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Waist Deep in the Big Muddy: Property Rights, Public Values, and Instream Waters

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WAIST DEEP IN THE BIG MUDDY:* PROPERTY RIGHTS, PUBLIC VALUES, AND INSTREAM WATERS

*John S. Harbison***

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I. INTRODUCTION

This article examines three legal mechanisms that are said to be

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able to satisfy the instream water needs of riparian habitats in the water-starved West: water markets, public trusts, and an innovative conserved water statute recently enacted in Oregon. Part II briefly lays out the context in which these mechanisms operate. This context is the law of prior appropriation that each western state has adopted in one form or another. This Part also introduces each mechanism with attention to how well each fits into a prior appropriation regime.

Part III explores more deeply the promise of water markets to provide optimal levels of instream water. For a number of reasons, most importantly the high transaction costs associated with water conveyances, this promise is illusory. Part IV considers the judicial application of the public trust doctrine to restore instream waters. It concludes that this approach is constitutionally suspect under the takings clause of the fifth amendment.¹ Part V analyzes the Oregon conserved water statute.² This imaginative legislation is designed to restore instream waters by encouraging marketization and avoiding the takings clause. Although it may accomplish both these goals, it is unlikely to serve the needs of riparian environments.

This article suggests that if Westerners want to ensure adequate levels of instream water, they must pay for the insurance. Unfortunately, it cannot be purchased cheaply. The power of the states to condemn property by eminent domain is the only legal mechanism that can guarantee the survival of threatened waterways. Whether or not this power of condemnation can be exercised effectively is a political question beyond the scope of this article. But it should be noted that we are beginning to witness a basic redistribution of appropriative rights in the West.³ We should see to it that our rivers and lakes receive their share.

II. CONFRONTING THE CONSEQUENCES OF PRIOR APPROPRIATION

The once vast estate consisting of the Truckee River, the Lahontan wetlands, and Pyramid Lake in western Nevada was a casualty of the law of prior appropriation. Diversion of the Truckee for irrigation has lowered the water level of Pyramid Lake by approximately forty feet. As a result, the Lahontan cutthroat trout is nearly extinct and the cui ui (the last species of an unusual genus of tubemouthed suckers) is endangered.⁴ There have been numerous other casualties: Tulare Lake and Mono Lake in California; Walker Lake in

1. Judicial takings have received relatively little attention compared to legislative takings. *But see* Thompson, *Judicial Takings*, 76 VA. L. REV. 1449 (1990).

2. OR. REV. STAT. §§ 537.455-537.500 (Butterworth 1988). This legislation is discussed briefly in Sax, *The Constitution, Property Rights and the Future of Water Law*, 61 U. COLO. L. REV. 257, 279-81 (1990).

3. *See generally* M. REISNER & S. BATES, *OVERTAPPED OASIS: REFORM OR REVOLUTION FOR WESTERN WATER* (1990).

4. *Id.* at 44; P. STEINHART, *TRACKS IN THE SKY: WILDLIFE AND WETLANDS OF THE PACIFIC FLYWAY* 104 (1987).

Nevada; and the Sevier River in Utah, to name but a few. Their remains attest to the severely utilitarian bias of the law of prior appropriation.

According to the classic formulation of prior appropriation law, an individual could obtain a vested right to water only by diverting it from its source and putting it to beneficial use. Only utilitarian uses, those associated with agriculture, industry, and domesticity, were thought to be beneficial.⁵ The use of water in its natural environment "was simply not a 'use' as the custom of the region had come to define the term."⁶ To the creators of prior appropriation law, "private ownership of stream water while in its natural environment [did] not exist; but private rights to extract and use such waters [did] exist, and they [were vested] property rights."⁷

In order to maintain their water rights, appropriators must withdraw their water from its source, to the detriment of riparian habitats like Mono Lake.⁸ This is the ecological consequence of the law of prior appropriation. Although this version of the prior appropriation doctrine is still the rule in most states, western legislatures have adopted numerous measures intended to promote instream flows. According to Joseph Sax,

it does not require mastery of abstruse legal doctrines to appreciate what is going on. The heart of the matter is that public values have changed, and the use of water has reached some critical limits. One result is that we need to retrieve some water from traditional users to sustain streams and lakes as natural systems and to protect water quality. . . . Thus, we have a potential head-on conflict between existing water users and their existing and future demands, and the existing and future demands of what may broadly be called in-stream uses.⁹

Instream flow statutes tend to authorize water agencies to with-

5. Wilkinson, *Aldo Leopold and Western Water Law: Thinking Perpendicular to the Prior Appropriation Doctrine*, 24 LAND & WATER L. REV. 1, 2 n.5 (1989). All of the western states have adopted the prior appropriation doctrine in some form. See generally 3 W. HUTCHINS, *WATER RIGHTS IN THE NINETEEN WESTERN STATES* (1977).

6. Tarlock, *Appropriation for Instream Flow Maintenance: A Progress Report on "New" Public Western Water Rights*, 1978 UTAH L. REV. 211, 212.

