cit.*, *supra*, part 1, Report by Secretary of Interior on Allocation of Costs and Feasibility of the Central Valley Project, H.R.Doc. No. 146, 80th Cong. (1947) pp. 581, 592; see also *Ivanhoe Irrig. Dist. v. McCracken*, *supra*, 357 U.S. 275, 295, 78 S.Ct. 1174, 1185.) Under the provisions of the long-term contracts between the federal government and various irrigation districts and water districts for irrigation water service and municipal-industrial water supplies, the U.S. Bureau has agreed to meet the “Tracy standards” of water quality. Thus, the component costs of maintaining salinity control are factored into the contract price of the water to be paid by the contractors.

3

[22] [23] Our threshold inquiry is whether a substantial impairment of contractual **199 rights is factually demonstrated. If only minor alterations are shown, our inquiry ends since no violation of constitutional dimension has occurred. (*Allied Structural Steel Co. v. Spannaus* (1978) 438 U.S. 234, 244–245, 98 S.Ct. 2716, 2722–2723, 57 L.Ed.2d 727; *In re La Fortune* (9th Cir.1981) 652 F.2d 842, 846.) In determining the extent of impairment, the court may consider a variety of factors, including whether the industry has been so regulated in the past that the contractor has notice that further state restrictions apply (*Energy Reserves Group v. Kansas Power & Light* (1983) 459 U.S. 400, 411 [103 S.Ct. 697, 704, 74 L.Ed.2d 569]), and “whether the parties have relied on the preexisting contract right and the extent to which the [regulation] violates the reasonable expectations of the parties (*Allied Structural Steel Co. v. Spannaus*, *supra*, 438 U.S. at p. 246 [98 S.Ct. at p. 2723, 57 L.Ed.2d at p. 737]; *In re Marriage of Bouquet*, *supra*, 16 Cal.3d [583] at p. 592 [128 Cal.Rptr. 427, 546 P.2d 1371]).” (*Mobil Oil Corp. v. Rossi* (1982) 138 Cal.App.3d 256, 263–264, 187 Cal.Rptr. 845.) However, a state regulation that merely restricts a party to the gains reasonably expected *147 from the contract does not constitute a substantial impairment. (*Energy Reserves Group v. Kansas Power & Light*, *supra*, 459 U.S. at p. 411, 103 S.Ct. at p. 704; *Allen v. Board of Administration* (1983) 34 Cal.3d 114, 120, 192 Cal.Rptr. 762, 665 P.2d 534, app. disp., 465 U.S. 1015 [104 S.Ct. 1262, 79 L.Ed.2d 669].)

[24] Nor is every impairment constitutionally proscribed. Contract rights, like other property rights, may be altered by the exercise of the state’s inherent police power to safeguard the public welfare. (*Donlan v. Weaver* (1981) 118 Cal.App.3d 675, 682, 173 Cal.Rptr. 566.) The function of the court, then, becomes one of balancing the interests involved. “[A]fter

examination of [various] factors, the court must balance the severity of the impairment resulting from retroactive application of the statute against the state interest served by the statute. The key inquiry is whether the importance of the state interest justifies the impairment. [Citations.]” (*Mobil Oil Corp. v. Rossi*, *supra*, 138 Cal.App.3d at p. 263, 187 Cal.Rptr. 845.)

“In evaluating the importance of the state interest and whether such interest justifies the impairment a court must consider where pertinent: whether the legislation was enacted to remedy an emergency situation (*Home Bldg. & L. Ass’n v. Blaisdell*, *supra*, 290 U.S. [398] at p. 444 [54 S.Ct. 231 at p. 242, 78 L.Ed. 413 at p. 432]; *Sonoma County Organization of Public Employees v. County of Sonoma*, *supra*, 23 Cal.3d [296] at pp. 309–313 [152 Cal.Rptr. 903, 591 P.2d 1]); whether the law is “appropriately tailored and limited to the situation necessitating its enactment” (*Donlan v. Weaver*, *supra*, 118 Cal.App.3d at p. 682 [173 Cal.Rptr. 566]; *Home Bldg. & L. Ass’n v. Blaisdell*, *supra*, 290 U.S. at p. 445 [54 S.Ct. at p. 242, 78 L.Ed. at p. 432]); the nature of the interest served by the legislation and whether the law was enacted to protect a broad societal interest rather than a narrow class (*Allied Structural Steel Co. v. Spannaus*, *supra*, 438 U.S. at pp. 248–249 [98 S.Ct. at pp. 2724–2725, 57 L.Ed.2d at pp. 738–739]).”

