INTRODUCTION

For the first time, a California court has examined carefully how the law of water quality and the law of water rights interact. In United States v. State Water Resources Control Board (U.S. v. SWRCB),1 the California Court of Appeal interpreted California statutes as giving the State Water Resources Control Board (the Board) broad power to establish water quality standards. More importantly, the court found that those statutes authorize the Board to modify water rights permits in order to achieve those standards.

Regulation of water quality in the Sacramento-San Joaquin Delta (the Delta) lies at the center of the controversy in U.S. v. SWRCB. The case arose out of challenges to the Board’s 1978 Sacramento-San Joaquin Delta and Suisun Marsh Water Quality Control Plan2 (the Plan) and to its Water Right Decision 1485 (D-1485),3 which implemented the Plan. In the Plan and its enforcement decision, the Board attempted to establish comprehensive water quality standards for the Delta by restricting removal of water from the basin that feeds into it. Along with numerous water users in the Delta, the Bureau of Reclamation of the U.S. Department of the Interior, as an exporter of water from the Delta to the San Joaquin Valley, challenged the Plan and D-1485.4
Although it upheld the Plan and D-1485, the court of appeal detailed a number of problems with the Board’s approach to implementing its water quality standards. In doing so, the court provided guidance for reconciling tensions among different doctrines in California water law.

The court’s decision introduces new concepts into water law, and its implications are far reaching. The court directed the Board, in making water quality decisions, (1) to protect reasonably all water uses without regard to the priorities drawn from existing water rights, (2) to consider all demands on water resources from the entire watershed, and (3) to balance all demands on water by determining which demands constitute "reasonable use." Exactly how these directions will affect the future of water policy decisions is not clear, but the Board will have to incorporate them into its hearings, convened in July 1987, on a new Delta water quality plan.

This Note examines the implications of the court of appeal’s holding in *U.S. v. SWRCB* for California’s policies regulating water quality in the Delta. Section I provides background on the physical attributes of the Delta and describes the two large government-operated projects that regulate and divert the Delta’s waters. Section II sets forth the legal framework for the court’s decision, outlining relevant legal doctrines in California’s water rights law and describing the development of the Board’s Plan and D-1485. Section III discusses the court of appeal’s decision. Finally, Section IV concludes by examining the new questions that *U.S. v. SWRCB* raises for water policy in California.

I

BACKGROUND

A. The Delta

The Sacramento-San Joaquin Delta encompasses 700,000 acres in a triangular area bounded by Sacramento at the north, Vernalis at the south, and Pittsburg at the west. The Delta’s legal definition does not include the Suisun Marsh, which state law defines as the waterways

5. CAL. WATER CODE § 12220 (Deering 1977); W. KAHRL, CALIFORNIA WATER ATLAS 104 (1979).
north of Suisun Bay and Honker Bay that are subject to tidal action.\textsuperscript{6} The Board, recognizing the interdependence between water quality in the Delta and in the Suisun Marsh, has included the marsh in the Delta water quality plan.\textsuperscript{7} In this Note the term "Delta" includes the Suisun Marsh.

The waters of the Delta play an integral role in the statewide water supply system. Both the Sierra Nevada\textsuperscript{8} and the Coastal Range\textsuperscript{9} contribute to the Delta much of their runoff from rain and melting snow, feeding the Sacramento and San Joaquin Rivers, other tributary streams, and—ultimately—the Delta. Water in the Delta flows down the Sacramento River and into San Francisco Bay. Manmade aqueducts carry water out of the Delta to the San Joaquin Valley\textsuperscript{10} and south to Los Angeles and San Diego.\textsuperscript{11}

The Delta supports a wide variety of water uses within its statutory boundaries. Its 700 miles of waterways flow by islands of reclaimed land, created with levees built by 19th-century farmers. Today, farmers on these islands depend on Delta water to produce many different crops.\textsuperscript{12} Farmers, however, are not the only ones dependent on Delta water. As of 1978, seventy-five major industrial and municipal users were taking Delta water and returning it as millions of gallons of discharged effluent each day.\textsuperscript{13} The Delta also supports a wide variety of fish and other wildlife\textsuperscript{14} and provides a scenic recreational area for hunters, fishermen, bird watchers, and boaters.\textsuperscript{15}

The Delta's water users depend on a delicate hydrologic balance for the area's freshwater quality. Fresh water flowing out of the Delta acts

\begin{footnotes}
\item[6] CAL. PUB. RES. CODE § 29101 (Deering 1987).
\item[7] Plan, supra note 2. The Board's inclusion of the Suisun Marsh represented a compromise between alternatives of isolating the Delta or including the entire watershed. The compromise reflected the Board's desire to form a comprehensive plan while recognizing the limitations on technical data regarding the relationship between the Delta and the San Francisco Bay. Telephone interview with Barbara Leidigh, Staff Attorney, State Water Resources Control Bd. Legal Department (Mar. 12, 1987).
\item[8] The Sierra Nevada stretches along California's eastern border. See W. KAHRL, supra note 5, at 10-11.
\item[9] The Coastal Range stretches along the entire California coast. The part of the range that feeds the Delta reaches north from San Francisco. See id.
\item[10] Both the federal government's Central Valley Project and the State Water Project carry water south to the San Joaquin Valley and beyond. See infra notes 23-35 and accompanying text.
\item[11] The State Water Project carries water south over the Tehachapi Mountains. The Metropolitan Water District then distributes this water throughout southern California. See infra note 31 and accompanying text.
\item[12] Delta agricultural products include both row crops, such as alfalfa and wheat, and various tree crops. Plan, supra note 2, at III-14; W. KAHRL, supra note 5, at 55.
\item[13] See W. KAHRL, supra note 2, at 105 for a graph depicting the industrial uses of water in the Delta.
\item[14] See id. at 104.
\item[15] Id.
\end{footnotes}
as a barrier to saltwater intrusion from San Francisco Bay.\textsuperscript{16}

The Delta suffers from a history of human activities adversely affecting its water quality and hydrologic balance. Miners in the Sierra foothills introduced hydraulic mining in the 1860's, dumping large amounts of sediment down Gold Country rivers that feed into the Delta.\textsuperscript{17} Beginning in the same era, Delta residents built levees to regulate the Delta's streams and to prevent flooding.\textsuperscript{18} Commencing in the last century, the growing agricultural community diverted Delta water for irrigation; by 1972 almost three million acre-feet of Delta water were diverted for agricultural uses.\textsuperscript{19} Additionally, private and public water projects have drawn on the Delta's waters for faraway uses.\textsuperscript{20} The reduced freshwater flow resulting from these changes has weakened the Delta's saltwater barrier, allowing salt water to move upstream into the Delta.

This saltwater incursion damages both the natural and human uses of the Delta. Salmon, for example, suffer extensively when salt water moves upstream. Normally, salmon return each year to the same location in the Delta for freshwater spawning, but the salt water impairs their ability to navigate and inhibits spawning of new generations.\textsuperscript{21} Cities that have long relied upon fresh water from the Delta for domestic and industrial uses suffer obvious hardships when salt water moves up the Delta to the place where they draw their water.\textsuperscript{22} Fluctuations in the Delta's saltwater levels and overall water quality remain a major environmental concern.

\section*{B. The Water Projects}

The federal government's Central Valley Project (CVP) and California's State Water Project (SWP) control releases of water upstream of the Delta and withdraw water from the Delta's southern end for export south, east, and west.\textsuperscript{23} The two projects hold rights to appropriate approximately one-third of all of the Delta water.\textsuperscript{24} As a result, the projects substantially affect the quality of water in the Delta.