7. W. HUTCHINS, *supra* note 5, vol. 1 at 443. For a history of the prior appropriation doctrine, see R. DUNBAR, *FORGING NEW RIGHTS IN WESTERN WATERS* (1983). For a case holding that the appropriation of water for a lake to be stocked with fish and opened for recreational fishing is not a beneficial use, see *Lake Shore Duck Club v. Lake View Duck Club*, 50 Utah 76, 166 P. 309 (1917).

8. Indeed, water must be put to utilitarian use continuously. An interruption in beneficial use may result in the loss of the water right by abandonment or forfeiture. See, e.g., *Horse Creek Conservation Dist. v. Lincoln Land Co.*, 54 Wyo. 320, 92 P.2d 572 (1939); *Ramsay v. Gottsche*, 51 Wyo. 516, 69 P.2d 535 (1937). Many western states have forfeiture statutes. See, e.g., WYO. STAT. § 41-3-401 (1977).

9. Sax, *The Limits of Private Rights in Public Water*, 19 ENVTL. L. 473, 474 (1989).

draw specific streams from further diversion,¹⁰ require consideration of public interests in instream water upon approval of a new diversion or transfer,¹¹ or allow public acquisition of existing water rights which can be dedicated to instream uses.¹² They reflect public concern about conserving instream water for wildlife, recreation, and aesthetics. Unfortunately, they have not served their purpose.¹³ Because the prior appropriation doctrine is founded on the principle of first in time, first in right,¹⁴ instream rights are junior to vested appropriative rights.¹⁵ Priority of appropriation gives the paramount right to users already withdrawing water from the stream.

Two alternatives to these typical statutory approaches have recently captured the attention of water lawyers, resource economists, and water managers. One is based on the belief that market-based allocations of water rights can provide desirable levels of instream water.¹⁶ The other builds on the notion that desirable levels can be provided by judicial assertion of the public trust doctrine.¹⁷

Market allocation of resources is usually preferable to political allocation.¹⁸ There have been encouraging instances of market-based

10. See, e.g., COLO. REV. STAT. ANN. § 37-92-102(3) (1974); IDAHO CODE § 67-4307 (1989); WYO. STAT. § 41-3-1002(e) (1977 & Cum. Supp. 1990).

11. See, e.g., CAL. WATER CODE § 1253 (West 1971); UTAH CODE ANN. § 73-3-8 (1980). The California and Utah statutes require consideration of ecological values in determining the public interest in stream withdrawals.

12. See, e.g., ARIZ. REV. STAT. ANN. § 45-141 (1987).

13. See, e.g., Aiken, *Instream Appropriations in Nebraska*, in *INSTREAM FLOW PROTECTION IN THE WEST* 102 (L. Macedonian, T. Rice & S. Shupe eds. 1989) [hereinafter *INSTREAM FLOW PROTECTION*]; Borden, *Oregon's Minimum Perennial Stream Flows*, in *id.* at 357, 360; Fassett, *Wyoming's Instream Flow Law*, in *id.* at 403, 412.

14. R. DUNBAR, *supra* note 7, at 74-80. As the first prior appropriation law stated, [t]he right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied. Priority of appropriation shall give the better right as between those using the water for the same purpose; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes.

Id. at 79-80. COLO. CONST. art. XVI, § 6. This provision establishes a dual priority system. The first priority relates to the time of establishment of the right of diversion. The second relates to the purpose of the diversion. Note, however, that appropriation for instream use is not a use contemplated by the language of the enactment.

15. Wilkinson, *supra* note 5, at 16.

16. See, e.g., Huffman, *Instream Water Use: Public & Private Alternatives*, in *WATER RIGHTS: SCARCE RESOURCE ALLOCATION, BUREAUCRACY, AND THE ENVIRONMENT* 249 (T. Anderson ed. 1983); Williams & McHugh, *Water Marketing and Instream Flows: The Next Step in Protecting California's Instream Values*, 9 *STAN. ENVTL. L.J.* 132 (1990).

17. Essentially, the public trust doctrine asserts that the public's historic interest in navigable waters "may in the proper circumstances serve to limit how much water may be diverted pursuant to an appropriative right." Dunning, *Instream Flows and the Public Trust*, in *INSTREAM FLOW PROTECTION*, *supra* note 13, at 102, 107. See also Johnson, *Public Trust Protection for Stream Flows and Lake Levels*, 14 *U.C. DAVIS L. REV.* 233 (1980); Sax, *supra* note 9.

