
Ensuring the Public Trust

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INTRODUCTION

The California Supreme Court’s recognition of the public trust doctrine as an integral part of California’s water rights system was one

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of the momentous events in the history of California (if not United States) environmental policy.¹ The court looked back to the foundational purposes of the public trust to hold that there are limits to the sovereign power to privatize the rights to use the waters of the state, and it looked forward to conclude that prudent development and sustainable use of California's water resources require the state to retain authority to protect the public trust for the benefit of all Californians. The court also defined the public trust as an environmental baseline that both protects the traditional interests of navigation, commerce, and fisheries and embodies the contemporary scientific and popular understanding that there are ecological limits to the diversion and use of water for consumptive purposes.

The lessons of *National Audubon Society v. Superior Court*² are now a commonplace of water rights law, appearing not just in administrative orders and judicial opinions, but also in standard water rights terms, policy studies, and legislation. The concept of the public trust as an environmental baseline has been fairly well integrated into the regulation of water rights and the resolution of water resources disputes. The lessons of *Audubon* have had less influence in the area of water resources planning, however, where economic and political pressures to expand existing water projects or to develop new sources have tended to outweigh the demonstrated needs of the aquatic ecosystems that are the sources of California's developed water supplies.

In this Article, I describe the early cases that interpreted the public trust doctrine following the California Supreme Court's *Audubon* decision and then explain how the environmental baseline directives of the public trust have been neglected in more recent planning decisions that have profoundly influenced the administration of the state's most important water resource — the Sacramento–San Joaquin

¹ The court's decision came in the famous case of *National Audubon Society v. Superior Court*, 658 P.2d 709 (Cal. 1983), in which the National Audubon Society and other environmental organizations sued to enjoin the City of Los Angeles from diverting water from four of the five tributary streams that provide Mono Lake with freshwater. The plaintiffs alleged that the city's diversions were lowering the volume of water in the lake and harming the public trust in a variety of ways, including increased salinity (which threatened both the brine shrimp that inhabit the lake and birds that depend on the lake for drinking water), diminishing public access and navigation as the lake shore and surface area of the lake diminished, and reducing wildlife as islands in the lake that served as nesting and roosting grounds became connected to the mainland, which allowed access by predators. *See id.* at 713-16.

The history of the litigation is well told in JOHN HART, *STORM OVER MONO: THE MONO LAKE BATTLE AND THE CALIFORNIA WATER FUTURE* (1996).

² *Audubon*, 658 P.2d at 709.

River and Delta ecosystem. I conclude by proposing a decisionmaking methodology that would better ensure that the public trust is more seriously considered and better protected in all facets of California water management.

I. THE 1980 UC DAVIS PUBLIC TRUST CONFERENCE

This symposium commemorating the thirtieth anniversary of the UC Davis Public Trust conference is something of a personal journey. In 1980, I returned to California following a judicial clerkship and stumbled into the recondite field of water law. My new law firm represented the City and County of San Francisco in litigation involving the Hetch Hetchy project, and I was assigned to these cases.³ As a student, I had studied neither environmental law nor water law.⁴ I had never seen Hetch Hetchy Valley (or, rather, the granite walls that now envelop O'Shaughnessy Reservoir like a mausoleum), and I knew Mono Lake only through occasional glimpses from the Yosemite high country. Then the California Supreme Court granted review in the *Audubon* litigation,⁵ and suddenly I had to learn about the Roman and English law of common resources, the doctrines of state title and equal footing, and the public trust in California's navigable waters. We all did.

In its opening brief to the supreme court, the City of Los Angeles asserted that recognition of the public trust as an integral part of California's water rights system would jeopardize every major water supplier in the state, including San Francisco.⁶ Our client asked us to research this claim, and the task fell to me as the junior member of the team. Knowing little water rights law and nothing of the public trust, I began my research by reading the cases cited by Los Angeles and the other parties. As the supreme court later observed, however, these

³ One case was a dispute over the rates San Francisco charged for hydroelectric power generated by the project. See *City & Cnty. of S.F. v. United Airlines*, 616 F.2d 1063, 1065 (9th Cir. 1979). The other was a suit by the 30 cities and water agencies that purchase water from San Francisco that claimed *inter alia* that Congress had made them co-grantees of the Hetch Hetchy project. See *City of Palo Alto v. City & Cnty. of S.F.*, 548 F.2d 1374, 1374, 1376 (9th Cir. 1977). There are now two excellent histories of the Hetch Hetchy project. ROBERT W. RIGHTER, *THE BATTLE OVER HETCH HETCHY* (Oxford 2005); JOHN W. SIMPSON, *DAM! WATER, POWER, POLITICS, AND PRESERVATION IN HETCH HETCHY AND YOSEMITE NATIONAL PARK* (2005).

⁴ Indeed, I am not sure I had even heard the terms "water" and "law" used as a conjunction.

⁵ *Audubon*, 658 P.2d at 708.

⁶ *City of Los Angeles Dep't of Water & Power's Return to Alternative Writ of Mandate by Way of Answer to Petition at 71-74, Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. Mar. 11, 1981) No. 24368 (on file with the author).

cases encompassed different strands of California law.⁷ The public trust cases all addressed the physical use of the state's waters and submerged lands, and most of them involved disputes over title to coastal lands rather than inland waters.⁸ The other set of cases addressed various aspects of the water rights system⁹ and, at least to the uninitiated, presented a cacophony of competing principles — priorities based on riparian and appropriative rights, different priorities based on areas-of-origin and municipal preference, still different priorities arising out of reasonable use, and so on.¹⁰

In those pre-LEXIS, pre-Westlaw days, I turned to the Legal Periodicals Index and discovered two sources that I hoped would be of some help. The first was Professor Joseph Sax's 1970 University of Michigan Law Review article, which provided an intellectual and historical foundation for reimagining the public trust as a principle of environmental stewardship.¹¹ The second was the 1980 UC Davis symposium on *The Public Trust in Natural Resources Law and Management*, in which I found several keys to unlocking the mysteries of the public trust as it might be applied to California's water rights system.¹²

The UC Davis Symposium issue began with a list of five questions posed by Professor Harrison Dunning, who had organized the public trust conference:

First, is there a single “public trust doctrine” . . . [o]r are there several public trust doctrines perhaps depending on the natural resource in question?

Second, is the public trust doctrine applicable to any natural resource, or . . . [i]s the trust, in fact, merely a “tidelands trust” as some have argued?

Third, what is the nature of the public trust? Does it involve public property rights, or a specialized form of governmental police power, or something else . . . ? Has the legislature the power to terminate the public trust, and if so in what circumstances?

⁷ See *Audubon*, 658 P.2d at 712, 726-27.

⁸ See *id.* at 718-24.

⁹ See *id.* at 724-26.

¹⁰ See *id.* at 726-27.

¹¹ Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970).

¹² *The Public Trust in Natural Resources Law and Management: A Symposium*, 14 UC DAVIS L. REV. 181 (1980).

Fourth, what kinds of public uses of natural resources are protected by the public trust doctrine? Must these uses somehow be related to navigable waters?

Fifth, what are the implications of the public trust doctrine for the managers of natural resources? Has the doctrine sufficient content actually to influence day-to-day natural resource management decisions?¹³

Professor Dunning's questions presciently framed the California Supreme Court's analysis of the public trust three years later in its *Audubon* decision.

Inside the Symposium issue, I found a short article by Professor Sax that suggested a methodology for recognizing and effectuating the public trust in contemporary natural resources disputes.¹⁴ He urged the courts and other decision-makers not to define the public trust in a narrow, binary manner:

It is unreasonable to view the public trust simply as a problem of alienation of publicly owned property into private hands, since many — if not most — of the depredations of public resources are brought about by public authorities who have received the permission of the state to proceed with their schemes. On the other hand, it is inconceivable that the trust doctrine should be viewed as a rigid prohibition, preventing all dispositions of trust property or utterly freezing as of a given moment the uses to which those properties have traditionally been put. It can hardly be the basis for any sensible legal doctrine that change itself is illegitimate.¹⁵

Professor Sax concluded with a plea for accommodation of interests, one that respects the historical foundations and ecological functions of the public trust. He emphasized that

[o]ur task is to identify the trustee's obligations with an eye toward insulating those expectations that support social, economic and ecological systems from avoidable destabilization and disruption. Less acute intrusions should be selected where feasible Where the alternatives include a

¹³ Harrison C. Dunning, *Foreword: The Public Trust in Natural Resources Law and Management*, 14 UC DAVIS L. REV. 181-82 (1980).

¹⁴ Joseph L. Sax, *Liberating the Public Trust from Its Historical Shackles*, 14 UC DAVIS L. REV. 185 (1980).

¹⁵ *Id.* at 186.

solution which will sustain yields and support long-established human uses or biological communities, that approach should be required.¹⁶

The principal articles in the Symposium issue provided a valuable overview of the public trust doctrine, tracing its development from the ocean to tidal estuaries and wetlands to freshwater rivers and lakes and onto dry land — a path akin to the evolution of the species. Jan Stevens described the origins of the public trust in Roman law, the English and American common law recognition of retained public rights to use navigable waters and their submerged lands, and California's incorporation of the public trust into its statutory and constitutional law governing tidal lands.¹⁷ Ralph Johnson explored the public trust doctrine as a means of ensuring the protection of minimum stream flows and lake levels.¹⁸ Professor Johnson began his article with the assertion that the “public trust doctrine and the appropriative water rights system are headed on a collision course in the West.”¹⁹ Charles Wilkinson concluded with a plea for greater use of the public trust doctrine in federal public lands law, both as a guide to judicial review of decisions that affect federal lands and natural resources and as a means of spurring “active administrative protection of resources that serve many different segments of the public.”²⁰

The article that proved to be of greatest use to this neophyte lawyer, however, was Professor Dunning's exposition of *The Significance of California's Public Trust Easement for California's Water Rights Law*.²¹ Professor Dunning picked up where the principal articles left off and traced the unique development of the public trust doctrine in California law.²² More importantly, as the title of the article suggests,

¹⁶ *Id.* at 193.

¹⁷ Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right*, 14 UC DAVIS L. REV. 195, 196-97, 199, 203-09 (1980).

¹⁸ Ralph W. Johnson, *Public Trust Protection for Stream Flows and Lake Levels*, 14 UC DAVIS L. REV. 233 (1980).

¹⁹ *Id.* at 233.

²⁰ Charles F. Wilkinson, *The Public Trust Doctrine in Public Land Law*, 14 UC DAVIS L. REV. 269, 315 (1980). In a related article, my colleague John Leshy analyzed claims by Nevada and several other western states that the United States has a trust responsibility under the equal footing doctrine to transfer title to all non-reserved federal lands to the states. John D. Leshy, *Unraveling the Sagebrush Rebellion: Law, Politics and Federal Lands*, 14 UC DAVIS L. REV. 317 (1980).

²¹ Harrison C. Dunning, *The Significance of California's Public Trust Easement for California Water Rights Law*, 14 UC DAVIS L. REV. 357 (1980).

²² Professor Dunning identified three essential features of the public trust. First:

he attempted to explain the relationship between the public trust and California's water rights system. According to Professor Dunning, the doctrine serves as an inherent limitation on the exercise of all water rights, regardless of type or priority of right. "Conceptually," he argued, "it is analogous to the public's right to be free of any public nuisance which might be caused by the exercise of proprietary rights."²³ This does not mean, however, that public trust uses always take precedence over uses authorized by water rights. Rather, the state and federal governments may modify, and in some cases terminate, the public trust to facilitate development of California's waters for consumptive purposes.²⁴

Professor Dunning also reasoned, however, that the common uses protected by the public trust must be recognized even in those watersheds that serve the state's water supply needs. He argued that "it should not follow that, merely because the physical capacity exists and water rights are recognized, a court must permit a project operator to divert water from the basin to the full extent of the water rights."²⁵ Professor Dunning concluded with a call for an accommodation of water rights and the public trust in a way that adapts to contemporary needs, both consumptive and *in situ*. Satisfactory resolution of these questions, he wrote, "will require a high degree of judicial craftsmanship, whether such resolution occurs in the *Mono Lake* litigation or in some future lawsuit."²⁶

With the insights gained from this education in the law, I persuaded the San Francisco City Attorney to file an amicus curiae brief in the *Audubon* case.²⁷ We advised the supreme court that San Francisco did

[I]t springs from the ownership of land conferred on the State of California upon admission to the United States Second, this property right serves to limit subsequently created private property rights, so that exercise of the public trust easement to the detriment of holders of those property rights gives rise to no right to compensation. And finally, although clearly the state may extinguish the public trust easement, such extinction requires more than would be demanded for alienation of ordinary state property.

Id. at 364-65 (footnote omitted).

²³ *Id.* at 383.