The California Legislature originally passed legislation to build the

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\item Natural tidal action pushes salt water toward the Delta. The fresh water flowing downstream pushes against the tide. Where these two forces meet, the water is brackish. \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.} at 21-22, 55.
\item \textit{Id.} at 104-06.
\item \textit{Id.} at 104.
\item See, \textit{e.g.}, Antioch v. Williams Irrigation Dist., 188 Cal. 451, 205 P. 688 (1922). \textit{See also infra} text accompanying notes 129-31.
\item \textit{W. KAHRLE, supra} note 5, at 47-53.
\item Telephone interview with Edward Huntley, Chief Coordinator of Bay-Delta Hearings for the Department of Water Resources (Jan. 9, 1988).
\end{enumerate}
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Central Valley Project in 1933.25 Because of the Depression, the state relied on the federal government to build and operate it,26 and the Bureau of Reclamation still operates the system.27 The CVP stores and regulates Sacramento River waters at the Shasta Dam, approximately one hundred miles from the Oregon border. The project augments the Delta's supply of water from the Sacramento River with water from the Folsom Dam on the American River east of Sacramento. From the Delta, the CVP's pumping stations feed canals to Contra Costa County28 and to operations farther south in the San Joaquin Valley. At these southern operations, a complicated canal system regulates the flow of the San Joaquin River and distributes water throughout the San Joaquin Valley.29

California's Department of Water Resources developed the State Water Project as a comprehensive approach to satisfy statewide demands for water.30 The project's Oroville Dam stores and regulates the Feather River, which flows into the Sacramento River above the Delta. From a pumping station near Tracy, the SWP ships water to the San Francisco Bay area, to the southern San Joaquin Valley, and to urban southern California.31

The two projects are vital to the state's economic prosperity.32 Before the projects were built, much of the land in the San Joaquin Valley went unused. By contrast, the San Joaquin Valley today is one of the nation's principal breadbaskets, contributing significantly to California's position as the nation's largest and most productive agricultural state.33

The projects also support southern California's large population by redistributing water from the sparsely populated northern regions of the state, where water is relatively plentiful, to the dry central and southern regions. Although seventy percent of the state's total water flow occurs

26. W. KAHRL, supra note 5, at 47-49.
27. Id. at 50.
28. Contra Costa County stretches east from the northern end of San Francisco Bay to the juncture of the Sacramento River and the San Joaquin River, bounded on the north by San Pablo Bay and Suisun Bay.
29. SWRCB, 182 Cal. App. 3d at 98-99, 227 Cal. Rptr. at 166; W. KAHRL, supra note 5, at 47-49.
30. SWRCB, 182 Cal. App. 3d at 99, 227 Cal. Rptr. at 167. Although the court in U.S. v. SWRCB explained that California developed the SWP in response to a need for a comprehensive water system, id., other observers have suggested different motivations. In particular, federal law prohibiting distribution of federally provided water to farms larger than 160 acres encouraged the state to develop its own system to deliver water to the huge San Joaquin Valley ranches. M. REISNER, CADILLAC DESERT 344-59 (1986).
31. SWRCB, 182 Cal. App. 3d at 99-100, 227 Cal. Rptr. at 167; W. KAHRL, supra note 5, at 50-54.
32. 1 H. ROGERS & A. NICHOLS, WATER LAW 76-77 (1967).
33. See W. KAHRL, supra note 5, at 48.
in the northern third of the state, nearly eighty percent of the demand comes from the southern part of the state.\textsuperscript{34} Leaders in southern California lobbied for construction of the SWP to support continued growth in their areas.\textsuperscript{35} Without the projects, the demographic profile of contemporary California would be radically different.

II
LEGAL FRAMEWORK FOR THE COURT’S DECISION

A. California Water Law

California water rights law determines who can use the Delta’s water, how it can be used, and how much will go to any one use. Any withdrawal of water from the Delta may be done only under a water “right.” A water right differs from a property right because the owner has no right to “hold” the water, as one can hold property. A water right gives the owner only the right to use the water.\textsuperscript{36} The water remains the property of the people of California.\textsuperscript{37}

Two independent legal doctrines determine water rights in California: riparianism and appropriation. The riparian doctrine, originating in common law,\textsuperscript{38} gives all owners of land along a stream common ownership of that stream. Each riparian user may divert the flow of water past his property for use upon his land, subject not to priority in time but only to the common law right of all riparians to a reasonable share of the water.\textsuperscript{39} If the stream cannot provide enough water for all riparian users, all riparians must reduce their usage proportionately.\textsuperscript{40}

The appropriation doctrine originated during the California gold rush when miners established their own water law of “first come, first served.” Under the appropriation doctrine, the first person to divert water from a stream for his own use gains a right.\textsuperscript{41} In times of shortage, appropriators must reduce their usage based on when they began diverting water from the stream. Unlike the riparian system, the appropriation doctrine does not require a proportionate reduction. The most recent

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\item[34.] 1 H. ROGERS & A. NICHOLS, supra note 32, at 33.
\item[35.] The author learned this during informal conversations with his grandfather, Norris Poulson, mayor of Los Angeles from 1953 to 1961.
\item[36.] Eddy v. Simpson, 3 Cal. 249, 252 (1853); CAL. WATER CODE § 1001 (Deering 1977). For further discussion, see 1 H. ROGERS & A. NICHOLS, supra note 32, at 191.
\item[37.] CAL. WATER CODE § 102 (Deering 1977). This distinction between water rights and property rights is important because the court in \textit{U.S. v. SWRCB} emphasized protection of all uses of Delta water regardless of who has “rights” to the water. See infra note 117 and accompanying text.
\item[38.] Lux v. Haggin, 69 Cal. 255, 361-409, 10 P. 674, 735-63 (1886). For further discussion of the riparian doctrine, see 1 H. ROGERS & A. NICHOLS, supra note 32, at 215-51.
\item[40.] Prather v. Hoberg, 24 Cal. 2d 549, 559-60, 150 P.2d 405, 411 (1944).
\item[41.] See Irwin v. Phillips, 5 Cal. 140, 147 (1855).
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diverter must be the first to stop using the water, whereas a senior user need not make any reductions. This time-based priority system produced the maxim of equity "first in time, first in right." 42

California is one of the last states to maintain a dual system of riparian and appropriative water rights. In other states, although riparian and appropriative doctrines may nominally coexist, riparian rights have been effectively eliminated by treating them as legally equivalent to appropriations. 43 In contrast, under California law riparian rights remain superior to those of appropriators. Thus, appropriators cannot obtain water until all riparian needs have been satisfied. 44

Both the Legislature and the courts, however, have recognized appropriative claims as legal rights. 45 In 1913, the Legislature established a permit system to formalize the claim process and to record appropriation rights. 46 The Board now has statutory responsibility for issuing appropriation permits and licenses. 47

Before issuing a water appropriation permit, the Board has "two primary duties: 1) to determine if surplus water is available [for the appropriation] and 2) to protect the public interest." 48 The water supply determination requires the Board to find that all riparian and existing appropriative users do not exhaust all the stream’s water. 49 The public interest requirement is more complex, involving numerous statutes. California law requires, for example, that water be used "for the greatest public benefit" 50 and that the Board weigh the relative benefits of competing beneficial uses. 51 One such beneficial use is keeping water in the stream to maintain fish and wildlife, 52 commonly called "instream