18. See, e.g., Gardner, *Market Versus Political Allocations of Natural Resources*

transfers of water rights dedicated to instream uses.¹⁹ Still, it is unreasonable to expect that such transactions will be either numerous or large enough to have a significant impact. The high transaction costs associated with the conveyance of water rights may make conveyances inefficient.²⁰ Even worse, there is no reason to assume that efficient amounts of water would be transferred instream even if transaction costs were not an obstacle. Instream water is a quintessential nonrival and nonexclusive public good that is not likely to be produced by market forces or, at best, is likely to be produced in suboptimal quantities.²¹

Exercise of the public trust doctrine, on the other hand, is political allocation with a vengeance.²² Vigorous application of the public trust doctrine would suppress the operation of all water markets. Voluntary conveyances of water to higher uses would be inhibited by continuous subjection to judicial reexamination.²³ Also, the public trust doctrine cannot distinguish between uses of different values. All water uses would be subject to the same restrictions regardless of their relative efficiency. Finally, assertion of the public trust doctrine may be a "taking" requiring compensation under the fifth amendment to the United States Constitution.²⁴

The public trust doctrine affects existing rights. In watersheds where streamflows are already fully owned by private interests, dedication of any of that water to instream uses is a zero-sum game.²⁵ If

in the 1980s, 8 W.J. AGRIC. ECON. 215, 222 (1983) (citing empirical studies of the political allocation of grazing resources that show that public rangeland is over grazed).

19. For example, The Nature Conservancy has occasionally purchased or accepted donated water rights it has dedicated to instream uses. See Wiley, *Untying the Western Water Knot*, 40 THE NATURE CONSERVANCY MAGAZINE 5 (1990). I define market-based transactions with enough breadth to encompass donations when—as in these instances—the donor will reap a tax benefit from the transfer. See also O'Brien, *Water Marketing in California*, 19 PAC. L.J. 1165, 1166 (1988) (suggesting that the phrase "water marketing" be used to refer to any use of financial incentives in water resource management).

20. See notes 57-63 *infra* and accompanying text.

21. See notes 71-73 *infra* and accompanying text.

22. Political allocation of resources is allocation that is not based on market prices, but on political values. For a discussion of the political allocation of public grazing resources, see P. FOSS, *POLITICS AND GRASS: THE ADMINISTRATION OF THE PUBLIC DOMAIN* (1960). Theoretically, allocation of water on the basis of market prices would generally be more efficient than political allocation because "buyers [would be compelled] to evaluate the benefits of acquiring additional quantities of water at the expense of foregoing something else of value." B. SALIBA & D. BUSH, *WATER MARKETS IN THEORY AND PRACTICE: MARKET TRANSFERS, WATER VALUES, AND PUBLIC POLICY* 12 (1987). Thus water would flow to its highest valued uses.

23. See Graff, *Environmental Quality, Water Marketing and the Public Trust: Can they Coexist?*, 5 UCLA J. ENVTL. L. & POL'Y 137 (1986).

24. The fifth amendment states, in part, that "[no] private property [shall] be taken for public use, without just compensation." U.S. CONST. amend. V.

25. In a zero-sum game, the winner gains and the loser forfeits all of the assets at stake in the game. Conflict over water resources in the West is becoming a zero-sum game because "traditional sources of new supply—such as dams and transbasin transportation of water, on which conventional users historically depended—are being

water is to be left instream, it will have to be taken from current agricultural, industrial, and domestic users. But if an exercise of the public trust to recapture this water for instream use is held to be a judicial taking under the fifth amendment, instream water would probably be provided in quantities no more optimal than if it were being traded in a market. Judges would and should leave to legislators decisions about whether to expend state revenue to condemn existing water rights.

The leading public trust case, *National Audubon Society v. Superior Court of Alpine County*,²⁶ provides a theory for challenging the exercise of water rights interfering with instream values.²⁷ What *Audubon* did not reach, however, is the question of whether the state's invocation of the public trust doctrine to displace existing water rights would be a compensable taking.²⁸ If the takings issue were to become justiciable today, the state would find itself before a United States Supreme Court, "already arguably hostile to the public trust doctrine as understood by the California courts, [that] may have hardened its position on when a taking exists."²⁹ In addition, it is a Supreme Court that has now decided that property owners must be compensated for temporary takings.³⁰ If judicial assertion of the public trust is a tak-

closed off for a variety of familiar reasons, including both federal reluctance to finance new projects and environmental objections." Sax, *supra* note 9, at 474. With a fixed supply of water, new users will have to take water from historic users. In the West's current drought, during which the supply of water is decreasing, conflicts between historic users have become zero-sum games. See, e.g., Houston, *Cut Water to Farmers, State Urged*, L.A. Times, March 11, 1991, at A3, col. 5 (reporting on political pressure generated by urban users to shut off completely the supply of irrigation water to California's rice farmers).

26. *National Audubon Soc'y v. Superior Court*, 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346, cert. denied, 464 U.S. 977 (1983) [hereinafter *Audubon*]. *Audubon* has been the subject of voluminous learned commentary. See, e.g., Littleworth, *The Public Trust vs. The Public Interest*, 19 PAC. L.J. 1201 (1988); Smith, *The Public Trust Doctrine and National Audubon Society v. Superior Court: A Hard Case Makes Bad Law or the Consistent Evolution of California Water Rights*, 6 GLENDALE L. REV. 201 (1984).

27. See Gray, *A Reconsideration of Instream Appropriative Water Rights in California*, in *INSTREAM FLOW PROTECTION*, *supra* note 13, at 180, 202.

28. After the California Supreme Court decided *Audubon*, the City of Los Angeles brought the takings question to the United States Supreme Court in a petition for a writ of certiorari. The United States Department of Justice opposed the petition on the ground that the takings issue was not ripe. The United States Supreme Court denied the petition without comment. 464 U.S. 977 (1983).