(*Id.*, at p. 264, 187 Cal.Rptr. 845.) Frequently, many, if not all, of these factors may be considered in the abstract without need of factual inquiry. (*Ibid.*)

[25] Here, no evidentiary showing is required, and we are able to reach the conclusion as a matter of law that no substantial impairment appears. The important factor underlying our determination is the expectations of the parties. The CVP’s appropriated water rights are, by definition, conditional—subject to the continuing supervisory authority of the Board, the constitutional limitation of reasonable use, and the priorities of senior rights holders. Logically, neither the project *nor* the contractors could have any reasonable expectation of certainty that the agreed quantity of water will be delivered.

Indeed, the federal water supply contracts reflect the parties’ understanding **200 that the availability of supplies is uncertain: the contracts expressly *148 provide for governmental immunity from any liability to the contractors due to the failure to furnish the specified quantities of water in times of water shortages. (Engle, *op. cit.*, *supra*,

pp. 91–92, 113–114, 131–132, 265–266, 277.) Thus, both substantively and conceptually, the contractors cannot justify any reasonable expectation of a certain or guaranteed water supply for delivery.

Additionally, the very fact that “without project” standards require the project to rectify any quality degradation due to project operations undermines the theory that either the CVP or the federal contractors could reasonably expect a greater quantity.

[26] Even were we, arguendo, to find the impairment substantial, we think the Board's action was justified as a valid exercise of the state police power. As a statewide agency with plenary power and duties of management and oversight of valuable water resources, the Board unquestionably was performing a legitimate public purpose. Having established a reasonable level of water quality protection, the Board was fully authorized to enforce such standards against the CVP in the larger interest of the public welfare.⁴⁰

III.

Enforcement of Water Quality Standards for Nonconsumptive, Instream Uses

In addition to protecting consumptive uses of the Delta, the Board formulated revised standards of water quality to protect fish and wildlife, a function expressly authorized by state and federal law.

The Porter-Cologne Act requires the establishment of water quality objectives to “ensure the reasonable protection of beneficial uses ...” (§ 13241), a protected category which includes “preservation and enhancement of fish, wildlife, and other aquatic resources....” (§ 13050, subd. (f).) Similarly, the FWPCA requires the state pollution control agency to establish and periodically revise water quality standards “taking into consideration their use and value for ... propagation of fish and wildlife *149 ...” (33 U.S.C. § 1313(c)(2).) Thus, the Board acted within its water quality authority to establish standards for the protection of fish and wildlife.

The Board employed a “modified without project” level of protection utilizing the striped bass fishery as a benchmark: water quality standards that would provide for “the maintenance of the fishery (as represented principally by striped bass) in the Delta estuary at levels which would

approach those that would have existed in the absence of the SWP and CVP.” In doing so, the Board recognized that while a higher level was necessary to ensure protection of other species (e.g., white catfish, shad and salmon), such level of protection would require the “virtual shutting down of the project export pumps,” contrary to the broader public interest. Thus, the Board determined that the modified without project standards provided a reasonable level of protection, pending future mitigation actions.

In the proceedings below the Bureau argued the Board had no authority to modify an appropriation permit once issued, and that the new standards for the protection of fish and wildlife will result in impairment of its vested appropriative rights. These arguments were, quite properly, rejected by the trial court. But the court nonetheless held the standards invalid by reason of the Board's failure to identify its *source* of authority. The court remanded the matter to the Board, presumably to ascertain whether a factual basis exists to **201 support the revised standards. The court's ruling was erroneous.