42. Id.; see 1 H. ROGERS & A. NICHOLS, supra note 32, at 254.
43. See, e.g., In re Deadman Creek Drainage Basin, 103 Wash. 2d 686, 694 P.2d 1071 (1985) (unused water connected to riparian land is available for appropriation to nonriparian lands); In re Adjudication of the Upper Guadalupe River Basin, 642 S.W.2d 438 (Tex. 1982) (nonuse of right to use riparian streamflow may lead to proper abrogation of the right). See also J. SAX & R. ABRAMS, LEGAL CONTROL OF WATER RESOURCES 227-33 (1986).
44. SWRCB, 182 Cal. App. 3d at 101-02, 227 Cal. Rptr. at 168.
45. Hoffman v. Stone, 7 Cal. 46, 49 (1857) (an appropriator acquires a “special property” in waters appropriated and may “invoke all legal remedies for its enjoyment or defence”); CAL. CIV. CODE § 1410(a) (Deering 1971). For a concise discussion of the appropriation doctrine, see 1 H. ROGERS & A. NICHOLS, supra note 32, at 254-56.
47. CAL. WATER CODE §§ 1200-1675.
48. SWRCB, 182 Cal. App. 3d at 102, 227 Cal. Rptr. at 168-69. See CAL. WATER CODE § 1253 (Deering 1977) (the Board shall allow appropriation of water for beneficial purposes under conditions that will best use the water in the public interest); id. § 1375(d) (before a permit may be issued “[c]here must be unappropriated water available to supply the applicant”).
49. SWRCB, 182 Cal. App. 3d at 102, 227 Cal. Rptr. at 169.
50. CAL. WATER CODE § 105.
51. Id. § 1257.
52. Id. § 1243.
When a potential appropriator's application is approved, that person receives a conditional appropriation permit. This permit may require, for example, that the permittee remove natural and added pollutants from coolant water before releasing that water into the ocean. Once the appropriator meets all of the conditions, the Board issues a license for the appropriation, confirming the holder's vested water right. Until the Board issues the license, it may reserve jurisdiction to amend the terms of the permit or license.

The Board may also impose continuing conditions on a permit or license. For example, the Board may require the appropriator to leave enough water in the stream during dry months to allow fish to survive. The Board may revoke any permit or license if the holder violates the conditions. The Board also may enforce conditions by issuing cease and desist orders or by obtaining injunctive relief.

Both the Central Valley Project and the State Water Project hold appropriative water rights by licenses granted by the Board. Under section 8 of the Reclamation Act of 1902, the Bureau of Reclamation must comply with state law to acquire rights to divert and store water for projects such as the CVP. The Bureau completed and began operating the CVP in 1951, although it did not obtain its first permits from the Board until 1958. The California Department of Water Resources obtained its permits to store and divert water for the SWP in 1967.

The appropriative water rights of the CVP are also subject to the California Watershed Protection statutes. These statutes confer a priority on the appropriative rights of water users within the Delta watershed, including users of all streams that flow into or out of the Delta;

57. *Id.* § 1394 (Deering Supp. 1987).
61. *Id.* § 1675 (Deering 1977).
62. *Id.* §§ 1825-1836, 1845.
64. W. Kahrl, *supra* note 5, at 49.
thus, the appropriative rights of these in-basin users take priority over the rights of the two projects to export water out of the basin.\textsuperscript{68} The projects also have extensive rights for in-basin use that receive the statute's protection.\textsuperscript{69}

One requirement that the riparian and appropriative doctrines have in common is that the water must be put to a use that is both beneficial and reasonable.\textsuperscript{70} The terms "beneficial" and "reasonable" play crucial—and different—roles in California water law and in the \textit{U.S. v. SWRCB} controversy. "Beneficial" use looks to the type of use; "reasonable" use looks to the circumstances under which the use is made and the relationship of that use to other beneficial uses.\textsuperscript{71} Although California's Constitution requires a beneficial use,\textsuperscript{72} courts have held that a wide range of activities meet this constitutional standard.\textsuperscript{73} In contrast, the reasonableness standard is more difficult to satisfy because it is based upon the balancing of competing needs for water.\textsuperscript{74}

The reasonable use doctrine was developed in response to the failure of riparianism and the beneficial use standard to prevent waste of water in California. Historically, as against appropriators, riparian water users were required only to make beneficial use of their water.\textsuperscript{75} Following this

\textsuperscript{68} \textit{Id.}

\textsuperscript{69} \textit{Id.} §§ 11460-11462; see Brief of Appellant State Water Resources Control Bd. at 16, \textit{SWRCB} (No. A027690) [hereinafter Board Brief]; see also 25 Op. Att'y Gen. 8, 18-22 (1955).

\textsuperscript{70} \textit{CAL. CONST.} art. X, § 2 ("Riparian rights in a stream or water course attach to [only] ... so much of the flow as may be required ... for the purposes for which such lands are ... adaptable, in view of such reasonable and beneficial uses ... "); see \textit{Peabody v. Vallejo}, 2 Cal. 2d 351, 367, 40 P.2d 486, 491 (1935).


This difference between beneficial and reasonable may be illustrated as follows. Using flood irrigation to create artificial paddies for cultivating rice is a "beneficial" agricultural use. This flooding, however, may not be considered "reasonable" if it limits the supply of water to a nearby city. Although the use of water to grow rice does achieve a benefit, this use may not be reasonable when compared to the needs of the nearby city.

\textsuperscript{72} \textit{CAL. CONST.} art. X, § 2. "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 ... " \textit{Id.} (emphasis added).

\textsuperscript{73} The courts have held that what constitutes a beneficial use "depends upon the facts and circumstances of each case." \textit{Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.}, 3 Cal. 2d 489, 567, 45 P.2d 972, 1007 (1935). For a representative list of beneficial uses, see \textit{Lee, Legal Aspects of Water Conservation Issues in California} 8-9 (Governor's Commission to Review California Water Rights Law, Staff Paper No. 3, 1977).

\textsuperscript{74} The question of reasonableness is a question of fact arising from a standard that responds to "externalities [such as drought] to assure the constitutional policy of maximizing the number of beneficial uses which a supply can meet." \textit{Kramer & Turner, supra} note 71, at 524. An inquiry into whether a use is reasonable "cannot be resolved in \textit{vacuo} isolated from statewide considerations of transcendent importance." \textit{Joslin v. Marin Mun. Water Dist.}, 67 Cal. 2d 132, 140, 429 P.2d 889, 894, 60 Cal. Rptr. 377, 382 (1967).

\textsuperscript{75} \textit{Kramer & Turner, supra} note 71, at 523.
principle, the California Supreme Court in *Herminghaus v. Southern California Edison Co.* held that a riparian owner could use the entire flow of a stream to flood her land while denying an upstream appropriator water to run a power plant. Reacting to *Herminghaus*, California voters passed an amendment to the state constitution two years later, subjecting all water users—riparians and appropriators—to the requirement that water use be reasonable as well as beneficial.

The last element of California water law relevant to the decision in *U.S. v. SWRCB* is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The 1969 Porter-Cologne Act established regional water quality boards that are responsible for developing plans to protect water quality in their respective regions. The Act requires regional boards to establish "water quality objectives" and to regulate the release of pollutants into state waters. By requiring the regional boards to present their plans to the state Board for approval or revision, the Porter-Cologne Act added ultimate responsibility for statewide water quality planning to the Board's existing authority to grant appropriation permits.