29. Dunning, *supra* note 17, at 115-16 (footnotes omitted). See *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987) (holding that state's grant of building permit on condition that permittees allow public an easement to pass across their property to a public beach was a "taking" under fifth amendment) [hereinafter *Nollan*]; *Summa Corp. v. California ex rel State Lands Comm'n*, 466 U.S. 198 (1984) (holding that state could not assert public trust easement over predecessors-in-interest who had their interests confirmed without any mention of such easement in federal patent proceedings).

30. *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304 (1987) (holding that when government has affected property by a land-use regulation, landowner can recover damages for the period of time prior to a final determination that the regulation constitutes a "taking" under the fifth amendment). The *Nol-*

ing, it could be a very expensive one.

Can western legislatures find "a constitutional method of establishing senior instream water rights without injuring any senior or junior water users?"³¹ The Oregon conserved water statute³² attempts to do just that. The statute establishes an incentive for the conservation of water by allowing the original appropriator to continue using seventy-five percent of the water she conserves.³³ The remainder, however, must be conveyed to the state for instream use with the original priority date.³⁴ To the original appropriator, the statute conditions the transfer of water to another user. The statute is similar to an ordinance requiring the dedication of a parcel of property in a development project to public purposes.³⁵

The Oregon conserved water statute promotes three public values that prior appropriation law has not served well. First, the statute assures a reasonable level of certainty about property rights. Second, it encourages the conservation of an exceedingly scarce resource. Third, it allocates water to its natural channels. It is indisputable that these are public values in need of promotion. The question, though, is whether implementation of the statute would be constitutionally permissible. Although exactions in the context of land use ordinances have usually been upheld, the United States Supreme Court's recent decision in *Nollan v. California Coastal Commission*³⁶ has thrown this line of cases into doubt.³⁷

lan and *First Lutheran* cases have generated voluminous discussion. For a collection of articles discussing these cases, see the symposium entitled *The Jurisprudence of Takings*, 88 COLUM. L. REV. 1581 (1988).

31. Wilkinson, *supra* note 5, at 34.

32. OR. REV. STAT. §§ 537.455-537.500 (Butterworth 1988).

33. In addition, this water can be reserved instream by the appropriator for future out of stream use. OR. REV. STAT. § 537.490. The coupling of conservation incentives with instream dedication is important, especially in fully appropriated watersheds. Unfortunately, the prior appropriation doctrine has promoted inefficient water use. See, e.g., *Enterprise Irr. Dist. v. Willis*, 135 Neb. 827, 284 N.W. 326 (1939) (holding that the amount of an original diversion is a vested right even if it exceeds any amount reasonably needed for the intended purpose of the diversion). According to classic prior appropriation law, conserved water simply became available to other appropriators as if it never had been vested in the original diverter. This principle is a substantial disincentive to conservation. See generally Note, *Water Use Efficiency and Appropriation in Colorado: Salvaging Incentives for Maximum Beneficial Use*, 58 U. COLO. L. REV. 657 (1988).

34. OR. REV. STAT. §§ 537.470, 537.480 (Butterworth 1988 & 1990 Supp.). This also departs from classic prior appropriation law. According to the appurtenancy principle, a change from one beneficial use to another results in loss of the original priority date. A senior right becomes a junior. Where the appurtenancy principle is still enforced, water rights holders are penalized for putting water to higher valued uses. See Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483, 494 (1982).

35. Land use exaction ordinances are familiar tools of urban land use planning. For example, an exaction ordinance may require that the developer of an office building create a public park in a corner of the building lot. See D. MANDELKER, *LAND USE LAW* 372-83 (2d ed. 1988).

36. 483 U.S. 825 (1987).

37. See Michelman, *Takings, 1987*, 88 COLUM. L. REV. 1600, 1614 n.63 (1988). Rep-

This doubt, however, is misplaced. The Oregon conserved water statute offers an opportunity to revive the unfortunately neglected distinction in exactions cases between privileges and rights. Properly understood, the Oregon statute confers a benefit on appropriators.³⁸ A state action permitting a private activity never permitted before, even if it makes the permission conditional, does not "take" anything away. The thing taken in a takings case is usually the expectation of a property owner to be able to use her property in particular ways.³⁹ An expectation cannot be taken if it does not yet exist, and a permission granted is transformed into an expectation only by the passage of time.⁴⁰

Under classic prior appropriation law, water conserved by the original appropriator does not remain vested in one who conserves.⁴¹ Instead, it returns to the river where, in all likelihood, it will be appropriated by someone else. This loss to the appropriator is not a taking. Instead, it is as if this conserved water was never appropriated in the first place. The Oregon statute grants appropriators something they have never had: the privilege of using water they have salvaged. That the statute grants them only seventy-five percent of this water is irrelevant. The fifth amendment prohibits the uncompensated taking of property. It does not prescribe the enlargement of legislative grants of property rights.