²⁴ *Id.* at 389-96. Professor Dunning pointed to the water rights authority of the State Water Resources Control Board and the United States' creation of the dams and pumping facilities of the Central Valley Project as examples. *Id.*

²⁵ *Id.* at 396.

²⁶ *Id.* at 397.

²⁷ Application of the City & County of San Francisco for Leave to File Brief as Amicus Curiae and Amicus Curiae Brief, *Nat'l Audubon Soc'y v. Superior Court*, No. 24368 (Cal. May 13, 1982) (on file with the author).

not believe that incorporation of the public trust into the water rights system would jeopardize its Hetch Hetchy project, and the city thus became the only major water utility in the state not to oppose the legal claims of the *Audubon* plaintiffs. The amicus brief rankled California's close-knit water supply community, and neither San Francisco's good standing nor mine has ever quite recovered.

I attended the oral argument at the California Supreme Court's San Francisco courtroom and was privileged to watch a coterie of talented attorneys explain the nuances of the public trust doctrine and California's water rights laws. It was an active bench, with all seven justices asking difficult questions. My enduring memory, though, is the exchange between Justice Frank Richardson, the only Republican appointee on the Court, and Adolph Moskovitz, lead counsel for Los Angeles. Toward the end of his argument, Adolph asserted that "if saving Mono Lake means so much to the State, let the State pay for it." Justice Richardson replied: "Was Los Angeles paying the State all the years it was taking the State's lake?"²⁸ Adolph later confided that, when the only conservative justice on the Court put it that way, he figured his chances of winning were not good.

II. NATIONAL AUDUBON SOCIETY V. SUPERIOR COURT

Two months after the *Audubon* oral argument, the California Supreme Court unanimously ruled that the public trust is an integral part of California's water rights system and may serve to limit the diversion of water where such diversions impair navigability, fisheries, recreation, ecological services, and other *in situ* uses protected by the doctrine.²⁹ Justice Broussard's opinion of the court relied extensively on the articles in the UC Davis Public Trust Symposium and, in most significant respects, tracked Professor Dunning's analysis of the

²⁸ Antonio Rossmann, Issues and Perspectives on California Water Rights Law, 3 (quoting oral argument in *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. May 3, 1982) (No. 24368)), available at https://sunsite.berkeley.edu/WRCA/WRC/pdfs/GW27thRossmann_supp.pdf (last visited Feb. 2, 2012) (supplementing March 10, 2009 written testimony before the California State Senate Committee on National Resources and Water).

²⁹ *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 727 (Cal. 1983). Justice Richardson filed a dissenting opinion, but only as to the majority's conclusion that courts have concurrent jurisdiction to adjudicate public trust claims. In Justice Richardson's opinion, the State Water Resources Control Board would have exclusive jurisdiction, and the court's role would be limited to judicial review of the Board's public trust decisions. Justice Richardson joined the remainder of the Court's opinion, including "its analysis of the relationship between the public trust doctrine and the water rights system in this state." *Id.* at 733.

relationship between the public trust doctrine and California's water rights system. Among the court's conclusions were:

- The public trust is both an aspect of the state's sovereignty over its navigable waters and submerged lands and is a limitation on all private property rights — including water rights — acquired in those resources. This servitude “prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust.”³⁰
- The public trust applies to all water rights, new and old, and to water resources planning and other decisions regarding the allocation and use of California's water resources.³¹
- Although the public trust protects navigable waterways, the doctrine also applies to activities on non-navigable tributaries that may affect public trust interests in the downstream navigable river, lake, or estuary.³²
- The state, acting through the Legislature or the State Water Resources Control Board, has authority to grant water rights that may harm public trust uses. In doing so, however, the state must consider the effects of the extractive water use on the public trust and provide some measure of protection of the competing public trust uses.³³
- The public trust is a component of the reasonable and beneficial use mandate set forth in Article X, Section 2 of the California Constitution. “All uses of water, including public trust uses, must now conform to the standard of reasonable use.”³⁴

I was elated with the supreme court's decision — especially its declaration that “the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water” and its recognition that “the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent

³⁰ *Id.* at 727.

³¹ *Id.* at 728.

³² *Id.* at 720.

³³ *Id.* at 727-28.

³⁴ *Id.* at 725.

with current needs.”³⁵ These holdings brought water rights law more squarely into alignment with the realities of water resources management, which requires flexibility and responsiveness to changes in hydrology, water quality, ecosystem functions, and fisheries, as well as the evolving scientific understanding of these physical forces.³⁶

Other aspects of Justice Broussard’s opinion of the court were less clear, however, and they left me with considerable skepticism about the meaning and efficacy of the public trust. For example, the supreme court articulated four distinct (and potentially conflicting) public trust standards: protecting the public trust wherever feasible, protecting the public trust when consistent with the public interest, an informal cost-benefit analysis and balancing of interests, and the public trust as merely one factor for consideration in water planning and allocation decisions.

A. Feasibility

The first and strongest public trust standard created a substantive mandate applicable to all aspects of water administration. The court bluntly declared that “[t]he state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.”³⁷ As explored in more detail below, this standard was the only one proposed by the court with the potential to provide meaningful protection of public trust resources.

B. Public Interest

The court’s second characterization of the public trust mandate came in the context of its discussion of the state’s power to authorize extractive uses of water that may harm *in situ* uses. “As a matter of practical necessity,” Justice Broussard wrote:

[T]he state may have to approve appropriations despite foreseeable harm to public trust uses. In so doing, however, the state must bear in mind its duty as trustee to consider the effect of the taking on the public trust . . . and to preserve, so

³⁵ *Id.* at 728.

³⁶ See ELLEN HANAK ET AL., *MANAGING CALIFORNIA’S WATER: FROM CONFLICT TO RECONCILIATION* 317-22, 371-73 (2011).

³⁷ *Audubon*, 658 P.2d at 728.

far as consistent with the public interest, the uses protected by the trust.³⁸

This statement that the public trust is subsumed within the wide-ranging and amorphous public interest standard is troubling for two reasons. First, it implies that the public trust is little more than a reiteration of the statutory public interest test that governs the California State Water Resources Control Board's ("SWRCB") water rights jurisdiction.³⁹ Second, it suggests that the public trust is simply one of a multiplicity of factors that must be considered, and somehow balanced, in decisions that allocate the rights to use the state's water resources — factors that include the entire array of consumptive and nonconsumptive uses.⁴⁰

³⁸ *Id.* (emphasis added).

³⁹ Section 1253 of the Water Code authorizes the Board to "allow the appropriation for beneficial purposes of unappropriated water under such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated." CAL. WATER CODE § 1253 (West 2006). Section 1255 reiterates this directive in the negative by stipulating that the Board "shall reject an application when in its judgment the proposed appropriation would not best conserve the public interest." *Id.* § 1255.

⁴⁰ As the Court of Appeal explained in the *Delta Water cases*:

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

United States v. SWRCB, 227 Cal. Rptr. 161, 169 (Ct. App. 1986) (internal citations are to the California Water Code). The Court also noted that environmental and other *in situ* uses must be factored into the public interest calculus:

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

C. *Cost-Benefit Analysis and Balancing*

Indeed, in its third formulation of the public trust the court expressly stated that trust interests should be weighed or balanced against the competing extractive uses of water. Justice Broussard emphasized:

This is not a case in which the Legislature, the Water Board, or any judicial body has determined that the needs of Los Angeles outweigh the needs of the Mono Basin, that the benefit gained is worth the price. Neither has any responsible body determined whether some lesser taking would better balance the diverse interests.⁴¹

It is uncertain how a cost-benefit algorithm or less formal balancing test would meaningfully weigh the diverse interests of urban and agricultural water service, water supply reliability, flood control, hydroelectric power generation, fisheries, recreation, aesthetics, water quality, and ecosystem services that often compete for California's scarce water resources. As Justice Scalia memorably observed in criticizing efforts to balance dissimilar factors under the dormant commerce clause: "[T]he scale analogy is not really appropriate, since the interests on both sides are incommensurate. It is more like judging whether a particular line is longer than a particular rock is heavy."⁴² Moreover, even if a common denominator could be found, a standard that purports to balance these divergent interests would risk blending the public trust into a broad pool of water allocation factors that the SWRCB and the Regional Water Quality Control Boards already apply in setting and implementing water quality standards for California's rivers, lakes, and estuaries.⁴³

Id. at 169-70 (except as noted, all internal citations are to the California Water Code).

⁴¹ *Audubon*, 658 P.2d at 728.

⁴² *Bendix Autolite Corp. v. Midwesco Enters. Inc.*, 486 U.S. 888, 897 (1988).

⁴³ See CAL. WATER CODE § 13241 (Deering 2006) ("Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following: (a) Past, present, and probable future beneficial uses of water; (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto; (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area; (d) Economic considerations; (e) The need for developing housing within the region.; (f) The need to develop and use recycled water."). The SWRCB then must review and approve the water quality plans adopted by the regional boards. *Id.* § 13245. The

D. Consideration

The fourth standard offered by the supreme court would reduce the public trust to merely a factor for consideration in water planning and allocation decisions. In discussing Los Angeles's claims that recognition of the public trust would undermine its capital investments and reliance on the Mono Basin supplies and could force the city to seek new water from alternative sources, Justice Broussard wrote that "[s]uch concerns must enter into any allocation decision. We hold only that they do not preclude a reconsideration and reallocation *which also takes into account* the impact of water diversion on the Mono Lake environment."⁴⁴ Taken at face value, this standard suggests that the public trust should function in a manner akin to the National Environmental Policy Act⁴⁵ or the California Environmental Quality Act,⁴⁶ which require thorough consideration of environmental effects, program alternatives, and mitigation, but ultimately do not afford substantive environmental protection.⁴⁷

Although it is unlikely that the supreme court intended to create this array of inconsistent standards for effectuating the public trust, the court's failure to articulate a single standard (or at least a cohesive set of standards) was confusing and threatened to diminish the public trust. The four standards set out in the opinion invited litigants to choose the one that would be most likely to promote their interests — environmentalists favored the substantive feasibility test, while water

Board's review is also governed by the statutory directive to provide "reasonable protection" or accommodation of all beneficial uses, which include "domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves." *Id.* § 13050(f); *see also id.* § 13000 ("The Legislature . . . finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.").

⁴⁴ *Audubon*, 658 P.2d at 729 (emphasis added).

⁴⁵ National Environmental Policy Act, 42 U.S.C.A. §§ 4321-4335 (West 2011).

⁴⁶ CAL. PUB. RES. CODE §§ 21000-21177 (Deering 2006).

⁴⁷ *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348-50 (1989) ("NEPA itself does not mandate particular results, but simply prescribes the necessary process. If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs."); *Citizens of Goleta Valley v. Bd. of Supervisors*, 801 P.2d 1161, 1167 (Cal. 1990) ("CEQA does not, indeed cannot, guarantee that these decisions will always be those which favor environmental considerations.").

users preferred the nonsubstantive, consideration standard — and the SWRCB and lower courts were left to sort things out for themselves.

To compound this uncertainty, the court failed to identify which party should bear the burden of proof in public trust cases. It made no attempt to explain the relationship between the public trust and the statutory laws that also protect lake levels, stream flows, navigability, water quality, fish and wildlife, habitat, endangered species, recreation, and other public trust uses.⁴⁸ Moreover, as noted above, the court also held that “[a]ll uses of water, including public trust uses, must now conform to the standard of reasonable use” — apparently subsuming protection of the public trust within the broader calculus of article X, section 2 of the California Constitution.⁴⁹ In short, *Audubon* raised as many questions about the public trust doctrine as it provided answers.

⁴⁸ These laws include: the Clean Water Act, 33 U.S.C. § 1313 (West 2011); the Porter-Cologne Act, CAL. PUB. RES. CODE § 13241 (Deering 2006); the Endangered Species Act, 16 U.S.C. §§ 1536, 1538 & 1539(a) (West 2011); the California Endangered Species Act, CAL. FISH & GAME CODE § 2080 (Deering 2006); and section 5937 of the California Fish and Game Code, *id.* § 5937.

⁴⁹ *Audubon*, 658 P.2d at 725. The voters added article X, section 2 to the California Constitution by initiative in 1928. The constitutional amendment changed California water law in three fundamental ways:

First, it declared the doctrines of reasonable and beneficial use to be the foundation of all water rights in California. Second, it stipulated that the requirement of reasonable use could be asserted in all water rights disputes, including those where an appropriator challenges a riparian use. Third, it invested all branches of government with significant authority to implement the mandates of reasonable and beneficial use.

HANAK, *supra* note 36, at 39-40.

The California Supreme Court has broadly interpreted the reasonable use mandate of article X, section 2:

[R]easonable use of water depends on the circumstances of each case, [and] such an inquiry cannot be resolved *in vacuo* isolated from statewide considerations of transcendent importance. Paramount among these [are] the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in the 1928 amendment.