**B. The Water Quality Control Plan and Decision 1485**

The first comprehensive plan of water quality standards for the Delta resulted from a voluntary agreement in 1965 among major Delta water users, including the Department of Water Resources and the Bureau of Reclamation. The Board incorporated these standards, commonly known as the "Tracy standards," into the Department's permits for the State Water Project. Although the Board did not put the standards into the Bureau's previously issued permits for the Central Valley Project, the Bureau complied with them voluntarily.

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76. 200 Cal. 81, 252 P. 607 (1926), cert. dismissed, 275 U.S. 486 (1927).
77. *Id.* at 100-01, 252 P. at 615.
80. *Id.* § 13240 (Deering 1977).
81. *Id.* § 13241 (Deering Supp. 1987).
82. *See id.* § 13263 (Deering 1977).
83. *Id.* § 13245.
87. Interview with John Renning, *supra* note 85.
When the Board imposed new Delta water quality standards on the two projects in 1971, the court stayed the Board’s decision. A short time later, the Regional Water Quality Control Board formulated a Delta water quality plan for waste discharges, as it was required to do under the Porter-Cologne Act. The Board approved the regional board’s “Basin 5B Plan” in 1975. At the same time, the Board indicated that it intended to convene hearings to develop a comprehensive water quality control plan for the Delta, a plan that would include salinity control. The Board convened those hearings in 1976, acting for the first time under its combined authority to determine water rights and to establish water quality control standards. The Board accepted evidence relating to Delta water quality over thirty-two days of hearings.

In describing its responsibilities for developing the Delta’s water quality plan, the Board defined one of its primary duties as “protection of vested water rights.” With that end in mind, the Board limited its focus to the two projects, since they had both the most junior water rights and the greatest impact on water quality.

The hearings resulted in two separate documents: the Plan and D-1485. The Plan established standards that reflect the approximate water quality that would exist in the Delta if the Central Valley Project and the State Water Project did not export water—the so-called “without project” standards. D-1485 issued a variety of orders to the projects aimed at achieving the Plan’s standards. These orders modified the projects’ appropriation licenses to require the projects to reduce water exports if necessary to maintain the standards. Specifically, the permit modifications...
tions allow the two projects to take water from the Delta only when the Plan’s standards are met. If the salinity level in the Delta is too high, the projects must release fresh water from their upstream reservoirs. In practical terms, the modifications require that the Central Valley Project and the State Water Project release additional fresh water each summer, when low freshwater flows normally allow salt water to intrude into the Delta, thereby increasing salinity above the Plan’s acceptable level.

III
THE COURT’S FINDINGS

Eight legal challenges followed issuance of the Plan and D-1485; these suits were consolidated into one trial court proceeding. The trial judge ordered the parties to brief only certain “key legal issues.” The trial court made no findings of fact because no evidence had been taken. Instead, the decision was purely legal. The trial court upheld the Board’s right to impose water quality standards but rejected the Board’s established standards as inadequate. The trial court found that the Board had failed to consider adequately the rights of water users in the central Delta and that the Plan did not follow the procedural requirements of the Porter-Cologne Act. The court ordered the Board to set aside the Plan and D-1485.

On appeal, the California Court of Appeal generally upheld the Plan and D-1485 and instructed the lower court to deny writ of mandamus. The court of appeal, however, discussed in detail a number of problems with the Board’s procedures, analyses, and conclusions. Instead of striking down the Plan and D-1485, the court implicitly instructed the Board to resolve these problems during hearings the Board had scheduled for 1986.

98. Plan, supra note 2, at VII-2.
99. See id.
100. Interview with Barbara Leidigh, supra note 7.
103. SWRCB, 182 Cal. App. 3d at 112, 227 Cal. Rptr. at 175.
104. Id. at 111, 227 Cal. Rptr. at 175.
105. Id. at 121-22, 227 Cal. Rptr. at 182.
106. Id. at 111, 227 Cal. Rptr. at 175.
107. Id. at 98, 227 Cal. Rptr. at 166. Because of the immediate danger to the Delta, the California Attorney General requested that the California Supreme Court review the trial court decision that withdrew the Plan and D-1485. The court refused to review the decision immediately and sent it to the First District Court of Appeal for a preliminary review.
108. Id. at 152, 227 Cal. Rptr. at 202.
109. Id. at 119-23, 126, 143, 227 Cal. Rptr. at 180-83, 185, 196-97.
The court applied a deferential standard of review. The court found that the Plan derived from the Board's authority to issue quasi-legislative rules, whereas D-1485 involved authority to make quasi-judicial determinations. Judicial review of the Plan, therefore, was limited in light of the Board's authority to issue quasi-legislative rules. In addition, because the trial court had not considered evidence, the court's role was even more limited: it could not consider if the Board's actions were arbitrary, capricious, or lacking in evidentiary support. The court concluded that the only questions before it were: (1) whether the Board in adopting the Plan acted contrary to procedures required by law, and (2) whether the Board acted within its jurisdiction in imposing water quality standards on the projects through D-1485.

A. The Plan

The court began its review of the Plan by considering the propriety of the Board's narrow focus on the two projects. The court found that the Board's approach of protecting water quality on the basis of water rights—which this Note will refer to as the "rights approach"—was "fundamentally defective." Specifically, the court found two problems with the Board's "without project" water quality standards. First, the court drew a distinction between water "rights" and "uses," and asserted that the Board, when developing water quality standards, should strive for reasonable protection of beneficial water uses, not of water rights. Second, the court stated that the Board must consider the effect on water quality of all demands for water throughout the Delta's watershed, including demands by upstream users. According to the court, the Board had failed on both counts.

1. Protect Water Uses, Not Rights

The court urged the Board to protect uses of water rather than water rights. The court described the difference between water uses

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110. Id. at 112, 227 Cal. Rptr. at 176 (relying upon Cal. Water Code § 13000 (Deering 1977)).
111. Id.
112. Id. (citing Industrial Welfare Comm'n v. Super. Ct., 27 Cal. 3d 690, 702, 613 P.2d 579, 585, 166 Cal. Rptr. 331, 337, cert. denied, 449 U.S. 1029 (1980)).
113. Id. at 113-14, 227 Cal. Rptr. at 177 (citing California Hotel & Motel Ass'n v. Industrial Welfare Comm'n, 25 Cal. 3d 200, 212, 599 P.2d 31, 48, 157 Cal. Rptr. 840, 847 (1979)).
114. Id. at 114-15, 227 Cal. Rptr. at 177.
115. Id. at 116, 227 Cal. Rptr. at 178.
116. See supra note 96 and accompanying text for a discussion of the "without project" standards.
118. Id. at 118-19, 227 Cal. Rptr. at 179-80.
119. Id. at 120, 227 Cal. Rptr. at 180.
120. Id. at 116, 227 Cal. Rptr. at 178.
and water rights in terms of the relationship of each to water quality plans. By seeking to protect water rights, the Board had introduced the priorities scheme of water rights law into water quality planning. The result of this approach was that the holder of superior water rights would receive water quality protection without having to bear any of the costs of maintaining water quality. The court found that this approach did not protect all water uses, but instead protected water uses based on the priority of the user's rights. Following this approach, the Plan imposed all the costs of water quality protection on the projects since they had the most junior water rights.

The court suggested that the Board's focus on water rights was a result of the Board's concern that protecting all beneficial uses would require the projects to maintain a constant flow of fresh water, even during droughts when they lacked sufficient stored water. The court reassured the Board that its water quality plan need provide only "reasonable protection of beneficial uses." Once all beneficial uses are considered, the Board enjoys broad discretion in deciding how much water quality protection is required.

