"In Search of Bigfoot": The Common Law Origins of Article X, Section 2 of the California Constitution

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I. Introduction

In a constitution laden with obscure and sometimes trivial provisions, Article X, section 2 is surely among the least known and least appreciated. Enacted by initiative in 1928, this section directs that all uses of California's water resources must be reasonable and for beneficial purposes.[1] The policy of Article X, section 2 is set forth in its first sentence, which provides:

> [B]ecause of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.[2]

The second sentence of the amendment implements this policy, declaring that

> [t]he right to water . . . is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.[3]

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1. Article X, section 2 originally was codified as Article XIV, section 3 of the California Constitution. It was reenacted verbatim and recodified on June 6, 1976. *See* CAL. CONST. art. X, § 2 (West Supp. 1989). Several cases discussed in this paper refer to the 1928 amendment as Article XIV, section 3. *E.g.*, Joslin v. Marin Mun. Water Dist., 67 Cal. 2d 132, 429 P.2d 889, 60 Cal. Rptr. 377 (1967), *see infra* text accompanying notes 10-17; Gin S. Chow v. City of Santa Barbara, 217 Cal. 673, 22 P.2d 5 (1933), *see infra* text accompanying notes 208-212 & 228-233; Peabody v. City of Vallejo, 2 Cal. 2d 351, 40 P.2d 486 (1935), *see infra* text accompanying notes 213-227. In describing these cases, I have changed all references to the constitutional provision to Article X, section 2.

2. CAL. CONST. art. X, § 2.

3. *Id.*

The enshrinement of water rights law in the constitution is not unique to California. Similar provisions appear in the constitutions of many other western states.[4] Nonetheless, it probably would surprise most students of constitutional law—accustomed to grappling with such matters as rights of expression, equal protection, and the structure of government—to learn that their state constitution has something to say about the Peripheral Canal, Mono Lake, and perhaps even the most recent drought.

II. The Sleeping Giant

I was tempted to borrow for this paper the title of the conference itself because the sobriquet "From Gold Dust to Silicon Chips" connotes a dynamic constitution, interpreted and amended to accommodate, and to keep pace with, changing economic, political, and social conditions. The title would be particularly appropriate for this paper because, perhaps more than any other provision of the California Constitution, the rights and powers set forth in Article X, section 2 are protected and administered in accordance with evolving societal values. Restrained by the thought that it would be presumptuous to appropriate to my exclusive use the theme of the entire Symposium, I have drawn my title instead from an essay on California water law written by my friend and colleague, Harrison Dunning. Noting that the doctrine of reasonable use has not traditionally played a major role in controversies over the allocation of the state's water resources, Professor Dunning described Article X, section 2 as "something of a sleeping giant, which may be awakened in future years as water grows shorter in supply and the interest in water conservation increases."[5]

4. *See, e.g.*, ARIZ. CONST. art. XVII, § 2 ("All existing rights to the use of any waters in the State for all useful or beneficial purposes are hereby recognized and confirmed."); COLO. CONST. art. XVI, § 6 ("The right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied."); IDAHO CONST. art. 15, § 3 ("The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit the use thereof for power purposes."); MONT. CONST. art. IX, § 3 ("All existing rights to the use of any water for any useful or beneficial purpose are hereby recognized and confirmed."); N.M. CONST. art. XVI, § 2 ("The unappropriated water of every natural stream . . . within the state of New Mexico, is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right."); *id.* § 3 ("Beneficial use shall be the basis, the measure and the limit of the right to the use of water."); WYO. CONST. art. 8, § 3 ("Priority of appropriation for beneficial uses shall give the better right. No appropriation shall be denied except when such denial is demanded by the public interests.").

5. H. DUNNING, WATER ALLOCATION IN CALIFORNIA: LEGAL RIGHTS AND REFORM NEEDS 29 (1982).

Two cases decided since Professor Dunning delivered this prognosis suggest that the giant has risen. These cases—which involve the preservation of Mono Lake[6] and the accommodation of the panoply of instream and consumptive uses that depend on the water resources of the Central Valley[7]—highlight the interplay between private and public rights embodied in Article X, section 2. The opinions forcefully reiterate that the constitution limits water rights by mandating that they be exercised in a reasonable manner for beneficial purposes, as defined by contemporary social values. Moreover, they hold that Article X, section 2 grants the state authority to adjust water rights and to reallocate water from existing users to new uses as necessary to maintain this reasonable use standard. These cases, along with the influential decision in *Joslin v. Marin Municipal Water District*,[8] are the subject of part III of this essay.

Following this discussion of the modern powers of the giant, part IV analyzes the common law antecedents of Article X, section 2, and part V describes the enactment of the amendment in 1928. They show that since its inception in 1855 California water rights law has developed pragmatically to facilitate the accomplishment of changing economic and, more recently, environmental purposes. As a consequence, California water rights have always been a peculiarly fragile species of property rights, heavily dependent on judicial perceptions that the private right is consistent with the broader public interest. Historically, those public values have been economic—evolving over time from gold mining to agriculture to commerce to industrial development. More recently, public values have come to include the supply of clean, potable water for a growing residental population and provision of adequate flows for instream uses, including fish and wildlife preservation, recreation, and aesthetic enjoyment.

The awakening of the slumbering giant described by Professor Dunning is likely to have profound effects on California's future. In a state whose agricultural economy, industrial base, and domestic population are almost entirely dependent on bringing water from the Sierra Nevada and the Colorado River to distant locations south and west, the dynamic relationship between private and public rights to water embodied in Article X, section 2 will play a major role in determining the outcome of such prominent social controversies as whether the ecosystem of San Fran-

6. National Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346 (1983); *see infra* text accompanying notes 18-39.

7. United States v. State Water Resources Control Bd., 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986); *see infra* text accompanying notes 40-57.

8. 67 Cal. 2d 132, 429 P.2d 889, 60 Cal. Rptr. 377 (1967); *see infra* text accompanying notes 10-17.

cisco Bay will thrive or risk further degradation; whether the striped bass and salmon runs in the Delta are preserved; whether cities or farmers will bear the greater burden of conservation to make additional water available for these instream uses; and whether the state's growing population will be served with water from new projects, such as a Peripheral Canal, or with water reallocated from that presently claimed by agriculture, industry, and domestic consumers.[9]

Despite its commanding presence in California water resources law, Article X, section 2 is not well understood. This essay is the beginning of a quest to explore the lineage of the giant. Hence, I have chosen the title "In Search of Bigfoot," taken from the popular name for California's most famous giant, Sasquatch.

III. The Modern Era of California Water Law: Three Applications of the Reasonable Use Doctrine

Before turning to the main thesis of this paper—that California water rights historically have been subject to the requirement that they be exercised in accordance with contemporary societal values—it is necessary to consider three significant recent applications of the reasonable use doctrine. For only through an understanding of the controversy surrounding the interplay between private and public rights can the historical significance of the common law background to Article X, section 2 be fully appreciated.

A. *Joslin v. Marin Municipal Water District*

Appropriately, the most important judicial interpretation of this obscure constitutional provision came in a minor dispute along a tiny coastal stream in western Marin County. Notwithstanding its humble origins, however, the supreme court's opinion in *Joslin v. Marin Municipal Water District*[10] is the cornerstone of modern California water law.

9. The California Department of Finance has projected that between 1985 and 2010 the state's population will increase by 39 percent, from 26.1 million to 36.3 million. DEPARTMENT OF WATER RESOURCES, CALIFORNIA WATER: LOOKING TO THE FUTURE 5-6 (1987) (Bulletin 160-87). Based on these projections, the Department of Water Resources recently predicted that the demand for water by municipal and industrial users will increase 32 percent between 1985 and 2010. *Id.* at 5. It also estimated that the demand for agricultural uses will remain relatively constant over this period. *Id.* at 11.

The allocational issues described in the text are currently the subject of the Bay-Delta water quality hearings pending before the State Water Resources Control Board. *See* STATE WATER RESOURCES CONTROL BOARD, DRAFT REVISED WORKPLAN FOR THE PROCEEDINGS ON THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN DELTA ESTUARY (July 20, 1989).

10. 67 Cal. 2d 132, 429 P.2d 889, 60 Cal. Rptr. 377 (1967).

The Joslins owned and operated a small sand and gravel company along Nicasio Creek. For twenty-two years, they relied on the unimpaired flow of the creek, which would carry rock and silt onto the banks of their riparian land. The Marin Municipal Water District (MMWD) is a publicly owned, municipal water supplier. MMWD obtained a permit from the State Water Rights Board, the predecessor to the State Water Resources Control Board, to construct a dam across the creek about one mile upstream of the Joslins' land and to impound and divert the waters of the creek for domestic water supply. The Joslins did not protest the application, later claiming that they had no notice of the proceedings. Rather, after MMWD constructed the dam and began diverting water, the Joslins sued for inverse condemnation on the ground that the dam had impaired their riparian rights by blocking the suspended rock and silt from flowing down the creek onto their land. The Joslins alleged that MMWD had diminished the value of their land by $250,000 and had deprived them of $25,000 worth of sand and gravel by the time of the trial.[11]

In a unanimous opinion, the California Supreme Court rejected the Joslins' claim. The court began by observing that, to prevail on their takings claim, the Joslins must "first establish[] the legal existence of a compensable property interest."[12] Relying on Article X, section 2, the court stated that "[s]uch an interest consists in the right to a *reasonable* use of the flow of water."[13] Although the evaluation of "what is a reasonable use of water depends on the circumstances of each case," the court declared that "such an inquiry cannot be resolved *in vacuo* isolated from statewide considerations of transcendent importance."[14] According to the court, a paramount factor was the "increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in [Article X, section 2]."[15]

The court reasoned that the Joslins' use of the unimpaired flow of Nicasio Creek to deposit rock and silt on their lands, although long-standing, had become unreasonable in light of the new demands of MMWD. It concluded that "since there was and is no property right in an unreasonable use [of water], there has been no taking or damaging of property by the deprivation of such use and, accordingly, the deprivation is not compensable."[16]

11. *Id.* at 134-35, 429 P.2d at 890-91, 60 Cal. Rptr. at 378-79.
12. *Id.* at 143, 429 P.2d at 897, 60 Cal. Rptr. at 385.
13. *Id.* (emphasis in original).
14. *Id.* at 140, 429 P.2d at 894, 60 Cal. Rptr. at 382.
15. *Id.*
16. *Id.* at 145, 429 P.2d at 898, 60 Cal. Rptr. at 386.

Joslin is something of an enigma. It may simply have been a decision not to countenance a use of water that required an inordinate percentage of the flow of the stream. Interpreted narrowly, *Joslin* might represent little more than a statement that egregiously wasteful uses of water violate Article X, section 2. The case may also exemplify the balancing of competing interests required by the constitution's reasonable use doctrine. Construed broadly, *Joslin* may stand as a pronouncement that Article X, section 2 requires all water rights to be exercised in accordance with contemporary economic conditions and social values. As these factors change and new demands for water arise, the state may adjust existing water rights to accommodate the relatively more valuable uses of the state's scarce water resources.

For fifteen years, it was unclear whether the California courts would interpret *Joslin* expansively or limit the decision to its peculiar facts.[17] In two major cases decided in the past decade, however, the courts have made clear that *Joslin* was the prelude to a resurgence of the dynamic conception of water rights embraced by the doctrine of reasonable use. As described in part IV, this evolutionary construction of Article X, section 2 represents a return to the utilitarian foundations of California water resources law.

B. *National Audubon Society v. Superior Court*

In contrast to *Joslin*, *National Audubon Society v. Superior Court*[18] can not be described as a trivial dispute. At issue were the water rights of Los Angeles in Mono Basin, located to the east of Yosemite National Park. The Los Angeles Department of Water and Power (DWP) began appropriating water in 1940 from four of the five streams that feed Mono Lake. DWP increased its diversions in 1970 to almost 100,000 acre feet per year, virtually the entire flow of the combined streams.[19] The water

17. In cases following *Joslin*, the courts held that Article X, section 2 authorized the State Water Resources Control Board (1) to enjoin riparians along the Napa River from diverting water to spray on wine grapes during periods of frost and to require the riparians to construct water storage facilities from which they could withdraw water during such periods, People *ex rel.* State Water Resources Control Bd. v. Forni, 54 Cal. App. 3d 743, 126 Cal. Rptr. 851 (1976); (2) to relegate unexercised riparian rights to a priority below that of all existing water water rights holders in a statutory adjudication of an entire stream system, *In re* Waters of Long Valley Creek Stream Sys., 25 Cal. 3d 339, 599 P.2d 656, 158 Cal. Rptr. 350 (1979); (3) to direct an appropriator to move its point of diversion for the purpose of protecting instream uses of the river below the existing point of diversion, Environmental Defense Fund v. East Bay Mun. Util. Dist., 26 Cal. 3d 183, 605 P.2d 1, 161 Cal. Rptr. 466 (1980); and (4) to require a prescriptive user to obtain a permit to appropriate water, People v. Shirokow, 26 Cal. 3d 301, 605 P.2d 859, 162 Cal. Rptr. 30 (1980).

18. 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346 (1983).

19. *Id.* at 424, 658 P.2d at 711, 189 Cal. Rptr. at 348.

exported from Mono Basin represents almost one-fifth of the total supplies available to Los Angeles.[20]

The plaintiffs—a consortium of environmental organizations led by the National Audubon Society and the Committee to Save Mono Lake—challenged DWP's appropriative rights on the ground that the diversions imperiled the public trust in Mono Lake. A long-recognized doctrine of California natural resources law,[21] the public trust grants the public certain rights in the navigable waters of the state. These rights include navigation, commerce, fishing, boating, and other forms of water recreation.[22] More importantly, the doctrine also confers on the public the right to preserve the navigable waters and adjacent lands embraced within the public trust " 'in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.' "[23]

The plaintiffs alleged that DWP's appropriations threatened the public trust in Mono Lake in several ways. First, the diversions from the feeder streams had lowered the level of the lake by forty-three feet and had reduced its surface area by twenty-five square miles.[24] Second, as the supply of fresh water to the lake diminished, the salinity level increased, threatening the food chain as well as the lake's availability as a source of potable water for migratory birds.[25] Third, if the level of Mono Lake continued to fall, land bridges would form between the islands in the lake and the shoreline. This would allow predators to come onto the islands and destroy the habitat of nesting birds.[26] Fourth, as the lake receded, "it has exposed more than 18,000 acres of lake bed composed of very fine silt which, once dry, easily becomes airborne in winds. This silt contains a high concentration of alkali and other minerals that irritate the mucous membranes and respiratory systems of humans and other animals."[27]

20. W. KAHRL, WATER AND POWER 433 (1982).

21. For a review of the development of the public trust in California, see *Audubon*, 33 Cal. 3d at 433-41, 658 P.2d at 718-24, 189 Cal. Rptr. at 355-61; State v. Superior Court (Lyon), 29 Cal. 3d 210, 226-33, 625 P.2d 239, 248-53, 172 Cal. Rptr. 696, 705-10 (1981); Berkeley v. Superior Court, 26 Cal. 3d 515, 521-25, 606 P.2d 362, 364-67, 162 Cal. Rptr. 327, 329-32 (1980); Dunning, *The Significance of California's Public Trust Easement for California's Water Rights Law*, 14 U.C. DAVIS L. REV. 357 (1980).