Barstow v. Mojave Water Agency, 5 P.3d 853, 864 (Cal. 2000) (quoting *Joslin v. Marin Mun. Water Dist.*, 429 P.2d 889, 894 (Cal. 1967)).

For a detailed history of article X, section 2, see Brian E. Gray, *In Search of Bigfoot: The Common Law Origins of Article X, Section 2 of the California Constitution*, 17 HASTINGS CONST. L.Q. 225 (1989).

III. EARLY INTERPRETATIONS OF THE PUBLIC TRUST DOCTRINE
FOLLOWING THE AUDUBON DECISION

As the years passed and several public trust claims made their way to the SWRCB and the courts, my initial skepticism was allayed as the Board and the courts carefully evaluated the relationship between the public trust doctrine and California's water rights system, applying the public trust doctrine to provide substantive protection for fisheries, stream flows, water quality, and vital ecosystem functions. Three cases were especially important to the early understanding of the public trust as an environmental baseline against which new and existing consumptive uses of water must be evaluated:

A. *The Lower American River Adjudication*

The first case, *Environmental Defense Fund v. East Bay Municipal Utility District (Lower American River)*, arose out of Environmental Defense Fund's ("EDF") challenge to a contract between the East Bay Municipal Utility District ("MUD") and the U.S. Bureau of Reclamation for water service from the Bureau's Auburn/Folsom-South Project, a unit of the Central Valley Project.⁵⁰ The contract called for the diversion of 150,000 acre-feet of water annually from the American River at Nimbus Dam for transport through the Folsom South Canal to the Mokelumne River. East Bay MUD would then divert the water from its storage facilities on the Mokelumne for domestic water supply throughout its service area in Alameda and Contra Costa Counties. EDF claimed that these diversions would harm recreational uses and water quality in the lower American River between Nimbus Dam and the confluence of the American and Sacramento Rivers. EDF argued *inter alia* that the diversions would violate the reasonable use mandate of article X, section 2 of the California Constitution and asked the court to order East Bay MUD to divert water instead from the Sacramento River a few miles below the confluence or from the Sacramento-San Joaquin River Delta.⁵¹

⁵⁰ *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, 605 P.2d 1, 2-5 (Cal. 1980).

⁵¹ *See id.* at 2-4. EDF, Save the American River Association, and several other parties filed the case in 1972, and the County of Sacramento later intervened as a co-plaintiff. The California Supreme Court ruled in 1977 that the plaintiffs' claim that East Bay MUD should be required to use reclaimed wastewater before it seeks new diversions from the American River must be first presented to the SWRCB and that the plaintiffs' reasonable use claims were preempted by federal law. *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, 572 P.2d 1128, 1128, 1137 (Cal. 1977), *vacated*, 605 P.2d 1 (Cal. 1980). The U.S. Supreme Court vacated the federal preemption decision and remanded the case for reconsideration in light of *California v. United States*, 438 U.S.

On remand from the California Supreme Court, which held that the courts had concurrent jurisdiction with the SWRCB to adjudicate claims of unreasonable use of water, the case was assigned to Judge Richard Hodge of the Alameda County Superior Court. Judge Hodge referred the case to the SWRCB for fact-finding and preliminary analysis of a variety of legal questions, one of which was the effect of East Bay MUD's proposed diversions on public trust uses of the American River. The SWRCB subsequently found that East Bay MUD's diversion of 150,000 acre feet annually ("afa") "will not significantly harm public trust uses of the lower American River" and that the alternative point of diversion proposed by the plaintiffs was not as feasible as diversion at Nimbus Dam.⁵² The Board also determined that water diverted from the American River would be of higher quality than water diverted from the Sacramento River or the Delta and thus presented the lowest risk to public health of the three proposed alternatives.⁵³ In addition, it concluded that "the Folsom-South Canal diversion point is not unreasonable, within the meaning of Article X, section 2 of the Constitution."⁵⁴

Following a trial *de novo*, Judge Hodge adopted a more nuanced view of the public trust doctrine. He began by observing that the public trust must be evaluated in conjunction with the constitutional mandate of reasonable use.⁵⁵ Judge Hodge then rejected both EDF's contention that public trust uses have a priority over consumptive uses and East Bay MUD's argument that the public trust is but one of many factors that comprise the reasonable use calculus. He explained that:

[w]ater quality cannot be excluded from the analysis simply because it does not fit plaintiffs' and intervenors' conception of

645 (1978). *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, 439 U.S. 811 (1978). In its 1980 decision, the California Supreme Court held that the state law reasonable use claims were not preempted and that the courts have concurrent jurisdiction with the SWRCB to adjudicate all unreasonable use claims other than those involving reclaimed waste water. *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, 605 P.2d 1, 4-5 & 9-10 (Cal. 1980).

⁵² Statement of Decision, *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, No. 425955 (Alameda County Superior Court, filed Jan. 2, 1990), at 22 (quoting CAL. STATE WATER RES. CONTROL BD., FINAL REPORT OF THE REFEREE IN THE LOWER AMERICAN RIVER ADJUDICATION 11, 13 (1988)).

⁵³ *Id.* at 23 (citing SWRCB Report, *supra* note 52, at 14-15).

⁵⁴ *Id.* (citing SWRCB Report, *supra* note 52, at 17).

⁵⁵ *Id.* at 26 ("Audubon demands that any such decision consider the requirements of Article X, section 2 of the Constitution, along with the evolving public trust doctrine.").

a public trust value. Neither, however, can the importance of the public trust be diluted by treating it as merely another beneficial use under Article X, co-equal with irrigation, power production, and municipal water supply.⁵⁶

Rather, Judge Hodge reasoned, “In assessing appropriation values versus public trust values, it is impossible to avoid a balancing analysis.”⁵⁷

Yet, the key to balancing is not to lose sight of the public trust in the effort to accommodate the competing uses. As Judge Hodge emphasized:

The uses must be balanced or evaluated to determine whether the fullest beneficial use of water has been achieved under Article X section 2 The point of *Audubon* is that the Court does not stop with that determination. Having determined the “fullest beneficial use of water,” the Court must still be cautious to avoid needless harm to public trust values. And if the harm to those values becomes significant, then the fullest beneficial use of water may be precluded as a violation of public trust.⁵⁸

Judge Hodge then carefully considered the evidence on water quality and protection of public drinking water supplies, as well as the evidence of the likely effects of East Bay MUD’s proposed diversions on stream flows, fisheries, and recreational uses in the lower American River.⁵⁹ Based on this evidence, he fashioned a “physical solution” that was designed to accommodate East Bay MUD’s water supply, public health needs, and the public trust. The physical solution included a set of minimum flow standards (greater than those set forth in the U.S. Bureau of Reclamation’s water rights permits for the project) and a water storage reserve “for release upon the recommendation of the [California] Department of Fish and Game in response to specific fishery requirements.”⁶⁰ Judge Hodge also appointed a special master to monitor the efficacy of the physical solution and the parties’ compliance with the judgment.

The *Lower American River* decision was a milestone in the understanding of the public trust in California for several reasons.

⁵⁶ *Id.*

⁵⁷ *Id.* at 29.

⁵⁸ *Id.* at 30.

⁵⁹ *Id.* at 49-82.

⁶⁰ *Id.* at 109.

First, it established that the public trust is more than simply a procedural or “considerational” doctrine; it imposes substantive obligations on both the state and federal governments *and* water users to protect public trust resources. Second, Judge Hodge showed how the public trust fits within the framework of article X, section 2 of the Constitution. Although the public trust does not create a categorical priority over other competing uses of water, it is more than merely one factor within the reasonable use calculus. The public trust and competing consumptive uses must be accommodated, where feasible, to ensure that the waters of the state are allocated in the highest and most reasonable manner. Third, the feasibility standard articulated by the supreme court in *Audubon* does not mean that proposed extractive uses of water must give way whenever there are feasible alternatives. Rather, advocates of the public trust must show that it is necessary to limit the extractive use to protect public trust resources. Fourth, the physical solution doctrine — long a hallmark of California water rights law⁶¹ — is an essential component of the public trust. If a physical solution can reasonably accommodate both the consumptive and public trust uses, it must be employed. Finally, in some cases it may not be possible both to allow the consumptive use and to protect the public trust. Under these circumstances, if the consumptive use threatens significant harm to public trust uses, the public trust may take precedence — even at substantial cost to the consumptive water user.⁶²

⁶¹ The California Supreme Court has long held that article X, section 2 “ ‘compels the trial court, before issuing a decree entailing such waste of water, to ascertain whether there exists a physical solution of the problem presented that will avoid the waste, and that will at the same time not unreasonably and adversely affect the prior appropriator’s vested property right.’ ” *Barstow v. Mojave Water Agency*, 5 P.3d 853, 869 (Cal. 2000) (quoting *Lodi v. E. Bay Mun. Util. Dist.*, 60 P.2d 439, 450 (Cal. 1936)). For a detailed analysis of the physical solution doctrine in California water law, see ARTHUR L. LITTLEWORTH & ERIC L. GARNER, *CALIFORNIA WATER II* 172-86 (2d ed. 2007).

⁶² Judge Hodge offered the following example:

[W]ere it proven that the diversion of EBMUD water could be accomplished at the Folsom-South Canal only by exterminating the fall run of salmon, and with minimal health benefits to the consumer, the balance would shift markedly in favor of plaintiffs. Substantial increase in expenditures of accomplishing a Delta diversion, even to the extent of millions of dollars, would not in such circumstances preclude the absolute protection of that significant public trust value.

Statement of Decision, *supra* note 55 at 30. He called this hypothetical an “easy case,” though it is markedly different from the facts of the actual litigation. *Id.*

B. *The Putah Creek Litigation*

The second significant decision applying the public trust doctrine in the aftermath of *Audubon* came in the *Putah Creek Water Cases*.⁶³ The plaintiffs sought an injunction that would require the Solano County Water Agency (“SCWA”) and Solano Irrigation District (“SID”) to restore flows in Putah Creek below the Putah Diversion Dam. SCWA receives this water by contract with the Bureau of Reclamation and provides water service through the Putah South Canal to agricultural users within SID and to other cities and farms in Solano County. The Bureau impounds the waters of Putah Creek in Lake Berryessa, which is formed by Monticello Dam, and releases water as required by its contract with SCWA. The plaintiffs claimed *inter alia* that the level of diversions at the Putah Diversion Dam was inconsistent with the public trust needs of Putah Creek and violated 5937 of the California Fish and Game Code.⁶⁴

The parties produced evidence on the hydrology of Putah Creek before construction of Monticello Dam, the current state of the river, the types and value of uses of the waters diverted into the Putah South Canal, and the effects of those diversions on fish, recreation, and aesthetic enjoyment of Putah Creek. Following the trial, Judge Richard Park concluded that the existing level of instream flows below the Putah Diversion Dam violated both section 5937 and the public trust doctrine. Judge Park began his analysis with the finding that Putah Creek

is a treasure. It is a home for birds, for wildlife, for waterfowl, fishes, trees, and vegetation. It’s an entire ecosystem in the middle of a heavily farmed, agricultural environment. It’s a

⁶³ Reporter’s Transcript of Judge’s Ruling, *Putah Creek Water Cases*, Judicial Counsel No. 2565 (Sacramento County Super. Ct. filed Apr. 8, 1996) [*hereinafter Putah Creek Water Cases*]. This was a coordinated proceeding of two cases: the first was brought by a local environmental group, the Putah Creek Council, the City of Davis, and UC Davis against the Solano Irrigation District; the second suit was filed by SID against all appropriative water right holders in the upper basin of the Putah Creek watershed, which included the Solano County Water Agency. *Id.* at 1.

⁶⁴ *Id.* at 13 & 19. Section 5937 of the Fish and Game Code provides:

The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam.

CAL. FISH & GAME CODE § 5937 (Deering 2006).

place for people to watch birds, [to] fish, to canoe, [and] to kick back and enjoy the sights, sounds, and the smells.⁶⁵

He also found that Putah Creek is “vital to the people of Solano County.”⁶⁶ As the principal source of domestic water supply for the cities of Vacaville, Fairfield, Vallejo, and Suisun City, it supplies “cheap, reliable, and high quality water to the farmers of Solano Irrigation District, contributing immeasurably to the economies and agricultural production of the county.”⁶⁷ Judge Park observed that the “common thread that ties the public trust resources of Putah Creek to the needs and interests of Solano County is obviously what this lawsuit is all about — water.”⁶⁸

Although his analysis of the public trust was not as extensive as Judge Hodge’s in *Lower American River*, Judge Park nonetheless reached several conclusions that advanced our understanding of the doctrine. First, he acknowledged that the development of the water resources of Putah Creek occurred during the period when the overriding state and federal policies were to exploit fully California’s water resources and put them to economic use.⁶⁹ Yet, despite the reliance interests fostered by the old policies, Judge Park ordered the consumptive users to give back some of their water because the over-appropriation of Putah Creek had degraded public trust resources.⁷⁰ In doing so, he confirmed the California Supreme Court’s holding in *Audubon* that “[o]nce the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water,” and that in exercising this authority, “the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs.”⁷¹

⁶⁵ *Putah Creek Water Cases*, *supra* note 63, at 2.