In emphasizing that the Board's water quality planning should protect beneficial water uses, the court relied heavily on the Board's responsibilities for water quality under the Porter-Cologne Act. The court found that the Act's legislative findings emphasize water quality protection "for use and enjoyment by the people of the state." The Act lists factors that must be considered in developing water quality plans. Those factors include beneficial uses but not water rights.

By relying on statutes, the court diminished the influence of the holdings of earlier cases that focused on the water rights approach. In Antioch v. Williams Irrigation District, the city of Antioch claimed that upstream diversions of the Sacramento River reduced freshwater flows into the Delta. Without the freshwater flows pushing San Francisco Bay salt water downstream, salt water intruded into the Delta as far as the city's source of fresh water.

The California Supreme Court in Antioch focused only on Antioch's water rights. The court concluded that the city's appropriation rights did not include the right to insist that junior appropriators curtail their

121. Id.
122. Plan, supra note 2, at 1-6 to 1-7 (citing CAL. WATER CODE § 12202 (Deering 1977)).
123. SWRCB, 182 Cal. App. 3d at 116, 227 Cal. Rptr. at 178.
124. Id. (citing CAL. WATER CODE § 13241 (Deering 1977 & Supp. 1987)).
125. Id.
126. Id. (citing CAL. WATER CODE § 13000 (Deering 1977)).
127. Id.
129. 188 Cal. 451, 205 P. 688 (1922).
130. Id. at 454, 205 P. at 690.
upstream use so that a sufficient flow remained to hold back saltwater intrusion. In *U.S. v. SWRCB*, the court of appeal found this 1922 case to be inapposite because more recent California statutes required the Board reasonably to protect all beneficial water uses regardless of water rights.

2. Consider Users Throughout the Watershed

The court, relying on statutory support, found that the Board was required to adopt what this Note calls the "watershed perspective." Stated simply, the watershed perspective requires the Board, in developing water quality plans, to develop a proposed plan without giving special consideration to the water rights of users in the watershed. In other words, all users—not just the users in the Delta—must be considered.

Thus, the Delta's water quality problems no longer may be seen only in local terms. The watershed stretches up the Sacramento and San Joaquin Rivers into the Sierra Nevada range and California's border mountains. Through the two water projects, moreover, water users throughout California make demands on the Delta. All those who use water from the streams that eventually feed the Delta have an impact on and a duty to prevent saltwater intrusion into the Delta. According to the court, the Board was unjustified in assuming that upstream users can have unlimited access to upstream waters.

Recognizing the Board's concern for the difficulty of carefully examining every water user throughout the Delta watershed, the court stated that the "Board need only take the larger view" and arrive at a "reasonable estimate" of water uses in establishing water quality standards. In effect, the court suggested that the Board step back from the details of water use and quality and establish standards that consider the general needs of all users.

In concluding its comments on the Plan, the court described the

131. *Id.* at 465, 205 P. at 694-95.
133. *Id.* at 118-19, 227 Cal. Rptr. at 179-80. In particular, the court relied upon three statutory provisions of the water code: (1) CAL. WATER CODE § 13000 (Deering 1977), which requires the Board to consider all competing demands; (2) *id.* § 13241(a), which requires a consideration of all "past, present, and probable future beneficial uses of water"; and (3) *id.* § 13241(c), requiring an examination of "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." *SWRCB*, 182 Cal. App. 3d at 118-19, 227 Cal. Rptr. at 179-80.
134. *SWRCB*, 182 Cal. App. 3d at 118-19, 227 Cal. Rptr. at 179-80. The term "watershed perspective" is the author's designation and not an expression used by the court.
135. W. KAHRL, supra note 5, at 70-71.
139. *Id.* at 119, 227 Cal. Rptr. at 180.
Board's procedure of combining water quality enforcement and modification of water rights into a single proceeding as "unwise."

The court suspected that the Board had set only such water quality objectives as could be enforced against the projects. As a result, "the Board compromised its water quality role by defining its scope too narrowly."

**B. D-1485 and Water Quality Enforcement**

After the court of appeal had discussed problems with the Plan, it considered the Board's enforcement of the Plan through D-1485. The court's key holding in the enforcement area was that the Board had the authority to modify appropriation permits. The court found that D-1485's adjustment of the appropriation permits of the Central Valley Project and the State Water Project was not improper, only insufficient. The court stated that the Board's authority over water rights provided one of many ways the Board could enforce its water quality standards. But the Board had a duty to take enforcement actions against all users, not just the projects.

The court based its conclusion on two grounds. First, the court pointed out that the Legislature explicitly granted the Board authority to reserve jurisdiction over the projects' permits, which the Board had done properly. Supporting this point, the court also noted that the United States Congress, in authorizing the Central Valley Project, had intended to cooperate with the state in controlling salinity.

Second, the court found that, independent of the Board's reserved powers, the Board could modify appropriation permits under its statutory authority to prevent waste or unreasonable use. In this regard, the court attributed substantial importance to the reasonable use doc-

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140. Id.
141. Id. at 119-20, 227 Cal. Rptr. at 179-80.
142. Id. at 122, 227 Cal. Rptr. at 182.
143. Id. at 125-26, 227 Cal. Rptr. at 184-85.
144. Id. at 127-28, 227 Cal. Rptr. at 185-86 (citing CAL. WATER CODE §§ 1394, 10500, 10504.5, 11500(e), 12202, 12205 (Deering 1977 & Supp. 1987)).
146. SWRCB, 182 Cal. App. 3d at 129, 227 Cal. Rptr. at 187 (citing CAL. CONST. art. X, § 2). The California Legislature took steps to make the amendment effective by enacting section 275 of the Water Code. That section requires the Department of Water Resources and the Board to take all appropriate actions to prevent waste, unreasonable use, and unreasonable methods of diversion or use. 1971 Cal. Stat. 2 (codified at CAL. WATER CODE § 275 (Deering Supp. 1987)). The courts have upheld Board actions to prevent unreasonable use by pointing out that the constitutional requirement of reasonable use is a valid exercise of the police power to regulate the use and enjoyment of water rights for the public benefit. See, e.g., State Water Resources Control Bd. v. Forni, 54 Cal. App. 3d 743, 753, 126 Cal. Rptr. 851, 857 (1976).
trine, labeling it the "cardinal principle of California's water law." Although the Board had made no express finding that the projects engaged in unreasonable use, the court assumed that the Board had based its decision to reduce the projects' water exports on such a finding. The court concluded that curtailment of water storage and export by the two major projects was an "eminently reasonable" way to improve Delta water quality. The court thus clarified that the Board has continuing authority to prevent unreasonable use. 

Although it upheld the Board's action, the court in dicta noted some uncertainties about the Board's enforcement power. The court observed that, although the state may regulate property rights—including water rights—the nature of the power delegated to the Board is not clearly stated. The court noted that the Legislature expressly authorized the Board to issue injunctions and to impose civil penalties in order to regulate waste discharges, but added that "waste discharges" in this context do not include saltwater intrusion.

The court also observed that, in contrast, the federal Clean Water Act, which includes control of saltwater intrusion, implicitly left water quality enforcement to the states through its statutory policy of noninterference with state authority to regulate water rights. The Board's enforcement power, therefore, could be construed broadly or narrowly depending on how the Board interprets its mandate.