22. *Audubon*, 33 Cal. 3d at 434, 658 P.2d at 719, 189 Cal. Rptr. at 356.

23. *Id.* at 434-35, 658 P.2d at 719, 189 Cal. Rptr. at 356 (quoting Marks v. Whitney, 6 Cal. 3d 251, 259-60, 491 P.2d 374, 380, 98 Cal. Rptr. 790, 796 (1971)).

24. 33 Cal. 3d at 428-29, 658 P.2d at 714, 189 Cal. Rptr. at 351.

25. *Id.* at 430, 658 P.2d at 715, 189 Cal. Rptr. at 352.

26. *Id.* at 430, 658 P.2d at 716, 189 Cal. Rptr. at 353.

27. *Id.* at 430-31, 658 P.2d at 716, 189 Cal. Rptr. at 353.

As the supreme court surveyed the dispute, it observed:

> This case brings together for the first time two systems of legal thought: the appropriative water rights system which since the days of the gold rush has dominated California water law, and the public trust doctrine . . . . Ever since we first recognized that the public trust protects environmental and recreational values, the two systems of legal thought have been on a collision course. They meet in a unique and dramatic setting which highlights the clash of values.[28]

The court was highly cognizant of the interests at stake. It characterized Mono Lake as "a scenic and ecological treasure of national significance, imperiled by continued diversions of water."[29] Yet, it also acknowledged that "the need of Los Angeles for water is apparent, its reliance on [its water] rights . . . evident, the cost of curtailing diversions substantial."[30]

The supreme court did not settle the controversy between the Audubon Society and Los Angeles.[31] It did decide, however, that the state may modify the city's appropriative rights as necessary to accommodate the public and private rights in the waters of Mono Lake. The court held 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."[32] It recognized that "[t]he population and economy of this state depend upon the appropriation of vast quantities of water for uses unrelated to in-stream trust values."[33] Accordingly, the court acknowledged that

> [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 far as consistent with the public interest, the uses protected by the trust.[34]

This obligation to weigh the public trust against the need for consumptive uses of the resource does not end when the state grants a water right. Rather, "[o]nce the state has approved an appropriation, the public trust

28. *Id.* at 425, 658 P.2d at 712, 189 Cal. Rptr. at 349 (citations omitted).

29. *Id.*

30. *Id.*

31. Since the supreme court's decision in 1983, the *Audubon* litigation has languished in a procedural quagmire. *See* National Audubon Soc'y v. Department of Water and Power, 858 F.2d 1409 (9th Cir. 1988). In a separate case based on sections 5937 and 5946 of the California Fish and Game Code, however, the advocates of protection for Mono Lake have succeeded in enjoining Los Angeles from diverting water from the creeks that supply the lake to the extent that such water is needed to maintain the trout fisheries in the streams. California Trout, Inc. v. State Water Resources Control Bd., 207 Cal. App. 3d 585, 255 Cal. Rptr. 184 (1989).

32. 33 Cal. 3d at 446, 658 P.2d at 728, 189 Cal. Rptr. at 364.

33. *Id.*, 658 P.2d at 727, 189 Cal. Rptr. at 364 (footnote omitted).

34. *Id.* at 446-47, 658 P.2d at 728, 189 Cal. Rptr. at 365 (citation omitted).

imposes a duty of continuing supervision over the taking and use of the appropriated water."[35] The court concluded that, "[i]n exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs."[36]

Audubon confirms the broad reading of *Joslin* discussed above.[37] It unambiguously holds that the state, acting either through the courts or the State Water Resources Control Board, may modify existing water rights to ensure that the uses of water authorized by the state keep pace with contemporary economic needs and public values. Although the court did not base its holding on the doctrine of reasonable use,[38] the case is nonetheless a landmark in the developing jurisprudence of Article X, section 2. The court declared that the 1928 amendment "establishes state water policy" and emphasized that "[a]ll uses of water, including public trust uses, must now conform to the standard of reasonable use."[39] Thus, *Audubon* holds that the state may modify its determination that a particular consumptive use of water is reasonable under Article X, section 2 whenever public values change from a utilitarian to a preservationist interest in the water resource. Under Article X, section 2, the state also may amend private rights to use the resource for consumptive purposes as necessary to ensure that the higher valued public trust purposes are "reasonably" protected.

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35. *Id.* at 447, 658 P.2d at 728, 189 Cal. Rptr. at 365.

36. *Id.*

37. *See supra* text accompanying notes 16-17.

38. The court noted the argument advanced by the California Attorney General that the State Water Resources Control Board could reconsider Los Angeles' water rights "under the doctrine of unreasonable use under article X, section 2." 33 Cal. 3d at 447 n.28, 658 P.2d at 728 n.28, 189 Cal. Rptr. at 365 n.28. In response, DWP argued that, because it used the water exported from Mono Basin for domestic purposes, *see* CAL. WATER CODE § 106 (West 1971) (declaring that "the use of water for domestic purposes is the highest use of water" recognized by state law), its water rights were "prima facie reasonable." 33 Cal. 3d at 447 n.28, 658 P.2d at 728 n.28, 189 Cal. Rptr. at 365 n.28. Citing *Joslin*, 67 Cal. 2d at 138-41, 429 P.2d at 893-95, 60 Cal. Rptr. at 381-83, the court stated that the dispute "centers on the test of unreasonable use—does it refer only to inordinate and wasteful use of water . . . or to any use less than the optimum allocation of water?" 33 Cal. 3d at 447 n.28, 658 P.2d at 728 n.28, 189 Cal. Rptr. at 365 n.28 (citations omitted). In view of its reliance on the public trust, the court concluded that it was unnecessary to decide the case on the basis of the reasonable use doctrine. *Id.*

39. 33 Cal. 3d at 443, 658 P.2d at 725, 189 Cal. Rptr. at 362. The court also noted that "[a]fter the effective date of the 1928 amendment, no one can acquire a vested right to the unreasonable use of water." *Id.* at 443 n.23, 658 P.2d at 725 n.23, 189 Cal. Rptr. at 362 n.23. (citing *Joslin*, 67 Cal. 2d at 145, 429 P.2d at 898, 60 Cal. Rptr. at 386).

C. *The Delta Water Cases*

Any doubts about the state's authority to reapportion existing water rights that lingered after *Audubon* were dispelled by the opinion of the court of appeal in *United States v. State Water Resources Control Board*,[40] commonly referred to as the *Delta Water Cases*.[41] As a panoramic dissertation on California water resources law, the opinion is a doctrinal landmark. Moreover, because it potentially affects the public and private rights to most of the water used in the Central Valley, the Bay Area, and Southern California, it may well be the single most important water resources decision in the history of California.

The *Delta Water Cases* reviewed the authority of the State Water Resources Control Board to establish water quality standards for the Sacramento and San Joaquin River Delta Estuary and to adjust the permits of the two largest appropriators in the basin—the Central Valley Project (CVP)[42] and the State Water Project (SWP)[43]—as necessary to

40. 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986).

41. Another common title for the case is *Racanelli*, after its author, Justice John T. Racanelli. *See, e.g.*, State Water Resources Control Board, *supra* note 9, at 3; Littleworth, *The Public Trust vs. the Public Interest*, 19 PAC. L.J. 1201, 1209 & n.39 (1988); Schultz & Weber, *Changing Judicial Attitudes Towards Property Rights in California Water Resources: From Vested Rights to Utilitarian Reallocations*, 19 PAC. L.J. 1031, 1091 & n.257 (1988). Although the *Delta Water Cases* may be Justice Racanelli's most significant opinion, naming the opinion after its author is as inappropriate as it would be to refer to Brown v. Board of Education, 347 U.S. 483 (1954), as *Warren*, or Marbury v. Madison, 5 U.S. (1 Cranch) 137 (1803), as *Marshall*.

42. The CVP is an integrated system of reservoirs, canals, and water distribution facilites operated by the United States Bureau of Reclamation. Its principal components are Lake Shasta Reservoir, which impounds the waters of the upper Sacramento River and its tributaries; Claire Engle Reservoir, which impounds the waters of the Trinity River for trans-basin diversion into the Sacramento River; Folsom Reservoir on the American River; New Melones Reservoir on the Stanislaus River; the Tracy Pumping Plant, which diverts water from the Delta for export to the San Joaquin Valley; and Friant Dam, which impounds the waters of the San Joaquin River for export to the southern San Joaquin Valley and to the Tulare Basin. *See* W. KAHRL, THE CALIFORNIA WATER ATLAS 46-50 (1979). The CVP has a water supply capacity of approximately 9.45 million acre feet per year. The lion's share of this water goes to agricultural users. DEPARTMENT OF WATER RESOURCES, *supra* note 9, at 25.

43. The SWP complements the CVP. As its name indicates, the SWP is owned by the state and is operated by the Department of Water Resources. Its principal components are Lake Oroville Reservoir, which impounds the waters of the Feather River for storage and transport to the Delta; the North Bay Aqueduct and South Bay Aqueduct, which deliver water to municipal, industrial, and agricultural users in the San Francisco Bay Area; Clifton Court Forebay and the Harvey O. Banks Pumping Plant, which diverts water from the Delta; and the Edmund G. Brown, Sr. California Aqueduct, which transports that water to agricultural users in the San Joaquin Valley and to municipal and industrial users in Southern California. *See* W. KAHRL, *supra* note 42, at 50-56. The water supply capacity of the SWP is approximately 2.3 million acre-feet per year. DEPARTMENT OF WATER RESOURCES, *supra* note 9, at 24.

implement those standards.[44] According to the court of appeal, the Board had established the water quality standards based on its assessment of the amount of water to which senior water right holders in the Delta were entitled and on its determination of the water quality that would have existed in the Delta without the operations of the CVP and the SWP.[45] In the water rights decision, commonly referred to as D-1485, the Board then modified the CVP and SWP permits to require the two projects to release water into the Delta system and to curtail their exports from the Delta as necessary to maintain "without project" water quality standards.[46] The court overturned the water quality standards adopted by the Board, holding that the standards should be based on the "reasonable protection of beneficial uses" in the Delta and the Suisun Marsh, rather than on the water quality that would exist in the absence of the projects.[47] As did the supreme court in *Audubon*, the court of appeal emphasized that the Board was not required to prefer instream uses over consumptive or export uses of the water.[48] Rather,

> [the] statutory charge grants the Board broad discretion to establish reasonable standards consistent with overall statewide interest. The Board's obligation is to attain the highest reasonable water quality "considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.[49]

Although the *Delta Water Cases* involved a panoply of legal questions, three aspects of the court's opinion are pertinent to the doctrinal development of Article X, section 2. First, the court ruled that the Board's authority to ensure compliance with the water quality laws is based in part on its powers under the reasonable use doctrine. In reaching this judgment, the court adopted the expansive interpretation of *Joslin*. The court began by observing that in D-1485 "the Board determined

44. STATE WATER RESOURCES CONTROL BOARD, WATER QUALITY CONTROL PLAN: SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH (1978); STATE WATER RESOURCES CONTROL BOARD, WATER RIGHTS DECISION 1485: SACRAMENTO-SAN JOAQUIN DELTA AND SUISUN MARSH (1978).

45. 182 Cal. App. 3d at 115-18, 227 Cal. Rptr. at 177-79.

46. *Id.* at 119, 227 Cal. Rptr. at 180.

47. *Id.* at 119-20, 227 Cal. Rptr. at 180-81. The requirement that the Board establish water quality standards adequate to "ensure the reasonable protection of beneficial uses" is set forth in the California Water Quality Control Act, CAL. WATER CODE § 13241 (West 1971 & West Supp. 1989).

48. 182 Cal. App. 3d at 119, 227 Cal. Rptr. at 180.

49. 182 Cal. App. 3d at 116, 227 Cal. Rptr. at 178 (quoting CAL. WATER CODE § 13000 (West 1971)) (emphasis deleted). For a more thorough discussion of the *Delta Water Cases*, see Robie, *The Delta Decisions: The Quiet Revolution in California Water Rights*, 19 PAC. L.J. 1111 (1988).

that changed circumstances revealed in new information about the adverse effects of the projects upon the Delta necessitated revised water quality standards."[50] It held that the Board could "modify the projects' permits to curtail their use of water on the ground that the projects' use and diversion of the water *had become unreasonable*."[51] Consistent with the dynamic view of Article X, section 2, the court stated that "[d]etermination of reasonable use depends upon the totality of the circumstances presented . . . . 'What constitutes reasonable water use is dependent upon not only the entire circumstances presented but varies as the current situation changes.' "[52] It held the Board's power "to prevent unreasonable methods of use should be broadly interpreted to enable the Board to strike the proper balance between the interests in water quality and project activities."[53] Emphasizing that "some accommodation must be reached concerning the major public interests at stake: the quality of valuable water resources and transport of adequate supplies for needs southward," the court concluded that the decision is "essentially a policy judgment requiring a balancing of the competing public interests."[54]

Second, the court held that the Board's constitutional authority to protect water quality in the Delta is augmented by the public trust doctrine.[55] According to the court, *Audubon* "firmly establishes that the state . . . has continuing jurisdiction over appropriation permits and is free to reexamine a previous allocation decision."[56]

Third, the court ruled that the Board erred in establishing "only such water quality objectives as could be enforced against the [CVP and SWP]."[57] The court held that if it is necessary to look beyond the two projects to attain water quality standards, the Board has the power under both Article X, section 2 and the public trust to require other water users to release water or to curtail their diversions.[58] Based on this directive, the Board has included other major permittees and licensees, as well as pre-1914 appropriators and riparians "upstream from the Bay-Delta Estuary and within the watershed of the Estuary" in its current water qual-

50. 182 Cal. 3d at 130, 227 Cal. Rptr. at 187.