The takings question is treated in more detail later in this article.⁴² Ultimately, of course, we must await further direction from the courts. Until then, however, western states are likely to continue experimentation with appropriative rights in order to promote changing public values. Each of the three mechanisms described in this Part (water markets, judicial assertion of the public trust, and conserved water exactions) is explored at greater length in the remainder of this

representative cases upholding land-use exactions are *Associated Home Builders v. City of Walnut Creek*, 4 Cal. 3d 633, 638, 484 P.2d 606, 610, 94 Cal. Rptr. 630, 634, *appeal dismissed*, 404 U.S. 878 (1971) (city may require developer to dedicate land within subdivision for public recreational facilities); *Jenad, Inc. v. Village of Scarsdale*, 18 N.Y.2d 78, 218 N.E.2d 673, 271 N.Y.S.2d 955 (1966) (planning commission may require developer to allot land within subdivision for park or pay fee in lieu thereof); *City of College Station v. Turtle Rock Corp.*, 680 S.W.2d 802 (Tex. 1984) (city may require developer to dedicate parkland within subdivision); *Jordan v. Village of Menomonee Falls*, 28 Wis. 2d 608, 137 N.W.2d 442 (1965), *appeal dismissed*, 385 U.S. 4 (1966) (village plan commission may require parkland dedication). For a discussion of the exactions cases prior to *Nollan*, see Smith, *From Subdivision Improvement Requirements to Community Benefit Assessments and Linkage Payments: A Brief History of Land Development Exactions*, 50 LAW & CONTEMP. PROBS. 5 (1987).

38. See Sax, *supra* note 2, at 280.

39. See *Penn Cent. Transp. Co. v. New York*, 438 U.S. 104, 124 (1978) (issue in takings case is extent of government's interference with investment-backed expectations of property owner).

40. See *infra* notes 166-172 and accompanying text.

41. See *Salt River Valley Water Users' Ass'n v. Kovacovich*, 3 Ariz. App. 28, 411 P.2d 201 (1966) (holding that conserved water may not be used by the conserving appropriator). See *infra* notes 150-155 and accompanying text.

42. See *infra* notes 100-174 and accompanying text.

article.

III. WATER MARKETS: TRANSACTION COSTS AND PUBLIC GOODS

Advocates of the allocation of water through market transactions assert that market-clearing prices will move water to higher valued uses.⁴³ Studies of the nascent water markets in the West have found that the transfer of water rights is almost always positive.⁴⁴ Within agriculture, for example, marketed water tends to flow to higher valued crops. When water prices rise, farmers search for crops which either use water more efficiently, yield higher gross returns, or both.⁴⁵ But most of the movement from lower to higher valued uses is from agriculture to municipalities and industries. In every market studied, agriculture is the dominant seller of water rights; industries and municipalities are the dominant buyers.⁴⁶

A. Legal Constraints on Market Transactions

Western legislatures, in differing degrees, have permitted transfers of water.⁴⁷ In Wyoming, for example, an appropriator, with the approval of the state Board of Control, may permanently change the use or place of use of the water provided several conditions are satisfied.⁴⁸ The most important of these requirements is that the proposed new use will not decrease the historic amount of return flow, change the place of return flow so as to injure another water user, or cause any other injury to a lawful appropriator.⁴⁹ This condition codifies the common law "no injury" rule found in many western jurisdictions.⁵⁰ The rule is intended to provide security of title to junior appropriators. Obviously, it hinders free transferability.

43. See, e.g., T. ANDERSON, *WATER CRISIS: ENDING THE POLICY DROUGHT* (1983); M. REISNER & S. BATES, *supra* note 3; Anderson & Leal, *Going With the Flow: Marketing Instream Flows and Groundwater*, 13 COLUM. J. ENVTL. L. 317 (1988); Ausness, *Water Rights, the Public Trust Doctrine, and the Protection of Instream Uses*, 1986 U. ILL. L. REV. 407; O'Brien, *supra* note 19.

44. The most recent and comprehensive of such studies is B. SALIBA & D. BUSH, *supra* note 22.

45. The largest water consumers in California, for example, are irrigated pasture, alfalfa, cotton, and rice. All are relatively low-valued crops which use water intensively. Fruits, vegetables, and nuts, on the other hand, produce more value and use less water. See M. REISNER & S. BATES, *supra* note 3, at 32-34.

46. B. SALIBA & D. BUSH, *supra* note 22, at 241.

47. See M. REISNER & S. BATES, *supra* note 3, at 98-110.

48. WYO. STAT. § 41-3-104 (1977).

49. *Id.*

50. According to the no injury rule, the holder of an appropriative water right may not transfer it to another person unless the change will not injure any other holder of a cognizable water right. The effect of such a rule is to give an appropriator downstream from the person who wishes to effect a transfer "a vested right in the stream regime that exist[ed] at the time the [downstream] appropriation [was] initiated." Gould, *Conversion of Agricultural Water Rights to Industrial Use*, 27 ROCKY MTN. MIN. L. INST. 1791, 1821 (1982).

