

Public Trust Protection for Stream Flows and Lake Levels

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INTRODUCTION

The public trust doctrine and the appropriative water rights system are headed on a collision course in the West.¹ Appropriators claim vested property rights to extract water for irrigation, mining, manufacturing and other uses. They further assert that under the appropriation doctrine such extractions can continue in perpetuity regardless of the consequences to navigation, fishery and other public values.² The public, however, increasingly insists on more protection for environmental and ecological values, aesthetic quality and recreational opportunities, which on lakes and streams usually means leaving waters in place. As a result, the courts are being asked to apply legal doctrines that

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¹ See generally GOVERNOR'S COMM'N TO REVIEW CAL. WATER RIGHTS LAW, FINAL REPORT (Dec., 1978), and the six staff papers published by the Commission, particularly A. SCHNEIDER, LEGAL ASPECTS OF INSTREAM WATER USES IN CALIFORNIA (1978), which summarize California's problems with conflicts between various water rights doctrines and between different groups of water users.

² Thousands of rivers, streams and lakes in the West are dried up completely by appropriators each year with disastrous consequences for fish and other living things which depend on water for survival. Countless other water bodies, so depleted by diversions, either annually or occasionally, are totally changed from their natural state and become an entirely different ecological habitat. For example, a wetland may become a dry wash. Most of these diversions are for irrigation, which in 1970 accounted for some 83% of the water consumed by all users in the U.S. and 90% of the water consumed in the western 17 states. NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE [hereinafter cited as WATER POLICIES FOR THE FUTURE].

will place limits on these water extractions.³ One such doctrine, flexible enough to consider and draw a fair balance between these contending forces, is the public trust doctrine. This article explores the use of the public trust doctrine for this purpose.

Expanding the application of the public trust doctrine to reflect new public priorities is neither surprising nor radical. Many other examples can be found where the courts have, during this century, created, expanded or altered some moribund or limited legal doctrine to accommodate changes in public priorities concerning water use. For example, courts have (a) expanded the navigation servitude theory on both the state and federal levels to protect the public rights of navigation;⁴ (b) developed the reservation doctrine under the Property Clause of the Federal Constitution to protect Indian reservation irrigation rights⁵ and to provide for sound management for other federal lands;⁶ (c) de-

³ This conflict is not new; it is simply getting worse and thus more noticeable as time goes by. In 1973 the National Water Commission said:

State laws creating and protecting rights to the use and enjoyment of water fail to give adequate recognition to social (that is, noneconomic) values in water. This omission derives in the west from the law of appropriation, which embodies the social preference during the period of its formulation for economic development over protection of such social values as esthetics, recreation, and fish and wildlife propagation. . . .

Id. at 271; see, e.g., *Sierra Club v. Andrus*, 487 F. Supp. 443 (N.D. Cal. 1980) (Sierra Club trying to force the U.S. Department of the Interior to assert, define and protect federal reserved water rights); *People v. Shirokow*, 26 Cal. 3d 301, 605 P.2d 859, 162 Cal. Rptr. 30 (1980) (state suing to protect against loss of public rights by unauthorized diversion); *California Trout, Inc. v. State Water Resources Control Bd.*, 90 Cal. App. 3d 816, 153 Cal. Rptr. 672 (3d Dist. 1979) (private group appealing denial of instream appropriation application); *Colorado River Water Conservation Dist. v. Colorado Water Conservation Bd.*, 197 Colo. 469, 594 P.2d 570 (1979) (Conservation Board applied for minimum stream flow rights under new state act).

⁴ See *United States v. Grand River Dam Auth.*, 363 U.S. 229 (1960); *Colberg, Inc. v. State*, 67 Cal. 2d 408, 432 P.2d 3, 62 Cal. Rptr. 401 (1967), *cert. denied*, 390 U.S. 949 (1968). See generally Morreale, *Federal Power in Western Waters: The Navigation Power and the Rule of No Compensation*, 3 NAT. RESOURCES J. 1 (1963).

⁵ See *Arizona v. California*, 373 U.S. 546 (1963); *Winters v. United States*, 207 U.S. 564 (1908).

⁶ *United States v. New Mexico*, 438 U.S. 696 (1978); *Cappaert v. United States*, 426 U.S. 128 (1976); *Federal Power Comm'n v. Oregon*, 349 U.S. 435 (1955). In *Cappaert* the Court recognized federally reserved water rights and used them to preserve the now-famous "pupfish," which lived in the subterra-

veloped the equitable apportionment doctrine in interstate litigation;⁷ (d) upheld use of interstate compacts;⁸ (e) upheld the

nean pool in Devils Hole National Monument—at the expense of an irrigation project.

⁷ *Nebraska v. Wyoming*, 325 U.S. 589 (1945); *Wyoming v. Colorado*, 259 U.S. 419 (1922).

⁸ *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938). An interstate compact binds all private water users in participating states regardless of their in-state priority dates.

There is an unresolved question of whether the abrogation of state-granted rights by operation of a U.S. treaty is a taking that requires compensation. Constitutional lawyers point to *Missouri v. Holland*, 252 U.S. 416 (1920), and *Reid v. Covert*, 354 U.S. 1 (1957), for the proposition that a treaty cannot authorize that which the Constitution prohibits, *i.e.*, a taking without compensation under the Fifth Amendment. During the 1950's this question was the focus of considerable political and legal debate related to the "Bricker Amendments." See Lofgren, *Missouri v. Holland in Historical Perspective*, 1975 SUP. CT. REV. 77; Looper, *Limitations on the Treaty Power in Federal States*, 34 N.Y.U. L. REV. 1045 (1959); Ely, *A Hidden Hole in the Fifth Amendment: Treaty Power Versus Property Rights: A Substitute for the Bricker Amendment*, 59 DICK. L. REV. 299 (1955) (discussing the few existing cases). International law experts question both the scope of the treaty and whether equitable apportionment is the applicable law. *Power Auth. v. Federal Power Comm'n*, 247 F.2d 538 (1957). See Van Alstyne, *International Law and Interstate River Disputes*, 48 CALIF. L. REV. 596 (1960); THE LAW OF INTERNATIONAL DRAINAGE BASINS (A. Garretson ed. 1967). Some water lawyers, analogizing from internal federal law, see *Hinderlider v. La Plata & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938); *Sanitary Dist. v. United States*, 266 U.S. 405 (1925), as well as from *Holland*, assert that such an action would not be a taking. See Trelease, *Federal Limitations on State Water Law*, 10 BUFFALO L. REV. 399, 414-15 (1961); 2 WATER AND WATER RIGHTS §§ 105, 152.3 (E. Clark, ed. 1967); 3 W. HUTCHINS, WATER RIGHTS LAWS IN THE NINETEEN WESTERN STATES 140 (1977). The 1944 agreement between Mexico and the United States over the Colorado River, 59 Stat. 1219 (1944), is the clearest example of the conflicting and divergent viewpoints. When the Senate ratified the treaty, it concurrently passed a resolution "that nothing in the treaty or protocol shall be construed as authorizing the Secretary of State directly or indirectly to alter or control the distribution of water to users within territorial limits of any of the individual states." *Id.* at 1265. Thus, while the United States may not have been constitutionally required to pay just compensation, Congress in order to reach a consensus felt it necessary to limit that power. 91 Cong. Rec. 3373 (1945). For an interchange of the water law and constitutional law points of view, see *House of Delegates, First Session*, 30 A.B.A. J. 624, 659-60 (1944); Breitenstein, *Water Administration Under the Proposed Treaty with Mexico*, 31 A.B.A. J. 67 (1945); Pound, *Reply*, 31 A.B.A. J. 69 (1945).

The United States-Mexico water treaties have not been judicially tested to date. If they are, the resolution of the conflict will be further complicated by the Secretary of Interior's formula for allocating federal reclamation waters

exercise of the state police power by which the states regulate vested water rights;⁹ and (f) recently found that pueblo water rights¹⁰ superseded vested appropriative water rights. These courts rejected the argument that eminent domain should be the only means available to extinguish private water rights, recognizing that in many situations, eminent domain is too costly, too cumbersome, too time-consuming, and not required by the equities of the water rights holders. More importantly, they also realized that the needs of a community—be it pueblo or nation—may outweigh the needs of the appropriator.

Historically, farmers, cities and industries have all relied upon lakes and streams as sources of water supply for their own purposes. As the demand from these water users has continued to grow, the available water supply has diminished. As a result, the search for new sources has become more aggressive, even desperate.¹¹ Traditionally, consumptive water users are frustrated by the growing public clamor that some of these remaining waters should be declared "off limits"; they argue that judicial recognition of in-place water protection claims will nullify their vested rights and defeat their legitimate expectations.

The current litigation over the diversion of water from the inlet streams to Mono Lake is illustrative of the conflict between long-standing appropriators and in-place water users.¹² Mono Lake, lying east of Yosemite National Park, is the second largest natural body of water wholly within California.¹³ Because of its high salinity level, no fish can survive there. However, the lake supports an extra-abundant supply of brine shrimp and brine flies, which attracts millions of migratory birds that rest, feed

under the Colorado River Interstate Compacts.

⁹ *Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.*, 3 Cal. 2d 489, 45 P.2d 972 (1935).

¹⁰ *New Mexico v. Aamodt*, 537 F.2d 1102 (10th Cir. 1976), *cert. denied*, 429 U.S. 1121 (1977).

¹¹ See generally 1 U.S. WATER RESOURCES COUNCIL, *THE NATION'S WATER RESOURCES 1975-2000*, at 2-82 (1979).

¹² *National Audubon Soc'y v. Department of Water & Power*, No. 6429 (Super. Ct. Mono County, Cal., filed May 21, 1979), *removed*, No. 80-127 (E.D. Cal. Feb. 20, 1980). References in this article to the case, causes of action and defenses are based on the initial state court proceedings.