The issue is now clearly controlled by *National Audubon Society v. Superior Court*, *supra*, 33 Cal.3d 419, 189 Cal.Rptr. 346, 658 P.2d 709, decided after the proceedings below. In that case the Supreme Court clarified the scope of the “public trust doctrine” and held that the state as trustee of the public trust retains supervisory control over the state's waters such that no party has a vested right to appropriate water in a manner harmful to the interests protected by the public trust.⁴¹ (*Id.*, at p. 445, 189 Cal.Rptr. 346, 658 P.2d 709.) “Once the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs. [¶] The state accordingly has the power to *reconsider* allocation decisions.... [] No *150 vested rights bar such *reconsideration*.” (33 Cal.3d at p. 447, 189 Cal.Rptr. 346, 658 P.2d 709, emphasis added.)

This landmark decision directly refutes the Bureau's contentions and firmly establishes that the state, acting through the Board, has continuing jurisdiction over appropriation permits and is free to reexamine a previous allocation decision. (*National Audubon Society v. Superior Court*, *supra*, 33 Cal.3d at p. 447, 189 Cal.Rptr. 346, 658 P.2d 709.) In reaching its decision, however, the Board acted without the benefit of *National Audubon*. The Board primarily relied upon its reserved jurisdiction to impose

conditions upon appropriation permits to protect the public interest.

[27] The trial court's ruling that the source of authority be identified and enabling findings be made is flawed in several respects. First, the Board's promulgation of the water quality standards in the Plan was a quasi-legislative action for which findings of fact were not required. (*McKinny v. Board of Trustees, supra*, 31 Cal.3d 79, 88, 181 Cal.Rptr. 549, 642 P.2d 460; *Stauffer Chemical Co. v. Air Resources Board, supra*, 128 Cal.App.3d 789, 793–794, 180 Cal.Rptr. 550.) Secondly, the Board's obligation when setting such standards is to “establish such water quality objectives ... as *in its judgment* will ensure the *reasonable* protection of beneficial uses....” (§ 13241, emphasis added.) The objectives contained in the Plan for the protection of fish and wildlife were determined necessary by the Board to provide a reasonable level of protection. That determination must be upheld absent a review of the administrative record and a showing of arbitrary or capricious conduct. No such evidentiary review has been undertaken.

[28] Arguably, the trial court intended to invalidate the enforcement program contained in Term 2 of the Decision rather than the standards contained in the Plan. Of course, a water rights decision is a quasi-judicial act for which findings are required to show the underlying factual bases (*Temescal Water Co. v. Dept. Public Works, supra*, 44 Cal.2d 90, 100–106, 280 P.2d 1; see also *Bank of America v. State Water Resources Control Bd., supra*, 42 Cal.App.3d 198, 205–206, 116 Cal.Rptr. 770); but we are aware of no requirement that findings be made to show the source of legal authority.

[29] In the new light of *National Audubon*, the Board unquestionably possessed legal authority under the public trust doctrine to exercise supervision over appropriators in order to protect fish and wildlife. That important role was not conditioned on a recital of authority. It *exists* as a matter of law itself.

Finally, as already shown, the Board retained continuing jurisdiction (§ 1394) to impose new standards upon the projects in **202 “the public interest.” *151 (§ 1253; *Bank of America v. State Water Resources Control Bd., supra*, 42 Cal.App.3d 198, 212, 116 Cal.Rptr. 770.) In acting upon appropriation permits, the Board was obliged to consider water quality for the protection of beneficial uses (§§ 174, 1243.5, 1257, 1258) which expressly includes “enhancement of fish and wildlife resources.” (§ 1243.) Here, the Board found that the imposition of the modified without project

standards was in the public interest, taking into account not only the needs of the fishery, but also the value of the projects.

In summary, the Board's evaluation process was not only a valid exercise of its reserved jurisdiction but also, in retrospect, a proper exercise of its public trust authority as confirmed by our high court: “The state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.... As a matter of practical necessity the state may have to approve appropriations despite foreseeable harm to public trust uses. In so doing, however, the state must bear in mind its duty as trustee to consider the effect of the taking on the public trust [citation], and *to preserve, so far as consistent with the public interest, the uses protected by the trust.*” (*National Audubon Society v. Superior Court, supra*, 33 Cal.3d at pp. 446–447, 189 Cal.Rptr. 346, 658 P.2d 709; emphasis added.) The Board's action reflects complete symmetry with these requirements.