The court ended its opinion by upholding the Board's protection of water kept in streams for fish and wildlife, known as "instream uses." The court based this conclusion on two grounds: (1) California law defines instream uses as beneficial; and (2) the public trust doctrine requires that the Board, acting on behalf of the state and the people,
protect water used for navigation and fishing.159

The California Supreme Court denied review of the U.S. v. SWRCB decision, thus rendering that decision final.160

IV
THE UNANSWERED QUESTIONS

Despite the length and comprehensiveness of its opinion, the court of appeal failed to resolve several key questions. The court also left a number of general instructions to which the Board must give substance as it seeks to answer the most difficult and fundamental question: who incurs the costs of maintaining water quality in the Delta?161 This Section addresses the questions left unresolved by the court and discusses how the court’s instructions will affect California’s water policy.

A. Invigorated Reasonable Use Doctrine

The court clearly stated that the Board has substantial authority to regulate water use by invoking the “reasonable use” doctrine.162 The question remains, however, as to how the Board will use the doctrine in regulating water quality.

Although the California Constitution requires reasonable use, the courts in the past have defined “reasonable” by giving more weight to local customs of water use than to “the most scientific method known.”163 In 1935, for example, the California Supreme Court held that conveyance losses as high as fifty percent from unlined ditches would be reasonable if comparable to losses from established local systems.164 The local custom doctrine allowed the use of water in ways that would be considered wasteful today.165 Courts have regularly condemned waste, yet “almost as regularly” they have refused to enforce rules against it.166

The court of appeal’s support for the reasonable use doctrine adds great momentum to a trend toward stricter enforcement of that doctrine.

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161. “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 standard.” SWRCB, 182 Cal. App. 3d at 112, 227 Cal. Rptr. at 175. See infra text accompanying notes 200-06 for further discussion.
162. See supra notes 146-50 and accompanying text.
163. E.g., Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 3 Cal. 2d 489, 547, 45 P.2d 972, 997 (1935).
164. Id. at 572-73, 45 P.2d at 1009-10.
165. Cf. Kramer & Turner, supra note 71, at 530-31 (suggesting a modern court would not permit a wasteful use of water on the basis that the use was consistent with local use).
166. J. SAX & R. ABRAMS, supra note 43, at 341; see, e.g., Tulare Irrigation Dist., 3 Cal. 2d at 489, 45 P.2d at 972.
That trend had begun at least a decade prior to *U.S. v. SWRCB*. In 1976, a California appellate court—pointing to the increasing needs of all Californians for water—concluded that the Board could require riparian water users to incur reasonable expenses to build a reservoir if direct pumping would deplete the river at crucial times.\textsuperscript{167} In 1979, the Board and the Department of Water Resources adopted joint regulations for investigating alleged misuses of water, defining "misuse" as "unreasonable" use.\textsuperscript{168} In 1980, the California Supreme Court reaffirmed the Board's responsibility to prevent unreasonable use when it acknowledged that the Board has concurrent—and in certain cases preemptive—jurisdiction with the courts in challenges to the reasonableness of a particular use.\textsuperscript{169}

In *U.S. v. SWRCB*, the court invigorated the reasonable use doctrine and advanced the enforcement trend by introducing a new approach for evaluating the reasonableness of water use: as new information about damage to water quality becomes available, it may be considered by the Board to justify revision of water quality standards and modification of existing permits and licenses. Without acknowledging the novelty of this approach, the court found that the Board could declare any particular method of water use unreasonable based on new information about the use's adverse effects on water quality.\textsuperscript{170} Under this analysis, the Board retains authority to adjust longstanding water rights at any time, based on new information or changing demands. The "new information" approach provides the Board, as an entity "uniquely qualified" to balance competing public interests, with greater flexibility to reach a water quality decision.\textsuperscript{171} Although some commentators have suggested that the Board has always had this ability,\textsuperscript{172} the strong language in the court's decision encourages the Board to take the initiative in considering the reasonableness of water uses.\textsuperscript{173}

The invigorated reasonable use doctrine raises three important is-

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\textsuperscript{168} CAL. ADMIN. CODE tit. 23, § 4000(c) (1979).

\textsuperscript{169} Environmental Defense Fund v. East Bay Mun. Util. Dist., 26 Cal. 3d 183, 198-200, 605 P.2d 1, 9-10, 161 Cal. Rptr. 466, 474-75 (1980). In the so-called East Bay MUD case, the Environmental Defense Fund (EDF) challenged a water agency's contract with the Bureau of Reclamation to obtain water. EDF claimed that the agency was making unreasonable use of its current water because it was not reclaiming that water before making new claims for imported water. The Supreme Court held that EDF had not exhausted its administrative appeals with the Board but noted that unless wastewater reclamation was involved, the group could apply to the courts in the first instance to prevent unreasonable water use. \textit{Id.}

\textsuperscript{170} SWRCB, 182 Cal. App. 3d at 130, 227 Cal. Rptr. at 188.

\textsuperscript{171} \textit{Id.}

\textsuperscript{172} Kramer & Turner, \textit{supra} note 71, at 532-33.

\textsuperscript{173} "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
sues. First, the doctrine's limits remain unclear. The court appears to give the Board complete discretion in evaluating what is a reasonable use. Apparently, the Board may reconsider an individual's water use and rights repeatedly. Each time it does so, the Board may consider technical, political, or other factors to place a value on that individual's use.

The effect of such broad authority is difficult to gauge. On the one hand, the constant threat of losing one's water rights makes those rights insecure. As the California Supreme Court has observed, uncertainty as to water rights "inhibits long range planning and investment for the development and use" of water. On the other hand, the threat of lost water rights may encourage water users to practice the least wasteful methods of water use and distribution in an effort to protect their rights by increasing the "reasonableness" of their use.

Second, the court's strong support for and explanation of the reasonable use doctrine put at issue the doctrine's purpose: is "reasonable use" intended only to prevent obvious waste, or is it intended also to give the Board authority to choose between competing valuable uses? Initially, reasonable use focused only on preventing waste. When Californians passed the constitutional amendment creating the doctrine, they were reacting to a California Supreme Court decision allowing an individual to use an entire stream to flood her land, thus preventing a planned hydroelectric plant from providing electricity. Presumably, Californians thought the reasonable use doctrine would prevent such waste.

The court of appeal described the reasonable use doctrine in different terms. It emphasized the Board's duty to make a "policy judgment requiring a balancing of the competing public interests" of exporting water south for the projects and of maintaining the water quality of the Delta. This emphasis on balancing competing public interests raises the question of whether or not such balancing should be used only for water quality purposes or for all water use issues.

From one perspective, the court's insistence on balancing suggests that the doctrine is intended to give the Board broad authority to choose between competing valuable uses. Thus, if the Board believes that society favors one type of water use over another, the Board may take water away from the less favored user and give it to the more favored user,

reasonable method of use is manifested." SWRCB, 182 Cal. App. 3d at 130, 227 Cal. Rptr. at


175. See supra note 78 and accompanying text.

176. The reasonable use constitutional amendment is attributed to the California Supreme Court's decision in Herminghaus v. Southern California Edison Co., which is discussed supra at notes 76-78 and accompanying text.

177. SWRCB, 182 Cal. App. 3d at 130, 227 Cal. Rptr. at 188.
regardless of how long the loser has held his water rights. This extreme interpretation of the court’s emphasis on balancing competing public interests reduces a water right to an uncertain claim dependent on the constantly shifting political trends in water policy.