¹³ Mono Lake is about 13 miles long and eight miles wide with a present volume of about two million acre-feet. The salinity level is about 10%, or three times the level of seawater.

and nest on the lake.¹⁴

The National Audubon Society filed suit to limit long-standing water diversions by the Department of Water and Power of the City of Los Angeles (DWP), which holds appropriative rights to extract water from the inlet streams to Mono Lake for municipal purposes.¹⁵ The DWP condemned the littoral/riparian rights of adjacent lakeside owners in the mid-1930's.¹⁶ It has been diverting water from the lake since 1941.¹⁷

The National Audubon Society alleges¹⁸ that the level of the lake has dropped dramatically below its level as a "natural lake," and that the lowering of the lake has exposed 14,700 acres of previously submerged land. The Society claims that, if DWP diversions continue, the lake will shrink to about half its "natural" surface area and about eighteen percent of its "natural" water volume.¹⁹ At this lower level, some 30,000 acres of former lake bed will be exposed. The complaint also alleges that the continued lowering of the lake will destroy the lake's brine shrimp and brine flies, thus eliminating the basin as a major bird habitat, as well as destroying the local brine shrimp harvesting industry.²⁰ The exposure of additional lake bed will increase the occurrence of mineralized dust storms that already plague the area, causing health hazards to nearby residents and damage to vegetation, and will further harm the aesthetic and recreational opportunities provided by the lake environment.

¹⁴ Complaint at 4, 5, *National Audubon Soc'y v. Department of Water & Power*, No. 6429 (Super. Ct. Mono County, Cal., filed May 21, 1979), *removed*, No. 80-127 (E.D. Cal. Feb. 20, 1980).

¹⁵ State Water Resources Control Board License No. 10191 (1974), and Permit No. 5555 (1940), in Complaint at 8.

¹⁶ *City of Los Angeles v. Aitken*, 10 Cal. App. 2d 460, 52 P.2d 585 (3d Dist. 1935) (valuation upon condemnation). The case is suggested reading for anyone seriously interested in the present Mono Lake controversy. It discusses the condition of the lake and basin at the time and the expected changes.

¹⁷ Proposed Pretrial Statement. This is not the only time that controversy has raged over Los Angeles' appetite for distant water supplies. See E. COOPER, *AQUEDUCT EMPIRE* (1968); R. NADEAU, *THE WATER SEEKERS* (1950).

¹⁸ Complaint at 4-13.

¹⁹ The complaint alleges that the level of the lake has already dropped more than 30 feet because of the diversions and is currently falling at the rate of approximately two feet per year; the lake presently contains approximately 57% of the volume it had as a "natural" lake. If the DWP diversions continue the lake will drop another 50 feet.

²⁰ Complaint at 4, 16, 17, 18, 19.

The Society asserts several different causes of action²¹ in an attempt to enjoin further DWP diversions of water from the basin. Notably among them is a claim that the DWP has violated the public trust.

In its defense, the DWP points out its vested appropriation rights²² under the California Water Code to continue extracting and diverting²³ water from the basin. In reliance on these rights, it has expended millions of dollars building dams, conduits and pipes²⁴ to carry water to the residents of Los Angeles, who depend on this source of supply. The DWP also claims that it has no reasonable alternative sources of water supply.²⁵

Regardless of its merits, the Mono Lake case exemplifies the type of legal action that will increasingly find its way into the courts as competition heightens between water extractors and "in place" users.²⁶ This type of litigation raises several impor-

²¹ The plaintiffs' causes of action are:

- 1) Violation of the public trust;
- 2) Violation of California Constitution art. XVI, § 6;
- 3) Quiet Title;
- 4) Public and Private Nuisance;
- 5) Violation of California Constitution art. X, § 4.

Complaint at 20.

²² Answer to Complaint at 5, 6, 10.

²³ An explanation of the choice of terms is necessary at this point. The terms "extraction" or "withdrawal" will be used to describe the removal of water from the water system, be it from a lake, stream or groundwater by a user, no matter whether the user is a riparian, an appropriator or a permittee. See note 26 *infra*. Conventionally, both are associated only with groundwater. Diversion is a term of art important in the appropriation doctrine and will be used in that narrow sense.

²⁴ Answer to Complaint at 8.

²⁵ Proposed Pretrial Statement at 19-20.

²⁶ For another recent case on the issue, see *In re Waters of Long Valley Creek Stream System*, 25 Cal. 3d 339, 599 P.2d 656, 158 Cal. Rptr. 350 (1980). The old saw in Colorado is that "the water follows the money." In California the water may follow the political power. A safe generalization is that no major judicial decision about water in California is safe from collateral attack. The court's decision in *Herminghaus v. Southern Cal. Edison Co.*, 200 Cal. 81, 252 P. 607 (1926), *cert. denied*, 275 U.S. 486 (1927), led to the amendment of the California Constitution two years later. CAL. CONST. art. X, § 2 (formerly CAL. CONST. art. XIV, § 3). Statutes and regulations have been enacted or repealed due to such political pressures. A good example is the entire history of the Central Valley project. See generally C. MEYERS & A. TARLOCK, *WATER RESOURCE MANAGEMENT: A CASEBOOK IN LAW AND PUBLIC POLICY* 322-82 (2d ed. 1980). Water is so scarce and such a necessary commodity that it is unlikely

tant theoretical and practical questions.²⁷ Does the public trust doctrine limit the amount of water that an appropriator or riparian can extract from a lake or stream where the extraction causes damage to navigation, commerce, fisheries, wildlife or other public trust interests? Can a state be enjoined from issuing further permits for *future* withdrawals of water that would result in such damage? Does the public trust doctrine operate "retroactively" to limit the amount of water that *existing* extractors, with vested appropriative or riparian rights,²⁸ can with-

that any state decision that would have a major political impact would be immune from review or alteration by a coordinate branch of state government.

²⁷ The outline of the proposed pretrial statement provides another checklist of issues. Many of them will not be dealt with in this article, either because of their dependence on California law or because of the variations in procedural matters between various state and federal courts. Several of these issues—standing, the actual wording of the state constitutions and water statutes, as well as the prior development of several lines of case law within a state—are critically important to anyone framing a public trust case.

²⁸ Water extraction rights generally arise from one of three sources in the West:

- 1) Under state law, based on a custom prevalent in the West and sanctioned by the Act of July 26, 1866, ch. 263, 14 Stat. 253, and the Desert Land Act of 1877, ch. 107, 19 Stat. 377. Both relate to appropriation of water on federal lands;

- 2) Under state statutory systems, where the extractor applies to the state agency for a license or permit to extract an explicit amount of water under certain terms and conditions; or

- 3) Under state law, based upon a variation of common law riparian rights, where an owner of riparian land was entitled to make "reasonable" use of the water. Reasonable use included extraction for irrigation, manufacturing, domestic and other beneficial uses.

Typically, in most states, early rights were created and proved up under the prevalent state doctrine, either riparian or appropriation. In some states, including California, riparian and appropriative rights co-existed. The conflicts between the two sets of rights in the latter states and the problems of proving and administering water rights in all of the western states led to the adoption of statutory permit systems beginning in the early 1900's. During the transition, some classes of existing rights were grandfathered in, while other classes had to apply for permits or lose their rights; still other classes of right were denied. Thus, after a definite point in time, all rights would be granted by permit only. Nearly all extraction rights acquired in recent years are based on permit systems that are the statutory implementation of pre-existing customary appropriation rights. For the most recent judicial analysis of the relationship between the riparian and appropriation systems in California, see *In re Waters of Long Valley Creek System*, 25 Cal. 3d 339, 599 P.2d 656, 158 Cal. Rptr. 350 (1980). See generally E. Clark, *supra* note 8; W. HUTCHINS, *supra*

draw from a lake or stream?

This article outlines the scope of the public trust and appropriation doctrines. It reviews the leading cases expressly and impliedly dealing with the points of contact and conflict between the two doctrines in order to construct a doctrinal framework within which to analyze cases such as Mono Lake. Finally, it uses this framework to predict how a court might approach such issues and cases in the future.²⁹

I. THE SCOPE OF THE PUBLIC TRUST DOCTRINE

The public trust doctrine has historically been used to protect the public interest in certain unique, valuable and irreplaceable natural resources.³⁰ Its scope, however, is difficult to define. The doctrine's clearest application has been to preserve public ownership in the beds and foreshores of navigable waters in order to protect public rights of navigation, commerce and fishery overlying those lands.³¹ In more recent years, as concern about the loss

note 8; C. MEYERS & A. TARLOCK, *supra* note 26; F. TRELEASE, *WATER LAW* (3d ed. 1979).

²⁹ Earlier articles by this author on the subject of public rights of navigation, fishery, etc., on western lakes and streams did not express the views espoused herein concerning the interrelationship of the public trust and other doctrines and the respective lines of cases. See Johnson, *Riparian and Public Rights to Lakes and Streams*, 35 WASH. L. REV. 580 (1960); Johnson & Austin, *Recreational Rights and Titles to Beds on Western Lakes and Streams*, 7 NAT. RESOURCES J. 1 (1967). In fact, no mention of the public trust doctrine is made in either of these articles. Years of additional research, teaching and worrying about these questions have produced a different perspective. It is like the story of the blind man and the elephant. Earlier research revealed those parts of the beast discovered at that time by the blind man. During the intervening years, while the elephant has not changed much, further search has allowed the blind man to discover more of the elephant's anatomy.

³⁰ See W. RODGERS, *ENVIRONMENTAL LAW* 170-86 (3d. ed. 1977), which gives extensive treatment to the definition, scope and current content of the public trust doctrine; Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 477, 556 (1970). This article relies on and builds from these sources. The reader is urged to refer back to these sources for general materials. The principal burden of this writing is to analyze the critical contact points between the public trust and appropriation doctrines. Thus, it is only cases and writings pertinent to that narrow focus which are given treatment here. The abbreviated definition of the public trust doctrine given here can only be fully understood after one has studied the actual cases where the doctrine has been applied.