51. *Id.* (emphasis added).

52. *Id.* at 129-30, 227 Cal. Rptr. at 187 (quoting Environmental Defense Fund, Inc. v. East Bay Mun. Util. Dist., 26 Cal. 3d 183, 194, 605 P.2d 1, 6, 161 Cal. Rptr. 466, 471 (1980)).

53. *Id.* at 130, 227 Cal. Rptr. at 188.

54. *Id.*

55. *Id.* at 150, 227 Cal. Rptr. at 201.

56. *Id.* (citing *Audubon*, 33 Cal. 3d 419, 447, 658 P.2d 709, 728, 189 Cal. Rptr. 346, 365).

57. *Id.* at 119-20, 227 Cal. Rptr. at 180.

58. *Id.* at 119, 227 Cal. Rptr. at 180.

ity proceedings.[59]

D. The Specter of Bigfoot

Read in conjunction, *Joslin*, *Audubon*, and the *Delta Water Cases* are emblematic of the modern era in California water resources law. According to these opinions, Article X, section 2 confers broad authority on the state to modify existing water rights to ensure that the current apportionment of California's water resources serves contemporary economic, social, and environmental goals in a reasonably efficient manner. This dynamic and utilitarian conception of California water rights means that such rights are fragile. In California, the property right in the state's water resources is good only for so long as the holder exercises the right in a manner that comports with present societal values.

Not surprisingly, this view of California water rights has been controversial. For example, two prominent water lawyers, Clifford Schultz and Gregory Weber, have written:

> It is difficult to conceptualize a more fundamental departure from stare decisis and the traditional rules of property than that evidenced by the *Audubon* and [the *Delta Water Cases*] decisions. California law has truly moved into an era where water use is viewed as a government granted privilege to be monitored by the Board and the courts and, when necessary, reallocated among competing users to achieve the greatest social good.[60]

After reviewing the early common law of water rights and the 1928 amendment to the constitution that added Article X, section 2, Schultz and Weber conclude that these recent cases are unprecedented and represent a dramatic break with the historical conception of water rights under California law.[61]

IV. The Common Law Development of California Water Rights: 1850-1928

As the remainder of this essay will demonstrate, that conclusion is unfounded. Well before the enactment of Article X, section 2 in 1928—indeed, since the earliest days of statehood—the California Supreme

59. STATE WATER RESOURCES CONTROL BOARD, *supra* note 9, at 3-4. The Board has stated that "[w]hile all water rights in the Bay-Delta Estuary will be examined during the Water Rights Phase [of the hearings], implementation may occur as incremental measures, with the larger projects being considered first and then other water right holders in a timely order." *Id.* at 21.

60. Schultz & Weber, *supra* note 41, at 1110.

61. *Id.* For more favorable views of *Audubon* and the *Delta Water Cases*, see Dunning, *The Public Trust Doctrine and Western Water Law: Discord or Harmony?*, 30 ROCKY MTN. MIN. L. INST. 17-1 (1984); Robie, *supra* note 49.

Court has crafted the state's water rights law in an explicitly utilitarian manner. As economic conditions have changed and as social goals have evolved, the court has not hesitated to modify the law, and the water rights based on that law, to facilitate California's economic growth and social well-being. Before examining this doctrinal development, however, it is necessary to describe the backdrop against which the evolution of California water rights took place. We begin, appropriately, with the founding of the state in 1850.

A. Adoption of the Common Law: Riparian Rights

Among the first acts of the new state legislature was the enactment of a statute that adopted the common law of England as the rule of decision in all California courts.[62] One effect of this legislation was to recognize the law of riparian rights.[63] Developed in England and on the continent during the late eighteenth and early nineteenth centuries, the riparian doctrine provides that the right to water is based exclusively on ownership of riparian land—that is, land adjacent to a river or other watercourse.[64] The central characteristics of the riparian right are the limitations on where water may be used and the method by which water is apportioned in times of shortage. Under the riparian system, water may be used only on land that abuts the watercourse from which the water is taken; in times of shortage, all riparians along the watercourse are entitled to a reasonable or "correlative" share of the available water.[65]

Unfortunately, the doctrine of riparian rights, borrowed from a "rainy country where water was no problem,"[66] was ill-suited to California. In nineteenth century England and the eastern United States, there was an abundance of water for all purposes. The principal towns and cities were settled along major rivers, which provided drinking water and a system of transportation. Industry used hydro-power—literally the power of the flowing waters—to run their machinery, and the natural rainfall was adequate to irrigate crops. Throughout the West, however, water is scarce and the places where an abundant supply could be found were not necessarily the same places where people wanted to use it. In California, for example, the most desirable sites for the cities—nascent

62. 1850 Cal. Stat. 219; *see* W. HUTCHINS, THE CALIFORNIA LAW OF WATER RIGHTS 52 (1956).

63. *See* Shaw, *The Development of the Law of Waters in the West*, 10 CALIF. L. REV. 443, 447-48 (1922).

64. *See* J. SAX & R. ABRAMS, LEGAL CONTROL OF WATER RESOURCES 154-56 (1986).

65. *Id.* at 156-58

66. W. STEGNER, BEYOND THE HUNDREDTH MERIDIAN 226 (1954).

centers of international trade—were along the coast. Yet, the native water supplies in the San Francisco Bay area and in the Los Angeles coastal plain were sufficient to support only small pueblos. The major industry of the new state was mining, not mills, and the miners did not own land on which to base a riparian right. Moreover, the early gold miners were among the first to recognize that to use the available water they had to find a way to get the water from the streambeds to where it was needed—the hillsides in which the gold ore lay. Similarly, it was not possible to grow most crops in California without irrigation, and the land that the early settlers wanted to farm was not always located along a river or other natural watercourse.

B. Creation of Appropriative Rights: *Irwin v. Phillips*

It was on this stage, framed by a system of resource allocation at odds with climate, geography, and economic aspirations of the fledgling state, that the California Supreme Court considered the case of *Irwin v. Phillips*.[67] Because of its dramatic break with the common law, *Irwin* remains to this day one of the most celebrated cases in the law of the American West.

The facts of the case were deceptively simple. Captain Irwin had constructed a dam along a stream in Nevada County for the purpose of supplying water to gold miners. The miners used the water to wash the excavated gravel and dirt, separating the gold ore and dust in the process. As reported by Samuel Wiel, other miners came along, "found the water gone and could not work, [and] demanded that Captain Irwin restore the water for them to its natural course."[68] When Irwin refused, they destroyed his dam. Irwin sued, claiming that his prior occupation and use of the water gave him superior rights to all subsequent users. The miners that arrived after Irwin defended on the basis of the riparian doctrine, contending that all occupants along the stream should have correlative rights to the available water.[69]

The California Supreme Court ruled in favor of Irwin. It began by observing that the law of riparian rights did not apply to the dispute, because neither party owned riparian land. Rather, the property through which the stream flowed was either state or federal; the miners were mere occupants: licensees of the government.[70] At liberty not to follow the

67. 5 Cal. 140 (1855).

68. Wiel, *The Pending Water Amendment to the California Constitution, and Possible Legislation* (Part One), 16 CALIF. L. REV. 169, 201 (1928).

69. *Id.*

70. 5 Cal. at 145-46.

common law, the court chose to decide the case in accordance with the principle that the prior possessor of property acquires superior rights to all but the true owner.[71] Thus, the court held for Irwin because he was the first user, or appropriator, of the water. He who is first in time, the court declared, also is first in right.[72]

Thus, borrowing from the law of finders, the California Supreme Court invented the doctrine of prior appropriation. Although the court declined to recognize Phillips' riparian rights claim because he did not own riparian land, it did not adopt the new allocational system based on priority of use by default. Rather, the court applied the doctrine of prior appropriation for the pragmatic reason that it would best serve the needs of the gold miners, who in 1855 formed the state's most important industry. The court observed that it was "bound to take notice of the political and social conditions of the country which [it] judicially rule[s]."[73] In California, the court continued, "the larger part of the territory consists of mineral lands, nearly the whole of which are the property of the public."[74] The miners who entered and worked these lands had established a system of laws by custom. According to the court,

> If there are, as must be admitted, many things connected with this system, which are crude and undigested, and subject to fluctuation and dispute, there are still some which a universal sense of necessity and propriety have so firmly fixed as that they have come to be looked upon as having the force and effect of *res judicata*. Among these the most important are the rights of miners to be protected in the possession of their selected localities, and the rights of those who, by prior appropriation, have taken the waters from their natural beds, and by costly artificial works have conducted them for miles over mountains and ravines, to supply the necessities of gold diggers, and without which the most important interests of the mineral region would remain without development.[75]

Irwin recognized the miners' custom because the rule of prior appropriation, rather than the doctrine of riparian rights, would better promote the economic interests of the state. Precisely because prior appropriation was better suited to the environmental realities and economic aspirations of the West, this new system of allocating water resources has become the foundation of western water law. As the

71. *Id.* at 147; *see* Armory v. Delamirie, 1 Strange 505 (K.B. 1722); Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221 (1979).

72. 5 Cal. at 147.

73. *Id.* at 146.

74. *Id.*

75. *Id.*

Colorado Supreme Court declared in *Coffin v. Left Hand Ditch Co.*,[76] the case in which it adopted the law of prior appropriation for Colorado:

> The climate is dry, and the soil, when moistened only by the usual rainfall, is arid and unproductive; except in a few favored sections, artificial irrigation for agriculture is an absolute necessity. Water in the various streams thus acquires a value unknown in moister climates. . . . [V]ast expenditures of time and money have been made in reclaiming and fertilizing by irrigation portions of our unproductive territory. Houses have been built, and permanent improvements made; the soil has been cultivated, and thousands of acres have been rendered immensely valuable, with the understanding that appropriations of water would be protected. Deny the doctrine of priority or superiority of right by priority of appropriation, and a great part of the value of all this property is at once destroyed.[77]

In California, *Irwin* is commonly viewed as establishing prior appropriation as one of the cornerstones of this state's water law. Before leaving the case, however, I would like to pause and consider the words with which the supreme court concluded its opinion. The court declared,

> The miner who selects a piece of ground to work, must take it as he finds it subject to prior rights . . . . If it is upon a stream, the waters of which have not been taken from their bed, they cannot be taken to his prejudice; but if they have been already diverted, *and for as high and legitimate a purpose as the one he seeks to accomplish*, he has no right to complain, no right to interfere with the prior occupation of his neighbor, and must abide the disadvantages of his own selection.[78]

The highlighted caveat is intriguing, for it suggests that, even at the birth of California water law, water rights in this state were limited by the notion that one's water right depends in part on the social utility of one's use of that water in relation to alternative uses. By the time of the 1928 amendment that added Article X, section 2 to the constitution, this limitation on water rights—the doctrine of reasonable use—had become a second cornerstone of California water law.

C. Riparianism Gains a Foothold: *Crandall v. Woods*

Unlike *Coffin v. Left Hand Ditch Co.*, in which the Colorado Supreme Court rejected riparian rights,[79] the court in *Irwin v. Phillips* did not address the question whether riparian rights existed in California because neither Irwin nor Phillips was a riparian landowner. Just two

76. 6 Colo. 443 (1882).
77. *Id.* at 446.
78. 5 Cal. at 147 (emphasis added).
79. 6 Colo. at 447.

years later, however, in *Crandall v. Woods*,[80] the court intimated that the riparian doctrine had obtained a foothold in California law. Despite the title of the reported opinion, *Crandall* involved a dispute between the Union Water Company, a municipal water supplier, and Jamieson, an occupant of public lands. In 1852, the Union Water Company began appropriating water from a creek that flowed through the land occupied by Jamieson. Although Jamieson had entered the land in 1851, he did not begin using water from the stream to irrigate the land until 1856.[81] The supreme court held that Jamieson, as first occupant on the land, had superior rights to the water. According to the court, "an appropriation of land carries with it the water on the land, . . . for in such cases the party does not appropriate the water but the land covered with water."[82] It then distinguished *Irwin*, reasoning that "[i]f the owners of the mining-claim . . . had first located on the bed of the stream, they would have been entitled, *as riparian proprietors*, to the free and uninterrupted use of the water."[83]

As in *Irwin*, the court did not reach its decision without carefully considering the consequences of its holding. Paramount among the court's goals again was the protection of investment and reasonable expectations as a means of facilitating productive uses of land. Posing the hypothetical of a gold miner who locates "along the bed of a stream, before any water-ditch or flume has been constructed," the court asked rhetorically, "[W]ill any one doubt that he should have the free use of the water, as against subsequent locators of either mining-claims or canals?"[84] The court followed this example, however, with what may have been the first public recognition that California's future would depend on industries other than gold mining in the Sierra Nevada. Suppose, the court stated, that a farmer had settled along a river, and "the water passing through his land was necessary for the purposes of irrigation[;] is not this purpose just as legitimate as using water for mining?"[85] The court then articulated a social preference for one type of use of water over another, stating that farming "may or may not be equally as profitable, but irrigation for agricultural purposes is sometimes necessary to supply natural wants, while gold is not a natural, but an artificial want, or a mere stimulant to trade and commerce."[86] This idea that one water

80. 8 Cal. 136 (1857).
81. *Id.* at 136.
82. *Id.* at 143.
83. *Id.* (emphasis added).
84. *Id.*
85. *Id.*
86. *Id.* at 143-44.

user may have preferential rights because its use of the water is relatively more socially valuable has reverberated throughout the history of California water law.

D. The Decline of California Gold Mining: *People v. Gold Run Ditch & Mining Co.*

In its brief, cryptic discussion in *Crandall* of land-based claims to water rights, the supreme court anticipated the two questions that would vex it for the succeeding thirty years. First, how should the increasingly competing claims to water by miners in the Sierra Nevada and farmers located downriver in the Sacramento and San Joaquin Valleys be resolved? Second, should it recognize the common law of riparian rights alongside the doctrine of prior appropriation? The court answered both questions in two opinions decided in the mid-1880s. Its rulings in *People v. Gold Run Ditch & Mining Co.*[87] and *Lux v. Haggin*[88] would influence the development of California as significantly as any judicial opinions in the state's history.