A similar legal obstacle to water conveyances is the area-of-origin rule restricting interbasin transfers. In the typical area-of-origin statute,⁵¹ a designated protected area may "not be deprived . . . of the water reasonably required to adequately supply the beneficial needs of the protected area . . . by a water supplier exporting or intending to export water for use outside a protected area."⁵² Like the no injury rule, the area-of-origin statute provides security to those users within a watershed who might be harmed by a conveyance of water out of the river system. It also hinders the free transfer of water rights.

The forces that have constrained the growth of water markets are institutional, like the no injury and out-of-origin rules, and economic. Market-inhibiting legal rules could be altered or abolished.⁵³ Wyoming's water rights transfer statute, for example, supersedes an earlier statute prohibiting *any* change in use or place of use.⁵⁴ Economic obstacles are more intractable. Water markets will take root only "where economic incentives for water transfers outweigh costs associated with market transactions."⁵⁵ Hope for vigorous market activity will be in vain as long as the current owners and potential purchasers of water rights are unable to derive a mutual benefit from exchange.

B. Bargaining and Transaction Costs

Bargaining among individuals to distribute a "cooperative surplus" is a key element of the economic theory of property. An example involving water rights illustrates the bargaining model. Assume that Farmer Brown has 400 acre-feet of water which she uses to irrigate 100 acres of pasture each year. The value of this water to her is approximately \$100 per acre-foot. The Nature Preservative, an organization which purchases land and water for preservation in its natural state, would like to acquire Farmer Brown's water. The value of keeping this water instream would be approximately \$150 per acre-foot to the Nature Preservative. Farmer Brown will not accept less than \$40,000 for the water; the Nature Preservative cannot spend more than \$60,000 for it. If these two parties decide to split the difference, Farmer Brown will agree to sell her water to the Nature Preservative for \$50,000.

The water will be moved from a lower valued use, irrigating pasture where it is valued at \$40,000, to a higher valued use, preserving

51. See, e.g., CAL. WATER CODE §§ 1215-1222 (West 1971 & Supp. 1990).

52. CAL. WATER CODE § 1216 (West Supp. 1990).

53. As one hopeful proponent of the free conveyance of water has said, "[i]t will only take time for more formal water markets to develop Outmoded institutions seem to evolve into new institutions when economic opportunities really exist." B. SALIBA & D. BUSH, *supra* note 22, at 8 (quoting W. Martin).

54. See Squillace, *A Critical Look at Wyoming Water Law*, 24 LAND & WATER L. REV. 307, 339 (1989). The author describes the procedures for approval of transfers under the superseding statute.

55. B. SALIBA & D. BUSH, *supra* note 22, at 255.

instream flows where it is valued at \$60,000. The result is the creation of \$20,000 in value. Farmer Brown and the Nature Preservative will share a cooperative surplus because both will benefit from the exchange. Of the new wealth created, Farmer Brown and the Nature Preservative will each receive \$10,000. A market is an institutional arrangement through which buyers and sellers capture and distribute cooperative surpluses by moving resources from lower valued to higher valued uses.⁵⁶

This movement of resources will not occur, however, "if the bargaining costs between [buyers and sellers] are too high for a voluntary exchange of rights to take place."⁵⁷ Transaction costs are imposed by the obstacles individuals face in capturing and distributing cooperative surpluses. Bargaining obstacles include "search and information costs, bargaining and decision costs, [and] policing and enforcement costs."⁵⁸ According to Ronald Coase,

[i]n order to carry out a market transaction, it is necessary to discover who it is that one wishes to deal with, to inform people that one wishes to deal and on what terms, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on. These operations are often extremely costly, sufficiently costly at any rate to prevent many transactions that would be carried out in a world in which the pricing system worked without cost.⁵⁹

Neither buyer nor seller will agree to a market transaction if either's bargaining costs exceed her expected share of the cooperative surplus.

The sources of transaction costs in water markets are numerous. According to Saliba and Bush, bargaining costs are incurred "in identifying legal and hydrologic characteristics of water rights (priority date, return flow obligations, etc.); in negotiating price and arranging financing and other terms of transfer; and in satisfying state laws and transfer approval procedures. . . such as court hearings, title searches

56. Of course their bargain could have resulted in the sale of the water at some other price between \$40,000 and \$60,000, but that would have merely distributed the surplus in different shares. The terms of the distribution will always depend, in part, on the relative bargaining positions and skills of Farmer Brown and the Nature Preservative.

57. R. COOTER & T. ULEN, *LAW AND ECONOMICS* 176 (1988).

58. Dahlman, *The Problem of Externality*, 22 *J.L. & ECON.* 141, 148 (1979).

59. Coase, *The Problem of Social Cost*, 3 *J.L. & ECON.* 1, 15 (1960). According to the Coase theorem, when transaction costs are absent the efficient use of resources will be unaffected by the content of legal rules. As Coase pointed out, in a world without transaction costs, market institutions would have neither substance nor purpose, private property could be dispensed with, and eternity could be experienced in a split second. Of course, as he also pointed out, such a peculiar world could not possibly exist. Coase, *The Firm, the Market, and the Law*, in R. COASE, *THE FIRM, THE MARKET, AND THE LAW* 14-15 (1988).

and hydrological studies to determine transfer impacts.”⁶⁰ Although some of the transaction costs on this list could be reduced by re-orientating the legal regime,⁶¹ most are unavoidable. One example, the expense of measuring the amount of water that would be physically transferred in a conveyance, suffices.