⁶⁶ *Id.* at 3.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.* at 13-14.

⁷⁰ *Id.* at 14-15.

⁷¹ *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 728 (Cal. 1983). In an illuminating meditation on the public trust and reliance interests, Judge Park observed:

Public trust issues were not considered when this project was formulated, authorized, built or placed in operation. If the water board knew then what we know now, if it had heard what I heard for the past five weeks, I think I can safely predict that there would have been a very different and very much more generous release schedule. And frankly it’s unfortunate that the

Second, Judge Park recognized the functional relationship between section 5937 and the public trust doctrine — that water released from or bypassed by dams to support the fishery in the stream below also serves public trust needs.⁷² This insight strengthened the public trust doctrine by showing that the common law doctrine often complements governing statutory law. Integration of section 5937 and the public trust would also be a feature of the SWRCB's resolution of the Mono Lake controversy.⁷³

Third, consistent with Judge Hodge's opinion, Judge Park applied the balancing and feasibility tests articulated in *Audubon* to provide substantive protection to the public trust resources of Putah Creek. Judge Park found that fish, recreation, water quality, and other public trust interests in Putah Creek were suffering from the upstream diversions, but he recognized that this alone was not sufficient to justify a reallocation of water from the SCWA users to the river.⁷⁴ “*National Audubon* makes it clear,” he wrote, “that public trust values in theory can be sacrificed altogether if it is more appropriate under all the facts and circumstances to allow a complete diversion of water to Solano County.”⁷⁵ Judge Park also found, however, that the SCWA and its customers had feasible alternatives to the diversions they would be required to forego to support additional stream flows in Putah Creek.⁷⁶ He noted that all the cities had current surpluses of water and that future demands could be met through conservation and water transfers.⁷⁷ Similarly, except during severe drought years, Solano County farmers had received full water deliveries. During drought periods, most farmers increased their pumping of groundwater, eliminated double plantings, switched to less water intensive crops, or

process didn't take place then, because, if it had, it would have been easy to live with. The Solano parties would have gotten what was offered to them and no doubt would have been happy with it.

But coming 40 years after the implementation and operation of this project any decision that lessens the amount of water delivered to Solano County is obviously difficult for them to accept. In a sense I think the Solano parties feel that this water belongs to them. They do call it project water. But I think the law says it belongs to all of us.

Putah Creek Water Cases, *supra* note 63, at 13-14.

⁷² *Putah Creek Water cases*, *supra* note 63, at 5, 19-23.

⁷³ *See infra* Part III.C.

⁷⁴ *Putah Creek Water cases*, *supra* note 63, at 19-20.

⁷⁵ *Id.* at 13.

⁷⁶ *Id.* at 14-15.

⁷⁷ *Id.* at 13.

fallowed land and sold the conserved water to the cities or to the Drought Water Bank.⁷⁸ Judge Park concluded that “these potential savings . . . will cover the additional releases that I would be ordering in this case.”⁷⁹

C. The Mono Lake Case

The third decision that helped to define the public trust doctrine came in the *Mono Lake case* itself. Following the California Supreme Court’s decision in *Audubon*, the case returned to federal court, was subsequently remanded to state court, later was consolidated with a separate lawsuit challenging Los Angeles’s diversions from the tributaries of Mono Lake under section 5937, and ended up before the State Water Resources Control Board for amendment of the city’s water rights licenses to ensure compliance with section 5937 in the tributary streams and to protect the public trust in Mono Lake.⁸⁰

⁷⁸ *Id.* at 14-18. For a study of agricultural responses to the 1986-1992 drought, see HAROLD O. CARTER ET AL., SHARING SCARCITY: GAINERS AND LOSERS IN WATER MARKETING (1994), available at <http://aic.ucdavis.edu/publications/oldanrpubs/scarcity.pdf>.

⁷⁹ Reporter’s Transcript, *Putah Creek Water Cases*, *supra* note 63, at 17. Although the water users subsequently appealed Judge Park’s decision, the parties ultimately negotiated a settlement agreement. The agreement *inter alia* limits the amount of water that may be diverted to serve consumptive uses within the Solano Project to 248,000 afa and establishes a minimum flow regime for Putah Creek below the Putah Diversion Dam. Settlement Agreement and Stipulation Among Solano County Water Agency, Solano Irrigation District, Maine Prairie Water District, Cities of Vacaville, Fairfield, Vallejo, and Suisun City, and Putah Creek Council, City of Davis, and the Regents of the University of California, *Putah Creek Water Cases* (2000) (on file with author). The Bureau of Reclamation then petitioned the SWRCB to amend its water rights permits for the Solano Project to recognize the water released from the project to meet the stream flow requirements as an instream water right pursuant to section 1707 of the Water Code.

⁸⁰ CAL. STATE WATER RES. CONTROL BD., MONO LAKE BASIN WATER RIGHT DECISION 1631 (1994) [hereinafter DECISION 1631]. The Board provides a brief summary of the procedural history of the case following the Supreme Court’s decision. *Id.* at 7-10. For a more detailed history, see JOHN HART, *supra* note 1, at 108-75.

In the section 5937 litigation, California Trout, the Mono Lake Committee, and the National Audubon Society brought suit to compel the SWRCB to rescind Los Angeles’s licenses to appropriate water from the tributary streams of Mono Lake because the licenses were not conditioned on compliance with section 5937 as required by section 5946 of the Fish & Game Code. The Court of Appeal held that section 5937 applies to the city’s licenses and it ordered the Board to include a term in the licenses declaring the city’s water rights to be subordinate to the requirements of section 5937. *Cal. Trout, Inc. v. SWRCB*, 255 Cal. Rptr. 184, 191 (Ct. App. 1989). In a subsequent decision, the Court directed the Superior Court to set interim flow standards for the four streams from which Los Angeles diverts water. *Cal. Trout, Inc. v. Superior Court*, 266 Cal. Rptr. 788, 803-04 (Ct. App. 1990).

The Board conducted an extensive evidentiary hearing that included analysis of a three-volume environmental impact report, computer models of the Mono Lake ecosystem, and more than forty days of testimony.⁸¹ This evidence covered a broad spectrum that evaluated the state of the Mono Lake ecosystem before Los Angeles began its water diversions; the effects of those diversions on fish, brine shrimp, waterfowl, wildlife, air and water quality, navigability, recreation, and other aspects of the public trust; the benefits and costs of alternative levels of stream flow and lake level restoration; and Los Angeles's water supply needs and alternative sources of supply, potential water conservation.⁸²

Although the Board found that "there is no single lake elevation that will maximize protection and accessibility to all public trust resources," it ultimately settled on a restored lake level of 6,392 feet above sea level, an increase of eighteen feet over the existing elevation.⁸³ The Board then amended Los Angeles's water rights licenses to begin the long process of repairing the Mono Lake ecosystem. It established minimum stream flow criteria for the tributaries and prohibited the city from diverting any water that would cause flows to fall below those standards.⁸⁴ The Board also prohibited Los Angeles from diverting any water until the level of Mono Lake

On remand, the case was transferred to the El Dorado Superior Court and assigned to Judge Terrence Finney, who had recently completed the preliminary injunction hearings in the *Audubon* litigation. In November 1991, Judge Finney ordered Los Angeles to meet minimum flow standards in the tributary streams and to restore the level of Mono Lake to an elevation of 6,377 feet above sea level. This judgment served as a foundation for the SWRCB's subsequent amendment of Los Angeles's water rights licenses. *In re Mono Lake Water Rights Cases*, Nos. 2284 and 2288 (El Dorado County Super. Ct. Dec. 6, 1989) (order granting preliminary injunction).

⁸¹ See DECISION 1631, *supra* note 79, at 12-20.

⁸² *Id.* at 21-180.

⁸³ *Id.* at 155. According to the Board:

[The] record indicates that an average water elevation of 6,392 feet would be consistent with protection of a number of important public trust resources including: air quality in the Mono Basin; water quality in Mono Lake; the Mono Lake brine shrimp and brine fly which provide food for migratory birds; secure, long-term nesting habitat for California gulls and other migratory birds; easily accessible recreational opportunities for the large number of visitors to the Mono Lake Tufa State Reserve; and the panoramic and scenic views which attract many people to the Mono Basin.

Id.

⁸⁴ *Id.* at 21-71, 156.

rose to 6,377 feet, with highly limited diversion rights during the period in which the lake level was between 6,377 and 6,391 feet.⁸⁵

Perhaps the most remarkable aspect of the Mono Lake decision, though, was the Board's analysis of the feasibility of Los Angeles's compliance with the stream flow and public trust restoration standards. The Board estimated that the minimum stream flow requirements would reduce the city's water exports from Mono Basin by an average of 35,200 afa.⁸⁶ In addition, over the projected twenty-year period during which exports would be limited to restore lake levels to 6,391 feet, it would lose an additional 35,700 afa.⁸⁷

Although these reductions comprised a staggering ninety-five percent of Los Angeles's pre-*Audubon* Mono basin supplies, the reduction in water exports was less than ten percent of the city's total water supplies.⁸⁸ The Board found that the city could make up this deficiency through a combination of increased groundwater pumping, purchases from the Metropolitan Water District, water conservation, use of reclaimed wastewater, and water transfers.⁸⁹ These alternative sources would be considerably more expensive than the Mono basin water, but the Board nevertheless determined that they were feasible options.⁹⁰ "Overall," the Board concluded, "the adverse water supply impacts of this decision are overridden by the legal requirement to provide flows to reestablish and maintain the pre-1941 fishery in the four tributary streams, and by the benefits of this decision to fishery and other public trust resources in the Mono Basin."⁹¹

⁸⁵ *Id.* at 156-58.

⁸⁶ *Id.* at 163.

⁸⁷ *Id.* at 163.

⁸⁸ *Id.* at 165-68.

⁸⁹ *Id.*

⁹⁰ *Id.* at 169-80. The SWRCB estimated that the increased cost of alternative water supplies will be \$27.8 million annually until the level of Mono Lake is restored to 6,391 feet, dropping to \$17.9 million per year after that. *Id.* at 171-72. Los Angeles also will lose approximately \$8.5 million annually in foregone hydroelectric power until the lake reaches the target elevation and \$5.6 million annually thereafter. *Id.* at 178-80.

⁹¹ *Id.* at 178. In 1998, the SWRCB approved new stream restoration and waterfowl habitat improvement standards for the tributaries. These standards included "stream restoration flows" designed to cleanse the rivers of accumulated silt and debris and better approximate the natural hydrographs of the tributaries. CAL. STATE WATER RES. CONTROL BD., WATER RIGHT ORDER 98-05, at 11-23 (1998), available at <http://www.waterrights.ca.gov/hearings/WaterRightOrders/WRO98-05.pdf>. Los Angeles did not challenge either *Water Right Decision 1631* or the subsequent water right order. John Hart, *supra* note 1, at 173-75.

Three aspects of the *Mono Lake* decision are especially significant: First, the Board faithfully and rigorously applied the public trust doctrine in a high stakes setting that pitted the state's largest city against a natural resource that (unique and alluring though it may be) is known to and visited by few Californians. Second, it took a broad view of the feasibility and balancing tests by considering the reallocation of Mono Basin water from Los Angeles to the ecosystem in the wider context of the city's overall water supplies. Third, the Board recognized the public trust as an ecological baseline that places fundamental limits on diversion of water for consumptive uses. All are essential embellishments of the California Supreme Court's articulation of the public trust in *Audubon*.

IV. INSTITUTIONALIZING THE PUBLIC TRUST

Following these early decisions, the SWRCB asserted the public trust doctrine proactively to protect public trust resources from new appropriations and, retrospectively, to repair rivers that had been degraded by water diversions. The most important prospective application of the doctrine was the Board's stipulation that all new appropriative rights are subordinate to the *in situ* needs of the public trust. Thus, the Board now includes in all permits and licenses a standard term that conditions the right to appropriate water on compliance with the public trust and declares that the "continuing authority of the SWRCB also may be exercised by imposing further limitations on the diversion and use of water by the permittee [or licensee] in order to protect public trust uses."⁹²

The most prominent retroactive application of the public trust doctrine following the *Mono Lake* decision came in the Board's 2001 reconsideration of the water rights of the Yuba County Water Agency ("YCWA") and other appropriators of water from the Yuba River.⁹³ Following a lengthy set of hearings and negotiations, the Board established new minimum stream flow standards and temperature requirements to protect chinook salmon, steelhead, and American

⁹² *Standard Permit and License Terms*, CAL. STATE WATER RES. CONTROL BD., http://www.waterboards.ca.gov/waterrights/water_issues/programs/permits (last updated May 11, 2011). The standard permit term for the public trust is Term 12. For licenses, the standard term appears in the license template. These standard terms are authorized by California Code of Regulations title 23, section 780(a).