Amici curiae argue, however, that the Board did not go far enough and should have reopened the project permits to provide even greater protection to the fish and wildlife of the Delta and San Francisco Bay. Amici point out that the Board itself acknowledged the inadequacy of the standards to mitigate the detrimental effects of the projects. But this issue is beyond the scope of this appeal. Whether the standards are *in fact* reasonable and in the public interest is a question which requires a review of the evidentiary record. That question, we repeat, is not before us by reason of the posture of the case presented. We may properly assume, however, that in undertaking new hearings, the Board will be guided by the principles discussed in *National Audubon* and may consider whether a higher level of protection is necessary and reasonable.

Amici further challenge the Board's declaration that it had no authority under its reserved jurisdiction to compel the projects to consider alternative water supply measures (e.g., groundwater management, water conservation, wastewater reclamation) to reduce exports from the Delta.⁴² Amici *152 concede, however, that no purpose would be served by a remand on this point. Again, for the guidance of the Board, we emphasize that the principles set out under *National Audubon* confirm the Board's power and duty to reopen the permits to protect fish and wildlife “whenever feasible,” even *without* a reservation of jurisdiction.

In conclusion, we hold that the water quality standards designed to protect fish and wildlife were properly established by the Board in the exercise of its valid authority.

directions to enter judgment denying the writ. Each party shall bear its own costs on appeal. The stay previously imposed shall remain in effect until this opinion becomes final.

3

ELKINGTON and NEWSOM, JJ., concur.

The judgment granting a peremptory writ of mandate, remanding the proceedings to the Board and commanding the Board to set aside the Plan and Decision, is reversed with

Parallel Citations

182 Cal.App.3d 82

Footnotes

* *Central Valley East Side Project Association v. State Water Resources Control Board* (Sac. County Super.Ct. No. 277506); *Kern County Water Agency v. State Water Resources Control Board* (Sac. County Super.Ct. No. 277555); *San Joaquin County Flood and Water Conservation District v. State Water Resources Control Board* (Contra Costa Co. Super.Ct. No. 193377); *South Delta Water Agency v. State Water Resources Control Board* (Contra Costa Co. Super.Ct. No. 193342); *Contra Costa Water Agency v. State Water Resources Control Board* (Contra Costa Co. Super. Ct. No. 193298); *Fibreboard Corporation v. State Water Resources Control Board* (Contra Costa Co. Super.Ct. No. 193313); *Crown Zellerbach Corporation v. State Water Resources Control Board* (Contra Costa Co. Super.Ct. No. 193368).

1 Unless otherwise indicated, all further statutory references are to the Water Code.

2 Harry P. Grody's insightful article, *From North to South: The Feather River Project and Other Legislative Water Struggles in the 1950's* (1978) 60 Southern California Quarterly 287, provides an absorbing account of the parochial conflicts and official inertia which confronted early proponents of a statewide, comprehensive water plan. Grody chronicles the key leadership role played by Governor Edmund G. "Pat" Brown in guiding the critical funding measure through political thickets resulting in the passage of the 1959 Burns-Porter Act (California Water Resources Development Bond Act; § 12930 et seq.). It is altogether fitting that the California Aqueduct bear his name in recognition of his prodigious accomplishments in securing vital legislative consensus and voter approval.