During the three decades following the supreme court's approval of prior appropriation in *Irwin v. Phillips*, the miners in the northern Sierra Nevada developed and perfected the process of hydraulic mining. Miners would divert water from the stream, run it along the ridgeline, and then drop the water through wooden penstocks to build up pressure. At the end of the penstocks, the water would be channeled into hoses and blasted against the hillsides. The pressurized water would break up the earth and gravel and carry the debris into sluices where the heavier gold ore would separate from the debris and settle through riffle boards in the bottom of the sluice.[89] Hydraulic mining was a tremendous advance over the early "pick and shovel" operations. "Given water, ground, drainage, and the proper equipment, one man could do in a day what dozens could hardly do in weeks."[90] As Professor Dunning has observed, however, although hydraulic mining was highly efficient for the miners, it "wreaked havoc with many of the state's rivers."[91] The debris generated by destruction of the hills washed into the streams of the Sierra Nevada and ultimately flowed into the Sacramento Valley. One historian has described the problems created by the enormous volume of mine tailings as follows:

87. 66 Cal. 138, 4 P. 1125 (1884).

88. 69 Cal. 255, 10 P. 674 (1886).

89. R. KELLEY, GOLD VS. GRAIN: THE HYDRAULIC MINING CONTROVERSY IN CALIFORNIA'S SACRAMENTO VALLEY 27 (1959).

90. *Id.* (footnote omitted).

91. Dunning, *supra* note 21, at 366 (footnote omitted).

> Abruptly leveling out on the flatlands, the rivers dropped their silt, thereby laying down rapidly-growing fan deposits of tailings. Mud from the mines went furthest downstream, being lighter, followed by sand, then gravel, then coarse rock. Each flood in the lowlands left behind vast slimy commons of "slickens." In time, sand appeared at canyon mouths and slowly washed out on farm lands to totally destroy them. The Sacramento Valley and the northern Sierra were entering upon tragic controversy, loss, suffering, and bitter estrangement.[92]

In *People v. Gold Run Ditch & Mining Co.*,[93] the state sued to enjoin hydraulic mining in the watershed of the North Fork of the American River.[94] The trial court found that the mining constituted a public nuisance, because it produced about 600,000 cubic yards of debris which clogged the American and Sacramento Rivers downstream.[95] The siltation had raised the bed of the rivers from six to twelve feet, which impaired navigability, increased the frequency and severity of flooding, and fouled the drinking water supplies of the city of Sacramento. Moreover, the deposition of sand, gravel, and other debris threatened to render downstream lands "unfit for cultivation and inhabitancy."[96] Based on these findings, the trial court permanently enjoined hydraulic mining.

Cognizant of the "[v]ast . . . interests bound up in the litigation,"[97] the supreme court affirmed. The court concluded that, as important as gold mining had been to the early economic development of California, it must give way to the paramount public interest in navigation and commerce and to the burgeoning commercial and agricultural development in the Sacramento Valley.[98] The court acknowledged that "in the mining regions of the State, the custom of making use of the waters of the streams as outlets for mining debris has prevailed for many years."[99] In that custom, the court stated, "the people of the State have silently acquiesced [and] mining operations, involving the investment and expenditure of large capital, have grown into a legitimate business."[100] Nevertheless, the court held that even a legitimate business may become unreasonable

92. R. KELLEY, *supra* note 89, at 56 (footnote omitted).

93. 66 Cal. 138, 4 P. 1152 (1884).

94. A private landowner filed a similar suit in federal court to enjoin hydraulic mining along the Yuba and Feather Rivers. In Woodruff v. North Bloomfield Gravel Mining Co., 18 F. 753 (C.C.D. Cal. 1884), the circuit court permanently enjoined the mining as a public and private nuisance.

95. 66 Cal. at 144, 147, 4 P. at 1154, 1156.

96. *Id.* at 145, 4 P. at 1154.

97. *Id.*, 4 P. at 1155.

98. *See id.* at 146, 4 P. at 1155.

99. *Id.* at 151, 4 P. at 1158.

100. *Id.*

if it "threaten[s] the safety of the people, and the destruction to public and private rights."[101]

It may seem ironic that the court that sanctioned hydraulic mining with its adoption of the law of prior appropriation in *Irwin v. Phillips* would declare this activity unreasonable a mere twenty-nine years later. *Gold Run Ditch* is consistent with *Irwin*, however, in one fundamental respect. In both cases, the court carefully considered the social and economic needs of California at the time of its decision and fashioned rules of law with an eye toward accomplishing those public purposes. Although *Gold Run Ditch* was not technically a water rights decision, it nonetheless represented a vital step in the development of California water resources law leading up to Article X, section 2. *Gold Run Ditch* both emphasized the court's willingness to shape legal doctrine to meet the needs of a dynamic economy, and highlighted the fragile nature of private property rights in the state's water resources. Although gold mining had been the foundation of the state's economy for more than three decades, California's economic future was elsewhere. Following *Gold Run Ditch*, mining would decline rapidly in importance, to be replaced by farming in the Central Valley, commerce along the Sacramento and San Joaquin Rivers, and establishment of San Francisco, Oakland, Sacramento, and Stockton as major port cities and industrial centers.[102]

E. Riparian Rights Ascendant: *Lux v. Haggin*

Lux v. Haggin,[103] was decided two years after *Gold Run Ditch*. As Eric Freyfogle has written:

> *Lux* . . . was a big case. . . . The trial drew the attention of water users throughout the state. At the plaintiffs' table sat Henry Miller, a man of modest German heritage who began his business life as a butcher in San Francisco and rose to become a major cattle baron and landowner. With him was Charles Lux, his partner and erstwhile competitor. Together they owned huge tracts of land in California's Central Valley, including some 100,000 acres stretching along the Buena Vista Slough in Kern County. Through this indistinct and swampy slough flowed the waters of the Kern River. Based on their land ownership, Miller and Lux claimed riparian

101. *Id.*

102. Robert Kelley has written that, by the end of 1884, "paralysis had spread throughout the northern Sierra Nevada. A traveler through the mines in November reported an unbroken tale of depression, bankruptcy, and depopulation . . . . The state's gold production dropped precipitously. The loss was estimated at $3,000,000 in the first year after the decision." R. KELLEY, *supra* note 89, at 244-45. By 1890, only one mine was still operating in the northern Sierra Nevada. *Id.* at 270.

103. 69 Cal. 255, 10 P. 674 (1886).

> rights to the natural flow of the river, and asserted the power to halt all upstream water diversions that disrupted that flow.
>
> Upstream, however, rested the massive Kern County Land and Canal Company, directed by James Ben-Ali Haggin. Haggin was a high society man, an attorney, a successful horse breeder, a land speculator, and an investor in numerous business ventures. . . . Haggin sought to divert water from the Kern River into his numerous ditches and canals and to transport it to irrigate lands throughout the county. Haggin's claim to water rested on his status as first appropriator on the Kern River.[104]

Lux also is a daunting legal opinion. It occupies almost 200 pages in the *California Reports* and remains the longest opinion ever rendered by the California Supreme Court.

Lux v. Haggin presented to the supreme court, for the first time, the question whether it should reject riparian rights as inconsistent with the climate, geography, and social conditions of California. This argument, advanced by Haggin, was difficult in light of the legislature's adoption of the common law in 1850[105] and because the court itself had recognized riparian rights in several prior cases.[106] But it was not an impossible argument by any means, for the Colorado Supreme Court had abolished riparian rights just four years earlier in *Coffin v. Left Hand Ditch Co.*[107] for reasons identical to those urged in *Lux*. By a four to three vote, however, the California Supreme Court upheld the doctrine of riparian rights, ruling that Miller and Lux, as downstream riparians, could demand from Haggin the "complete natural flow" of the Kern River as needed to supply the beneficial uses of their riparian land.[108]

Although the court offered a variety of reasons for its decision to preserve riparian rights, its central analytic theme was composed of three parts. First, it observed that the legislature had adopted the common law as the rule of decision in all California courts. The court held that this statute embraced both the common law of England in 1776 and the common law of the United States as developed in the colonies and the various states during the eighteenth and nineteenth centuries.[109] Under the common law, "[e]ach riparian proprietor has a right to the natural flow of the

104. Freyfogle, Lux v. Haggin *and the Common Law Burdens of Modern Water Law*, 57 U. COLO. L. REV. 485, 485-86 (1986) (footnotes omitted).

105. *See supra* text accompanying notes 62-65.

106. *See, e.g.*, Anaheim Water Co. v. Semi-Tropic Water Co., 64 Cal. 185, 30 P. 623 (1883); St. Helena Water Co. v. Forbes, 62 Cal. 182 (1882); Zimmler v. San Luis Water Co. 57 Cal. 221 (1881); Osgood v. El Dorado Water & Deep Gravel Mining Co., 56 Cal. 571 (1880); Pope v. Kinman, 54 Cal. 3 (1879).

107. 6 Colo. 443 (1882); *supra* text accompanying notes 76-77.

108. 69 Cal. at 396, 10 P. at 757.

109. *Id.* at 379-87, 10 P. at 746-51.

watercourse undiminished except by its reasonable consumption by upper [riparian] proprietors."[110]

Second, although the court had created the law of prior appropriation, it declared that the doctrine was not part of the common law, even in California.[111] From this it reasoned that the appropriative right is of lesser status than the riparian right. Appropriators are consequently not entitled to share in water needed by riparians along the same river.

> By settled principles of both the civil and common law, the riparian owner has a usufruct in the stream as it passes over his land, of which he cannot be deprived by *mere diversion*. The right of a riparian proprietor to have the water of a stream run through his land is a vested right, and an interference with it imports damage.[112]

Third, the court rejected the argument that "public policy" required the abolition of riparian rights. According to the court,

> It may be suggested that judges in this state should rise to the appreciation of the fact that the physical conditions here existing require an "appropriator" to be authorized to deprive, without indemnification, all the lower riparian proprietors . . . of every natural advantage conferred on their lands by the running water. A "public policy" has been appealed to, which has not found its expression in the statutes of the state, but which rests apparently on the political maxim, "The greatest good to the greatest number"; on the claim that, by permitting such deprivation of the enjoyment of the stream by the riparian proprietors, more persons or a larger extent of territory will be benefited by the waters. The proposition is simply that, by imperative necessity, the right to take or appropriate water should be held paramount to every other right with which it may come in conflict.[113]

The court declined the invitation, stating that "the policy of the state is not *created* by the judicial department."[114] Although the courts "may be called upon to declare it," the court held that public policy "can be ascertained only by reference to the constitution and the laws passed under it."[115]

Based in part on this last declamation, *Lux v. Haggin* is commonly viewed as a profoundly conservative opinion. Professor Freyfogle has written, for example, that the supreme court "largely ignored the legitimate roles of courts and legislatures in dealing with property rights. The

110. *Id.* at 391, 10 P. at 753.
111. *Id.* at 387-90, 10 P. at 751-53.
112. *Id.* at 392-93, 10 P. at 754 (emphasis in original) (citations omitted).
113. *Id.* at 307, 10 P. at 702.
114. *Id.* at 307-08, 10 P. at 702 (emphasis in original).
115. *Id.* at 308, 10 P. at 702.

court assumed that, once the common law created a property right, the right was set and could be altered only by the exercise of eminent domain powers."[116] He concludes that the supreme court "did not appreciate its own critical and powerful role in defining the limits of property rights. By denying any flexibility and mutability in the common law, the court drained itself of valuable powers."[117]

Lux v. Haggin therefore would seem to contradict the thesis of this article that, leading up to the adoption of article X, section 2 in 1928, the California Supreme Court created a system of water rights law that was both dynamic and utilitarian. Although I generally agree with Professor Freyfogle that *Lux* was rigid and short sighted, I also believe that it is consistent with the perspective that, from its inception, California water resources law has evolved as necessary to facilitate the perceived social and economic demands of the day. Two aspects of the *Lux* opinion support this conclusion.

First, after expressing its reluctance to decide the case on the basis of "public policy," the court ignored its own counsel and grounded its holding on the public policies of discouraging monopoly and ensuring that riparian landowners received sufficient water to allow them to irrigate their crops. It noted that the lands in the Central Valley were irrigated naturally by the annual spring runoff, which would overflow the banks of the rivers and flood the riparian lands leaving behind a layer of silt that would fertilize the soil.[118] If, the court stated, "in accordance with the law, such lands may be deprived of the natural irrigation without compensation to the owners, we must so hold; but we fail to discover the principles of 'public policy' which are of themselves of paramount authority and demand that the law shall be so declared."[119] In fact, the court determined that public policy undermined Haggin's advocacy of the abolition of riparian rights. The court declared that

> it does not require a prophetic vision to anticipate that the adoption of the rule . . . of "appropriation" would result in time in a monopoly of all the waters of the state by comparatively few individuals . . . who could either apply the water to purposes useful to themselves, or sell it to those *from whom they had taken it away*, as well as to others.[120]

Viewed in this light, *Lux v. Haggin* is consistent with prior opinions because it stands as another example of the California Supreme Court's

116. Freyfogle, *supra* note 104, at 515.
117. *Id.*
118. *See* 69 Cal. at 309, 10 P. at 703.
119. *Id.*
120. *Id.* at 309-10, 10 P. at 703 (emphasis in original).

decision to tailor its water rights law to serve the economic interests of the time. Two years earlier, in *Gold Run Ditch*, the court protected downstream navigational and agricultural uses from upstream water pollution. *Lux* complemented *Gold Run Ditch* by also protecting downstream users from the harmful effects of upstream appropriations. Both opinions perceived the future of California's economy, poised to enter the twentieth century, as residing in the Central Valley, rather than in the Sierra Nevada.[121]

The second reason for reading *Lux v. Haggin* as a positive contribution to the utilitarian development of California water rights law is the court's decision to reject the "natural flow" theory of riparian rights. According to this doctrine, each riparian was entitled to the full and natural flow of the river diminished only by withdrawals by other riparians for domestic purposes.[122] Because diversions for irrigation of crops would diminish the water available to downstream users, the natural flow doctrine was incompatible with significant productive uses of California's water resources. In recognition of this, the court adopted the "reasonable use" theory of riparian rights. Under this doctrine, each riparian along a river has "correlative" or shared rights to the water of the river along with all other riparians and may use a portion of that water for consumptive purposes so long as the use does not unreasonably harm other riparians.[123] As the court explained in *Lux*,

> What is such a just and reasonable use may often be a difficult question, depending on various circumstances. To take a quantity of water from a large running stream for agriculture or manufacturing purposes would cause no sensible or practicable diminution of the benefit to the prejudice of a lower proprietor; whereas taking the same quantity from a small running brook passing through many farms would be of great and manifest injury to those below who need it for domestic supply or watering cattle; and therefore it

121. The pattern of subsequent economic development in California verified the court's perceptions. As noted above, by 1890 hydraulic mining had all but died out in the northern Sierra Nevada. *See supra* note 102. In contrast,

> [i]n the twenty years following *Lux v. Haggin* population grew and irrigated agriculture expanded within the San Joaquin Valley. . . . The wheat fields and cattle ranges that had dominated the valley in the 1870s and 1880s were being replaced by irrigated vineyards, orchards, and dairy farms. In Fresno County the area under irrigation rose from 100,000 acres in 1890 to 400,000 acres in 1910; the number of farms increased by 250 percent as large holdings were broken up. A similar change took place in Merced, Madera, and Stanislaus counties.