³¹ *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387 (1892). On the origins of the

of in-place water opportunities has increased, courts have expanded the doctrine in some states to protect the public interest in bathing, swimming, recreational boating, aesthetics, climate, scientific study, environmental and ecological quality, wildlife preservation³² and the allocation of water. Significantly, one of the main thrusts of the cases articulating the traditional public trust doctrine has been to protect the public interest in in-place uses of water. However, it is also significant that only one of these cases has expressly involved a conflict between the appropriation and the public trust doctrines.

Merely to describe the existing applications of the public trust doctrine does not define its potential scope. If we take a more functional approach to the scope of the doctrine and look past the labels to the interests protected,³³ the rationale of the decisions³⁴ and the results obtained,³⁵ we find a much larger group of cases that can and should be identified as public trust decisions. One of the main purposes of this article is to define this broader, functionally oriented public trust doctrine, since it is likely to impact the western prior appropriation system in the future.

A. *Traditional Public Trust Doctrine*

First, let us look at the opinions that have traditionally been identified by their authors, or by recognized legal scholars, as public trust decisions. What constraints would these cases place on the appropriation doctrine if they were used to protect in-

public trust doctrine, see Deveney, *Title, Jus Publicum and the Public Trust: An Historical Analysis*, 1 SEA GRANT L.J. 13 (1976); Sax, *supra* note 30; Note, *The Public Trust Doctrine in Tidal Cases: A Sometimes Submerged Traditional Doctrine*, 79 YALE L.J. 762 (1970).

³² "The permissible range of public uses is far broader, including the right to hunt, bathe or swim and the right to preserve the tidelands in their natural state as ecological units for scientific study." *Marks v. Whitney*, 6 Cal. 3d 251, 259-60, 491 P.2d 374, 380, 98 Cal. Rptr. 790, 796 (1971).

³³ That is, the public interest in in-place water uses for navigation, fishery, environmental quality and wildlife preservation.

³⁴ The unifying and underlying rationale of these decisions is the dramatic increase in the public interest in in-place water uses. This interest has made the issue a powerful political and social force in recent years and has led the public into the courts in increasing numbers to demand protection for those uses.

³⁵ That is, the fact that these protections have required and successfully produced a significant redefinition and reduction of countervailing private property rights.

place water uses? In approaching this question it will be helpful to categorize the cases in which courts have already applied the public trust doctrine and then to examine their potential impact on future lake- and stream-level preservation cases.

Courts have traditionally used the public trust doctrine to:

(1) *Require express legislative action.* In *Gould v. Greylock Reservation Commission*,³⁶ *Robbins v. Department of Public Works*,³⁷ and *City of Berkeley v. Superior Court of Alameda County*,³⁸ the Massachusetts and California courts used the doctrine to require express legislative action before permitting a state park (*Gould*), a swamp (*Robbins*) or a tide flat (*Berkeley*) to be committed to private or specialized public uses.³⁹

³⁶ 350 Mass. 410, 215 N.E.2d 114 (1966).

³⁷ 355 Mass. 328, 244 N.E.2d 577 (1969).

³⁸ 26 Cal. 3d 515, 606 P.2d 362, 162 Cal. Rptr. 327, *cert. denied*, 101 S. Ct. 119 (1980).

³⁹ A somewhat related issue arose in Washington. See *Wilbour v. Gallagher*, 77 Wash. 2d 306, 462 P.2d 232 (1969), *cert. denied*, 400 U.S. 878 (1970). The plaintiff sued to enjoin the defendant from filling his portion of the bed of Lake Chelan, a large navigable lake heavily used for recreational purposes. While the Washington court in *Wilbour* never explicitly mentions the public trust doctrine, the rationale of the decision, the interest protected and the result obtained all identify it clearly as a public trust case. For a general analysis of Washington law in the public trust area, see Johnson & Cooney, *Harbor Lines and the Public Trust Doctrine in Washington Navigable Waters*, 54 WASH. L. REV. 275 (1979).

When *Wilbour v. Gallagher* was decided, Washington had no Shoreline Management Act. See Wash. Rev. Code Ann. §§ 90.58.010-.930 (Supp. 1978). The local county had no zoning or permit requirement controlling such fills. The Corps of Engineers was unconcerned because commercial navigation was not obstructed; Congress did not enact the expansive § 404 of the Federal Water Pollution Control Act Amendment until 1972. The court used common law principles to enjoin the fill as an unlawful interference with the public right of navigation. In the now-famous footnote 13, the court cast a cloud on future fills in Washington's navigable waters by suggesting that a planning, zoning and permit process ought to be available to allow public participation in the decision process for such activities. For the definitive article on this case and footnote 13, see Corker, *Thou Shalt Not Fill Public Waters Without Public Permission: Washington's Lake Chelan Decision*, 45 WASH. L. REV. 65 (1970).

Wilbour v. Gallagher, with a boost from Professor Corker's authoritative article, is credited as being a major factor in bringing about the enactment of Washington's Shoreline Management Act in 1971. Developers wanted the Act in order to remove the cloud created by *Wilbour*; the environmentalists wanted it to legitimize public participation in the decision process and to exert some environmental control over shoreline development.

(2) *Invalidate legislation.* In *Priewe v. Wisconsin State Land & Improvement Co.*,⁴⁰ the Wisconsin court relied on the doctrine to declare invalid legislation which had authorized a private developer to drain a lake for a housing development.

(3) *Affirm legislative rescission.* In *Illinois Central Railroad Co. v. Illinois*,⁴¹ the Supreme Court applied the doctrine to affirm legislation rescinding a conveyance of the bed of Lake Michigan in front of the City of Chicago.

(4) *Test for excessive delegation.* In *Gould v. Greylock Reservation Commission*,⁴² the Massachusetts court used the public trust doctrine to invalidate an excessive delegation of authority to a private company to develop and operate a state park and ski area.

(5) *Require broad-based decision-making.* In *Meunsch v. Public Service Commission*,⁴³ the Wisconsin court used the doctrine to deny a local government the power to commit a state-wide resource (a fishing stream) to power generation purposes, thus requiring more broadly based political decision-making.

(6) *Affirm a public trust easement.* In *People v. California Fish Company*⁴⁴ and *Marks v. Whitney*,⁴⁵ California courts held that, although a private individual may hold "legal" title to the bed of navigable waters, that individual cannot use the bed in a way that interferes with the public trust rights of navigation, commerce, fishery, wildlife habitat, etc., in the overlying waters.

(7) *Require comprehensive water planning.* In *United Plainsmen Association v. North Dakota State Water Conservation Commission*,⁴⁶ the court prohibited issuance of water appropriation permits for coal-related power- and energy-produc-

⁴⁰ 93 Wis. 534, 67 N.W. 918 (1896).

⁴¹ 146 U.S. 387 (1892).

⁴² 350 Mass. 410, 215 N.E.2d 114 (1966).

⁴³ 261 Wis. 492, 53 N.W.2d 514, *aff'd on reh.*, 261 Wis. 515, 55 N.W.2d 40 (1962).

⁴⁴ 166 Cal. 576, 138 P. 79 (1913).

⁴⁵ 6 Cal. 3d 251, 491 P.2d 374, 98 Cal. Rptr. 790 (1971).

⁴⁶ 247 N.W.2d 457 (N.D. 1976) *Cf.* *City of Eau Claire v. Department of Natural Resources*, 2 ENVIR. L. REP. 20512 (Dame County Wis. Cir. Ct. 1972), where the trial court held that the public trust did not apply to underground waters since they are not "navigable." The main issue in that case concerned pollution and the power of the legislature to delegate authority. A similar fact pattern has been raised in a yet undecided case, *Kelley v. Hooker Chem. & Plastic Corp.*, No. 79-22878, ENVIR. L. REP. 65617 (Ingraham County Mich. Cir. Ct. 1979).

tion facilities until a comprehensive water-use plan was completed which would take account of such in-place uses as navigation, commerce and fishery. The court explicitly ruled that the public trust doctrine applied to the allocation of waters as well as to conveyances of land that underlie or abut water resources.

(8) *Require reasonable effort to mitigate resource harm.* The Wisconsin cases⁴⁷ and a recent Pennsylvania decision⁴⁸ held that even where the destruction of a public trust resource is justified because of some overriding public purpose to be served, the actor must make all reasonable efforts to minimize the harm to the public trust resource.

It is noteworthy that with the exception of *Gould*, all of these cases expressly invoked the public trust doctrine to protect in-place uses of water. Thus, even the traditional public trust cases have long accorded a high priority to this public interest.

B. *Expanded Public Trust Doctrine*

Once we move away from the cases that have traditionally been recognized as public trust cases, we find three other groups of decisions that seem to be in function, if not in name, public trust cases. These are (1) riparian rights cases that protect lake and stream levels against water extractors; (2) navigation servitude cases; and (3) public use cases. In addition, the variety of steps taken by legislatures and administrative agencies in recent years to protect in-place water uses have tended to protect public trust interests.

1. Riparian Rights Cases Protecting Lake and Stream Levels against Water Extractors

Riparian rights accrue to persons who own land abutting a stream or lake. These rights exist because of the natural relationship of land and water and include the rights to access, to boat, swim, fish and to extract water for irrigation and other

⁴⁷ *City of Madison v. State*, 1 Wis. 2d 252, 83 N.W.2d 674 (1957); *State v. Public Service Comm'n*, 275 Wis. 112, 81 N.W.2d 71 (1957); *City of Milwaukee v. State*, 193 Wis. 423, 214 N.W. 820 (1927).

⁴⁸ *Payne v. Kassab*, 11 Pa. Commw. Ct. 14, 312 A.2d 86 (1973), *aff'd*, 468 Pa. 226, 361 A.2d 263 (1976). Although argued as a public nuisance case, Professor Rodgers properly points out that *Payne* is functionally a public trust case. W. RODGERS, *supra* note 30, at 177.

beneficial uses.

The earliest cases which protected natural lake and stream levels against damaging extractions used the riparian rights doctrine.⁴⁹ However, the doctrine had limited potential. In the West, it was available only in the three coastal states of California, Oregon and Washington, which had adopted in tandem both the riparian and appropriation systems. Even there, courts used it only occasionally for this purpose. The riparian rights doctrine was not available at all in the western mountain states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming, which had early rejected riparianism and had opted for "pure" appropriation systems.