⁹³ CAL. STATE WATER RES. CONTROL BD., WATER RIGHT DECISION 1644: FISHERY RESOURCES AND WATER RIGHT ISSUES OF THE LOWER YUBA RIVER (2001) (revised in 2003 in accordance with SWRCB Order WR 2003-16).

Shad in the Yuba River below YCWA's Englebright Dam.⁹⁴ The Board relied heavily on the public trust doctrine, as well as article X, section 2 of the California Constitution, to amend the water rights of YCWA to implement the new fishery protection standards *and* to reject claims that the water users were entitled to compensation for lost revenues that would result from the changes in their water rights.⁹⁵ Consistent with the foundational cases discussed above, the Board also engaged in a "feasibility/balancing" analysis to conclude that YCWA and the other appropriators would not be unreasonably burdened by the re-operational changes needed to protect the fish. The Board also applied section 5937 to bolster its public trust determinations.⁹⁶

These were salutary developments because they institutionalized the role of the public trust doctrine in the SWRCB's water rights administration. The Board's increasing use of the public trust also persuaded me that the doctrine could play a significant role in water resources management that augmented the statutory laws that protect stream flows, water quality, fish and wildlife, habitat, endangered species, recreation, and other instream uses.

V. THE PUBLIC TRUST AND WATER RESOURCES PLANNING

Despite these advances, more recent water management decisions have caused some of my initial skepticism about the efficacy of the public trust to return. As the cases described in parts III and IV demonstrate, the SWRCB and the courts have generally applied the public trust doctrine in a manner that recognizes its fundamental purpose of ensuring that extractive uses of the state's water resources do not unduly and unnecessarily degrade the ecosystems that are the sources of those developed supplies. In contrast, the major decisions that have dominated California's water management and planning over the past fifteen years have not been so faithful to the Supreme Court's

⁹⁴ *Id.* at 35-86.

⁹⁵ *See id.* at 30-31, 139-42.

⁹⁶ *Id.* at 100-31, 142. Because of uncertainty about the effects of the new flow standards on hydroelectric power production at YCWA's New Bullards Bar and Englebright Dams, the SWRCB set interim standards in both its 2001 and revised 2003 decisions. *Id.* at 125-127. In 2008, the Board made the flow standards permanent. CAL. STATE WATER RES. CONTROL BD., REVISED WATER RIGHT ORDER 2008-14, at, 56-63 (2008). In that same order, it also authorized YCWA to transfer up to 200,000 afa to the State Water Project from 2008 through 2025. *Id.* at 59. (YCWA previously made a series of short-term transfers to the SWP for use in the Environmental Water Account). Through these annual transfers, YCWA may recoup some of the economic benefits of the water that it must release from its reservoirs to comply with the streamflow and standards set forth in Decision 1644. *Id.* at 44-45.

directive that “[t]he state has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.”⁹⁷ Yet this prospective feature of the public trust is just as important as its remedial aspects because, with careful planning that is cognizant of public trust resources, we can avoid the mistakes of the past in which so many of the state’s rivers have been over-appropriated and its aquatic ecosystems needlessly diminished.⁹⁸

Unfortunately, though perhaps not surprisingly, the most glaring failure to account adequately for the public trust in water resources planning has occurred in the Sacramento–San Joaquin River and Delta system. This failure has happened despite explicit promises to place protections and sustainable use restrictions of the Bay-Delta ecosystem on par with consumptive uses that divert water from the system. Indeed, in each of the most recent efforts to establish long-term standards to protect this critical source of California’s developed water supplies, the public trust has either been relegated to a factor of secondary importance or is at risk of being subsumed within a broader water allocation calculus that is likely to prefer the consumptive uses that impound, divert, and export water from the system over the sustainable ecological needs of the estuary.

A. *The CALFED Bay Delta Program*

The CALFED Bay-Delta Program arose out of the protracted and fitful efforts to protect water quality, endangered species, and other instream uses of the Bay-Delta system, while also allowing for the diversion of water — both from and upstream of the Delta — for municipal, agricultural, industrial, and other consumptive uses.⁹⁹ The waters of the Bay-Delta system are vital to California’s population and economy.¹⁰⁰ Along with so many of California’s rivers, lakes, and

⁹⁷ Nat’l Audubon Soc’y v. Superior Court, 658 P.2d 709, 728 (Cal. 1983).

⁹⁸ See HANAK ET AL., *supra* note 36, at 19-134, 183-251.

⁹⁹ For an overview of the regulatory efforts to protect water quality and endangered species in the Bay-Delta estuary that preceded the CALFED program, see *State Water Res. Control Bd. cases*, 39 Cal. Rptr. 3d 189, 203-10 (Ct. App. 2006); see also Elizabeth Ann Rieke, *The Bay-Delta Accord: A Stride Toward Sustainability*, 67 U. COLO. L. REV. 341, 343-49 (1996). The Little Hoover Commission’s 2005 analysis of the failings of CALFED also includes a useful history. LITTLE HOOVER COMMISSION, STILL IMPERILED, STILL IMPORTANT: THE LITTLE HOOVER COMMISSION’S REVIEW OF THE CALFED BAY-DELTA PROGRAM 1-10 (2005).

¹⁰⁰ Currently an average of 5.9 million acre-feet of water is exported south each year from the Bay-Delta, of which about 60 percent is taken for agriculture and the remainder for urban uses. Two-thirds of California

estuaries, however, the impoundment and diversion of water from the system has strained the ecosystem to the point of near collapse.¹⁰¹ As the California Supreme Court has described:

[I]n 1994, against a backdrop of the mounting concerns over water shortages, the ecological deterioration of Bay-Delta estuary, the decline in water quality, and the risk of levee system failure, eight state agencies and 10 federal agencies with management or regulatory responsibility over the Bay-Delta formed CALFED to develop a long-term solution to the Bay-Delta's problems.¹⁰²

The mission of the CALFED program was "to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system."¹⁰³ To achieve these dual purposes, CALFED stated that it would take "a broad approach to addressing the four problem areas of water quality, ecosystem quality, water supply reliability and levee system integrity, recognizing that many of the problems and solutions in the Bay-Delta system are interrelated."¹⁰⁴ For the first three categories, it specifically pledged to:

Provide good water quality for all beneficial uses.

Improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.

households receive at least some of their domestic water from the Bay-Delta, and over seven million acres of highly productive land are irrigated from the same source.

In re Bay-Delta Programmatic Evtl. Impact Report Coordinated Proceedings, 184 P.3d 709, 715 (Cal. 2008).

¹⁰¹ "Conflicting demands have resulted in several resource threats to the Bay-Delta: the decline of wildlife habitat; the threat of extinction of several native plant and animal species; the collapse of one of the richest commercial fisheries in the nation; the degradation of Bay-Delta water quality; the continued land subsidence on Delta islands; and a Delta levee system faced with a high risk of failure."

Id. (quoting CALFED BAY-DELTA PROGRAM, FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT, Technical App., Phase II Report at 11(2000)).

¹⁰² *Id.* at 717.

¹⁰³ CALFED BAY-DELTA PROGRAM, PROGRAMMATIC RECORD OF DECISION 9 (2000).

¹⁰⁴ *Id.* at 10.

Reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system.¹⁰⁵

The stated goals of the program were admirable — to correct the long-standing imbalance between extractive and instream uses of the Sacramento-San Joaquin Rivers and Delta, to repair and restore ecosystem integrity, and to develop a long-term plan for the sustainable use of the waters of the system to support the panoply of consumptive and nonconsumptive beneficial uses. Indeed, the simple articulation of CALFED's mission as embodying both water supply and ecological restoration was a cause for great optimism as it represented a sharp break from the previous policies that, for many decades, had promoted water development to the almost complete exclusion of water quality, fisheries, aquatic habitat, and ecological health. The high hopes that I and many others had for CALFED were short-lived, however, as the program moved decisively to make water supply reliability its paramount consideration.

This shift occurred early on, during the Phase I scoping process, when CALFED eliminated from further consideration any program alternative that did not include increasing the amount of water exported from the Delta.¹⁰⁶ CALFED explained that it would evaluate only those alternatives that would allow the Central Valley Project ("CVP") and the State Water Project ("SWP") to increase their exports of water from the Delta because "an alternative that would achieve water quality objectives by reducing or capping exports would prevent the CALFED Program from achieving its objectives regarding water supply reliability."¹⁰⁷ As a result of this decision, although CALFED

¹⁰⁵ *Id.* at 9.

¹⁰⁶ CALFED BAY-DELTA PROGRAM, FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT, at CR-30 (2000).

¹⁰⁷ *Id.* The CVP is owned and operated by the U.S. Bureau of Reclamation. As described by the California Supreme Court:

The CVP operates 21 reservoirs, 11 power plants, and 500 miles of major canals and aqueducts. With total storage capacity of more than 12 million acre-feet, the CVP delivers approximately seven million acre-feet of water annually through the Delta-Mendota Canal to over 250 water contractors, primarily for agricultural use in the Central Valley and adjacent areas.

In re Bay-Delta Programmatic Env'tl. Impact Report Coordinated Proceedings, 184 P.3d 709, 716 n.1 (Cal. 2008). The SWP is owned and operated by the California Department of Water Resources. As described by the California Supreme Court:

The SWP consists of a series of 21 dams and reservoirs (including Oroville Dam and Lake Oroville on the Feather River, a tributary of the Sacramento

prepared two drafts and a final Programmatic Environmental Impact Statement/Environmental Impact Report during Phase II, it did not evaluate any alternative that included limiting or reducing future exports of Delta water.¹⁰⁸

Although contradictory to CALFED's mission statement of developing a long-term program that will *both* "restore ecological health and improve water management for beneficial uses of the Bay-Delta system," this decision could be characterized as simply a judgment call for CALFED to make in narrowing the scope of a complex programmatic EIS/EIR. Indeed, the California Supreme Court upheld CALFED's choices for precisely this reason.¹⁰⁹ CALFED also serves, however, as a cautionary tale of the consequences of undervaluing the public trust in long-term water planning.

CALFED recognized that the environmental flow and water quality requirements — as well as the state and federal laws that protect fish and other aspects of the ecosystem — might not allow for an increase in CVP and SWP exports.¹¹⁰ Yet the CALFED agencies chose to

River), five power plants, 16 pumping plants, and 662 miles of aqueduct; it exports Bay-Delta water through the California Aqueduct.

Id. at 716 n.2. The coordinated operations of the CVP and SWP are the largest contributor to the problems of water quality, flow reduction, flow alteration, and fisheries decline that have perplexed California water administrators for the past four decades. *See id.* at 717.

¹⁰⁸ The final PEIR evaluated four water conveyance alternatives, each with an assessment of "additional storage up to 6 million acre feet . . . and without additional storage," as well as a "no action" alternative that CALFED used as a basis for comparison of the program alternatives. CALFED BAY-DELTA PROGRAM, *supra* note 106, at ES-7. All of the alternatives called for an increase in the CVP and SWP exports over the next 30 years to meet the projected demands of California's growing population. *Id.*

CALFED selected as its "preferred alternative" a program that includes significant dredging and improvements to the channels of the Delta to permit more efficient transport of water from the Sacramento River basin to the CVP and SWP pumps in the south Delta; possible future construction of a 10,000 cfs capacity conveyance canal that would divert water from the Sacramento River and convey it directly to the eastern interior channels of the Delta; construction of salinity barriers in the south Delta to keep San Joaquin inflow from the south Delta pumps; creation of an intertie between the CVP and SWP facilities and a joint point of diversion; installation of new fish screens; and construction of as much as 6 million acre feet of new surface and ground water storage upstream of the Delta and as off-stream storage near the Delta and in the San Joaquin Valley. *Id.* at 2-16 to 2-18.

¹⁰⁹ *In re Bay-Delta Programmatic Env'tl. Impact Report Coordinated Proceedings*, 184 P.3d at 718, 731-32.

¹¹⁰ For example, the Programmatic EIS/EIR states that:

All of the CALFED Program actions will need to comply with applicable

disregard these facts and refused to consider any alternative that would have evaluated a capped or reduced exports scenario.¹¹¹ In turn, this decision to ignore the acknowledged risk that increased exports from the Delta could violate water quality, instream flow, and endangered species requirements led in short order to exactly those consequences.