3 In two instances the Board performs a limited adjunct function in the process of adjudication of water rights: One, as a special master or referee upon reference from the court (§ 2000 et seq.), a function advisory in nature (Hutchins, *op. cit., supra*, pp. 356–360; Rogers & Nichols, *op. cit., supra*, pp. 552–554); another, as a hearing body to conduct a "statutory adjudication," upon petition of any water rights holder, determining all the water rights in a "stream system" (§ 2500 et seq.; see, e.g., *In re Waters of Long Valley Creek Stream System* (1979) 25 Cal.3d 339, 158 Cal.Rptr. 350, 599 P.2d 656). The statutory hearing is contingent upon the Board's finding that the public interest will be served by such determination. (§ 2525.) But again, the Board's determination is tentative in nature and must be filed in the superior court for hearing and final adjudication. (§§ 2750, 2768, 2769; Hutchins, *op. cit., supra*, pp. 360–362; see *In re Waters of Soquel Creek Stream System* (1978) 79 Cal.App.3d 682, 145 Cal.Rptr. 146, disapproved on other grounds in *In re Waters of Long Valley Creek Stream System, supra*, 25 Cal.3d 339, 158 Cal.Rptr. 350, 599 P.2d 656 [trial court properly rejected and remanded Board's determination of water rights]; Rogers & Nichols, *op. cit., supra*, pp. 551–552.)

4 The amendment provides:

"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. *The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.* Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained." (Emphasis ours.)

5 The statutory enumeration includes "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." (33 U.S.C. § 1362(6).)

- 6 The state agency's task is described as follows: "Whenever the State revises or adopts a new standard, such ... revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation." (33 U.S.C. § 1313(c)(2).)
- 7 The court's omission, pragmatic in purpose, is explained by its declared intention "to avoid spending valuable time on factual issues that may well become moot before a final judgment is entered in this case." The trial court requested all parties "to consider the advisability ... of arranging for a final judgment to be entered on the legal issues in time to secure appellate guidance for the reopened 1485 hearings."
- 8 The Plan declares in pertinent part: "One of the primary concerns in preparing a water quality control plan for the Delta is the evaluation of CVP and SWP operations and exports *on Delta vested water rights*. Without project conditions reflect that theoretical water quality which would occur in the absence of the CVP and SWP. If without project conditions in the Delta, as limited by reasonable beneficial use, are provided by this plan, *vested water rights* will be protected from infringement by project operations." (Emphasis added.)
- 9 We observe, parenthetically, that the statutory factors to be considered in establishing water quality objectives do not include *water rights*. (§ 13241.)
- 10 In view of our determination, it is unnecessary to reach the issue whether the water quality objectives are invalid for failure to provide the salinity control guaranteed by the watershed protectionist legislation. We discuss that legislation and its effect upon the Contra Costa Canal in Part IIE (*infra*).
- 11 The Plan states, in part: "The direct effects of SWP and CVP diversions covered by permits currently before the Board do not result in major impact on water quality conditions in the southern Delta. It is questionable whether the Board could justify imposing terms and conditions in the permits before the Board to resolve all of the water quality problems in this area. [¶] Thus, ... the Board's vested water right authority through which [permit] terms and conditions are imposed ... will not yield an implementable solution based on a consideration only of project facilities on the Sacramento River system and the Delta."
- 12 The Plan provides: "The current Vernalis objective contained in the Basin 5B Plan is used as an interim level of protection for the southern Delta. However, achievement of this interim level of protection cannot be ensured until New Melones Reservoir is operational. [¶] The most practical solution for long-term protection of southern Delta agriculture is construction of physical facilities to provide adequate circulation and substitute supplies. If necessary physical facilities are constructed, the circulation flows needed may be only a moderate increase above those committed from New Melones Reservoir. Negotiations concerning such facilities are currently underway between the project operators and the South Delta Water Agency."
- 13 The trial court's added reliance on the Board's failure to make supporting findings is misplaced in view of the quasi-legislative nature of the standards for which findings are not required. (*Stauffer Chemical Co. v. Air Resources Board, supra*, 128 Cal.App.3d 789, 794, 180 Cal.Rptr. 550.)
- 14 Southern Delta riparians dispute the Board's finding that the projects have no direct impact in the southern Delta. They argue, in essence, that because the export pumping plants are located here, the project operations result in harmful flow reversal causing reduced water levels in some channels as well as the elimination of the cleansing action of the freshwater outflow. The southern Delta riparians contend, therefore, that water quality protection is needed from the pumping plants, and the permits which authorize diversions at the pumps *were* before the Board. But the Board found to the contrary—that the project operations governed by the permits before the Board were not responsible for the water quality problems in the southern Delta. Because the trial court undertook no evidentiary review, it did not reach the pivotal factual issues. Thus, that question is beyond the scope of this appeal.
- 15 Indeed, with commendable candor, the Board conceded at oral argument that it did not comply with the requirements of section 13241 with respect to the southern Delta water quality objectives.
- 16 The Board advised at oral argument of its intention to consider revised standards for the southern Delta at the upcoming hearing, though implementation before 1988 is unlikely. We are advised that the New Melones Project is now in operation. Accordingly, the Vernalis standard is apparently in effect for the southern Delta, giving that region at least minimal water quality protection until new standards can be established.
- 17 Waste is defined under the Porter-Cologne Act to include: "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with ... human or animal origin," or any production or manufacturing process. (§ 13050, subd. (d).)
- 18 "Term 2" of the Decision provides in part: "Permittees shall maintain, by reduction of direct diversion at the project pumps or by release of natural flow or water in storage, or by operation of the Delta Cross Channel gates, or by any combination of these measures, water quality conditions in the channels of the Delta and Suisun Marsh equal to or better than the standards set forth in ... Table II included in the [Board's] Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh...."