Two cases, *Los Angeles v. Aitken*⁵⁰ and *In re Martha Lake*,⁵¹ illustrate application of the riparian rights doctrine. In *Martha Lake*, decided in 1929, the Washington State Supervisor of Water Resources had issued a permit for the appropriation of water from a lake which would have lowered the water level about twelve inches and bared from eight to fifty feet of muddy lake bottom. The riparian owners had purchased their fast lands for homesites and for its ready access to fishing, swimming and boating. The court rejected the argument that the statutory appropriation permit gave paramount status to appropriators and held that the water could not be extracted unless the riparians were first compensated for the damage that would be caused to their lands.

In *City of Los Angeles v. Aitken*,⁵² decided in 1935, a California court held in an eminent domain proceeding that Los Ange-

⁴⁹ Several states approached the problem of stabilizing lake levels statutorily. For example, three midwestern riparian states passed lake level statutes in the 1930's and the 1940's. Indiana, IND. CODE ANN. § 13-2-13-1 (Burns 1973) (first adopted in 1947, ch. 350, 1947 Ind. Acts 1409); Michigan, MICH. STAT. ANN. § 11.300(1)-300(26)(1973) (first adopted in 1937, repealed and amended several times until the passage of Pub. Act No. 146, 1961 Mich. Pub. Acts 206); Minnesota, MINN. STAT. ANN. § 105.43 (West 1977) (first adopted in 1947, ch. 142, 1947 Minn. Laws 218). It is noteworthy that these states are dotted with many medium- to small-sized lakes which are in heavy demand for recreational purposes.

⁵⁰ 10 Cal. App. 2d 460, 52 P.2d 585 (3d Dist. 1935).

⁵¹ 152 Wash. 53, 277 P. 382 (1929). See also *In re Clinton Water Dist.*, 36 Wash. 2d 284, 218 P.2d 309 (1950); *Litka v. City of Anacortes*, 167 Wash. 259, 9 P.2d 88 (1932). For an analysis of these cases, see Johnson, *supra* note 29, at 593-95.

⁵² 10 Cal. App. 2d 450, 52 P.2d 585 (3d Dist. 1935).

les must pay damages for condemnation of the riparian rights of landowners abutting a navigable body of water, Mono Lake. The City planned to appropriate the waters of Rush and Lee Vining Creeks, which supplied about ninety percent of the lake's inflow. These extractions would eventually expose much of the lake bed, producing unsightly mud flats and dust plains and would ruin the vegetation on nearby lands when wind-swept mineralized dust settled there.

Because of the heavy salinity of Mono Lake, the littoral owners had made no domestic use of the water and had extracted none for irrigation, mining or other beneficial uses. However, the lake was highly valued for pleasure boating, swimming, duck and goose hunting, and scenic beauty, all of which would be seriously impaired or destroyed as a result of the appropriations. All of these customary uses were nonconsumptive, in-place uses. The City of Los Angeles argued that, since the public enjoyed these recreational uses in the same way as the adjacent landowners, they were really "public rights," the loss of which did not entitle the adjacent owners to special compensation. The public was not represented in the case.

The court rejected the City's argument and held that the riparian landowners did have special, compensable rights by virtue of their ownership of riparian land and unique relationship to the water. Further, it held that in-place recreational uses of the lake were "beneficial" uses under the California Constitution.⁶³

2. The Navigation Servitude Cases

The navigation servitude⁶⁴ cases pose another example of a

⁶³ The City had argued that art. 14, § 3 of the California Constitution, which declared that riparian owners in California were limited to "such water as shall be reasonably required for the beneficial use to be served," denied the littoral owners any right to compensation for loss of in-place uses for boating, swimming and hunting because such uses were not "beneficial." *City of Los Angeles v. Aitken*, 10 Cal. App. 2d 450, 467-68, 52 P.2d 585, 588-89 (3d Dist. 1935).

⁶⁴ The phrase "navigation servitude" can refer to either of two parallel doctrines: one at the federal level, represented by the line of cases starting with *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824) through *United States v. Rands*, 389 U.S. 121 (1967), and the other at the state level, represented by such cases as *Colberg, Inc. v. State*, 67 Cal. 2d 408, 432 P.2d 3, 62 Cal. Rptr. 101 (1967), *cert. denied*, 390 U.S. 949 (1968); and *Commonwealth v. Thomas*, 427 S.W.2d 213 (Ky. 1967). For purposes of this section of the article, the implicit meaning of navigation servitude is state navigation servitude, for it is the individual

doctrine that should be treated as a part of the public trust doctrine. Traditionally, the courts have attached the "public trust"—rather than the "navigation servitude"—label to the theory used to constrain state conveyances of title to the beds of navigable waters to protect public rights of navigation, commerce and fishery. This doctrine applies only where the state holds, or has in the past held, title to the lands in question. The doctrine operates by limiting or qualifying the title conveyed by the state to these lands,⁵⁵ much as a recorded easement burdens land conveyed without mention of the easement.

The navigation servitude, on the other hand, imposes a dominant easement on navigable water beds without regard to the source or intervening chain of title to those lands. It applies even where title to the land was never held by the state, such as when a homestead title went directly from the federal government to a private party.⁵⁶ The navigation servitude usually operates to justify nonpayment of compensation to private persons whose property interests have been damaged or destroyed by a government project on navigable waters undertaken in aid of navigation.⁵⁷ The federal cases have even held, however, that the

states that have the greatest interest in preserving the public right to navigation on the smaller streams and lakes. This is not to say that there will not be cases where the "public" and the state will be in conflict over the effect of imposing the navigational servitude, especially in California. For example, the highway in *Colberg* could have blocked ingress and egress to a public boat ramp instead of the Colberg's drydock. See Morreale, *supra* note 4; Comment, *State Navigation Servitude*, 4 LAND & WATER L. REV. 521 (1969). See generally 1 HUTCHINS, *supra* note 8, for discussions of the nature and the balance of force between the federal government and the states.

⁵⁵ *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 452-53 (1892); *People v. California Fish Co.*, 166 Cal. 516, 138 P. 79 (1913).

⁵⁶ See *San Diego County Archeological Soc'y v. Compadres*, 81 Cal. App. 3d 923, 927, 146 Cal. Rptr 786, 788 (1978), where the court stated, "[H]owever, the public trust doctrine applies only to limited types of real property to which the state holds or held title because it was important the land be available to all. It does not involve private property except where the state has conveyed the land into private hands." There is another conveyance pattern that raises some interesting conceptual problems—land which was conveyed into private ownership by the previous ruling nation/state. The Spanish or Mexican land grants in California potentially raise this problem.

⁵⁷ The navigation servitude doctrine has been applied in a majority of the other states only when the project that damages private property interests is in aid of navigation. *Wernberg v. State*, 516 P.2d 1191 (Alas. 1973), and *Commonwealth v. Thomas*, 427 S.W.2d 213 (Ky. 1967), both exemplify the majority

federal navigation servitude applies to nonnavigable tributaries of navigable waters, where the purpose of the project is to aid navigation on the lower, navigable part of a river.⁵⁸

Where the facts are such that both doctrines could apply, there is no clear line separating them. For example, *California Fish*,⁵⁹ the foundation case for the public trust doctrine in California, was a decision in which the court said that grantees of tidelands from the state took "bare" legal title subject to the public easement for navigation⁶⁰—a statement that could as well be attributed to the navigation servitude.

In *Colberg, Inc. v. State*,⁶¹ the California court explicitly recognized the integrated nature of these two concepts, saying that "the state's servitude operates upon certain private rights . . . whenever the state deals with its navigable waters in a manner consistent with the public trust under which they are held."⁶² Thus, if we look past the labels, we see that both the public trust doctrine and the navigation servitude are in these instances protecting the same fundamental public right: the right of navigation in navigable waters.

3. Public Use Doctrine

The public use⁶³ doctrine is so closely allied and so parallel to

position. California previously discussed and rejected the majority position in *Colberg, Inc. v. State*, 67 Cal. 2d 408, 432 P.2d 3, 62 Cal. Rptr. 401 (1967), *cert. denied*, 390 U.S. 949 (1968). In California and a minority of states, the navigation servitude can be invoked whenever the state project is consistent with the public trust in navigable waters and is consistent with the improvement of commercial traffic and intercourse. Thus no compensation is required, even though the immediate impact of the project is to block access from a small navigable bay to open waters. For example, in *Colberg*, the impact was to destroy the plaintiff's shipbuilding business. *Id.* at 419-20, 432 P.2d at 10-11, 62 Cal. Rptr. at 408-09.

⁵⁸ *United States v. Grand River Dam Auth.*, 363 U.S. 229 (1960); *see Morreale, supra* note 4.

⁵⁹ *People v. California Fish Co.*, 166 Cal. 576, 138 P. 79 (1913).

⁶⁰ *Id.* at 597-99, 138 P. at 88.

⁶¹ 67 Cal. 2d 408, 432 P.2d 3, 62 Cal. Rptr. 401 (1967), *cert. denied*, 390 U.S. 949 (1968).

⁶² *Id.* at 421, 432 P.2d at 11-12, 62 Cal. Rptr. at 409-10 (relying both on a string of cases from other jurisdictions and "sound public policy").

⁶³ The term "public use" has been used arbitrarily, as there is no other convenient handle for the group of cases using this theory. *Jus publicum* encapsulates the modern cases dealing with "public use," but it also carries along some

the public trust doctrine in its protection of in-place water uses that it can justifiably be claimed as a part, or a different form of expression, of the public trust doctrine. Courts have used the public use doctrine, developed largely since the Second World War, to protect the public right of navigation on waters that are recreationally but not commercially navigable, where the beds are generally privately owned.⁶⁴

Under the early common law, the owner of the bed of a lake or stream had the exclusive right to use the water surface over his land.⁶⁵ A landowner was said to own "ad coeleum," *i.e.*, to the sky. This rule posed no real threat to the public right of navigation on commercially navigable waters because the beds underlying those waters were generally owned by the federal government prior to statehood and by the states thereafter. In the occasional case of private ownership of the bed, the early public trust and navigation servitude doctrines effectively assured that such private ownership did not impair the public easement for navigation.

intellectual baggage that the modern courts have found unnecessary to voice, *e.g.*, *State v. McIlroy*, 595 S.W.2d 659 (Ark. 1980). *See generally* Deveney, *supra* note 31.