The usual unit of a water conveyance is the cubic foot of water per second. To determine the amount of water flow in “second feet,” a hydrologic engineer multiplies the area of the cross-section of the stream by the velocity of the water in feet per second. Not all of the water crossing this imaginary plane is traveling, however, at the same rate of speed. Near the sides, surface, and bottom of the cross-section, the water is slowed by friction, so the hydrologic engineer calculates its average velocity.⁶² The expenses associated with this undertaking may be considerable. Although water lawyers are often instructed to “think land” by proponents of water marketing,⁶³ water has more in common with the wind. In constant motion, not easily captured or measured, water generates many transaction costs that cannot be reduced, much less eliminated.⁶⁴

C. *Providing Public Goods*

Assuming that transaction costs could be overcome, however, one must ask whether instream users could compete with other consumers also seeking to capture their share of the cooperative surpluses available. The Nature Conservancy, an organization dedicated to the purchase and preservation of important plant and wildlife habitats, wants to purchase enough water to save the Lahontan wetlands.⁶⁵ The

60. B. SALIBA & D. BUSH, *supra* note 22, at 6 (asserting that transaction costs in water markets are relatively high).

61. Many states require, for example, that proposed transfers of water rights be approved by the state water agency. *See, e.g.*, WYO. STAT. § 41-3-104 (1977) (requiring approval by the state Board of Control). These statutes could be repealed, or at least modified, to make transfers less difficult. In Wyoming, for example, the statute does not reach transfers of water held by irrigation districts. Indeed, some districts allow individual members to arrange their own deals. *See* Squillace, *supra* note 54, at 343-44. Modification of these transfer statutes could advance two important normative principles of property law: (1) minimization of harm caused by failures in private bargaining, and (2) removal of impediments to private agreements. *See* R. COOTER & T. ULEN, *supra* note 57, at 99-101.

62. *See* F. TRELEASE & G. GOULD, *CASES AND MATERIALS ON WATER LAW* 15 (4th ed. 1986). Trelease and Gould also describe other measurement units such as the “miner’s inch” and the “acre-foot.” The former equals the quantity of water that can be discharged through a one-inch orifice under some specified amount of pressure. The latter equals the quantity of water required to flood one acre of land one foot deep.

63. *Id.* at 10.

64. For a discussion of transaction costs in water conveyances, see Howe, Boggs, & Butler, *Transaction Costs as Determinants of Water Transfers*, 61 U. COLO. L. REV. 393 (1990).

65. The once enormous Lahontan wetlands have shrunk to fewer than seven thousand acres. Even in their diminished state, they comprise one of the most significant wildlife areas on the continent. For example, at least one-half of the canvasbacks and one-third of the dowitchers on the Pacific Flyway stop over in the wetlands. In fact,

Nature Conservancy estimates that protection of the remaining wetlands would require the acquisition of 55,000 acre-feet of water from irrigators on the Truckee River at a price of approximately \$40 million. The Nature Conservancy obviously believes that the value of leaving the water instream is very high.⁶⁶

Some studies suggest that in many instances instream water would have values high enough to make preservation economically efficient.⁶⁷ One of the more ambitious attempts to compare instream and out-of-stream values focused on Mono Lake and its tributaries.⁶⁸ Calculating recreational, aesthetic, and fish and wildlife values, for visitors and non-visitors, the study concluded that total benefits from the preservation of Mono Lake water levels would be approximately \$40 per California household. A subsequent study found, in contrast, that the cost of replacing Mono Lake water now used by the cities of southern California from other sources would be twenty-two cents per household.⁶⁹ These studies demonstrate that it would be economically efficient to restore Mono Lake. The question remains whether such an outcome would be produced by market forces.

Instream water is a public good. It furnishes benefits that can be "provided to all people (in a nation or town) at no more cost than that required to provide it for one person."⁷⁰ Moreover, instream water is a particular type of public good in that it is both nonrival and nonexclusive.⁷¹ A nonrival good is one with respect to which consumption by one individual does not diminish the utility available to other persons.

the Lahontan marshes were recently designated one of the thirteen international Western Hemispheric Shorebird Preserves. At times, the Lahontan contains thirty thousand white pelicans, twelve thousand tundra swans, the largest nesting colony of white-faced ibis in the world, and ninety percent of the Pacific Flyway's snow geese. Withdrawals for irrigation from the Truckee River continue to shrink the wetlands. See Wiley, *supra* note 19, at 10-11.