- 19 The Decision states, as relevant: “The current negotiations between the project operators and the South Delta Water Agency concerning the construction of physical facilities to provide adequate circulation in the southern Delta to meet these standards ... appear to be directed toward the most practical solution for long-term protection of southern Delta agriculture and should be concluded as soon as practicable.... If an agreement is not executed by January 1, 1980, the Board will examine in detail southern Delta water rights, determine the causes and sources of any encroachment, and take appropriate action....”
- 20 The Plan explains, in pertinent part: “Riparian rights (taking into account upstream diversions by other riparians) would be generally sufficient to satisfy water quality needs of agricultural users in the southern Delta without regard to hydrologic year type. However the permits of water development facilities in the San Joaquin River watershed ... which may be major contributors to southern Delta quality and quantity deterioration are not before the Board, ... [but] the permits do provide that such appropriations are subject to prior vested rights.”
- 21 The Department of Water Resources does *not* challenge the authority of the Board to modify its permits. Each of DWR's permits for the SWP contains a clause expressly reserving jurisdiction of the Board to modify the terms for purposes of salinity control and protection of fish and wildlife.
- 22 In Decision 893, issued in 1958 (pertaining to diversions from the American River), the Board issued the permits subject to an agreement for “co-ordination” with other units of the CVP for consumptive uses and salinity control. It provided that if no agreement was reached (and none was), the permits were “subject to further order of the Board.”
- In Order 124, issued in 1959 (pertaining to diversions from the Trinity River), the Board reserved jurisdiction for a period of two years following actions on applications of the U.S. Bureau for the CVP for the purpose of “coordinating” the terms imposed with terms of other permits held by the U.S. Bureau for the CVP.
- In Decision 990, issued in 1961 (pertaining to the Sacramento River, Rock Slough and Delta channels), the principal decision relating to Delta waters, the Board reserved jurisdiction for purposes of “coordinating” terms with other CVP units and with the SWP. The Board also reserved jurisdiction until March 1, 1964, to impose conditions for salinity control.
- In Decision 1020, issued in 1961 (pertaining to the consumptive uses of the San Luis Unit), the Board once again reserved jurisdiction for purposes of “coordinating” the terms with other units of the CVP and the SWP and similarly reserved jurisdiction until March 1, 1964, to impose conditions for salinity control.
- In Decision 1250, issued in 1966 (pertaining to power generation in the San Luis Unit), the Board reserved jurisdiction to impose terms for salinity control and to coordinate terms with other units.
- In Decision 1308, issued in 1968 (pertaining to Rock Slough and the Contra Costa Canal), the Board reserved jurisdiction to impose terms for salinity control and to coordinate terms between the CVP and SWP.
- And in Decision 1356, issued in 1970 (pertaining to the [uncompleted] Auburn-Folsom Dam), the Board reserved jurisdiction to coordinate terms among the projects, to impose terms for salinity control and protection of wildlife.
- 23 Section 1394 provides, in part, that the Board may reserve jurisdiction “to amend, revise, supplement, or delete terms and conditions in a permit....
- “(a) If the board finds that sufficient information is not [then] available to finally determine the terms and conditions ... [necessitating] ... a period of actual operation ... to secure the required information [or]
- “(b) If the application ... acted upon resrepresent[s] only part of a co-ordinated project, ... and the board finds that the co-ordinated project requires co-ordinated terms and conditions which cannot reasonably be decided upon until decision is reached on said other pending applications....”
- 24 What constitutes a reasonable use or method of diversion is ordinarily a question of fact. (*People ex rel. State Water Resources Control Bd. v. Forni*, *supra*, 54 Cal.App.3d 743, 750, 126 Cal.Rptr. 851; but see *Joslin v. Marin Mun. Water Dist.*, *supra*, 67 Cal.2d at p. 141, 60 Cal.Rptr. 377, 429 P.2d 889 [rock and gravel business unreasonable as a matter of law where no policies favored its operation].) Whether substantial evidence exists to support the Board's implied finding is a question we do not reach in light of the absence of review of the administrative record below. The only question here is whether the Board has the *authority* to make that decision.
- 25 The law of water rights involves a hierarchy of priorities: Riparian rights as a class have priority which must be satisfied before any appropriative rights are exercised. As among appropriators, “the first in time is the first in right.” In times of water shortage the most junior rights-holder must reduce use even to the point of discontinuance before the next senior appropriative rights-holder must cut back at all. (*Hutchins*, *op. cit.*, *supra*, pp. 154–160.) Any impairment of the rights of the prior appropriator constitutes an invasion of private rights for which a remedy lies at law and in equity. (*Joerger v. Pacific Gas & Electric Co.* (1929) 207 Cal. 8, 26, 276 P. 1017.)
- Under the statutory scheme, priority of the issued permit is based upon the application date. (§§ 1450, 1455.) For the most part, the CVP applications preceded those of the SWP, so that most appropriative water rights of the CVP have a higher priority than the rights of the SWP.
- 26 We are informed that the proposed joint operating agreement since negotiated is ineffective until approved by Congress. It is common knowledge that the required congressional approval has yet to be given.