Miller, *Riparian Rights and the Control of Water in California, 1879-1928: The Relationship Between an Agricultural Enterprise and Legal Change*, 59 AGRIC. HIST. 1, 7 (1985).

122. For a discussion of the natural flow doctrine in early American law, see M. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW 35-40 (1977).

123. *See* D. GETCHES, WATER LAW 51 (1984).

> would be an unreasonable use of the water . . . . It is therefore to a considerable extent *a question of degree*; still, the rule is the same that each proprietor *has a right* to a reasonable use of it for his own benefit for domestic use *and* for manufacturing and agricultural purposes.[124]

This passage is significant because it established reasonable use as another cornerstone of California water law. Following *Lux*, each water right would depend on an evaluation of its reasonableness in light of all other competing uses of the available water. As the court put it,

> The reasonable usefulness of a quantity of water for irrigation is always relative; it does not depend on the convenience of or profitable results to the particular proprietor, but upon the reasonable use, reference being had to the needs of all the other proprietors on the stream. It depends, in other words, on all the circumstances.[125]

F. The Doctrine of Reasonable Use

In the years following *Lux v. Haggin*, the supreme court applied the reasonable use doctrine as the primary basis of allocating water among riparians in times of shortage. For example, in *Southern California Investment Co. v. Wilshire*,[126] a dispute between two riparians along a small creek in San Bernardino County, the court held that "in cases where there is not water enough to supply the wants of both . . . each owner has the right to the reasonable use of the water taking into consideration the rights and necessities of the other."[127] *Half Moon Bay Land Co. v. Cowell*[128] stands, however, as the clearest statement that the courts could adjust riparian rights to allocate water from less productive uses to uses of greater social value.

Half Moon Bay considered the respective rights of several riparians along San Vicente Creek, a small coastal stream. Reviewing the formula employed by the trial court to apportion the water, the supreme court stated that "many different facts are to be considered."[129] These include the seasonal variation in the flow of the stream, the amount of land irrigated by each riparian, the extent of each riparian's river frontage, and a

124. 69 Cal. at 403-04, 10 P. at 760-61 (emphasis in original).

125. *Id.* at 408, 10 P. at 763.

126. 144 Cal. 68, 77 P. 767 (1904).

127. *Id.* at 71, 77 P. at 768; *see also* Turner v. East Side Canal Co., 168 Cal. 103, 108, 142 P. 69, 72 (1914); Mentone Irrigation Co. v. Redlands Co., 155 Cal. 323, 327, 100 P. 1082, 1083 (1909); Senior v. Anderson, 130 Cal. 290, 296, 62 P. 563, 566 (1900); Harris v. Harrison, 93 Cal. 676, 681, 29 P. 325, 327 (1892).

128. 173 Cal. 543, 160 P. 675 (1916).

129. *Id.* at 549, 160 P. at 678.

variety of less objective factors.[130] Thus, to determine the reasonableness of a particular use of water in relation to the other competing riparian uses, the court held that the trial court "may also consider the practicability of irrigation of the lands of the respective parties, the expense thereof, [and] the comparative profit of the different uses which could be made of the water on the land"[131] In other words, the "reasonableness" of the allocation depends in large part on the relative social utility of each riparian right.

The supreme court also applied the doctrine of reasonable use to appropriative rights. As Clifford Lee has observed, well before the addition of Article X, section 2 to the constitution, the courts "restricted appropriative right holders to water uses that served beneficial purposes *and* were reasonably necessary for such purposes."[132] Two cases best illustrate this application of the reasonable use doctrine.

The first, *California Pastoral and Agricultural Co. v. Madera Canal and Irrigation Co.*,[133] involved a dispute between a riparian and an upstream appropriator along the Fresno River. As in *Lux v. Haggin*, the riparian claimed that the appropriator was diverting water that it needed for irrigation. The appropriator defended on the ground that it had been using the water for twenty-five years and therefore had obtained superior rights by prescription. In response, the riparian argued that the appropriator could acquire prescriptive rights only to "the amount of water *reasonably necessary* to be diverted from the river for the proper irrigation of the lands irrigated by defendant," which the riparian claimed was less than the water actually diverted by the appropriator.[134]

The trial court ruled that the doctrine of reasonable use did not apply in a dispute between a riparian and an appropriator and therefore rejected the plaintiff's evidence on this point.[135] The supreme court reversed. "[O]ne actually diverting water under a claim of appropriation for a useful or beneficial purpose," the court held, "cannot by such diversion acquire any right to divert more water than is reasonably necessary for such use or purpose . . . ."[136] Accordingly, appropriative rights exist only to the extent that the appropriator uses the water diverted reason-

130. *Id.* (citing Harris v. Harrison, 93 Cal. 676, 681, 29 P. 325, 327 (1892)).

131. *Id.* at 549-50, 160 P. at 678.

132. C. LEE, LEGAL ASPECTS OF WATER CONSERVATION IN CALIFORNIA 7 (1977) (Governor's Commission to Review California Water Rights Law, Staff Paper No. 3) (emphasis in original).

133. 167 Cal. 78, 138 P. 718 (1914).

134. *Id.* at 81, 138 P. at 719 (emphasis in original).

135. *See id.* at 83, 138 P. at 720.

136. *Id.* at 85, 138 P. at 721.

ably and for a beneficial purpose. The court explained that the purpose of the reasonable use doctrine was to fulfill "the policy of the law of the state to require the highest and greatest possible duty from the waters of the state in the interest of agriculture and other useful and beneficial purposes."[137] Fourteen years later, this explicitly utilitarian proclamation would serve as the model for the declaration of the purposes of Article X, section 2.[138]

The second example of the supreme court's application of the doctrine of reasonable use to appropriative rights, *Town of Antioch v. Williams Irrigation District*,[139] illustrates the potency of the reasonable use requirement. Antioch, which is located along the Carquinez Strait below the confluence of the of the Sacramento and San Joaquin Rivers, sued twenty-seven upstream appropriators. The city sought to enjoin the diversions on the ground that they reduced the flow of the Sacramento River, allowing salt water to intrude from San Francisco Bay during periods of high tide and low outflow. The salt water then mixed with the freshwater of the river and degraded the quality of the water Antioch diverted for domestic supply.[140] Although Antioch was located along the river, the court held that it could not assert riparian rights to water that it distributed to individual customers.[141] Accordingly, the city based its claim on prescriptive use, which it contended gave it appropriative rights that were senior to those of the defendant appropriators.[142] The supreme court recognized Antioch as the prior appropriator and stated that the appropriative right entitles the holder "to protection against acts of subsequent appropriators which materially deteriorate[] the quality of the water for the uses to which he wishes to apply it."[143] On the basis of the reasonable use doctrine, however, the court denied Antioch relief.

The court first noted that appropriators such as Antioch must "take notice of the policy of our law, which undoubtedly favors in every possible manner the use of the waters of the streams for the purposes of irrigating the lands of the state to render them fertile and productive, and discourages and forbids every kind of unnecessary waste thereof."[144] It then observed that during the late summer and fall of 1920 the flow in

137. *Id.* at 84, 138 P. at 721.
138. *See supra* text accompanying note 2.
139. 188 Cal. 451, 205 P. 688 (1922).
140. *Id.* at 453-54, 205 P. at 689-90.
141. *Id.* at 456, 205 P. at 690-91.
142. *Id.* at 457, 205 P. at 691.
143. *Id.* at 459, 205 P. at 692 (citing Phoenix Water Co. v. Fletcher, 23 Cal. 486 (1863)).
144. *Id.* at 460-61, 205 P. at 692.

the Sacramento River measured at the City of Sacramento was 420 cubic feet per second, as reduced by the defendants' upstream appropriations. During this period, Antioch contended that a flow of 3,500 cubic feet per second was necessary to maintain adequate water quality at its point of diversion. Thus, Antioch claimed that "3,080 second-feet of water otherwise available for irrigation above must at all times be kept flowing down the river into the bay, without any other beneficial use whatsoever, in order that the city of Antioch may be able to take less than one second-foot of fresh water therefrom."[145] The court asserted that "[i]t would be hard to conceive of a greater waste for so small a benefit."[146]

Emphasizing the role that its water rights decisions play in shaping California's economic development, the court declared:

> It may without exaggeration be said that the full use of the waters of the rivers and mountain streams for irrigation, power, and like beneficial purposes, is absolutely necessary to the continued growth and prosperity of the state. The interior valleys are rapidly growing in population and their capacity for production is being developed, chiefly, by irrigation of the land. The necessity for the most economical and careful use of the limited supply of water obtainable in this arid climate has often been adverted to in the decisions of this court from the beginning of [the state's] settlement . . . , and as it grows and increases in population and production the necessity increases correspondingly.[147]

The court concluded that in light of these important alternative demands for the available water, Antioch's claim was "extremely unreasonable and unjust to the inhabitants of the valleys above and highly detrimental to the public interests besides."[148]

G. Riparian Rights Redux: *Miller & Lux v. Madera Canal and Irrrigation Co.*

Thus, from the creation of appropriative rights in *Irwin v. Phillips*, through the establishment of riparian rights in *Lux v. Haggin*, and on into the early twentieth century, the California Supreme Court continued to shape and, where appropriate, to reshape water rights as necessary to facilitate the economic and social development of the state. As the opinions in *Half Moon Bay*, *California Pastoral*, and *Town of Antioch* illustrate, during this latter period the court began to employ the reasonable use doctrine as the nexus between its utilitarian purposes and its adjustment of water rights. According to those cases, water rights exist only to

145. *Id.* at 461, 205 P. at 692-93.
146. *Id.*, 205 P. at 693.
147. *Id.* at 461-62, 205 P. at 693.
148. *Id.* at 465, 205 P. at 694.

the extent that they are exercised for reasonable and beneficial purposes, taking into account competing uses of the water, comparative profitability of the uses, and other economic factors, as well as the supreme court's own idea of social progress. The court held that the doctrine of reasonable use applied to disputes between riparians, to controversies between appropriators, and to cases in which a riparian challenges an appropriator's uses of water. During this period, however, the court steadfastly refused to apply the reasonable use requirement to cases in which an appropriator challenged the validity of a riparian right. This loophole in the doctrine of reasonable use was a vestige of *Lux v. Haggin*'s characterization of appropriative rights as having a lesser status than riparian rights.

The court had the opportunity to repair this loophole in *Miller and Lux v. Madera Canal and Irrigation Co.*,[149] which in many respects was the sequel to *Lux v. Haggin*. Along with their vast landholdings in the Kern River basin, Henry Miller and Charles Lux owned land that was riparian to the Fresno and San Joaquin Rivers on which they grazed cattle. Miller and Lux sued to enjoin the Madera Canal and Irrigation Company, an upstream appropriator, from impounding and diverting the spring runoff of the two rivers. They claimed that Madera's diversions unlawfully reduced the silt normally carried by the the spring runoff, which irrigated and fertilized their riparian lands. Miller and Lux claimed that as riparians they were entitled to receive the full flows of the two rivers, undiminished by any upstream appropriations.[150]

The supreme court affirmed the grant of a preliminary injunction in favor of Miller and Lux. In upholding their claim to riparian rights, the court rejected two important arguments advanced by the defendant. First, Madera contended that the spring runoff was not part of the riparian right because a riparian is not entitled to the waters produced by extraordinary freshets.[151] The court held that this rule did not apply to rivers such as the Fresno and San Joaquin that flood and overflow their banks annually during the spring snow melt. It reasoned that

> [w]hat the riparian proprietor is entitled to as against non-riparian takers, is the ordinary and usual flow of the stream. There is no good reason for saying that the greatly increased flow following the annually recurring fall of rain and melting of snow . . . is any less usual or ordinary than the much diminished flow which comes af-

149. 155 Cal. 59, 99 P. 502 (1909).

150. *Id.* at 68-71, 99 P. at 505-06.

151. *See, e.g.*, Fifield v. Spring Valley Water Works, 130 Cal. 552, 62 P. 1054 (1900); Modoc Land Co. v. Booth, 102 Cal. 151, 36 P. 431 (1894).

ter the rains and the melted snows have run off.[152]

Second, Madera urged that "the method of irrigation adopted by [Miller and Lux], i.e., that of having the annual increased flow of the river spread out over its lands, was not a reasonable use of the water."[153] The court dismissed this argument out of hand, explaining that

> the doctrine that a riparian owner is limited to a reasonable use of the water applies only as between different riparian proprietors. As against an appropriator who seeks to divert water to non-riparian lands, the riparian owner is entitled to restrain any diversion which will deprive him of the customary flow of water which is or may be beneficial to his land. He is not limited by any measure of reasonableness.[154]

Then, in language reminiscent of *Lux v. Haggin*,[155] the court held that it had no power to reallocate water from riparians to appropriators on the basis of public policy. Madera argued that the court's decision to grant Miller and Lux the full spring runoff would stifle upstream development. The court acknowledged that authorization of upstream appropriations "to irrigate non-riparian land or to develop power" might well "permit the cultivation of more land and benefit a greater number of people than will be served if the flow continues in its accustomed course."[156] Nevertheless, it held that

> [n]either a court nor the legislature has the right to say that because such water may be more beneficially used by others it may be freely taken by them. Public policy is at best a vague and uncertain guide, and no consideration of policy can justify the taking of private property without compensation.[157]

H. A House Divided

The supreme court's refusal to allow utilitarian considerations to influence its opinion would appear to be flatly inconsistent with its decisions in *Half Moon Bay*, *California Pastoral*, and *Town of Antioch*. These cases are not so much inconsistent, however, as they are exemplary of the doctrinal chasm in the edifice of reasonable use, which the court steadfastly refused to close.