⁶⁴ For a review and analysis of public use cases, see Johnson & Austin, *supra* note 29. Other law review articles since have dealt with the subject on a state-by-state basis or have focused on specific aspects of the subject. *See, e.g.*, Stone, *Legal Background on Recreational Use of Montana Waters*, 32 MONT. L. REV. 1 (1971); Knuth, *Bases for the Legal Establishment of a Public Right of Recreation in Utah's "Non-navigable" Waters*, 5 J. CONTEMP. L. 95 (1978); Note, *Ownership of Navigable Water Bottoms—California Co. v. Price Revisited*, 36 LA. L. REV. 694 (1976); *People v. Mack: A Sportsman's Definition of Navigability*, 3 ENV'T L. 68 (1973); Note, *Property—Susceptibility of Beds of Navigable Waters to Private Ownership*, 50 TUL. L. REV. 193 (1975); Comment, *Public Recreation on Non-Navigable Lakes and the Doctrine of Reasonable Use*, 55 IOWA L. REV. 1064 (1970); Note, *Water and Water Courses—Recreational Rights—A Determination of the Public Status of West Virginia Streams*, 80 W. VA. L. REV. 356 (1978); Note, *Waters and Watercourses—Rights of the Public in Non-Navigable Waters*, 42 MISS. L.J. 270 (1971).

⁶⁵ *People v. Emmert*, 597 P.2d 1025 (Colo. 1979), is a reminder that in some jurisdictions traditional property law has not yielded to the pressures of change. The Colorado court held in that case that the public trust doctrine does not alter the private property rights when the bed of a stream or lake is privately owned. While it is in keeping with Colorado's position as the last defender of "Simon-pure" appropriation doctrine, the position seems difficult to defend in a state where stream fishing is immensely popular.

A different problem arose on waters which were not commercially navigable.⁶⁶ Ordinarily in such cases, the title to the bed was held by the riparian owners. As recreational uses became more popular, the courts developed the public use theory out of a need to find a doctrine that recognized a public right to boat, swim and fish on those waters, even though the beds were privately owned.

Only occasionally have decisions favoring the public right of navigation attributed their results to the public trust or navigation servitude doctrines. In a now well established line of cases, however, various state courts have developed three other sources of public rights to navigation.⁶⁷ Some courts hold that the public⁶⁸ right of boating on waters of which the beds are privately owned is a "riparian right."⁶⁹ Other courts attribute the public right to the Northwest Ordinance and to state constitutions which reserve to the public a right to travel over the Mississippi and Missouri rivers, their tributaries and the carrying places between.⁷⁰ A third group bases the public right on declarations in state constitutions that the waters in the state belong to the "public." Because these public waters have always flowed across private land, these courts reason that the public boating on such

⁶⁶ "Navigable" is a word of art, perhaps even of sorcery. It is used here to cover the widest possible variation of meanings, including the evolving federal definition and the 50 different state definitions. My water law expert colleague, Professor Corker, argued persuasively as long ago as 1970 that the whole concept of navigability for determining anything other than the floating of a supreme court opinion should be abandoned. The concept is confusing, slippery, unpredictable, antique and irrelevant to today's problems. See Corker, *supra* note 39, at 76-81. However, the concept is firmly embedded in water law jurisprudence. It is frequently mouthed and still occasionally used by courts and legislatures today. See, e.g., *State v. McIlroy*, 595 S.W.2d 659 (Ark. 1980).

⁶⁷ For further discussion of these three lines of cases, see Johnson & Austin, *supra* note 29, at 41.

⁶⁸ The apparent mixing and matching of "public" and "riparian" rights need to be clarified. On nearly all western lakes of significant size, the state owns riparian land either outright or in the form of highways, access roads or the like. Thus the state is a riparian and can allow the "public" to enjoy the benefits of those riparian rights. Cf. *Botton v. State*, 69 Wash. 2d 751, 756-57, 420 P.2d 352, 356 (1966) (discussing reasonableness of the state's riparian use relative to the other riparians).

⁶⁹ Typical of this theory are *Johnson v. Seifert*, 257 Minn. 159, 100 N.W.2d 689 (1960), and *Snively v. Jaber*, 48 Wash. 2d 815, 296 P.2d 1015 (1956).

⁷⁰ E.g., *Elder v. Delcour*, 364 Mo. 835, 269 S.W.2d 17 (1954).

water does not surcharge that easement.⁷¹

The development of these new theories to protect public navigation rights on navigable waters has been accompanied by a parallel expansion in the definition of navigability to cover more and more waters. The early English rule⁷² was that navigability for the public right of use extended only to waters where the tide ebbs and flows. This rule was rejected early in the United States as unsuited to a country where great rivers flowed inland for hundreds and sometimes thousands of miles. Thus, the rule adopted here was that waters are navigable for public use if they are "navigable in fact" for commercial purposes, whether or not subject to the ebb and flow of the tide.⁷³ The state courts expanded this definition even further after World War II because of the massive increase in recreational boating, fishing, etc., so that it now also includes waters which are "recreationally" navigable.⁷⁴

At the same time that the courts were expanding the definition of navigability, they were also diminishing the importance of bed ownership in finding a public right. The early cases often noted state ownership of the beds of navigable waters as a reason for, or at least source of protection for, the public right of navigation. For most courts, such bed ownership is no longer so important. Courts are increasingly finding theories to support public rights of navigation on virtually all boatable waters. This trend brings these cases more in line with the traditional public trust doctrine cases which also tend to diminish the importance of bed ownership.

These "public use" cases may properly be classified as part of the public trust doctrine. Although the cases seldom mention the public trust doctrine explicitly, they are nonetheless predicated on the principle that navigable waters should be available

⁷¹ *Day v. Armstrong*, 362 P.2d 137 (Wyo. 1961).

⁷² *The Monticello*, 87 U.S. (20 Wall.) 430 (1874).

⁷³ See *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377 (1940).

⁷⁴ See *Johnson & Austin*, *supra* note 29. The 1980 Arkansas case of *State v. McIlroy*, 595 S.W.2d 659 (Ark. 1980), is illustrative of the latest expansion of navigability to include recreationally navigable waters. The older Arkansas cases had held that the public right of navigation extended only to waters which were commercially navigable. In *McIlroy* the court followed the lead of the Massachusetts, Ohio, Michigan and other state courts and explicitly changed its test of navigability to guarantee the public a right to use recreationally navigable waters.

for public use under a theory that does not require eminent domain proceedings to condemn the bedowner's rights. As such, they operate as public trust cases.

An important question still remains. Assuming that these public use cases are expressions of the public trust doctrine, how would they affect the outcome of a case where an appropriator takes water from a stream and causes damage to public navigation and fishery rights? To date the public use cases have arisen out of conflicts between the public, which wants to boat on certain waters, and bed owners, who claim exclusive rights of possession of the surface of those waters overlying their lands. No public use case poses a conflict between an appropriator whose extractions would destroy navigation, and the public which wants the water left in place.

*Los Angeles v. Aitken*⁷⁵ and *Martha Lake*⁷⁶ seem relevant here because they, at first blush, provide the basis for legal protection of in-place public uses. But the development of the public use line of cases over the past thirty years suggests that the future might well see the judicial application of these principles as constraints on appropriators. The argument is as follows: prior to the advent of the public use cases, the courts tended to rule that the property rights of bed owners were paramount to public rights of navigation and fishery. The increasing public demand for recreational boating, fishing and environmental protection in the post-war era caused the courts to develop legal theories that supported these public rights and constrained private bed owners. It would be consistent with this trend and a logical next step if the courts now found that these public rights of navigation and fishery are potent enough to constrain appropriators whose water extractions would similarly destroy or deny the public uses.

4. Legislative and Administrative Protection of In-Place Uses of Lakes and Streams

In recent years some states have enacted legislative measures to protect in-place uses of lakes and streams. The Federal Wild and Scenic Rivers Act⁷⁷ has been the impetus for many of these

⁷⁵ *City of Los Angeles v. Aitken*, 10 Cal. App. 460, 52 P.2d 585 (3d Dist. 1935).

⁷⁶ *In re Martha Lake Water Co.*, 152 Wash. 53, 277 P. 382 (1929).

⁷⁷ Pub. L. No. 90-542, 82 Stat. 906 (1968) (codified in 16 U.S.C. §§ 1271-1287)

measures⁷⁸ which, like the federal act, protect designated waters because of their "wild," "scenic" or "environmental quality" characteristics. Ordinarily, such a designation protects these waters, usually rivers or streams, from the construction of "improvements," *i.e.*, dams, reservoirs or diversion channels, in order to preserve the existing natural conditions. One consequence of these protective acts is to protect both existing and future in-place uses of the waters. States have also enacted statutory moratoriums on further appropriations.⁷⁹ In contrast to a moratorium on actual appropriations, the Colorado River Basin Project Act⁸⁰ imposed a ten-year ban on the study of any transbasin diversion of the Columbia River⁸¹ by any federal agency, partly to protect in-place water uses. In addition, some state legislatures have broadened state law definitions of navigability to provide more extensive protection of navigation and other public rights of in-place water uses.⁸²

Some states have also taken administrative actions to protect in-place uses.⁸³ Dewsnup and Jensen⁸⁴ list twenty-two adminis-

(1976)).

⁷⁸ See R. DEWSNUP & D. JENSEN, *STATE LAW AND INSTREAM FLOWS* 61 (1977), for a list of many of the state acts.