- 27 In light of our decision we find it unnecessary to interpret the 1960 agreement. Should approval of a new joint operating agreement fail to occur, it would appear prudent for the Board during the scheduled hearings to determine the relative priorities. However, nothing we have said here should be read to compel the Board to impose identical terms and conditions upon the projects.
- 28 Section 8 provides: “Nothing in this Act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any State or of the Federal Government or of any landowner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof.”
- 29 In 1940 “construction ... of ... distribution systems [for delivery of the stored waters]” was added as an additional purpose. (54 Stat. 1200.)
- 30 A similar result was reached by the Ninth Circuit in reviewing conditions imposed upon the New Melones Project requiring the project (1) to comply with the state and local water quality control plans and (2) to give preference to the area of origin. (§§ 10505.5, 11460.) The court held that these goals—water quality and county-of-origin preference—were consistent with congressional purposes: “[These conditions], far from working against congressional purposes, lead to results anticipated, and apparently encouraged, by Congress.” (*New Melones II, supra*, 694 F.2d at p. 1181.)
- 31 We note that in the present proceedings the U.S. Bureau presented *no* evidence to the Board, relying solely on its argument that the Board lacked authority to regulate a federal facility. Nor did the U.S. Bureau respond to a pretrial order below directing the parties to disclose evidence not presented to the Board that the parties would seek to introduce at trial. Accordingly, the trial judge properly rejected the Bureau’s later attempts to offer evidence concerning the impact of D 1485 upon CVP operations.
- 32 The specified chloride standard conforms to the current public health standard for drinking water (250 mg/l), discussed hereafter.
- 33 The Plan declares in relevant part: “Prior vested water rights include those of riparian lands, pre-1914 appropriators and [senior appropriators].... In addition, the permits of both [projects] for use outside the Delta or the Sacramento River watershed are subject to use by appropriators within the Delta and watershed regardless of when such use was or is initiated (Water Code Section 11460 and Decisions D 990 and D 1275) [with the effect that] the rights of all legal users ... in the Delta and ... watershed [are] senior to the rights of [the projects] for use outside the Delta or the watershed.”
- 34 Section 10505 provides: “No priority under this part shall be released nor assignment made of any application that will, in the judgment of the board, deprive the county in which the water covered by the application originates of any such water necessary for the development of the county.”
- In 1969, the Legislature added section 10505.5 which expanded the concept to include any appropriation application, permit or license.
- 35 Congress has also declared a policy of federal cooperation with the states to protect watershed regions. “[I]t is the sense of Congress that the Federal Government should cooperate with States and their political subdivisions, ... and other local public agencies for the purpose of ... furthering the conservation, development, utilization, and disposal of water, and ... of preserving, protecting, and improving the Nation’s land and water resources and the quality of the environment.” (16 U.S.C. § 1001.)