On the other hand, the court’s concern with balancing simply may recognize that water quality is among the factors that the Board may consider in making reasonable use determinations. If this is the correct interpretation of the court’s language, then reasonable use decisions perhaps will not endanger established water uses. Instead, existing uses merely would have to avoid damaging water quality to such an extent as to interfere with another’s use. If the water quality damage from a particular use became severe, the use would be declared unreasonable. Although this interpretation may sound like the more rational perspective, the court failed to make clear whether the reasonable use doctrine was intended to prevent waste or to facilitate much broader balancing choices among uses.

Finally, the invigorated reasonable use doctrine may push California’s water rights law farther toward a public resource perspective and away from a private rights perspective. The primary purpose of the public resource approach to water use decisions is to safeguard the overall water demands of all Californians. This approach would require a centralized body, usually governmental, to balance competing demands. The extreme version of this approach would maintain all water rights in the name of the people; individuals would have qualified permission to use water until the central decisionmaker chooses, for any reason, to take away that permission. Even in the current system, a water right is different from a traditional fee simple property right.

The private rights perspective, in contrast, places water use decisions in the private arena. In an extreme version, individuals would hold an absolute right to do anything they choose to do with the water, including simply holding it. Decisions as to the water’s use would be dictated by market demands, which would set the highest price for the most valued use. The difference between a water right and the traditional fee simple property right would be insignificant.

The court’s preference for the public resource perspective is clearly demonstrated by its heavy reliance on the Board’s overall authority to

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178. Sacramento Valley rice growers, for example, who use water to create rice paddies, could lose their water rights when a future governor appoints Board members who are more sympathetic to the needs of San Francisco residents who want to drink that water.

179. A fee simple property right is owned entirely by individuals, can be transferred easily, and may not be taken away by the government without compensation. In contrast, a water right is owned partially by the people of the state and cannot be transferred without Board approval of the buyer’s beneficial and reasonable use. Furthermore, it involves only the right to use water and may be deemed unreasonable and taken away at any time. Cal. Water Code § 102 (Deering 1977).
make statewide water plans and decisions. The court’s interpretation of
the reasonable use doctrine closely resembles the public resource perspec-
tive. The reasonable use doctrine requires a central public agency (i.e.,
the Board) to make judgments on behalf of the people of California re-
garding the relative values of various water uses. In the court’s view, the
water right differs from a property right in three major respects: (1) the
Board, on behalf of the people, retains the right to hold the water and to
decide what is a reasonable water use; (2) water cannot be transferred
without Board approval of the buyer’s beneficial and reasonable use; and
(3) the right is subject to the Board’s authority to change its determina-
tion of the use’s reasonableness. In other words, while a water rights
holder may use the water, his right remains subject to the resource poli-
cies represented on the Board.180

The Board, applying the public resource approach, would provide
more protection for instream and other public uses than it would under
the private rights approach. Under the private rights scheme, instream
uses would have low market value, because an individual would receive
little economic benefit from keeping the water instream.181 Under the
public resource approach, however, the Board can consider the aggregate
economic and noneconomic interests of all individuals of current and fu-
ture generations for instream and other public uses of water. As a result,
the great variety of life depending on water quality—from birds in Delta
estuaries to fish in streams across the state—receives greater protection.

B. Protecting Beneficial Uses

The court required that the Board develop water quality plans to
protect “beneficial uses,” not “water rights.”182 The court’s emphasis on
beneficial uses of water instead of water rights, although vague, fulfills
the intent of the Porter-Cologne Act.

At first glance, the difference between the two terms the court uses is
not obvious. A water right, by definition, is a right to use water.183
“Right” and “use,” therefore, may refer to the same concept. For exam-

180. The public resource perspective moves California away from a private rights scheme
of water law, a move that a number of writers have advocated in recent years. See, e.g., Wil-
liams, The Requirement of Beneficial Use as a Cause of Waste in Water Resource Development,
23 NAT. RESOURCES J. 7 (1983). The reasonable use emphasis makes the water right ex-
remely qualified and dependent on the Board’s continuing approval. As a result, the water
right is not a very marketable asset. Moreover, water use decisions are removed from the
marketplace and vested firmly in a public body.

181. An individual whitewater rafter, for example, would get relatively less economic ben-
efit from the large amount of water required to maintain whitewater conditions than would a
hydroelectricity producer who would draw the water to power its turbines. Thus, the white-
water rafter would not have enough of an economic interest to bid against the power producer
for the water.

182. See supra notes 120-32 and accompanying text.
183. See supra note 36 and accompanying text.
ple, if the Board maintains water quality in order to protect a city's right to use the water for domestic or industrial purposes, the Board also protects that city's beneficial use. The converse is also true: if the Board protects the use, the right is also protected. Thus the court's special emphasis on protecting beneficial uses seems irrelevant at first glance.

One possible explanation for the court of appeal's emphasis on beneficial uses, however, is that this approach may introduce a new and flexible concept of cooperation—instead of legal priority—into water planning decisions. By adopting the beneficial use approach, the court implicitly rejected the Board's assumption that the projects, which had the most junior water rights, must take the primary responsibility to protect the Delta's water quality. The court's rejection of the priority system for protecting the Delta implies that in the future all water users will share responsibility. If shared responsibility becomes the norm for protecting water quality, then the "first in time, first in right" priority system for appropriators is obsolete. Indeed, the court made this suggestion:

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 more preferred beneficial use even though later in time. The court also suggested that riparian water users may share the burden of protecting the Delta's water quality. Although riparian users already share the burden of reduced water supplies among themselves, their rights are superior to those of appropriators. Focusing on beneficial uses, however, requires riparians to share equally with appropriators the costs of water quality control.

Another possible explanation for the court of appeal's distinction between rights and uses is that protecting beneficial uses will provide greater safeguards for "public" uses. Public uses include enhancement of fish and wildlife resources that benefit the public at large. No riparian or appropriative right controls such uses. If the water quality plan protected only rights, those uses for which no individual holds a water right would receive no direct protection. In contrast, an approach that protects beneficial uses provides broader safeguards because all uses are to be considered in formulating the Delta's water quality plan. The court's

184. See supra note 95 and accompanying text.
185. SWRCB, 182 Cal. App. 3d at 132, 227 Cal. Rptr. at 189.
186. Id. at 142, 227 Cal. Rptr. at 196 (citing State Water Resources Control Bd. v. Forni, 54 Cal. App. 3d 743, 751-52, 126 Cal. Rptr. 851, 856 (1976)).
187. Developing priorities for water quality protection based on the water rights system means that riparian water users are the last to pay the costs of water quality and junior appropriators are the first. Id. at 101-02, 227 Cal. Rptr. at 168.
188. In the past, instream uses did not have any priority during droughts. J. SAX & R.
emphasis on protecting uses may be an attempt to encourage the Board to protect public, as well as private, uses.

Regardless of the explanation for the court's emphasis on protecting beneficial uses, that emphasis is consonant with the Porter-Cologne Act's orientation toward safeguarding water quality for the people of the state. As the Porter-Cologne Act states, concerns about public water quality relate to the "use and enjoyment" of water, not to water rights in isolation. Focusing on water rights alone for regulating the Delta's water quality creates a rigid system that cannot adjust easily over time to serve changing needs.

If water quality depended only on water rights, most fishermen, for example, would lose all protection for their activities, because they normally lack any riparian or appropriative right. The Porter-Cologne Act, however, does not focus on protecting individual rights. Rather, as the court points out, the Act sets forth the Board's "legislated mission ... to protect the 'quality of all the waters of the state ... for use and enjoyment by the people of the state.'" Therefore, a water quality plan must address not the protection of legal rights to water, but the protection of water quality so that the water may be used.