Utilitarian considerations of public policy were relevant to controversies among riparians because each riparian had equal rights to the full flow of the river. When there was insufficient water to serve the demands

152. 155 Cal. at 63, 99 P. at 511.
153. *Id.* at 64, 99 P. at 511.
154. *Id.*
155. *See supra* text accompanying notes 113-115.
156. *Id.* at 64-65, 99 P. at 512.
157. *Id.* at 65, 99 P. at 512.

of all, some methodology was needed to apportion the available supplies. The court adopted reasonable use as the measure of riparian rights because, in a dispute among equals, distribution of the available water to the most important and most profitable uses would achieve the greatest social utility under the circumstances. Similarly, in disputes among appropriators, although priority of use would be the guiding factor, reasonable use also was important to ensure that economically superior uses did not go without water simply because they were junior in time to lower valued or less efficient users.

The court was unwilling to apply the reasonable use doctrine to cases between a riparian and an appropriator, however, because it viewed riparian rights as a species of real property and regarded appropriative rights as having a lesser legal status. Based on this distinction, the court concluded that it could not elevate the quasi-property right held by appropriators over the real property rights owned by riparians. Regardless of its justification on grounds of public policy, the court reasoned, such a reordering would constitute a taking of the real property right.

In *Town of Antioch*, the court attempted to explain the distinction between riparian and appropriative rights. Alluding to the law of finders,[158] the court observed that, under the common law, riparian landowners were the "true owners" of the water flowing past their lands.[159] California's contribution to the common law of water rights was to recognize that "where the true owner did not interfere between rival claimants there could be property rights in mere possession and use"—i.e., appropriation—"good against everyone not in privity with the true owner."[160] The court stated, however, that this right by "mere possession" was "the sole basis of the right of appropriation. . . . [An appropriator] is . . . always a trespasser with respect to the riparian owners. . . ."[161] Accordingly, the court concluded that an appropriator could not assert the doctrine of reasonable use against riparians in an effort to obtain superior rights. For, as "mere possessors," appropriators have inherently inferior rights to those of the true owners of the water.

158. *See supra* text accompanying notes 70-72. According to the law of finders, a possessor can acquire rights to property, based simply on the act of possession, which are superior to everyone but the so-called "true owner" of the property. As against the finder or "mere possessor" of the property, however, the true owner retains absolute title. *See* J. DUKEMINIER & J. KRIER, PROPERTY 3-34 (2d ed. 1988).

159. Town of Antioch v. Williams Irrigation Dist., 188 Cal. 451, 463, 205 P. 688, 693 (1922).

160. *Id.*

161. *Id.*, 205 P. at 694.

Although this analysis may have made sense conceptually, it suffered both from a flaw in logic and from extraordinary practical difficulties. The court concluded its discussion in *Antioch* with the statement that, because the law of appropriative rights is "the creation of the courts," the judiciary is free "to adapt and modify" appropriative rights as a rule of the common law "so as to suit the peculiar conditions existing here."[162] It failed to recognize, however, that riparian rights also are the creation of the courts; as a common law rule they too can and should be modified to "suit the peculiar conditions" of twentieth century California. If it determined that an integrated application of reasonable use principles was necessary to serve the economic and social requirements of the state at that point in time, the court had ample powers—if not a responsibility—under the common law to bridge the doctrinal gap and hold that all water rights, in all settings, depend on reasonable use.[163]

Moreover, at the time of the *Miller and Lux* and *Antioch* decisions, it was apparent that the rule that riparians could demand the unimpaired flow of the river, without any consideration of the reasonableness of this use in light of competing demands, would seriously impair the development of California's increasingly urban and industrial economy. By the first decade of the twentieth century, the cities of Los Angeles and San Francisco and the communities on the east side of San Francisco Bay had exhausted their local water supplies and were looking to distant

162. *Id.*

163. Ironically, just six years before it decided *Miller and Lux*, the supreme court embraced the theory of the common law discussed in the text. In Katz v. Walkinshaw, 141 Cal. 116, 74 P. 766 (1903), the court held that the English common law of groundwater rights, according to which every overlying landowner has the unrestricted right to pump water from the aquifer, *see* J. SAX & R. ABRAMS, *supra* note 64, at 787, was inapplicable in California. Rejecting the argument that it was bound by the legislature's adoption of the common law to adhere to the rule of "absolute ownership," the court stated: "The true doctrine is, that the common law by its own principles adapts itself to varying conditions and modifies its own rules . . . . 'When the reason for a rule ceases, so should the rule itself.' " 141 Cal. at 123, 74 P. at 767 (quoting CAL. CIV. CODE § 3510). According to the court, the absolute ownership doctrine was ill-suited to California because it would lead to the over-exploitation of the state's groundwater resources, thereby creating "a fierce strife, first to acquire and then to hold every available supply of water." *Id.* at 127, 74 P. at 769. The court adopted instead the principle of reasonable use, holding that overlying landowners have "correlative rights" to the water of the aquifer. *Id.* at 135-36, 74 P. at 772. Only if there is water in excess of the reasonable needs of the overlying owners, the court ruled, may water be exported for use on non-overlying lands. *Id.* at 135, 74 P. at 772.

This decision to modify the common law of groundwater, incorporating the doctrine of reasonable use in an effort to ensure that the law comports with the environment and economy of California, stands in stark contrast to the court's rigid adherence to the common law of surface water rights in *Miller and Lux.*

parts of the state for supplemental sources. Los Angeles had begun its conquest of the Owens Valley; San Francisco sought congressional approval to dam Hetch Hetchy Valley in Yosemite National Park; and the East Bay communities set their sights on the waters of the Mokelumne River.[164] California's largest electric utilities, Pacific Gas & Electric and Southern California Edison, had begun to develop hydroelectric projects in the Sierra Nevada on tributaries to the Sacramento and San Joaquin Rivers.[165] And, well before this time, farmers in the Central Valley had begun to irrigate lands that were not riparian to any watercourse.[166]

All of these diversions impounded the spring runoff of the state's major rivers and consequently infringed upon the right of downstream riparians to the full and natural flow of the rivers. The riparian right established in *Lux v. Haggin* and confirmed in *Miller and Lux* thus stood in the path of new appropriations that would be essential to the economic growth of California during the next century.[167] As the supreme court itself recognized in *Antioch*, placing such a right in downstream users was "extremely unreasonable and unjust to the inhabitants of the valleys above and highly detrimental to the public interests besides."[168]

In response to the mounting concerns over riparian rights, the California Legislature enacted the Water Commission Act of 1913.[169] Along with establishing a Water Commission to regulate appropriative rights

164. *See* W. KAHRL, *supra* note 42, at 28-37.

165. *See* Fall River Valley Irrigation Dist. v. Mt. Shasta Power Corp., 202 Cal. 56, 259 P. 444 (1927); Herminghaus v. Southern Cal. Edison Co., 200 Cal. 81, 252 P. 607 (1926).

166. *See* Miller, *supra* note 121, at 7-10.

167. Three years after *Miller and Lux*, the court devised a minor exception to the rule that a riparian could demand the unimpaired flow from upstream appropriators. In Gallatin v. Corning Irrigation Co., 163 Cal. 405, 126 P. 864 (1912), it held that a riparian may not enjoin an upstream appropriation of floodwaters if the waters diverted by the appropriator "are of no substantial benefit to the riparian owner or to his land, and are not used by him." *Id.* at 413, 126 P. at 867. The court did not base this exception to *Miller and Lux*, however, on the doctrine of reasonable use. Rather, it held that flood waters not capable of being used by downstream riparians "are not a part of the flow of the stream which constitutes 'parcel' of his land within the meaning of the law of riparian rights." *Id.* The court did not explain why the ability or inability of the downstream riparians to use the water should alter its character—*viz*, why the water should be part of the flow of the river in the first case, floodwaters or freshets in the second.

Although *Gallatin* provided a means for the courts to avoid the inefficiencies of *Miller and Lux* on a few streams, the exception did not apply to the major rivers of the state—the Sacramento and San Joaquin Rivers and their tributaries—because the riparians along those rivers did rely on the spring floodwaters for irrigation and replenishment of their lands. *See* Miller, *supra* note 121, at 15-21.

168. Town of Antioch v. Williams Irrigation Dist., 188 Cal. 451, 465, 205 P. 688, 694 (1922).

169. 1913 Cal. Stat. 1012.

initiated after the effective date of the statute,[170] the act limited riparian rights in two important ways. First, it declared that riparian rights that were not exercised for a "useful and beneficial purpose" for ten consecutive years would be permanently forfeited.[171] Second, the act authorized the future appropriation of all "unappropriated waters," which it defined as all of the surface waters of the state except for waters previously appropriated and waters that "are being applied to useful and beneficial purpose[s] upon, or in so far as such waters are or may be reasonably needed for useful and beneficial purposes" on riparian lands.[172] It then defined "useful and beneficial purposes" as not more than two and one-half acre feet of water per acre per year as applied to the irrigation of uncultivated land.[173] The effect of these two provisions was to prevent riparians from claiming the unimpaired spring runoff for irrigation of uncultivated grazing land.

In light of these developments, it is not surprising that just sixteen years after it decided *Miller and Lux* the supreme court revisited the question whether the doctrine of reasonable use should apply in a dispute between riparians and appropriators.

I. The Endgame: *Herminghaus v. Southern California Edison*

On its facts, *Herminghaus v. Southern California Edison Co.*[174] was a virtual reprise of *Lux v. Haggin* and *Miller and Lux*.[175] The plaintiffs

170. Following enactment by the Legislature, the act was challenged by a group of power and water companies and submitted to the electorate on referendum. *See* M. ARCHIBALD, APPROPRIATIVE WATER RIGHTS IN CALIFORNIA 9-10 (1977) (Governor's Commission to Review California Water Rights Law, Staff Paper No. 1). Following approval by the voters, the act became effective on December 19, 1914. *Id.* at 10.

171. Water Commission Act § 11, 1913 Cal. Stat. 1018. The supreme court later held that this provision violated Article X, section 2. Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist., 3 Cal. 2d 489, 531, 45 P.2d 972, 989 (1935). The court concluded that the constitution "expressly protects the riparian not only as to his present needs, but also as to future or prospective reasonable beneficial needs." *Id.*

172. Water Commission Act § 11, 1913 Cal. Stat. 1018.

173. *Id.* § 43, 1913 Cal. Stat. 1033.

174. 200 Cal. 81, 252 P. 607 (1926), *cert. dismissed*, 275 U.S. 486 (1927).

175. It is intriguing to note, however, that the Miller and Lux Company tacitly supported Edison, the upstream appropriator in *Herminghaus*, against the claims of the downstream riparians. Catherine Miller has observed that "even as Miller and Lux sought to preserve its water supply and irrigation systems through riparian rights, the riparian doctrine began to operate against the company itself." Miller, *supra* note 121, at 15. Because all riparians along the Kern and San Joaquin Rivers had correlative rights, as riparian demands downstream of the Miller and Lux Company increased, the company's share of the water in the rivers diminished. Ironically, the company began to rely on contracts with upstream appropriators, rather than on the doctrine of the *Miller and Lux* case, to protect its water supplies. *Id.* Then, to limit the rights of downstream riparians to demand a share of the unimpaired flow, the company "tacitly supported the efforts of a number of large power companies to impose the stan-

owned 18,000 acres in Fresno and Madera Counties, which they alleged were riparian to the San Joaquin River. As had the plaintiffs in the earlier cases, they relied on the spring floods to irrigate and to replenish their lands. Herminghaus and her co-plaintiffs sued to enjoin Edison from constructing and operating a dam upstream of their lands, contending that the impoundment would impair their riparian rights to the unimpaired flow of the San Joaquin River.[176] A significant difference between these allegations and the facts of the prior cases was that the upstream appropriator in *Herminghaus* was a public utility, rather than another irrigator. The case thus presented the court with the question whether an historical, but antiquated, method of irrigating riparian lands for agricultural purposes should give way to a new appropriation to supply the needs of California's modern urban and industrial economy.

Unfortunately, as it had done in *Lux v. Haggin* and *Miller and Lux*, the court adhered to its doctrinal distinction between riparian and appropriative rights and rejected the utilitarian argument advanced by Edison that riparians must exercise their rights efficiently so as to maximize the water available for all competing uses. Quoting from *Miller and Lux*, the court reiterated that, vis-a-vis a nonriparian user, " 'riparian owners have a right to have the stream flow past their land in its usual course.' "[177] It concluded that

> [i]f the higher interests of the public should be thought to require that the water usually flowing in streams of this state should be subject to appropriation in ways that will deprive the riparian proprietor of its benefit, the change sought must be accomplished by the use of the power of eminent domain.[178]

Despite this entrenchment of riparian rights, three aspects of the *Herminghaus* opinion suggest that the court was troubled by the implications of its decision to insulate riparians from the doctrine of reasonable use in allocation controversies with appropriators. First, the court reviewed section 42 of the Water Commission Act, which declared the use of more than two and one-half acre feet of water per acre to irrigate uncultivated land to be unreasonable.[179] Edison argued that this limitation applied to the plaintiffs' lands and required the court to declare that,

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dard of reasonable use on riparian owners . . . . Self-interest, not legal principle, determined the company's strategy." *Id.* Indeed, Edison's attorney in the *Herminghaus* litigation was none other than Edward F. Treadwell, who had successfully represented the company in *Miller and Lux*. *See* Treadwell, *Modernizing the Water Law*, 17 CALIF. L. REV. 1, 12 (1928).

176. *Herminghaus*, 200 Cal. at 86-87, 252 P. at 609.

177. *Id.* at 101, 252 P. at 615 (quoting Miller and Lux v. Madera Canal and Irrigation Co., 155 Cal. 59, 65, 99 P. 502, 512 (1909)).