- 36 The remaining statutes prohibit impairment of water rights by the projects, even by condemnation (§ 11461), require repayment for water provided by the projects in excess of water rights (§ 11462) and neutralize watershed or area exchanges (§ 11463).
- 37 Section 12201 clarifies that an adequate water supply is a supply sufficient 1) to maintain and expand agriculture, industry, urban and recreational development in the Delta and 2) to provide a common source of fresh water for export to water-deficient areas, subject to the provisions of the watershed and county-of-origin statutes.
- 38 The Plan states in part: “[W]ater quality standards for public drinking supplies have been developed at levels necessary to provide *full protection regardless of a particular entity’s vested rights*. In accordance with Section 64473 of Title 22 of the California Administrative Code, the standard for drinking water has been established at 250 mg/l chloride.” (Emphasis added.)
- 39 The Board’s apparent reliance on its powers under the drinking water statutes to protect the public health is misplaced. The Board has no such public health authority.
- Water delivered *to consumers* for domestic uses must conform to the federal Safe Drinking Water Act (42 U.S.C. §§ 300f—300j—10) and California’s Pure Drinking Water Law (Health & Saf.Code, § 4010 et seq.). Among other things, each water supplier must comply with water quality regulations (Health & Saf.Code, § 4023 et seq; Cal.Admin.Code, tit. 22, § 64401 et seq.) to assure safe drinking water quality. But these regulations apply to *retail* suppliers (Health & Saf.Code, §§ 4010, 4010.1, subd. (e); 42 U.S.C. § 300f(4)); the State Water Project and the Central Valley Project act as *wholesale* water suppliers. The Board had no authority under the drinking water statutes to compel the projects to maintain salinity control. Moreover, under the safe drinking water statutory scheme, it is the Department of Health Services that is responsible for enforcement. (Health & Saf.Code, §§ 20, 4032–4035.) The trial court correctly concluded that the drinking water statutes did not give enforcement authority to the Board.

- 40 While it has been said that an impairment of a contract in which the state is a party is subject to stricter scrutiny (*United States Trust Co. v. New Jersey* (1977) 431 U.S. 1, 26, 97 S.Ct. 1505, 1519, 52 L.Ed.2d 92), that principle has no application here. Although the state is a party in the sense that the contractors, as water districts, are political subdivisions of the state, the Board's action in no way benefits the contractors financially. This is not a case in which the state has sought to be relieved of its own financial obligations.
- 41 The interests protected by the public trust are nonconsumptive, in-stream uses: navigation, fishing, recreation, ecology and aesthetics. (*National Audubon Society v. Superior Court, supra*, 33 Cal.3d at pp. 434–435, 189 Cal.Rptr. 346, 658 P.2d 709.)
- 42 In denying reconsideration, the Board explained: “While restrictions on SWP and CVP operations resulting from the imposition of the suggested [conservation] requirements could potentially provide additional indirect benefits to Delta users, there are limits to the Board's authority to consider such matters. To impose requirements outside the scope of the jurisdiction reserved in the permits would exceed those limits.”

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