The CALFED Record of Decision, issued in 2000, set the stage for an increase in CVP and SWP pumping from the Delta.¹¹² For example, the 2004 Operating and Criteria Plan (“OCAP”) for the coordinated operation of the projects provided for a 27% to 54% increase in

regulatory programs. Most potential surface water storage projects being evaluated by CALFED will need to comply with, among other things, the requirements of the state and federal ESAs, the SWRCB’s Clean Water Act Section 401 certification program, and the U.S. Army Corps of Engineers’ Section 404 permit program.

CALFED BAY-DELTA PROGRAM, *supra* note 106, at CR-65. Notably absent from this list is the public trust, which is fully applicable to the Sacramento-San Joaquin River and Delta system. See *United States v. SWRCB*, 227 Cal. Rptr. 161, 200-02 (Ct. App. 1986).

¹¹¹ In comparing the water supply and management consequences of the five alternatives included in the Programmatic EIS/EIR, CALFED acknowledged that under the “no action” alternative:

Annual Delta exports could decrease by as much as 570 TAF or could increase by as much as 370 TAF over the long-term period. *Reductions in annual Delta exports would result from more protective Delta water management criteria . . .* During dry and critical years, annual Delta exports could decrease by as much as 610 TAF or could increase by as much as 130 TAF.

CALFED BAY-DELTA PROGRAM, *supra* note 106, at 3-8 (emphasis added). Although CALFED planned for increased exports under each of the four program alternatives, it estimated that without construction of additional storage the change in exports from the “no action” levels would range from increases of 140,000–590,000 afa in most years to a possible decrease of 30,000–90,000 afa in dry and critical years. *Id.* In other words, CALFED recognized that the consequences of future implementation and enforcement of the environmental laws in the Bay-Delta system could be a net reduction from current levels of exports by as much as 430,000 afa during most years and as much as 700,000 afa in dry and critical years. *Id.*

Even under the preferred alternative, CALFED predicted that without additional storage “annual long-term period Delta exports would increase 250–380 TAF . . . over the No Action Alternative” — a possible net decrease of 320,000 afa from existing export levels. In dry and critical years, the preferred alternative (without storage) could result in a net decrease in exports from current pumping levels of as much as 560,000 afa. *Id.* Indeed, in its responses to public comments, CALFED candidly stated: “Exports could be reduced or increased under the Preferred Program Alternative compared to existing conditions.” *Id.* at IA-5.1-15 (emphasis added).

¹¹² See HANAK ET AL., *supra* note 36, at 60, 63-64.

exports from the south Delta pumps.¹¹³ By the latter part of the decade, Delta flows and water quality had been further diminished, salmon and Delta smelt were on the brink of extinction, and the two projects were in violation of the very laws that CALFED had predicted might limit their exports of water from the system. In 2006, the SWRCB issued a cease and desist order against the CVP and SWP based on the Board's determination that project operations violated salinity standards in the south Delta.¹¹⁴ The following year, Judge Oliver Wanger of the U.S. District Court for the Eastern District of California concluded that the biological opinion that approved the 2004 OCAP was inadequate to protect the Delta, and he ordered the U.S. Fish and Wildlife Service to revise it.¹¹⁵ Judge Wanger subsequently determined that the biological opinion designed to protect salmon and steelhead from coordinated CVP and SWP operations also was inadequate and, he directed the National Marine Fisheries Service to revise it as well.¹¹⁶ Indeed, the California Department of Water Resources has estimated that future compliance with endangered species requirements will reduce SWP exports from the Delta "virtually every year in the future (93% of future years). These reductions would amount to a 20% reduction from current levels about one-fourth of the time, and greater than 30% in one-sixth of future years."¹¹⁷

Although these regulatory decisions established a *post hoc* environmental baseline of sorts, emergency remedial action is not an adequate substitute for fidelity to the public trust in the initial water planning decisions that — if incorrectly structured — may irreparably

¹¹³ See *Natural Res. Def. Council v. Kempthorne*, 506 F. Supp. 2d 322, 332 (E.D. Cal. 2007).

¹¹⁴ Draft Cease and Desist Order Nos. 262.31-16 & 262.31-17, 2006 WL 451949, at *10 (Cal. State Water Res. Control Bd. Feb. 15, 2006). The Board ordered the projects *inter alia* to consider a variety of corrective actions, including a "reduction in exports" from the Delta. *Id.* at *18.

¹¹⁵ *Kempthorne*, 506 F. Supp. 2d at 387-88.

¹¹⁶ *Pac. Coast Fed'n of Fishermen's Ass'ns v. Gutierrez*, 606 F. Supp. 2d 1122, 1193-94 (E.D. Cal. 2008). In more recent opinions, Judge Wanger invalidated the biological opinions for both the Delta Smelt and the salmonid species *inter alia* based on his conclusion that the USFWS and NMFS did not adequately consider the economic effects of their decisions. See *In re Consol. Salmonid Cases*, 1:09-CV-01053 OWW DLB, 2011 U.S. Dist. LEXIS 109012, at *428 (E.D. Cal. Sept. 20, 2011); *In re Consol. Delta Smelt Cases*, 1:09-CV-00407 OWW DLB, 2011 U.S. Dist. LEXIS 98300, at *194 (E.D. Cal. Aug. 31, 2011).

¹¹⁷ CAL. DEP'T OF WATER RES., SUMMARY: DRAFT STATE WATER PROJECT DELIVERY RELIABILITY REPORT 2007, at 1 (2008).

harm public trust uses.¹¹⁸ Yet CALFED's failure to protect the public trust in the Sacramento–San Joaquin River and Delta ecosystem is not surprising as CALFED paid scant attention to its public trust obligations. CALFED did evaluate the effects of present and future water exports on water quality and fisheries under the guise of its mission statement to “restore ecological health and improve water management for beneficial uses of the Bay-Delta system.”¹¹⁹ But it did so in a manner that always made the public trust subordinate to the goal of improving the reliability of water service to those parts of the state that rely on exports upstream of or from the Delta.

In marked contrast to the early cases that established the public trust in California water resources law — *Lower American River*, *Putah Creek*, and *Mono Lake* — CALFED did not ask whether public trust uses require additional water and, if so, whether it would be feasible to reallocate water to serve the public trust. Rather, CALFED addressed these questions in reverse order. It concluded that the water exporters needed more water, and it found that capping or reducing Delta exports would be infeasible and therefore not worthy of consideration as a means of ensuring the health of the ecosystem.

Ultimately, CALFED's failure to account for and to protect the public trust in water resources planning caused it to fail in both of its mission goals. It adopted a program that would neither restore ecological health nor improve water management. Instead, the CALFED program gave legal sanction to water management decisions that have further degraded the ecosystem, jeopardized the species that depend on the ecosystem for their critical habitat, and exacerbated the

¹¹⁸ In upholding CALFED's decision to ignore the identified risks that the environmental needs of the Bay-Delta ecosystem might well require additional water, the California Supreme Court did note:

Bay-Delta ecosystem restoration to protect endangered species is mandated by both state and federal endangered species laws, and for this reason water exports from the Bay-Delta ultimately must be subordinated to environmental considerations. The CALFED Program is premised on the theory, as yet unproven, that it is possible to restore the Bay-Delta's ecological health while maintaining and perhaps increasing Bay-Delta water exports through the CVP and SWP. If practical experience demonstrates that the theory is unsound, Bay-Delta water exports may need to be capped or reduced.

In re Bay-Delta Programmatic Env'tl. Impact Report Coordinated Proceedings, 184 P.3d 709, 726 (Cal. 2008). This is a useful acknowledgment of the realities of remedial regulatory practice, but it would have been preferable for the Court to have recognized the benefits of informed, proactive water management.

¹¹⁹ CALFED BAY-DELTA PROGRAM, PROGRAMMATIC RECORD OF DECISION 9 (2000).

uncertainties and unreliability of the water supplies that are drawn from the ecosystem.

B. *The Aftermath of CALFED*

In the wake of the CALFED debacle, the state undertook two new efforts to shore up the reliability of California's water supplies while better protecting the aquatic resources of the Delta ecosystem. In 2006, former Governor Arnold Schwarzenegger created the Delta Vision Blue Ribbon Task Force.¹²⁰ Three years later, the Legislature enacted the Sacramento–San Joaquin Delta Reform Act.¹²¹ Both of these initiatives offered new hope for protecting the public trust in the waters of the Delta ecosystem.

1. Delta Vision

In his executive order creating the Delta Vision Blue Ribbon Task Force, Governor Schwarzenegger directed its seven members to develop a strategic plan “for sustainable management of the Delta’s multiple uses, resources and ecosystem.”¹²² He defined sustainability in this context as management of the Delta “over the long term to restore and maintain identified functions and values that are determined to be important to the environmental quality of the Delta and the economic and social well being of the people of the state.”¹²³ The strategic plan for the Delta revealed that the Task Force regarded its work as a reaction to CALFED’s failings. As the Delta Vision Task Force advised the Governor:

The Delta has been the subject of decades of study and political deadlock. As a consequence, ecosystems have eroded, levees have deteriorated, fish populations have collapsed, and our system of delivering water has become ever more precarious.

The disparate interests with a stake in the Delta have attempted for years to reach agreement on the Delta’s future. Those efforts, most recently the CALFED process, have failed.

¹²⁰ GOVERNOR’S DELTA VISION, BLUE RIBBON TASK FORCE, FINAL REPORT 67-70 (2007) [hereinafter FINAL REPORT].

¹²¹ CAL. WATER CODE §§ 85000-85350 (West 2011).

¹²² GOVERNOR’S DELTA VISION, FINAL REPORT, *supra* note 119, at 69.

¹²³ *Id.*

This Task Force is keenly aware of that history and the peril California faces from continued failure.¹²⁴

The Task Force recommended a series of reforms that included: restoration of the “Delta ecosystem as the heart of a healthy estuary”; promotion of “statewide water conservation, efficiency, and sustainable use”; construction of additional water storage and conveyance facilities; and creation of a “new governance structure with the authority, responsibility, accountability, science support, and secure funding to achieve these goals.”¹²⁵ The Task Force also called for state law and policy to recognize “the co-equal goals of restoring the Delta ecosystem and creating a more reliable water supply for California.”¹²⁶ These goals, it explained, are co-equal “because one objective can’t be achieved without the other.”¹²⁷ Then, to emphasize its differences from CALFED (which also, of course, had stated that restored ecological health and improved water management were its twin mission goals), the Delta Vision Task Force declared:

The co-equal goals must be fully institutionalized in California policy making; commitment to achieving them cannot be

¹²⁴ GOVERNOR’S DELTA VISION, BLUE RIBBON TASK FORCE, STRATEGIC PLAN, at i (2008).

¹²⁵ *Id.* at 23.

¹²⁶ *Id.* at vii.

¹²⁷ *Id.* at v-vi. As the failure of CALFED showed, it is not possible to enhance the reliability of water supplies from the Sacramento–San Joaquin River and Delta system without restoring and ensuring the ecological integrity of the Bay-Delta estuary — at least without repealing the various environmental laws that protect water quality and endangered species. Whether it is possible to restore the ecosystem without creating a reliable water supply is less obvious.

The Task Force recognized, however, that California will continue to rely on exports of water from the system to support existing and future consumptive uses throughout the state and that improvements in storage and conveyance, as well as changes in water management, are needed to protect the ecological integrity of the system. Thus, in explaining its conditional (and qualified) support for a canal or tunnel to move water from the Sacramento River to the south Delta pumps, the Task Force stated:

As a central protection of that reliability, the Task Force recommends, subject to further analysis, a two-channel approach—improving the existing channel through the Delta and a second channel designed for conveyance—to carry water to export pumps. Increased storage capacity, surface and ground, plus changed operations are also required to improve water supply reliability. Concurrently, Californians need to become less dependent on water supply from the Delta, both to reduce risk from a failed Delta conveyance system and to reduce risks to the ecosystem. A revitalized Delta ecosystem will require reduced diversions at critical times.

Id. at vi.

discretionary. To this end, the goals should be reflected in the state's constitution, its statutes, and its financing structures. That way, policy makers have the authority, responsibility, and long-term revenue stream necessary to accomplish the goals. In addition, the water contracts, water rights permits, and operational agreements that drive much of the day-to-day management of the Delta should also contain stipulations that recognize the co-equal goals.¹²⁸

Finally, the Task Force noted that the "reasonable use and public trust principles of the California Constitution provide a strong legal foundation for weighing water demands and uses."¹²⁹ The Delta Task Force's recognition that the public trust might actually play a role in the resolution of California's most important and vexing water conflict was a vast improvement on CALFED's neglect (if not abnegation) of the public trust.¹³⁰

2. The Sacramento–San Joaquin Delta Reform Act of 2009

The Delta Vision strategic plan had a profound influence on the legislation that became the Sacramento–San Joaquin Delta Reform Act of 2009.¹³¹ The Act followed the Task Force's recommendation and declared that the waters of the system shall be managed to achieve the co-equal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem."¹³² It also created a Delta Stewardship Council charged with developing a Delta Plan that *inter alia* will "[r]estore Delta flows and channels to support a healthy estuary and other ecosystems";

¹²⁸ *Id.* at 57.