⁷⁹ MONT. REV. CODES ANN. § 89-8-105(1) (Cum. Supp. 1977). This Act established a moratorium for three years on new appropriations from the Yellowstone River.

⁸⁰ Pub. L. No. 90-537, 82 Stat. 885 (codified at 43 U.S.C. §§ 1501-1556 (1976)).

⁸¹ *Id.* § 201. It should be noted that both of these moratoriums were highly political in nature, both having the effect of buying time while searching for a more permanent and effective solution to a critical long-term problem.

⁸² In the Final Report of the National Water Commission, it was recommended that "[s]tate legislatures can and should liberalize their tests of navigability for purposes of the public trust, thus bringing more waters . . . within the ambit of public use." *WATER POLICIES FOR THE FUTURE*, *supra* note 2, at 279.

A few states have legislatively assigned all or part of the unappropriated waters of the state to a state agency to be managed in the public interest until the waters are appropriated to other permanent uses. North Dakota assigned all unappropriated waters to the Water Conservation Commission to use in fulfillment of its power, including the stabilization and restoration of the state's waters for recreational and wildlife purposes. N.D. CENT. CODE §§ 61-02-14, 29 (1960 & Supp. 1979). The Commission has also been given an option of appropriating for its own purposes any of the excess water in its management. The specified procedure is simply one of sending notice to the state engineer, thus obviating the need for full administrative hearings.

⁸³ See R. DEWSNUP & D. JENSEN, *PROMISING STRATEGIES FOR RESERVING IN-*

trative or agency actions that have been taken to protect instream values, some of which are pertinent here. Those which bear the closest relationship to lake and stream level maintenance are (1) direct reservation of instream flow;⁸⁵ (2) administrative moratorium on new appropriations;⁸⁶ (3) use of statutory criteria specifically designed to protect instream values in reviewing applications for appropriations;⁸⁷ (4) placing conditions in appropriation permits designed to preserve instream flow needs;⁸⁸ (5) imposing a more stringent burden of proof on applicants for large appropriations to establish the quantity of water needed;⁸⁹ and (6) appropriation by a state agency for environmental, recreational, historic or scenic purposes.⁹⁰

The federal government has also increased its protection of navigable waters by adopting an exceedingly broad definition of navigability in the Federal Water Pollution Control Act Amend-

STREAM FLOWS (1977); R. DEWSNUP & D. JENSEN, *supra* note 78. See generally Tarlock, *Appropriation for Instream Flow Maintenance: A Progress Report on "New" Public Western Water Rights*, 1978 UTAH L. REV. 211. The author is indebted to Dewsnup and Jensen for their two fine studies, and to Tarlock for his insightful law review article. The studies and article speak mainly to the problems of "stream flow" maintenance rather than lake level maintenance. The term "in place" has been used throughout this article to include both streams and lakes. Conceptually, lake level maintenance can be treated as a less complex subset of the problems and variables associated with stream flow maintenance. Many of the same techniques and criteria will apply to either physical situation.

⁸⁴ R. DEWSNUP & D. JENSEN, *supra* note 78, at 10. The examples footnoted are drawn from the text of that report; additional applications are cited by those authors in the table at 71.

⁸⁵ MONT. REV. CODES ANN. § 85-2-316 (1979).

⁸⁶ OR. REV. STAT. § 536.410(1) (1979).

⁸⁷ UTAH CODE ANN. § 73-3-8 (Supp. 1979).

⁸⁸ *Bank of America Nat'l Trust & Sav. Ass'n v. State Water Resources Control Bd.*, 42 Cal. App. 3d 98, 116 Cal. Rptr 770 (3d Dist. 1974); CAL. WATER CODE §§ 1253-1259 (West 1971). See also *California v. United States*, 438 U.S. 645 (1978) (construction of New Melones Dam).

⁸⁹ MONT. REV. CODE ANN. § 89-885(6) (Cum. Supp. 1977).

⁹⁰ *State Dep't of Parks v. Idaho Dep't of Water Admin.*, 96 Idaho 440, 530 P.2d 924 (1974); COLO. REV. STAT. §§ 3792-102(3), -103(4) (1976); see *California Trout, Inc. v. State Water Resources Control Bd.*, 90 Cal. App. 2d 816, 153 Cal. Rptr. 672 (3d Dist. 1979); *Fullerton v. State Water Resources Control Bd.*, 90 Cal. App. 3d 590, 153 Cal. Rptr. 518 (1st Dist. 1979); *Colorado River Water Conservation Dist. v. Rocky Mountain Power Co.*, 158 Colo. 331, 406 P.2d 798 (1965).

ments of 1972.⁹¹ It has used this definition in combination with other federal acts⁹² to expand its authority over federal waters and to limit fills and other obstructions that interfere with public navigation, fishery and environmental values.

These legislative and administrative protections for in-place water uses confirm the high priority now accorded these values by society. They also affirm the inadequacy of the appropriation system for providing suitable legal protection for these values. And lastly, they are, in effect, significant governmental expressions of the public trust theory aimed at protecting in-place water uses. As such, they lend policy support to judicial efforts to achieve these same goals.

II. THE RELATIONSHIP OF THE PUBLIC TRUST AND THE APPROPRIATION DOCTRINES

One might well ask why the public trust and appropriation doctrines have not crossed paths—or swords—more frequently in the past. A closely related question is why the prior appropriation system did not develop its own protections for in-place water uses. Why does this issue arise now rather than 100 years ago when the appropriation system was evolving? One finds the answer by examining the particular history of the West and the conditions that prevailed there when the appropriation doctrine was developing.

The appropriation system grew out of the practical needs of settlers in the arid western United States during the 19th century. Water was scarce yet essential for both mining and farming. In many cases the only way to mine or farm effectively was to divert water from a stream and carry it long distances—often from another watershed—by ditches to the mine or farm. No federal or state laws or regulations controlled such water diversions during the early settlement days. Out of a need to bring some order to a potentially chaotic situation, the miners and farmers developed the customary rule that “first in time is first in right.” That is, the first person to divert water from a stream or lake obtained a legal right to continue doing so in perpetuity.

⁹¹ 33 U.S.C. § 1362(7) (1976).

⁹² Rivers and Harbors Appropriation Act of 1899, 33 U.S.C. §§ 401, 403, 407 (1976); Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-666c (1976); Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464 (1976 & Supp. III 1979), as amended by Pub. L. No. 96-464, 94 Stat. 2060 (1980).

A second principle established early on was that a water user did not acquire a "legal" right to appropriate until the water had been actually diverted out of the stream or lake and put to beneficial use.⁹³

During the 19th and early 20th centuries, the prior appropriation system seldom impinged on the public rights of navigation. This was for several reasons. First, the early diversions were from the smaller rivers and streams and seldom harmed public interests; alternative in-place water-use opportunities were usually available to the public. Second, the "public" at that time consisted largely of the same miners and farmers who participated in and depended directly on the appropriation system. It did not yet include today's large, urban populations which are so far removed from farming and mining. The urban public's huge appetite for outdoor recreation and aesthetic and environmental quality had yet to arise.

It was not until the second quarter of the 20th century, long after the West was settled and long after the prior appropriation system was a fully developed legal doctrine, that the in-place water users found their interests in conflict with those of the appropriators. Early disagreements arose in the 1920's and 1930's in suits between private parties where landowners tried to stop appropriations that interfered with their in-place uses of the water.⁹⁴ Truly "public" objections were seldom raised against appropriations until the post-Second World War growth of recreational boating and the more recent environmental movement.⁹⁵ In recent years it has become increasingly clear that the appropriation system, if allowed to continue unrestrained, will adversely affect and in some cases destroy valuable

⁹³ A novel exception to this rule occurred in an early Colorado case, *Empire Water & Power Co. v. Cascade Town Co.*, 205 F. 123 (8th Cir. 1913), where the court required that enough water be left instream to maintain a waterfall and the microenvironment associated with it but only because the economic interests of a resort were involved. No "public" rights were at issue in this case.

⁹⁴ See, e.g., *City of Los Angeles v. Aitken*, 10 Cal. App. 460, 52 P.2d 585 (1935); *In re Martha Lake Water Co.*, 152 Wash. 53, 277 P. 382 (1929); *Litka v. City of Anacortes*, 167 Wash. 259, 9 P.2d 88 (1932); see text accompanying notes 52-53 *supra*.

⁹⁵ See, e.g., *Harris v. Brooks*, 225 Ark. 436, 283 S.W.2d, 129 (1955); *Taylor v. Tampa Coal Co.*, 46 So. 2d 392 (Fla. 1950); *Brown v. Ellingson* 224 So. 2d 391 (Fla. Dist. Ct. App. 1969), *appeal dismissed*, 237 So. 2d 767 (Fla. 1970); *Hoover v. Crane*, 362 Mich. 36, 106 N.W.2d 563 (1960).

in-place commercial and recreational water uses.

The above analysis leads to the conclusion that the public trust doctrine may soon limit the amount of water that can be extracted from a lake or stream under the prior appropriation doctrine. Where withdrawals of water reach a point that threatens damage to navigation, fishery, wildlife protection or other public trust interests, the courts will be asked to determine whether further extractions will be permitted under the strict criteria⁹⁶ developed for permitting the loss of public trust resources. Needless to say, this could sharply inhibit such extractions. However, to hold otherwise would be to permit these highly valued public rights, protected so carefully against intrusion from other directions, to be destroyed with impunity by persons claiming water rights under the prior appropriation (or riparian) system of water law. Furthermore, it would fly in the face of the current judicial, legislative and administrative trends toward protecting these resources and permitting their loss only under strict safeguards. If the public trust doctrine applies to constrain *fills* which destroy navigation and other public trust uses in navigable waters,⁹⁷ it should equally apply to constrain the *extrac-*

⁹⁶ The strict criteria affecting both the procedural and substantive limitations on changes to public trust resources are discussed by W. RODGERS, *supra* note 43, §§ 2.16(b) & (c). Two recent cases on this issue are *City of Berkeley v. Superior Court of Alameda County*, 26 Cal. 3d 515, 606 P.2d 362, 162 Cal. Rptr. 327, *cert. denied*, 101 S. Ct. 119 (1980), and *Morse v. Oregon Div. of State Lands*, 285 Or. 197, 590 P.2d 709 (1979).