178. *Id.*

179. *See supra* text accompanying notes 172-173.

because their use of the spring runoff was unreasonable, there remained unappropriated water available for Edison's new use.[180] Although the court rejected the proposition that the Legislature could "arrogate to itself the right to determine what are the 'useful and beneficial purposes' to which lands held in private ownership shall be devoted or to which those riparian rights . . . shall be limited in their use and enjoyment,"[181] it made clear that riparian rights *are* limited by the doctrine of reasonable use. Echoing its earlier opinions in *Southern California Investment Co. v. Wilshire*[182] and *Half Moon Bay Land Co. v. Cowell*,[183] the court emphasized:

> The extent to which such riparian land owners need, and use, and are entitled to have the benefit of the flow and overflow of such waters under their vested riparian rights therein is a matter which depends upon the circumstances of each particular case; upon location, aridity, rainfall, soil porosity, responsiveness, adaptability to particular forms of production, and many other elements which render the question essentially one for judicial inquiry and determination in all cases involving the proper use of water upon both cultivated and uncultivated areas.[184]

Thus, although the court adhered to the separation of the riparian and appropriation systems, it did not retreat from its prior holdings that both riparian and appropriative rights must be exercised reasonably in light of competing demands on the water resource.[185]

Second, while the court was without power to declare the plaintiffs' riparian rights subordinate to Edison's nonriparian use, it suggested that it would have authority in a basin-wide adjudication to reallocate the waters of the San Joaquin River to best serve the general public interest. The court mused:

> If the state were here assaying to uphold an effort on its part to work out impartially, unselfishly and in the interests of the whole people some general plan or system for the equitable adjustment of rights and uses in its flowing streams with a view to the conservation, development, and distribution of the dynamic forces and generative and fertilizing fructibilities of their waters, it might well be argued that public policy, public interest, and a most liberal interpretation of the police powers of the state might rightfully be invoked in support of such an effort.[186]

180. 200 Cal. at 115-17, 252 P. at 621-22.
181. *Id.* at 117, 252 P. at 621-22.
182. 144 Cal. 68, 77 P. 767 (1904); *see supra* text accompanying notes 126-127.
183. 173 Cal. 543, 160 P. 675 (1916); *see supra* text accompanying notes 128-131.
184. 200 Cal. at 117-18, 252 P. at 622.
185. *See supra* part IV(F).
186. 200 Cal. at 120, 252 P. at 623.

Because *Herminghaus* involved two sets of private litigants, however, the court found it inappropriate to decide whether it possessed such broad ranging reapportionment authority.[187]

Third, the court was sharply divided on the question whether to integrate the riparian and appropriative systems through the reasonable use doctrine.[188] In a prophetic dissent, Justice Shenk declared that the majority's opinion "will result in checking the progress of the state of California in conserving this most important natural resource."[189] He observed that, to supply the plaintiffs with "less than one percent of the maximum flow of the San Joaquin River," the court's decision allowed them to demand "over ninety-nine percent of that flow."[190] In Justice Shenk's opinion, the decision sanctioned "a highly unreasonable use or method of the use of water," and "unnecessarily pull[ed] the teeth of the Water Commission Act."[191] He noted that the legislatures of Oregon and Washington—two of the other western states that recognized riparian rights—had limited riparians to a reasonable share of the available water and that such limitations had been upheld by the state supreme courts.[192]

Justice Shenk also urged that, as a creation of the common law, riparian rights are inherently dynamic and subject to revision by the courts. "One of the characteristics of the common law," he observed, "is that it contains within itself its own repealer, that is to say, it changes as conditions change and adapts itself to new conditions, *ex proprio vigore*."[193] In an explicitly instrumentalist passage of his dissent, Justice Shenk argued that California was a very different place than it had been in 1886 when *Lux v. Haggin* was decided. As a result of the economic evolution that had occurred, and would continue to occur, he declared that the common law doctrine of riparian rights itself must evolve to facilitate that change. "It is difficult to conceive of a question more intimately connected with the present and future industrial and economic development of the state," he concluded, "than the conservation of the excess waters of its great rivers."[194]

187. *Id.*

188. Although the vote on the decision of the case was five to one, *see id.* at 123, 252 P. at 624, the vote denying the petition for rehearing was four to three, *id.* at 131, 252 P. at 608.

189. *Id.* at 123, 252 P. at 624 (Shenk, J., dissenting).

190. *Id.*

191. *Id.*

192. *Id.* at 125, 252 P. at 625 (citing *In re* Hood River, 114 Or. 112, 227 P. 1065 (1924); Brown v. Chase, 125 Wash. 542, 215 P. 23 (1923)).

193. *Id.* at 125-26, 252 P. at 625.

194. *Id.* at 126, 252 P. at 625.

V. Bigfoot Is Born: The Enactment of Article X, Section 2

Persuaded by Justice Shenk's argument in *Herminghaus* that the continued exemption of riparian rights from the doctrine of reasonable use would stifle upstream appropriations for urban and industrial uses, the legislature placed an initiative to reform California water law on the 1928 ballot. The purpose of the initiative was to amend the constitution to overrule *Herminghaus*, *Miller and Lux*, and *Lux v. Haggin*.[195] In the words of Harry Scheiber, the 1928 amendment resolved

> the *Herminghaus* questions of "rule" versus "policy," of vested rights and competing doctrines, . . . in a way that fused public rights concepts in theory with "popular sovereignty" in practice: the people changed the constitution. Neither the judges nor the rich and the powerful, nor even the legislature, finally ruled on this matter; it was the electorate who decided.[196]

A. The Text of the Amendment

As described at the outset of this article, the amendment begins with a declaration of policy that "the water resources of the State be put to beneficial use to the fullest extent of which they are capable" and states that users shall conserve water "with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."[197] By this prefatory language, the amendment incorporates into the California Constitution the common law doctrine of reasonable use developed in cases such as *Southern California Investment Co. v. Wilshire*,[198] *Half Moon Bay Land Co. v. S. H. Cowell*,[199] *California Pastoral and Agricultural Co. v. Madera Canal and Irrigation Co.*,[200] and *Town of Antioch v. Williams Irrigation District*.[201] Implementing this policy, the second sentence of the amendment stipulates that all water rights are "limited to such water as shall be reasonably required for the beneficial use to be served."[202]

Because it was enacted as a response to *Herminghaus*, the amendment also specifically addresses riparian rights. First, Article X, section 2 confirms that riparian rights exist and accords them constitutional sta-

195. W. HUTCHINS, *supra* note 62, at 13-14; Wiel, *Fifty Years of Water Law*, 50 HARV. L. REV. 252, 274-75 (1936).

196. Scheiber, *Public Rights and the Rule of Law in American Legal History*, 72 CALIF. L. REV. 217, 249 (1984).

197. CAL. CONST. art. X, § 2; *see supra* text accompanying note 2.

198. 144 Cal. 68, 77 P. 767 (1904); *see supra* text accompanying notes 126-127.

199. 173 Cal. 543, 160 P. 675 (1916); *see supra* text accompanying notes 128-131.

200. 167 Cal. 78, 138 P. 718 (1914); *see supra* text accompanying notes 133-137.

201. 188 Cal. 451, 205 P. 688 (1922); *see supra* text accompanying notes 139-148.

202. CAL. CONST. art. X, § 2; *see supra* text accompanying note 3.

tus.[203] Second, it expressly applies the doctrine of reasonable use to riparians. The amendment declares:

> Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purpose for which such lands are, or may be made adaptable in view of such reasonable and beneficial uses.[204]

Although the meaning of this language was subject to some debate during the initiative campaign,[205] in two of the early water rights cases following enactment of the 1928 amendment, the California Supreme Court made clear that the purpose of the amendment was to bridge the gap between the riparian and appropriative systems by making riparian rights subject to the doctrine of reasonable use both in disputes with other riparians and in cases in which the riparian right is challenged by a competing appropriation.

B. Early Applications of Article X, Section 2

Appropriately, Justice Shenk was the author of the opinions in *Gin S. Chow v. City of Santa Barbara*[206] and *Peabody v. City of Vallejo*.[207] Both cases involved suits by riparian landowners along small coastal streams to enjoin a city from appropriating water upriver from the plaintiffs' land.

In *Gin Chow*, the plaintiffs owned about 20,000 acres in the Santa Ynez River basin in Santa Barbara County. They alleged that Santa Barbara's diversions from the river deprived them of water to which they were entitled under *Herminghaus, Miller and Lux,* and other cases.[208] The supreme court rejected the plaintiffs' claim, basing its decision both on Article X, section 2 and on a common law exception to the rule that

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203. The amendment provides that "nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which [his] land is riparian under reasonable methods of diversion and use." CAL. CONST. art. X, § 2. It also guarantees appropriators water to which they are "lawfully entitled." *Id.*

204. *Id.*

205. Based on the legislative history of the initiative, Samuel Wiel argued that the amendment affirmed *Herminghaus* by requiring that compensation be paid to riparians whose prior rights to the unimpaired flow of the river were abridged. In his opinion, the amendment simply declared that a riparian could not enjoin an upstream appropriation if the courts determined that the riparian use was unreasonable. Wiel, *supra* note 68, at 175-76. As Clifford Schulz and Gregory Weber have observed, however, the ballot argument in favor of the initiative, which was submitted to the voters, contradicted Wiel's interpretation and urged the voters to overturn *Herminghaus* and *Lux v. Haggin*. Schulz & Weber, *supra* note 41, at 1070-71 & n.189.

206. 217 Cal. 673, 22 P.2d 5 (1933).

207. 2 Cal. 2d 351, 40 P.2d 486 (1935).

208. 217 Cal. at 677-80, 22 P.2d at 6-7.

the doctrine of reasonable use does not apply between riparians and appropriators. Relying on *Gallatin v. Corning Irrigation Co.*,[209] the court held that the plaintiffs' assertion of their riparian rights to block Santa Barbara's appropriation was unreasonable because "the waters to be taken and used by the defendants are not and never can be used or be put to any beneficial or useful purpose by the plaintiffs."[210] Although the court confused the issue by embracing the spurious distinction between floodwaters and waters capable of being used by the plaintiffs on their riparian lands,[211] this conclusion is significant because it was the first time the California Supreme Court relied on the doctrine of reasonable use to decide that an appropriation should take precedence over the rights of downstream riparians.[212] *Gin Chow* recognized that Article X, section 2 joins the riparian and appropriation systems by establishing that riparian rights are subject to the requirement of reasonable use, not just in disputes among riparians, but also in cases between riparians and appropriators.

Peabody confirmed this construction of the 1928 amendment. The plaintiffs, riparians along Suisun Creek in Napa County, sued to enjoin the city of Vallejo from impounding water behind a dam that it had constructed on a tributary of the creek.[213] They used the water of Suisun Creek to irrigate orchards, vineyards, and other crops.[214] As did the plaintiffs in *Gin Chow*, the Peabodys asserted their riparian rights to the unimpaired floodwaters of the creek, which they used to saturate their lands, deposit silt, cleanse the land of accumulated salts, and replenish the groundwater supply.[215] In contrast to *Gin Chow*, however, the *Peabody* trial court found that

> all of the waters in Suisun Creek, including the waters flowing in the stream during peak flows, were being put to a beneficial use by the plaintiffs, and that the impounding of any portion of these waters by the defendant would result in material and substantial damage to the plaintiffs.[216]

Peabody therefore presented the supreme court with the question it had sidestepped in *Gin Chow*: whether Article X, section 2 empowered it to declare unreasonable an existing riparian use for the benefit of a new appropriation.

209. 163 Cal. 405, 126 P. 864 (1912); *see supra* note 167.
210. 217 Cal. at 706, 22 P.2d at 18.
211. *See supra* note 167.
212. 217 Cal. at 706, 22 P.2d at 18.
213. 2 Cal. 2d at 358-59, 40 P.2d at 487-88.
214. *Id.* at 360, 40 P.2d at 488.
215. *Id.* at 362-63, 40 P.2d at 489.
216. *Id.* at 362, 40 P.2d at 489.

The court ruled that the 1928 amendment "has enjoined the doctrine of reasonable use as between the riparian owner and an appropriator."[217] Declaring that *Miller and Lux* "is no longer the law of this state,"[218] the court also held that the limitations of Article X, section 2 "now apply to every water right and every method of diversion. . . . The right to the use of water is limited to such water as shall be reasonably required for the beneficial use to be served."[219] Based on the constitutional prohibition against waste and unreasonable use, the court then found that the plaintiffs' use of the floodwaters of Suisun Creek to deposit silt on their lands and to flush salts from the soil "cannot be supported. . . . This asserted right involves an unreasonable use . . . or an unreasonable method of diversion of water as contemplated by the constitution."[220] The court remanded the case, however, for a determination whether the plaintiffs' exercise of their riparian rights to maintain the groundwater table beneath their property was reasonable in light of Vallejo's competing demands.[221]

The court's directions on remand are significant because they establish that Article X, section 2 authorizes the state to reallocate water from existing users, such as the *Peabody* plaintiffs, to new uses, such as those of Vallejo. In assigning the burden of proof to the city, the court stated that an appropriator may "enter[] a field of water supply and seek[] by appropriation to take water from such supply on the claim that there is more than sufficient for all reasonable beneficial uses by those who have the prior and preferential right."[222] As it had done in pre-1928 cases,[223] the court held that the determination whether existing uses are reasonable should be guided by a flexible and dynamic evaluation of the competing interests. The existence of wasteful or unreasonable use, it explained, "depends on the circumstances of each case and the time when waste is required to be prevented."[224] If the water supply of a particular river is abundant relative to demand, the court stated that

217. *Id.* at 367, 40 P.2d at 491.

218. *Id.* at 368, 40 P.2d at 492.

219. *Id.* at 367, 40 P.2d at 491.

220. *Id.* at 369, 40 P.2d at 492.

221. *Id.* at 383, 40 P.2d at 498-99. The court held that the plaintiffs would not be entitled to an injuction under these circumstances. Rather, it remanded the case for trial "as a condemnation action." *Id.* According to the instructions to the trial court, the plaintiffs would be entitled to damages only if the court found that the plaintiffs' use of water was reasonable and that the defendant's diversions substantially interfered with their rights. *Id.* The supreme court also directed the trial court to ascertain whether there was available a "physical solution" to the dispute. *Id.*

222. *Id.* at 381, 40 P.2d at 498.

223. *See supra* part IV(F).

224. 2 Cal. 2d at 368, 40 P.2d at 492.