¹²⁹ GOVERNOR'S DELTA VISION, FINAL REPORT, *supra* note 119, at 3-4. The Delta Task Force's characterization of the public trust is not quite accurate, as it is a common law, rather than constitutional, doctrine.

¹³⁰ The Delta Vision Report and Strategic Plan were transmitted to the Delta Vision Committee, which was comprised of the Secretary for Resources, the Secretary for Environmental Protection, the Secretary for Business, Transportation and Housing, the President of the California Public Utilities Commission, and the Secretary for Food and Agriculture. The Committee adopted most of the Task Force's recommendations, including the concept of co-equal goals, which the Committee concluded should be enacted into state law. DELTA VISION COMM., IMPLEMENTATION REPORT 1-6 (2008).

¹³¹ CAL. WATER CODE §§ 85000-85350 (West 2011).

¹³² *Id.* § 85054. In recognition of the dynamic nature of ecosystems, as well as the scientific understanding of those systems, the Legislature also stated that the "coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." *Id.*

improve water quality to meet drinking water, agriculture, and ecosystem goals; restore and protect habitat and migratory corridors; “promote statewide water conservation, water use efficiency, and sustainable use of water”; and “promote options for new and improved infrastructure relating to the water conveyance in the Delta, storage systems, and for the operation of both to achieve the coequal goals.”¹³³ The Act also reiterated that the “longstanding constitutional principle of reasonable use and the public trust doctrine shall be the foundation of state water management policy and are particularly important and applicable to the Delta.”¹³⁴

These legislative mandates — and the Delta Stewardship Council charged with implementing them — hold great promise for more ecologically sensitive and sustainable management of the Sacramento–San Joaquin River and Delta system. They give equal status to ecological integrity of the system and the competing consumptive demands that have brought the system to its current state of crisis. They require more efficient and more creative management of the state’s developed water resources. And they correct a fundamental failing of past efforts to protect the system by expressly directing that the public trust and reasonable use doctrines be the guiding principles for all future water allocation, use, and planning decisions.

C. *The Public Trust and Future Water Resources Planning*

The Delta Vision Task Force’s advocacy of the public trust and the Legislature’s restoration of the public trust doctrine to its essential position in the water resources planning process are likely to be seen as milestones in the history of California water policy. Yet there remains some cause for concern that these reforms may not adequately protect the essential needs of the ecosystem and effectuate the mandates of the public trust.

The first concern, of course, is the history of frustration and failure in Delta management and planning — a history that includes a multitude of litigation, political stalemate, regulatory failure, and most recently CALFED.¹³⁵ If past is indeed prologue, there is a significant risk that future efforts to protect the public trust in the Sacramento–

¹³³ *Id.* §§ 85200-85204, 85300-85304. The Delta Plan will guide all state and local actions that may affect the Delta. *Id.* § 85300(a). The Delta Stewardship Council also has authority to review decisions and plans of state, regional, and local agencies to ensure that they are consistent with the Delta Plan. *Id.* § 85225-85225.30.

¹³⁴ *Id.* § 85023.

¹³⁵ See HANAK ET AL., *supra* note 36, at 59-65.

San Joaquin River and Delta system will give way to the continued demands placed on the system by California's municipal, industrial, and agricultural water users.

Second, it is not clear how the "co-equal" goals of providing a more reliable water supply while also protecting, restoring, and enhancing the Delta ecosystem will be achieved. As Judge Hodge observed in his *Lower American River* opinion, although the public trust does not necessarily take precedence over competing uses, neither "can the importance of the public trust be diluted by treating it as merely another beneficial use under Article X, co-equal with irrigation, power production, and municipal water supply."¹³⁶ In other words, the legal concept of "co-equality" presents a significant risk that water managers and regulators will blithely balance consumptive and public trust uses against each other — though giving them equal weight in the balancing calculus — and come to an allocation decision that accommodates both without adequately ensuring the essential baseline of a sustainable ecosystem. Indeed, two recent water planning analyses — both involving the Sacramento–San Joaquin River and Delta system — provide early evidence that policymakers will interpret "co-equal" in precisely this manner.

1. The Bay Delta Conservation Plan

The Bay Delta Conservation Plan ("BDCP") negotiations are a multiparty effort to craft a "a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework."¹³⁷ The plan will serve as a Habitat Conservation Plan ("HCP") under section 10 of the federal Endangered Species Act¹³⁸ and as a Natural

¹³⁶ Statement of Decision, *Envtl. Def. Fund v. E. Bay Mun. Util. Dist.*, *supra* note 52, at 26.

¹³⁷ BAY DELTA CONSERVATION PLAN STEERING COMM., PROGRESS REPORT ON THE BAY DELTA CONSERVATION PLAN, PROGRESS REPORT ON THE BDCP, at 1-1 (Jan. 2012) (working draft). The BDCP participants include the federal and state agencies with jurisdiction over the waters of the Sacramento–San Joaquin River and Delta system, upstream and in-Delta diverters, environmental groups, and other interested constituencies. *Id.*

¹³⁸ 16 U.S.C. § 1539(a)(2) (2006). An HCP is an agreement between the federal agencies charged with administering the Endangered Species Act — the U.S. Fish and Wildlife Service and the National Marine Fisheries Service — and water users whose project operations may "take" an endangered or threatened species. The purpose of the agreement is to define the conditions under which the water users may impound or divert water without jeopardizing the protected species or adversely altering its critical habitat. An HCP also may authorize the water users to "take" a specified

Community Conservation Plan (“NCCP”) under California law.¹³⁹ The plan also will define how the CVP and SWP must be operated to comply with the state and federal endangered species acts, and it will form the basis for new biological opinions governing project operations.¹⁴⁰ In addition, the BDCP will coordinate the regulatory standards imposed by other laws, including the Clean Water Act, the Porter-Cologne Act, the National Environmental Policy Act, the California Environmental Quality Act, and the Sacramento–San Joaquin Delta Reform Act of 2009.¹⁴¹

The BDCP process would appear to be an ideal forum, not only for developing a comprehensive conservation planning strategy to help achieve the co-equal goals of water supply reliability and ecosystem restoration, but also for effectuating the public trust in the Bay-Delta estuary. The early reviews, however, are not promising.

At the request of the Secretary of the Interior and the Secretary of Commerce, the National Research Council (“NRC”) evaluated the BDCP working draft and concluded that it is deficient in several respects, including omission of San Francisco Bay from the Bay-Delta ecosystem, failure to synthesize the scientific studies of the multiplicity of stressors on the ecosystem, inadequate explanation of the requirements of adaptive management, and the absence of recommendations to address the fragmented and incoherent nature of water management in the Bay-Delta system.¹⁴² Most germane to the analysis of the public trust, though, are what the NRC panel called the BDCP’s failure to conduct an “effects analysis” and the lack of clarity about the BDCP’s fundamental purpose.¹⁴³ These criticisms focused on

number of the species without violating the statute. See Littleworth & Garner, *supra* note 61, at 151-53.

¹³⁹ CAL. FISH & GAME CODE §§ 2800-2840 (West 2011). An NCCP is similar to an HCP. It is an agreement between the California Department of Fish and Game and water users whose actions may “take” a species listed under the California Endangered Species Act. The purpose of the NCCP is to provide for the management and conservation of the species habitat for the protection of the species, while also allowing for the impoundment and diversion of water for consumptive uses. An NCCP also may include incidental take authorization. Littleworth & Garner, *supra* note 61, at 159-60.

¹⁴⁰ PROGRESS REPORT ON THE BDCP, *supra* note 138, at 1-12.

¹⁴¹ *Id.* at 1-10 to 1-16. The 2009 state legislation authorizes the Delta Stewardship Council to include the BDCP in its own Delta Plan. CAL. WATER CODE § 85320 (West 2011).

¹⁴² NAT’L RESEARCH COUNCIL, A REVIEW OF THE USE OF SCIENCE AND ADAPTIVE MANAGEMENT IN CALIFORNIA’S DRAFT BAY DELTA CONSERVATION PLAN 2-6 (2011) (pre-publication copy).

¹⁴³ *Id.* at 18-24.

the BDCP's decision to recommend construction of a forty-five mile subterranean pipeline that would convey water from the Sacramento River under the Delta to the CVP and SWP pumping plants in the south Delta.¹⁴⁴

The NRC panel observed that, although the BDCP had extensively described the species that inhabit or migrate through the Bay-Delta estuary, it limited its analysis of the adverse effects on these species and their habitat to those potentially caused by the proposed new conveyance facility. The BDCP draft:

[T]hus *presupposes* the choice of the project to be permitted. By contrast, a broadly focused conservation strategy, which the BDCP draft also say it is, requires a similarly broadly focused, comprehensive analysis. Such an effects analysis would include a systematic analysis of the factors affecting species and ecosystems of concern and the likely contribution of human-caused changes in the system. Such an analysis would then lead to the informed choice of options for reversing the decline of the ecosystem and its components, rather than only analyzing a pre-chosen option.¹⁴⁵

In the opinion of the NRC, this inadequate effects analysis stemmed from the BDCP's vague definition of its mission. As noted above, the BDCP is a forum for negotiating an HCP and NCCP as required to authorize the "incidental take" of protected species under the federal and state Endangered Species Acts. But, it also is a process for creating "a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework."¹⁴⁶

The NRC panel observed that if the BDCP's purpose is simply to devise a plan that will allow the taking of protected species as an incidental consequence of future CVP and SWP operations, then its early selection of a new Delta conveyance facility is legally justified. Under this scenario, the tunnel and pipeline would be the proposed project, and the HCP/NCCP would be the means by which its effects

¹⁴⁴ See BAY DELTA CONSERVATION PLAN STEERING COMM., PROGRESS REPORT ON THE BAY DELTA CONSERVATION PLAN, PROGRESS REPORT ON THE BDCP, at 4-14 to 4-19 (Nov. 2010) (working draft). In the draft reviewed by the NRC, the BDCP Steering Committee described this "tunnel/pipeline conveyance facility . . . as the new BDCP conveyance approach to allow for dual operations of the new north and existing south Delta diversions." It noted, however, that "it has not been decided if the conveyance facility would be a tunnel/pipeline or, alternatively, a canal facility." *Id.* at 4-14.

¹⁴⁵ NAT'L RESEARCH COUNCIL, *supra* note 142, at 21.

¹⁴⁶ PROGRESS REPORT ON THE BDCP, *supra* note 138, at 1-1.

on protected species would be evaluated. If the BDCP purports to have the broader purpose of formulating a comprehensive management plan for the Bay-Delta system, however, then the early focus on a new Delta conveyance facility skews and perverts the environmental analysis. The NRC panel explained:

To obtain an incidental take permit, it is logical to identify a proposed project or operation and design conservation methods to minimize and mitigate its adverse effects. But if the BDCP were largely a broader conservation program, designed to protect the ecosystem and provide a reliable water supply, then a more logical sequence would be to choose alternative projects or operating regimes only after the effects analysis was complete. Under that scenario, choosing the alternative first would be like putting the cart before the horse, or *post hoc* rationalization; in other words, choosing a solution before evaluating alternatives to reach a preferred outcome.¹⁴⁷

As described below, the decision-making sequence employed by the BDCP also violates the public trust.

2. The SWRCB Flow Criteria Report

The second piece of evidence for my concern that the public trust may be shortchanged in future water planning and allocation decisions is illustrated by the SWRCB's establishment of flow criteria as required by the Sacramento–San Joaquin Delta Reform Act of 2009. The Act states that the Board “shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources.”¹⁴⁸ It requires the Board to “use the best available scientific information” and directs that the flow criteria “shall include the volume, quality, and timing of water necessary for the Delta ecosystem under different conditions.”¹⁴⁹

The Board's analysis, which included consultation with the preeminent scientists in the fields of hydrology, fisheries biology, and ecology, is the most sophisticated and complete study of the public trust needs in the Bay-Delta system.¹⁵⁰ It confirmed that the decades of

¹⁴⁷ NAT'L RESEARCH COUNCIL, *supra* note 143, at 4; *see id.* at 22-23.

¹⁴⁸ CAL. WATER CODE § 85086(c)(1) (West 2011).