⁹⁷ *State v. Public Serv. Comm'n*, 275 Wis. 112, 81 N.W.2d 71 (1957). As an indication of the U.S. Supreme Court's thinking on this subject, see *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 452-53 (1892):

The interest of the people in the navigation of the waters and in commerce over them may be improved in many instances by the erection of wharves, docks and piers therein, for which purpose the State may grant parcels of the submerged lands; and, so long as their disposition is made for such purposes, no valid objections can be made to the grants. It is grants of parcels of lands under navigable waters, that may afford foundation for wharves, piers, docks, and other structures in aid of commerce, and grants of parcels which, being occupied, do not substantially impair the public interest in the lands and water remaining, that are chiefly considered and sustained in the adjudged cases as a valid exercise of legislative power consistently with the trust to the public upon which such lands are held by the State. But that is a very different doctrine from the one which would sanction the abdication of the general control of the State over lands under the navigable waters of an

tion of water that destroys navigation and other public interests. Both actions result in the same damage to the public interest.

This article previously presented eight types of actions that courts have already ordered under the authority of the public trust doctrine.⁹⁸ A preliminary way of analyzing their potential impact on water extraction is to apply these cases to theoretical conflicts between extractors and in-place users and then gauge the extent to which they could limit extraction. In theory, the courts could rule as follows under the public trust cases:

(1) In Massachusetts⁹⁹ and California¹⁰⁰ the courts have sufficient precedent to require express legislative authority to extract water where such extraction would damage navigation or some other public trust interest. In other words, the fact that a valid appropriation permit had been issued by a state water agency under general statutory authority would not be sufficient authority to extract water. Nor would it be sufficient that the extractor claimed a common-law "riparian" right to take such water.

(2) A Wisconsin court, on the authority of *Priewe*,¹⁰¹ could rescind a legislative grant of a water right that would completely destroy a navigable lake. In fact, *Priewe* is just such a case. The only distinction is that in *Priewe* the purpose of the extractions was to drain the lake, whereas in this hypothetical the purpose of the extraction is to make beneficial use of the water. The impact on navigation would be the same in both cases.

(3) Suppose that a state legislature granted to a private company a right to extract water from a navigable lake or stream, thereby giving it power to control or destroy the navigability of a large section of the waters in front of a city. Under the U.S. Supreme Court's decision in *Illinois Central*,¹⁰² courts would uphold a legislative rescission of such a grant against the claim

entire harbor or bay, or of a sea or lake. Such abdication is not consistent with the exercise of that trust which requires the government of the State to preserve such waters for the use of the public.

⁹⁸ See text accompanying notes 31-42 *supra*.

⁹⁹ *Robbins v. Department of Pub. Works*, 355 Mass. 328, 244 N.E.2d 577(1969).

¹⁰⁰ *City of Berkeley v. Superior Court of Alameda County*, 26 Cal. 3d 515, 606 P.2d 362, 162 Cal. Rptr. 327, *cert. denied*, 101 S. Ct. 119 (1980).

¹⁰¹ *Priewe v. Wisconsin State Land & Improvement Co.*, 93 Wis. 534, 67 N.W. 918 (1896).

¹⁰² *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387 (1892).

that it was an unconstitutional taking of private property without compensation.

(4) In Massachusetts, under *Gould v. Greylock*,¹⁰³ a court could strike down as excessively broad any statutory or administrative delegation of authority to a private person over waters essential for preserving the public right of navigation or some other public trust interest.

(5) Suppose that a state legislature or agency delegated control over water extraction or use to a local government. A Wisconsin court under *Muensch*¹⁰⁴ could declare invalid any such delegation that threatened to destroy statewide interests in navigation, fishery or some other public trust interest.

Suppose that a water extractor has or has applied for a state appropriative permit or a judicially recognized common law riparian right to extract water from a lake or stream.

(6) A California court following *California Fish*¹⁰⁵ and *Marks v. Whitney*¹⁰⁶ might hold that while such a person has a legal right to extract water, such rights, like title to the bed of the coastal sea, are burdened with the public trust and cannot be used so as to destroy that trust interest.

(7) The Pennsylvania¹⁰⁷ and Wisconsin¹⁰⁸ courts could hold that the extractor must use all reasonable efforts to mitigate or minimize any threatened damage to public trust interests.

(8) A North Dakota court under *United Plainsmen*¹⁰⁹ could require that before any such extraction would be legally authorized, the extractor would have to complete a comprehensive plan demonstrating appropriate recognition and protection of any threatened public trust interest.

(9) Under the navigation servitude cases, the federal govern-

¹⁰³ *Gould v. Greylock Reservation Comm'n*, 350 Mass. 410, 215 N.E.2d 114 (1966).

¹⁰⁴ *Muensch v. Public Serv. Comm'n*, 261 Wis. 492, 53 N.W.2d 514, *aff'd on reh.*, 261 Wis. 515, 55 N.W.2d 40 (1962).

¹⁰⁵ *People v. California Fish Co.*, 166 Cal. 576, 130 P. 79 (1913).

¹⁰⁶ 6 Cal. 3d 251, 491 P.2d 374, 98 Cal. Rptr. 790 (1971).

¹⁰⁷ *Payne v. Kassab*, 11 Pa. Commw. Ct. 14, 312 A.2d 86 (1973), *aff'd*, 468 Pa. 826, 361 A.2d 253 (1976).

¹⁰⁸ *City of Milwaukee v. State*, 193 Wis. 423, 214 N.W. 820 (1927); *State v. Public Serv. Comm'n*, 275 Wis. 112, 81 N.W.2d 71 (1957); *City of Madison v. State*, 1 Wis. 2d 252, 83 N.W.2d 674 (1957).

¹⁰⁹ *United Plainsmen Ass'n v. North Dakota Water Comm'n*, 247 N.W.2d 457 (N.D. 1976).

ment¹¹⁰ and (at least in theory) the state governments would have the power to proceed with a project that caused damage to an appropriator, such as cutting off an out-of-basin diversion, where such action was required to protect and enhance the public right of navigation.

(10) The question presented by *Los Angeles v. Aitken*¹¹¹ and *In re Martha Lake*¹¹² is a more complex one. Assume that in California or Washington a business or a city wanted to extract water from a lake for some beneficial use, but the extraction would damage navigation, wildlife, fishery or other in-place values. The riparian owners on the lake would attempt to enjoin the extraction on the theory that it threatened their riparian rights. The California and Washington courts would recognize such claims, but would nonetheless allow the extraction if the extractor was a public body with power to take water rights by eminent domain.¹¹³ A taking under statutory eminent domain procedure requires that compensation be paid to the riparians for the loss of their rights.

At first blush, the hypothetical posited at the beginning of this article, in which the "public" challenges such an extraction under the public trust doctrine, seems distinguishable from the situation in *Aitken* and *Martha Lake*. However, the difference becomes more illusory than real when one realizes that on nearly all lakes of any significance the state also owns riparian land (state highways, access roads, etc.) and thus holds riparian or "public" rights on behalf of the public. That ownership entitles the state to raise the same in-place water protection issues, and to have them judged by essentially the same criteria, as when a public trust issue is raised. In fact, the substance of the challenges would seem to be identical in the two situations.

¹¹⁰ *United States v. Grand River Dam Auth.*, 363 U.S. 229 (1960). No state court as yet has gone as far as *Grand River*.

¹¹¹ *City of Los Angeles v. Aitken*, 10 Cal. App. 2d 460, 52 P.2d 585 (3d Dist. 1935).

¹¹² *In re Martha Lake Water Co.*, 152 Wash. 53, 277 P. 382 (1929).

¹¹³ No attempt is made here to analyze several complex issues that might, under special facts or state statutes, affect these general statements. Different state law rules on standing would obviously be relevant. Also important would be the question whether in a given state a municipality can condemn the riparian rights accruing to a state by reason of state ownership of riparian land or whether, if this authority is unclear, the current state government policy is not to resist such action by a municipality.

(11) Under the public use cases, the courts could logically rule that the public right of navigation and fishery on recreationally navigable waters is enforceable not only against bed owners who claim exclusive possessory rights to the surface, but also against appropriators whose water extractions threaten substantial damage to navigation, fishery and other public interests.

III. IMPACT ON EXISTING WATER RIGHTS HOLDERS

Assuming that the public trust doctrine applies to conflicts between water extractors and lake-level protectors, there still remains the critical question of whether and to what extent the doctrine should apply to persons already holding appropriation or other water-extraction rights.

A. *Tidelands*

Suppose that trust-burdened property had been earlier conveyed into private ownership and now was being reclaimed by the state for trust purposes. In *Illinois Central*¹¹⁴ the court recognized that while "there may be expenses incurred in improvements made under such a grant which the state ought to pay," it would not affect the state's power to resume the trusts. In *Berkeley*¹¹⁵ the California Supreme Court faced a similar situation on a large scale. California had conveyed to private owners some 22,299 acres of tidelands, of which 4,186 acres had been filled but not improved, and 3,666 acres had been both filled and improved with structures. The state argued that all of this land should again be subjected to the public trust. Instead, the court decided to "balance the interests of the public in the tidelands conveyed . . . against those of the land owners who hold title under these conveyances." It then held that "[i]n the harmonizing of these claims, the principle we apply is that the interests of the public are paramount in property that is still physically adaptable for trust uses, whereas the interests of the grantees and their successors should prevail insofar as the tidelands have been rendered substantially valueless for other purposes."¹¹⁶

¹¹⁴ *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 455 (1892).

¹¹⁵ *City of Berkeley v. Superior Court of Alameda County*, 26 Cal. 3d 515, 606 P.2d 362, 162 Cal. Rptr. 327, cert. denied, 101 S. Ct. 119 (1980).