"there is no need for the conservation of the product thereof."[225] But when the water is "needed for beneficial uses it may be stored or restrained by appropriation subject to the rights of those who have a lawful priority *in a reasonable beneficial use*."[226] The court emphasized that the doctrine of reasonable use requires that "[w]hen the supply is limited public interest requires that there be the greatest number of beneficial uses which the supply can yield."[227]

C. A Unified Theory of Water Rights

As interpreted and applied in *Gin Chow* and *Peabody*, the 1928 amendment accomplished the long overdue integration of the riparian and appropriative systems by subjecting all water rights, in all proceedings, to the doctrine of reasonable use. The significance of this doctrinal change did not pass unnoticed by the supreme court. In his opinion for the court in *Gin Chow*, Justice Shenk acknowledged the plaintiffs' argument that since *Lux v. Haggin* the court had "adhered to the general rule that in a controversy between a riparian owner and an appropriator the doctrine of reasonable use does not apply."[228] Echoing his *Herminghaus* dissent, Justice Shenk described the potentially stultifying consequences of this rule. "It requires no extraordinary foresight," he observed, "to envision the great and increasing population of the state and its further agricultural and industrial enterprises dependent upon stored water—water that is now wasted into the sea and lost to any beneficial use."[229] Characterizing the 1928 amendment as "the highest and most solemn expression of the people of the state in behalf of the general welfare," Justice Shenk concluded that the "present and future well-being and prosperity of the state depend upon the conservation of its life-giving waters."[230]

In light of the court's sense of occasion, it is somewhat surprising that Justice Shenk did not view the decision as a dramatic departure from doctrine. "There is nothing novel about the limitation of the riparian right to a reasonable, beneficial use of water," he stated. "Other western states which first adopted the common-law doctrine of riparian rights have effectually changed it to meet modern conditions."[231] Responding to the plaintiffs' contention that application of the reasonable

225. *Id.*
226. *Id.* (emphasis added).
227. *Id.*, 40 P.2d at 491.
228. Gin S. Chow v. City of Santa Barbara, 217 Cal. 673, 696, 22 P.2d 5, 14 (1933).
229. *Id.* at 702, 22 P.2d at 16.
230. *Id.* at 701, 22 P.2d at 16.
231. *Id.* at 704, 22 P.2d at 17.

use doctrine would constitute a taking of their property, Justice Shenk explained that

> the amendment purports only to regulate the use and enjoyment of a property right for the public benefit, for which reason the vested right theory cannot stand in the way of the operation of the amendment as a police measure. A vested right cannot be asserted against it because of conditions once obtaining.[232]

Indeed, he quoted the United States Supreme Court for the proposition that " 'every state is free to change its laws governing riparian ownership and to permit the appropriation of flowing waters for such purposes as it may deem wise.' "[233]

VI. Hibernation and Reawakening: The Modern Resurgence of Reasonable Use

Following the decisions in *Gin Chow* and *Peabody*, the newly integrated doctrine of reasonable use lapsed into a period of dormancy. One reason for this was the supreme court's definition of reasonable use in *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District*,[234] which it handed down just four months after *Peabody*. The plaintiffs in *Tulare* were a group of riparians and appropriators who sued the Lindsay-Strathmore Irrigation District, a junior appropriator, to quiet title to the waters of the Kaweah River. One issue in the case was Lindsay-Strathmore's contention that it was entitled to some of the water used by the plaintiffs because they were wasting water by conveying it from the river to their fields through unlined ditches. In rejecting the junior appropriator's argument, the court held that

> it is the policy of the state to require within reasonable limits the highest and greatest duty from the waters of the state. However, an appropriator cannot be compelled to divert according to the most scientific method known. He is entitled to make a reasonable use of the water according to the general custom of the locality, so long as the custom does not involve unnecessary waste.[235]

The supreme court's decision to evaluate the reasonableness of a particular use of water by reference to similar uses in the surrounding community was a major setback for those who sought to provide for new demands by reallocating water from inefficient existing uses. If a trans-

232. *Id.* at 703, 22 P.2d at 17 (citing Chicago & Alton R.R. v. Tranbarger, 238 U.S. 67, 78 (1915)).

233. *Id.* at 705, 22 P.2d at 18 (quoting Connecticut v. Massachusetts, 282 U.S. 660, 670 (1931)).

234. 3 Cal. 2d 489, 45 P.2d 972 (1935).

235. *Id.* at 547, 45 P.2d at 977 (citations omitted).

mission or irrigation system "was commonly used in a region and was operated properly, it generally was held not to be legally wasteful despite significant water losses."[236] For example, in *Tulare* the court approved the senior appropriators' conveyance losses of forty to forty-five percent based on its determination that "many irrigation systems in the San Joaquin Valley have an average conveyance loss far in excess of forty percent."[237] As Steve Shupe has observed, the incorporation of local custom into the definition of reasonable use "has perpetuated wasteful practices that became customary early in the development of the West."[238] Until recently, the courts "have continued to consider customary irrigation losses (currently averaging fifty-nine percent of the water diverted) as non-wasteful, despite the . . . development of efficient technologies."[239]

A second reason for the repose of the doctrine of reasonable use was the construction and expansion of the state's major reclamation projects beginning in the mid-1930s and continuing into the early 1970s. During these years, the federal government constructed the Central Valley Project,[240] the state built the State Water Project,[241] San Francisco completed and then expanded its Hetch Hetchy facilities,[242] and Los Angeles extended its Owens Valley Project north into Mono Basin.[243] For over forty years, the large storage reservoirs constructed as part of these and other projects[244] alleviated most of California's water supply problems. As a consequence, the courts were not asked to exercise their powers

236. Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483, 491 (1982).

237. 3 Cal. 2d at 572-73, 45 P.2d at 1009. The court noted that two large irrigation systems had conveyance losses of 55.2 percent and 57.9 percent over a period of five years and that four federal projects had average conveyance losses of 46.8 percent. *Id.* at 573, 45 P.2d at 1009.

238. Shupe, *supra* note 236, at 491.

239. *Id.* In 1980, the California Legislature overruled *Tulare*, declaring that "conformity of a use, method of use, or method of diversion of water with local custom shall not be solely determinative of its reasonableness, but shall be considered as one factor to be weighed in the determination of the reasonableness of use." CAL. WATER CODE § 100.5 (West Supp. 1989).

240. *See* W. KAHRL, *supra* note 42, at 46-50. For a description of the major components of the CVP, see *supra* note 42.

241. *See* W. KAHRL, *supra* note 42, at 50-56. For a description of the major components of the SWP, see *supra* note 43.

242. *See* CITY AND COUNTY OF SAN FRANCISCO, SAN FRANCISCO WATER & POWER: A HISTORY OF THE MUNICIPAL WATER DEPARTMENT AND HETCH HETCHY SYSTEM 33 (1985).

243. *See* W. KAHRL, *supra* note 20, at 330-50; National Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 426-29, 658 P.2d 709, 713-15, *cert. denied*, 464 U.S. 977 (1983).

244. For a list of the surface water reservoirs in California with capacities greater than 75,000 acre feet, and the dates of their construction, see DEPARTMENT OF WATER RESOURCES, *supra* note 9, at 123.

under Article X, section 2 to reallocate water from existing users to new uses.

By 1980, however, two changes had occurred which led to the dramatic resurgence of the reasonable use doctrine. First, it became widely recognized that the statewide demand for water for consumptive purposes was nearing the limits of existing developed supplies.[245] The electorate's rejection of the Peripheral Canal in 1982[246] confirmed that the era of answering rising demand with construction of massive new water projects had come to an end.[247] Second, the environment had become a major factor in the debates over future development of California's water resources. In both *Audubon* and the *Delta Water Cases*, for example, environmental and fishing organizations presented credible evidence that prior decisions had allocated too much water to consumptive uses and had failed adequately to protect instream uses, fisheries, and other environmental values.[248] These two developments have presented the courts and the State Water Resources Control Board with the question whether water that has been allocated to certain users in the form of riparian and appropriative rights should be reallocated to new consumptive users in the growing urban and suburban areas of the state and to non-consumptive uses such as maintenance of water quality, provision of stream flows for migration of anadromous fish, preservation of Mono Lake, and protection of the estuarian ecosystem of San Francisco Bay.

As noted previously, the constitutional authority of the state to en-

245. Between 1945 and 1980, California's population increased from about 10 million to almost 24 million. *Id.* at 6-7. Irrigated acreage rose from a pre-World War II level of 5 million acres to a high of 9.7 million acres in 1981. *Id.* at 8-9. By 1980, net urban water use reached 5 million acre feet per year, while net agricultural use exceeded 27 million acre feet per year. *Id.* at 16. While supplies vary regionally and annually, the 1976-1977 drought created severe shortages throughout the state. *See* DEPARTMENT OF WATER RESOURCES, THE 1976-1977 CALIFORNIA DROUGHT: A REVIEW 26-90 (1978). Moreover, by the mid-1980s, most regions were reporting existing or near-future deficiencies in supply. *See* DEPARTMENT OF WATER RESOURCES, *supra* note 9, at 40. In its original draft report in the Bay-Delta Hearings, *see supra* part III(C), the State Water Resources Control Board found that Southern California users that receive water from the State Water Project reached the dependable limits of their available supplies from all sources in 1985. STATE WATER RESOURCES CONTROL BOARD, DRAFT WATER QUALITY CONTROL PLAN FOR SALINITY: SAN FRANCISCO BAY / SACRAMENTO-SAN JOAQUIN DELTA ESTUARY 6-12 (1988).

246. *See* Department of Water Resources, *supra* note 9, at 77.

247. *See* Peterson, *Changes Confronting Federal Agency that Built Water Projects for West*, N.Y. Times, Mar. 17, 1985, at 22, col. 1. This article notes that Congress has not authorized a major new reclamation project since 1968 and that the Reagan administration reduced the Bureau of Reclamation's budget by 20 percent for fiscal year 1986. It also quotes the acting commissioner of Reclamation as stating that "most of our people recognize that the day of the big new projects are [sic] behind us." *Id.*

248. *See supra* parts III(B) & III(C).

gage in such a reapportionment of water has been questioned.[249] Perhaps this interpretation is the result of Bigfoot's hibernation during the three decades between the supreme court's original explication of Article X, section 2 in *Gin Chow* and *Peabody* and its reassertion of the doctrine of reasonable use in *Joslin*. Unseen for so many years, Sasquatch may have become a mythological figure, rather than a tangible force in California water law. Viewed from this perspective, the courts' assertion of broad powers under Article X, section 2 to reallocate water from antiquated to new uses would appear to be illegitimate, based on myth rather than on legal doctrine.

The common law genesis of Article X, section 2 demonstrates, however, that well before its enactment in 1928 the courts shaped California water law in an avowedly utilitarian manner and limited the private property right in the state's water resources based on the courts' evolving perceptions of the social utility of the use for which the right was exercised. When the paramount economic interest of the state was goldmining, the supreme court created—almost out of whole cloth—the doctrine of prior appropriation, because riparian rights would not serve the needs of the miners. As mining declined in importance and began to interfere with the developing agricultural and commercial economy of the Sacramento Valley, the court recognized the supremacy of riparian rights for downstream irrigation and moved to abate the public nuisance caused by hydraulic mining debris. This evolution in the law of water rights ushered in four decades of growth in the Central Valley, which made agriculture California's predominant industry. By the second decade of the twentieth century, however, the exemption of riparian rights from the doctrine of reasonable use threatened to stifle the development of hydroelectric power and domestic water supplies for the cities of the Bay Area and Southern California. When the supreme court resisted the integration of the riparian and appropriative systems through the doctrine of reasonable use, which was necessary to facilitate this urban and industrial development, the people themselves acted to make all water rights subject to the requirement of reasonable use. In short, as demographic conditions have changed and the state's economy has evolved, water rights have been modified to ensure that the authorized uses of water serve the contemporary needs of the public.

Historically, the reasonable use requirement limited existing water rights as necessary to keep pace with the transformation of the state's economy. This occurred during a period of tremendous economic growth as California moved from gold dust to farming to commerce to

249. *See supra* part III(D).

heavy industry to aerospace to silicon chips. More recently, as the state's economic needs threaten to overwhelm the capacity of our natural resources to support them, and as a growing urban population seeks relief in the remaining undeveloped parts of our landscape, environmental interests also claim a share of California's water resources. Thus, it should not be surprising that advocates of fish and wildlife, recreation, and preservation have looked to Article X, section 2 for authority to reconsider the social utility of existing, and predominantly consumptive, uses of water in light of current public values.

The view expressed in *Joslin*, *Audubon*, and the *Delta Water Cases* that " 'reasonable water use is dependent upon not only the entire circumstances presented but varies as the current situation changes,' "[250] is not new. Rather, it may be traced back beyond the enactment of Article X, section 2 to the very first water rights case decided by the California Supreme Court in 1855.[251] This dynamic and utilitarian conception of water rights formed the basis of the court's adoption of prior appropriation as the water law of the West and permeated its subsequent cases that recognized the doctrine of riparian rights, incorporated the principle of reasonable use, and ultimately integrated the riparian and appropriative systems. Thus, far from being some kind of golem created by the recent supreme court, the Bigfoot of California water law has a strong lineage and a proud heritage.

VII. Conclusion

At the conclusion of his wonderful book on the Klamath Mountains, David Rains Wallace contemplates the meaning of the Sasquatch myth for our modern world. "[N]ew myths don't appear fully formed," he writes, "but evolve imprecisely out of old myths. . . . Giants seem to have originated as a way of giving human form to all that is titanic and inchoate in nature."[252] In their dominion over the land and beasts around them, giants affirmed "a desire for human power over wilderness."[253] Wallace believes that as we have evolved, however, so too has Bigfoot. Thus, we may see in the Klamath giants

> the possibility of a consciousness quite different from our own, of a being that may be very close to us in hominid origins, but that may have evolved in mysterious ways. We imagine an animal that

250. United States v. State Water Resources Control Bd., 182 Cal. App. 3d 82, 129-30, 227 Cal. Rptr. 161, 187 (1986) (quoting Environmental Defense Fund v. East Bay Mun. Util. Dist., 26 Cal. 3d 183, 194, 605 P.2d 1, 6, 161 Cal. Rptr. 466, 471 (1980)).

251. Irwin v. Phillips, 5 Cal. 140 (1855); *see supra* part IV(B).

252. D.R. WALLACE, THE KLAMATH KNOT 137 (1983).

253. *Id.*

> somehow has understood the world more deeply than we have, and that thus inhabits it more comfortably and freely, while eluding our self-involved attempts to capture it.
>
> Giants might be seen as a kind of preadapted myth that can help us to survive the world we've created. Giants have hovered for thousands of years in the backgrounds of our dreams of immortality and omniscience, large shadows humans cast behind them as they moved toward brilliant visions of limitless power. But now the visions are fading into a natural world that has proved much deeper than we ever imagined. Giants can have a new function in an evolutionary myth. They link us to lakes, rivers, forests, and meadows that are our home as well as theirs. They lure us into the wilderness . . . not to devour us but to remind us where we are, on a living planet. If giants do not exist, to paraphrase Voltaire, it is necessary to invent them.[254]

Fortunately, we have our Bigfoot. He is more than a myth. Inhabiting our remote mountain canyons, wild rivers, high desert lakes, and bays and estuaries, he is also a vital part of our legal imagination.

254. *Id.* at 137-38.