C. The "Watershed Perspective"

The court required that the Board consider all upstream users throughout the Delta's watershed in developing water quality plans. This "watershed perspective" complicates development of a Delta water quality plan but broadens the perspective of the Board's deliberations.

Any attempt by the Board to consider all demands on the Delta's waters will greatly increase the already large number of parties involved in Delta water quality hearings. Not only will water users living in the Delta take part, but urban dwellers, farmers, fishermen, industries, and interested parties from virtually every part of the state will be free to join in the discussion. In theory, every person who draws water from a stream that eventually feeds the Delta should be considered. That group includes farmers and town residents in the northernmost California mountains, in the Sierra Nevada, and throughout the Sacramento Valley.

ABRAMS, supra note 43, at 329 n.4 (1986). As a result of the court of appeal's decision, all water users, including the public, have an equal right to water quality protection. Whereas, in the past, such uses as protection of fish habitat had no water right—and thus little protection—the fish now have the same right to water quality as the farmer.

189. CAL. WATER CODE § 13000 (Deering 1977).

190. SWRCB, 182 Cal. App. 3d at 116, 227 Cal. Rptr. at 178 (citing CAL. WATER CODE § 13000).

191. Id. at 118-19, 227 Cal. Rptr. at 179-80.

192. The parties that challenged the Board's Plan and D-1485 indicate the large number of parties already involved in the Delta water quality hearings. For a list of the parties involved, see supra note 101.
Additionally, the Board must consider all water users within the Delta, not just the projects. The Delta's fish and wildlife, for example, have needs that the Board must consider. Furthermore, the Board must consider all those who draw water from the Delta via the projects. This group includes farmers in the San Joaquin Valley and residents of southern California as far south as San Diego. Further, the Board not only must consider users from different regions, it also must include the different types of water rights holders—both riparian and appropriators.

What remains unclear is the extent to which these new parties should or will be involved in developing the new water quality plan. The court failed to describe how the Board should include the new parties in its deliberations. The sparsity of directions raises the following procedural issues for the expanded hearings:

   (1) Parties: Who has a right to take part in the development of the water quality plan? Do people and organizations with even the most remote interest in the Delta have a right to participate?

   (2) Notice: Must the Board notify all the potentially affected parties of the Board's impending actions to develop the Delta's water quality plan?

   (3) Evidence: What kinds of evidence must the Board review in its consideration of all water uses that affect the Delta? Must it attempt to quantify the amount of water needed by each of the different types of users? Or should the evidence also consider the social values of various uses?

   (4) Proof: What standard of proof must the Board meet to prove that it considered all water users, including upstream and downstream users? Must the Board prove to the court that all uses have been "reasonably protected"?

In general, the decision in *U.S. v. SWRCB* pushes the Board to assume a much broader view of its role in water quality regulation. Specifically, the court's statements indicate that the Board must: (1) adopt a broad policy approach that would include any type of testimony by every interested party in the hearings; (2) develop water quality standards by making judgments on the relative values of competing demands for water, including the demand for freshwater flow to push back the salt water; and (3) take all actions, not limited to adjusting water rights, to achieve the standards that it sets.

Support for these conclusions can be found in a number of the court's statements. First, the court instructed the Board to "take the larger view of the water resources in arriving at a reasonable estimate of all water uses" and to assume a "global perspective in water quality plan-

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The court rejected as "too cumbersome and impractical" a requirement that the Board define or quantify all water rights in the watershed before adopting a comprehensive water quality control plan. Instead, the court's terminology indicates that the Board should keep a certain distance from the details of water demands. That distance would encourage the Board to accept a diversity of evidence—from detailed scientific evaluations of the Delta's environment to generalized testimony on water policy and environmental protection.

Second, the court, citing the Porter-Cologne Act, assured the Board that it need only give "reasonable protection" to the Delta's water quality. The term "reasonable" implies some balancing or tradeoffs between water uses and water quality.

Finally, the court stated that the Board had no authority to limit the scope of its water quality plan. With a mandate for a broad scope, the Board must accept evidence from all parties and set standards that are not limited by the Board's power to enforce the standards.

**D. Paying the Costs of Delta Water Quality**

Although the court clearly portrays the cost of improving Delta water quality as "the central dispute" in the case, it explained that the lack of evidence in the record restricted its review to the procedural—as opposed to substantive—aspects of the Board's decision. As a result, the court provided no direct instructions on how to resolve the fundamental issue of who bears the costs for maintaining water quality in the Delta.

Protecting the Delta's water quality requires a steady flow of fresh water. In times of low flow, one or more users of Delta water will have to reduce their usage to maintain that freshwater flow. As a result, some users will have to curtail their activities, acquire water from another (possibly more expensive) source, or accept lower quality water along with all other Delta water users. Regardless of which alternative is chosen, some parties will incur extra water costs.

How the Board will resolve this cost issue will be answered in the

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195. *Id.*
196. The court conspicuously omitted levels of demand when it delineated the three elements essential to a water quality control plan: "(1) beneficial uses to be protected; (2) water quality objectives; and (3) a program of implementation." *Id.* (citing *CAL. WATER CODE* § 130500) (Deering 1977)).
199. *Id.* at 120, 227 Cal. Rptr. at 181.
200. *Id.* at 116, 227 Cal. Rptr. at 178.
201. *Id.* at 115, 227 Cal. Rptr. at 177.
Board's reopened hearings on Delta water quality. The challenge facing the Board is to define the legal standard for "reasonable protection" of the Delta's water quality while keeping in mind the costs that will necessarily be imposed.

The term "reasonable" has many sources. Both the California Constitution and the Porter-Cologne Act use the term. In addition, each of the parties involved in the hearings will define the term differently. Moreover, the court's interpretation of "reasonable" makes the Board's challenge that much more difficult. The court's emphasis on balancing competing water demands will cause the definition of "reasonable protection" to change as demands and priorities shift. In essence, the Board must evaluate the perspectives of and potential costs for all water users having any effect on Delta water quality and then must balance the competing demands.

CONCLUSION

The last crucial question remaining is how the Board will respond to the court of appeal's decision. The Board again must face the question of how to protect the Delta's water quality. The number of parties to be heard and the issues to be considered have increased. It is unclear, however, whether the Board will accept its new and broader role with enthusiasm. At one extreme, the Board might approach the hearings with a commitment to make a comprehensive evaluation of all the uses for water flowing into and out of the Delta. At the other end of the spectrum, the Board might conduct a superficial review aimed at maintaining the status quo. In either case, the approach and the conclusions of the current Board can set the tone for water quality decisions of future Board members.

The management of water resources in California is undergoing fundamental change. Improvements in water conservation techniques have allowed the agricultural community to reduce its water demand at a time when there is an emerging consensus that cooperative approaches are vital to setting water policy. This emphasis on cooperation, along with

203. See supra note 198 and accompanying text.
204. CAL. CONST. art. X, § 2.
205. CAL. WATER CODE § 13241 (Deering 1977).
207. See, e.g., Stall, California's Historic Water Battles Now Seem Soluble for the Century, L.A. Times, Nov. 16, 1986, at V3, col. 1. An important step is the recently implemented Coordinated Operating Agreement, which provides for the joint operation of the Central Valley Project and the State Water Project, discussed supra note 145.
guidance from the courts and new support among California's water users, should encourage the Board to accept its enhanced responsibilities with vigor.