¹¹⁶ *Id.*

B. Appropriative Rights

The ownership of appropriative rights is significantly different than the ownership of tidelands and requires a different analysis. An appropriative water right is incorporeal. Its owner, unlike the owner of a tract of land, does not own any particular unit of water. The owner merely has a right to divert and use water now and in the future. These differences must be accounted for when considering the retroactivity issue.

Suppose that an extractor in a popular recreation site has a legal right to appropriate more water than he has historically put to use but presently plans to increase the extractions up to the permitted maximum. The conflicts between his right to extract and the threatened damage to the public trust resource can be analyzed through a mix of the appropriation and the public trust doctrines.

Traditional appropriation doctrine principles may limit the extraction to the amount that historically has been put to beneficial use. In a proper case the appropriator may even lose the right to increase his extractions through a statutory forfeiture proceeding¹¹⁷ and could then be denied a new permit on the ground that it is not in the public interest.¹¹⁸ Alternatively, the public trust doctrine could prohibit future extractions that threaten substantial damage to public trust interests, especially where an appropriator has few equities in his favor and is basing his right on the bare legal claim of the appropriative right.¹¹⁹

¹¹⁷ The unused portion of a water right may be declared abandoned. See generally Trelease, *supra* note 28; W. HUTCHINS, *supra* note 8, at 225-444. The question of loss of unused portions of an appropriative water right, above and beyond that quantity put to actual and beneficial use, has also been addressed with regard to transfer of water rights. See *Green v. Chaffee Ditch Co.*, 150 Colo. 91, 371 P.2d 775 (1962); *Basin Elec. Power Coop. v. State Bd. of Control*, 578 P.2d 557 (Wyo. 1978).

¹¹⁸ See 2 W. HUTCHINS, *supra* note 8, at 286-327.

¹¹⁹ In a license renewal dispute in Montana, the court was faced with the question whether the public had a right to have sufficient water left in a stream for the protection of trout. The court said:

The Commission does not deny that DePuy has a valid appropriative right to the water of Armstrong Spring Creek. In fact the Commission made no attempt to prove that the amount of water actually put to a beneficial use by DePuy was less than the amount claimed and diverted. The Commission does maintain that the public has a prior right in the waters of the creek which would require DePuy to release some water through a fishladder. The pub-

A more complex question arises where the extractor is making beneficial use of the full amount legally permitted, but where continued extractions threaten substantial damage to public trust interests. There is no way within the appropriation doctrine itself to limit such future extractions. Standard appropriation doctrine rules say that the extractor can continue taking water regardless of the adverse or even disastrous consequences for public trust interests.¹²⁰ How would the public trust doctrine affect such a case? In particular, how would the rules derived from the *Berkeley* tidelands case apply to it?

At the outset a distinction should be noted between the rights of an owner of tidelands and those of an owner of a water right. Because a water right is incorporeal, no fill, building or other structure can be built on it. The water itself is therefore, under *Berkeley*, "still physically adaptable for trust uses," and has not been "rendered substantially valueless" for trust purposes.

It is appropriate, nonetheless, to ask whether other underpinnings of the *Berkeley* test provide a basis for allowing extractors

lic right urged by the Commission would be based on the fact that the public had used the creek as a fishing stream and natural fish hatchery before DePuy built his dam. Under the rule of *Bullerdick v. Hermsmeyer*, 32 Mont. 541, 81 P. 334 (1905), DePuy could not use the water to the detriment of prior rights.

Such a public right has never been declared in the case law of this state. California, an appropriation doctrine jurisdiction, whose Constitutional provisions relating to water rights are virtually the same as Article III, § 15 of the Montana Constitution, has recognized such a right and has upheld statutes requiring fishways. *People v. Glenn-Colusa Irrigation Dist.*, 127 Cal. App. 30, 15 P.2d 549 (3d Dist. 1952). Under the proper circumstances we feel that such a public interest should be recognized. This issue will inevitably grow more pressing as increasing demands are made on our water resources. An abundance of good trout streams is unquestionably an asset of considerable value to the People of Montana.

Paradise Rainbows v. Fish & Game Comm'n, 148 Mont. 412, 421 P. 2d 717, 721 (1966).

¹²⁰ An even more obvious case for the public trust doctrine to limit appropriations is where an application for an appropriation permit is being considered by the state permitting agency. If substantial harm to public trust interests is threatened by the issuance of the permit, then it should either be denied or conditioned so as to protect those interests. Assuming that preservation and protection of public trust resources is in the "public interest," most western states have statutory or regulatory guidelines on how to handle the matter. See 1 W. HUTCHINS, *supra* note 8, at 409-15.

to continue diversions which threaten damage to public trust interests. The *Berkeley* test appears to be based on two broad criteria. First, the grantees of tidelands have an equitable argument in their favor because they have made a substantial investment by building over or filling in the tidelands, all in reliance on the grant from the state. Second, returning the filled lands to their former inundated tidelands status may be ecologically impossible, or at least so costly as to be out of proportion to the public benefits to be achieved by that course of action.

What happens if we apply these *Berkeley* criteria to the facts of a typical water extraction case? Under the first criterion, the water extractors would be able to make an equitable argument for continuing extractions because of their investment in constructing diversion works in reliance on appropriation permits issued by the state. That investment surely must be considered by a court in deciding whether future extractions should be limited by public trust interests.

Consideration of the second *Berkeley* criterion produces a different result. That criterion considers whether it is ecologically impossible to recreate natural tidelands or whether the cost of removing fills or buildings from the land is disproportionately high when compared to the modest public trust benefits to be achieved by such action. This same problem would simply not occur in the ordinary water extraction situation. The only action that would normally be required to make more water available for public trust purposes would be to close the diversion gates or turn off the pumps. There would seldom be substantial costs associated with such action, as there would be in physically removing a fill from tidelands.

Yet *Berkeley* is not a complete solution to the problem. There are other factors that a court should consider in determining where to draw the line between the appropriation and the public trust doctrines. One must also consider the cost to the extractors of obtaining water from alternative sources, or of doing without the water. What would be the "conservation" cost to the extractor if no practical alternative sources are to be found? Are the alternative sources of water so expensive or are the conservation costs so high as to be comparable to the cost of removing fills and buildings on tidelands? These are questions that will have to be considered by the courts in deciding these issues.

CONCLUSION

Many difficult questions will be posed by the application of the public trust doctrine to protect in-place water users against damage or destruction by water extractors. Few of these questions have been answered yet by the courts. Nonetheless, a few useful comments about both judicial policy and procedure can be made.

The most important policy consideration is the recognition that public priorities have indeed changed. Judicial opinions throughout the nation are already reflecting these changes and will reflect them increasingly in the future. Courts everywhere now recognize that in-place water uses must be legally protected, and that the prior appropriation system itself fails to provide adequate protection. The real question now is not *whether* but *how* this protection is to be provided. The public trust doctrine is an appropriate judicial theory on which to base such in-place water protection and should be used for that purpose.

This in itself would be a significant judicial step forward and would tend at the very least to focus debate on the right issues. But changing the issues and the focus of debate goes only half the distance. Vital questions remain. Just where is the line to be drawn between these two conflicting doctrines? Just what is the scope of the pre-existing servitude established by the public trust doctrine? Under what set of facts will a court say that an appropriator has overstepped the public trust boundary line? Certainly it is not possible in this brief article to draw that line so that it resolves all the multiple and varied problems that will arise in future cases. The line will have to be drawn by judicial decisions, and it will have to evolve out of the facts on a case-by-case basis.

This article suggests some basic guidelines that can aid courts in analyzing these problems. Let us consider a typical and rather fundamental question: To what extent should an administratively issued appropriation permit give the holder a legal right in perpetuity to divert water from a river or lake regardless of the adverse consequences to public navigation, fishery and environmental values? This question is likely to be central in future litigation between public trust advocates and appropriative rights holders.

Judicious application of public trust criteria requires two procedural alternatives. The first is for the judiciary itself to apply

the rather strict, common law public trust criteria to determine when public trust resources can be committed to private or specialized-public uses.¹²¹ This alternative is viable only if the case is one where the court is procedurally capable of considering the full range of factors that must be evaluated, including opportunity costs to both sides, in arriving at a wise decision. But that may be difficult or impossible in many situations. Procedural constraints often limit a court's ability to hear and to consider the full range of alternatives on both sides. A court may find, for example, that it cannot hear evidence on the cost of alternative sources of water supply, the cost of potential conservation measures or the full range of economic and social impacts of its decisions. Parties that must be before the court in order to test the issues fully may not be parties to the lawsuit.

If judicial consideration of these multiple factors is not feasible, then under public trust principles the appropriation should be enjoined. The issue of allowing further damage to public trust interests should then be entrusted to the legislative process. Unlike the courts, a legislature has the capacity to discover and consider all factors in deciding the extent to which the waters in question should be permanently committed to private or specialized-public uses. This second alternative also has the advantage of allowing consideration and evaluation of contemporary public priorities and social values. It places before the legislative body, representing all of the people of the state, the critical issue of where to draw the line between the public interest in navigation, fishery and environmental quality, and the private or specialized-public interest in the extraction and use of particular waters.

The prior appropriation system of water law is clearly deficient in its capacity to resolve the legitimate conflicts between the public, which believes that it has a right to have waters left in place for navigation, fishery, environmental quality and other public trust uses, and appropriators who believe that they have a right to extract these same waters for irrigation, municipal and industrial purposes. The application of public trust principles to these conflicts will aid in focusing the debate on the proper issues and in drawing a line that is consistent with society's current and future needs and values. Both logic and authority sup-

¹²¹ See note 96 *supra*.

port the application of the public trust doctrine in these situations. As this article points out, the courts have already applied the public trust doctrine to protect in-place water uses in many related situations, though often under various other labels and guises. Consistency, clarity, coherence and predictability would be served if more explicit recognition were given to the public trust nature of these various in-place water protection theories, and if the public trust doctrine were explicitly recognized as a constraint on the appropriation doctrine.