¹⁴⁹ *Id.*

¹⁵⁰ CAL. STATE WATER RES. CONTROL BD., DEVELOPMENT OF FLOW CRITERIA FOR THE SACRAMENTO-SAN JOAQUIN DELTA ECOSYSTEM 4 (2010) [hereinafter FLOW CRITERIA REPORT]. Although the Board looked broadly at the array of public trust interests, it focused on fisheries, water quality, and ecosystem services. *Id.* at 4-7.

over-appropriation of water have taken a severe toll on the resources of the ecosystem. For example, the Board found that “[r]ecent Delta flows are insufficient to support native Delta fishes for today’s habitats.”¹⁵¹ It noted that “[t]he effects of non-flow changes in the Delta ecosystem, such as nutrient composition, channelization, habitat, invasive species, and water quality, need to be addressed and integrated with flow measures,”¹⁵² but it also determined that the “best available science suggests that current flows are insufficient to protect public trust resources.”¹⁵³ The Board bluntly concluded that restoration of “environmental variability in the Delta is fundamentally inconsistent with continuing to move large volumes of water through the Delta for export.”¹⁵⁴

The Board then set about to correct this problem, stating that inflow from the Sacramento and San Joaquin River systems into the Delta must be increased to support a healthy and sustainable Bay-Delta ecosystem. “In order to preserve the attributes of a natural variable system to which native fish species are adapted,” the Board determined that the flow criteria should include:

- 75% of unimpaired Delta outflow from January through June;
- 75% of unimpaired Sacramento River inflow from November through June; and
- 60% of unimpaired San Joaquin River inflow from February through June.¹⁵⁵

¹⁵¹ *Id.* at 5.

¹⁵² *Id.* at 4.

¹⁵³ *Id.* at 2.

¹⁵⁴ *Id.* at 6. The Board also highlighted that the water quality needs of consumptive and instream beneficial uses of the waters of the Delta may be in tension with one another: “The drinking and agricultural water quality requirements of through-Delta exports, and perhaps even some current in-Delta uses, are at odds with the water quality and variability needs of desirable Delta species.” *Id.*

¹⁵⁵ *Id.* at 5. The SWRCB stated that other criteria include: “increased fall Delta outflow in wet and above normal years; fall pulse flows on the Sacramento and San Joaquin Rivers; and flow criteria in the Delta to help protect fish from mortality in the central and southern Delta resulting from operations of the State and federal water export facilities.” *Id.* It added that the criteria “should reflect the frequency, duration, timing, and rate of change of flows, and not just volumes or magnitudes.” *Id.* The Board also declared that the “[i]nflows should generally be provided from tributaries to the Delta watershed in proportion to their contribution to unimpaired flow unless otherwise indicated.” *Id.*

These flow criteria represent a significant increase over the fifty percent average unimpaired inflow and outflow that exists under current levels of aggregate diversions.¹⁵⁶

The flow criteria were controversial, and the Board was careful to note that “none of the determinations in this report have regulatory or adjudicatory effect. Any process with regulatory or adjudicative effect must take place through the State Water Board’s water quality control planning, water rights processes, or public trust proceedings in conformance with applicable law.”¹⁵⁷ When it sets flow criteria with actual regulatory effect, the SWRCB continued, it “reviews and considers all the effects of the flow objectives through a broad inquiry into all public trust and public interest concerns.”¹⁵⁸ These include non-fisheries’ public trust resources, as well as “a broad range of public interest matters, including economics, power production, human health and welfare requirements, and the effects of flow measures on non-aquatic resources (such as habitat for terrestrial species).”¹⁵⁹ The Board also stated that it “does not make any determination regarding the feasibility of the public trust criteria and consistency with the public interest in this report.”¹⁶⁰ And there’s the rub.

The vital question for the Delta ecosystem will be how the Board discharges its ultimate obligation to establish flow criteria *with* regulatory effect under the public trust, reasonable use, and public interest standards. The Board correctly recognized that the public trust does not trump other uses of the waters of the Sacramento–San Joaquin River and Delta system — neither as a matter of law nor in light of the realities of current and projected future demands that rely on the Delta for their water supplies. This is consistent with the California Supreme Court’s holdings in *Audubon* that the SWRCB “has the power to grant usufructuary licenses that will permit an appropriator to take water from flowing streams and use that water in a distant part of the state, even though this taking does not promote, and may unavoidably harm, the trust uses at the source stream”¹⁶¹ and that “[a]ll uses of water, including public trust uses, must now conform to the standard of reasonable use.”¹⁶²

¹⁵⁶ *Id.* at 28-29.

¹⁵⁷ *Id.* at 3.

¹⁵⁸ *Id.* at 2.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 3.

¹⁶¹ *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 727 (Cal. 1983).

¹⁶² *Id.* at 725.

While the Board must evaluate the public trust in conjunction with the competing demands on the resource, it must weigh and accommodate public trust and extractive uses in a careful sequence that (1) identifies public trust needs, (2) analyzes the effects of the extractive uses (usually water impoundments, diversions, and alteration of flows) on the public trust, (3) evaluates the uses that are served by the diversions of water, and (4) determines the feasibility of altering or limiting the extractive uses to provide reasonable protection for public trust requirements. The risk posed by a less than careful application of the public trust doctrine is that trust uses and consumptive uses will simply be weighed and balanced against each other in a vague decision-making calculus that inevitably will prefer water supply reliability over the documented and now compelling needs of the Delta ecosystem.

This risk is highlighted by the perfunctory, if not sanguine, response of the Delta exporters to the SWRCB's Flow Criteria Report — a response based in large part on the Board's assurances that any future application of the public trust to the Bay-Delta system would include a "balancing of public trust values and water rights."¹⁶³ The reaction of Tom Birmingham, General Manager of the Westlands Water District, is emblematic. "The information certainly is interesting and informative," he said, "but it's immaterial. Protecting the public trust resources are not the only goals of the planning processes."¹⁶⁴

This facile balancing of the public trust against other important goals is cause for concern because the temptation to encroach on the public trust in furtherance of the countervailing goal of security of water supply will always be great. Regulation and planning that give equal weight to these goals — that starts with the presumption that both are at play and that environmental baseline requirements and water supply needs can be balanced and accommodated in the public interest — will tend to resolve scientific uncertainties, policy judgments, and questions of water rights in favor of the latter. This is the lesson of CALFED, the BDCP, and the other previous efforts to protect *in situ* uses of water in the Bay-Delta system.

¹⁶³ FLOW CRITERIA REPORT, *supra* note 151, at 3.

¹⁶⁴ Kelly Zito, *Study: Cut in Delta Water Use Needed for Fish*, S.F. CHRONICLE, Aug. 4, 2010, at A-1.

IV. A MODEST PROPOSAL

To minimize this risk that the public trust will be lost or diminished at the outset, I offer a modest proposal — one that is based on the wisdom of *Lower American River*, *Putah Creek*, and *Mono Lake*.

The SWRCB first should establish water quality, stream flow, temperature, and other criteria as required to protect public trust uses. These would be similar to the Flow Criteria Report described previously. As with the lake elevation level and other standards established in the Mono Lake case, these criteria would not necessarily provide full or ideal protection for all public trust uses. But they would be set at levels that, based on the best available science, would assure the survival and propagation of fish and maintain essential ecosystem services and integrity. Borrowing from section 109 of the Clean Air Act,¹⁶⁵ these criteria also would include an “adequate margin of safety” to ensure that changes in hydrology, uncertainties in the science, problems with monitoring and enforcement, and other variables do not encroach upon the vital needs of the ecosystem.

These criteria would serve as the environmental baseline for all water resources planning, permitting, and enforcement. The water needed to fulfill this environmental baseline would effectively be set aside and excluded from the water available for impoundment, diversion, and use by all water right holders. This set-aside would be incorporated into, and place ecosystem protection limits on, the operation of existing water projects and the planning of future water resources development.

Planning agencies such as CALFED would be required to ensure the protection of defined public trust needs before they propose new projects or advise existing water users on the quantity of water available to support existing or proposed increases in impoundments and diversions. Environmental protection initiatives such as BDCP and the Delta Stewardship Council would be similarly bound to ensure protection of the public trust in determining how much, and under what conditions, water may be diverted from the ecosystem. Regulatory agencies such as the SWRCB and the Regional Boards could grant permits, establish water quality standards and flow requirements, and apportion responsibility for meeting those requirements only after determining that their actions would not encroach upon or interfere with the achievement of the defined public

¹⁶⁵ 42 U.S.C. § 7409(b)(1) (2006) (directing Environmental Protection Agency to establish ambient air quality standards that, “allowing an adequate margin of safety, are requisite to protect public health”) (emphasis added).

trust requirements. And the courts would follow the lead of Judges Hodge and Park and recognize the public trust as an environmental baseline that limits the rights of consumptive users in water rights adjudications.

Therefore, as their first responsibility, all agencies with authority over California's waters must adhere to and ensure the protection of the defined public trust needs of the ecosystem. The only lawful exception to this directive would be based on a finding that it would be infeasible to fulfill the environmental baseline in individual circumstances. The burden of proof would be placed on the agency (or the proponents of the new project or existing water use) to demonstrate that:

1. The needs of the competing consumptive uses are compelling;
2. There are no other reasonably available and affordable sources of supply, including transfers, conjunctive management, and use of reclaimed waste water; and
3. The water right holder and its derivative users have deployed all reasonable conservation measures to minimize their demands on the resource.

This decision-making structure, or something similar to it, is essential to ensuring meaningful protection of the public trust in future water resources regulation and planning decisions.

CONCLUSION

The distinguished fisheries biologist Peter Moyle has concluded that, despite all of our laws and administrative efforts — water quality standards established under the Porter-Cologne Act,¹⁶⁶ the Endangered Species Act,¹⁶⁷ section 5937 of the California Fish and Game Code,¹⁶⁸ Environmental Protection Agency vetoes and intervention under the Clean Water Act,¹⁶⁹ the Central Valley Project Improvement Act,¹⁷⁰

¹⁶⁶ CAL. WATER CODE §§ 13000, 13050(j), 13140-13148 (West 2011); see *SWRCB cases*, 39 Cal. Rptr. 3d 189, 207 (Ct. App. 2006); *United States v. SWRCB*, 227 Cal. Rptr. 161, 200 (Ct. App. 1986). For a summary of the SWRCB's struggles to protect water quality in the Sacramento–San Joaquin River and Delta system, see HANAK ET AL., *supra* note 36, at 59-62.

¹⁶⁷ 16 U.S.C. §§ 1531, 1539 (2006); see HANAK ET AL., *supra* note 36, at 61-62.

¹⁶⁸ CAL. FISH & GAME CODE § 5937 (West 2011).

¹⁶⁹ See HANAK ET AL., *supra* note 36, at 61.

¹⁷⁰ Central Valley Project Improvement Act, Pub. L. No. 102-575, 106 Stat. 4706

CALFED¹⁷¹, the Delta Reform Act,¹⁷² the BDCP,¹⁷³ and the public trust among them — “the fish are losing.”¹⁷⁴ As recently reported by Professor Moyle and others:

Of 129 kinds of native fish in California, 5 percent are extinct, 24 percent are listed as threatened or endangered species, 13 percent are eligible for listing today, and another 40 percent are in decline In other words, over 80 percent of the native fishes are extinct or imperiled to a greater or lesser degree.¹⁷⁵

In addition, all runs of salmon, steelhead, delta smelt and its relatives, sturgeon, and striped bass are at perilously low levels because of dams, water diversions, flow alteration, pollution, destruction of wetlands, and other human causes.¹⁷⁶

After reviewing these dismaying statistics, Professor Moyle usually adds: “People always ask me, ‘How much water do the fish need?’ And they ask that because they usually want to take all the rest.” He means this as a criticism of our existing water policies, but I have come to think of it as the best way of thinking about the public trust.

If there is any prospect of preserving our remaining fish species and restoring the integrity of the aquatic ecosystems on which they depend for their survival, then we must first decide how much water the fish need. Second, we must mean it; we must effectively set this water aside and insulate it from new and existing diversions. And third, we must structure our water planning, water allocation, and water rights enforcement decision-making to ensure that we protect the water needed to fulfill the ecological baseline that the public trust embodies. If we do not make these changes to ensure that the public trust is meaningfully considered and actually protected in California’s future water resources management, we are likely to see California’s stream flows, fisheries, and aquatic ecosystems continue to decline “past hope, and in despair, that way past grace.”¹⁷⁷

(1992). For a brief description of the CVPIA and California water policy, see HANAK ET AL., *supra* note 36, at 62.

¹⁷¹ See *supra* Part V.A.

¹⁷² CAL. WATER CODE §§ 85000-85350 (West 2011).

¹⁷³ See *supra* Part V.C.1.

¹⁷⁴ HANAK ET AL., *supra* note 36, at 200.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.* at 200-06.

¹⁷⁷ WILLIAM SHAKESPEARE, CYMBELINE, act 1, sc. 1, in *The Riverside Shakespeare: The Complete Works 1571* (2d ed. 1997).