66. Wiley, *supra* note 19, at 13. Instream flows have at least three tangible benefits: (1) outdoor recreation, which also has multiplication effects on local economies; (2) water quality; and (3) fish and wildlife habitat. Instream flows also have intangible benefits such as (1) "bequest values" attributable to the choice to leave resources to future generations; and (2) "existence values" attributable to the knowledge that a unique ecosystem will be preserved, even if never visited. The difficulty of quantifying these benefits is an additional transaction cost that inhibits the purchase of water for instream uses even in an otherwise functioning market. See generally Colby, *The Economic Value of Instream Flows—Can Instream Values Compete in the Market for Water Rights*, in *INSTREAM FLOW PROTECTION*, *supra* note 13, at 87. In fact, it is arguable that attempting to quantify intangible benefits is a category mistake because it attributes monetary qualities to values that cannot be commodified. See M. SAGOFF, *THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT* 93-94 (1988).

67. See B. SALIBA & D. BUSH, *supra* note 22, at 222-25 (citing and summarizing several of these studies).

68. See generally J. LOOMIS, *ECONOMIC EVALUATION OF PUBLIC TRUST RESOURCES OF MONO LAKE* (1987).

69. Colby, *supra* note 66, at 91.

70. P. SAMUELSON & W. NORDHAUS, *ECONOMICS* 977 (13th ed. 1989).

71. For a description of nonrival, nonexclusive goods, see A. RANDALL, *RESOURCE ECONOMICS: AN ECONOMIC APPROACH TO NATURAL RESOURCE AND ENVIRONMENTAL POLICY* 165-71 (2d ed. 1987).

Consumer A's satisfaction from knowing that maintenance of the level of Pyramid Lake will save the world's only population of the cui ui will, for example, not be diminished if Consumer B gains the same satisfaction from having the same knowledge.⁷² A nonexclusive good is one with respect to which the owner cannot obtain a price. The holder of the water rights used to maintain the level of the Lahontan wetlands could not effectively charge either Consumer A or B for the pleasures they derive from their knowledge of the cui ui's survival.

The problem with nonrival and nonexclusive goods is that their benefits cannot be captured and sold. Consequently, their production has little appeal to profit-seeking capitalists. Instead, public goods tend to be provided "only by private philanthropy (usually in suboptimal quantities) or by the public sector, which would finance their provision from general revenues."⁷³ Public goods are produced in suboptimal quantities by private philanthropies because few philanthropic organizations possess the wealth needed to acquire efficient amounts.⁷⁴ Because capitalists and philanthropists are unlikely to produce optimal amounts of public goods, the government often tries to take up the slack. It typically does so by subsidizing the provision of public goods by private parties⁷⁵ or by providing public goods itself.⁷⁶

The government can also optimize the provision of public goods by imposing liability rules that punish harmful private behavior.⁷⁷ Livable air quality, for example, is a public good that can be produced by penalizing air polluters. Likewise, liability rules could be applied against water users to punish wasteful practices and make more water

72. Likewise, the utility obtained by Consumer A from canoeing the Truckee River will not be reduced by one-half if Consumer B launches her canoe in the river, too.

73. A. RANDALL, *supra* note 71, at 176.

74. In fact, The Nature Conservancy concedes that it cannot save the Lahontan wetlands without the support of public—as well as private—funds. See Wiley, *supra* note 19, at 11-12. It is also worth noting that there are substantial transaction costs associated with the fund raising efforts of philanthropic organizations. A significant portion of the budget of most philanthropies is devoted to raising money. Large-scale philanthropy depends on large numbers of people who act in largely selfless concert. "When transaction costs and difficulties prevent concerted action, the more valuable public benefits will be sacrificed in favor of less valuable benefits received by one or a few private users who lack transaction problems." Freyfogle, *Water Justice*, 1986 U. ILL. L. REV. 481, 513 n.101.

75. The government may, for example, subsidize physicians who provide vaccinations against epidemic diseases to the public. See R. COOTER & T. ULEN, *supra* note 57, at 48.

76. The classic example of direct government provision of a public good is the lighthouse. As John Stuart Mill noted more than a hundred years ago, it is a proper office of government to build and maintain lighthouses, establish buoys, etc. for the security of navigation: for since it is impossible that the ships at sea which are benefited by a lighthouse, should be made to pay a toll on the occasion of its use, no one would build lighthouses from motives of personal interest, unless indemnified and rewarded from a compulsory levy made by the state.

J. MILL, *PRINCIPLES OF POLITICAL ECONOMY* 968 (J. Robson ed. 1965).

77. See, e.g., P. SAMUELSON & W. NORDHAUS, *supra* note 70, at 775.

available for other uses.⁷⁸ If Farmer Brown were water-profligate, she might install a drip irrigation system, provided the penalty for waste was high enough. But absent repeal or modification of the conserved water rule, salvaged water would not be allowed to augment instream flows. Instead, it would be appropriated by Farmer Brown or another out-of-stream consumer for another use.⁷⁹

Finally, the government can institute direct controls by requiring individuals to behave in specified ways. It can require the payment of taxes to fund the provision of a public good, as it does to pay for the construction of a water storage reservoir. More pertinent to this article, the government can appropriate the property of individuals to enlarge the stock of a public good. This is precisely the effect of the judicial application of the public trust doctrine. The public trust doctrine posits that under certain circumstances the holders of water rights must surrender them for a public purpose. In *National Audubon Society v. Superior Court of Alpine County*, the public purpose was the maintenance of water levels in Mono Lake.⁸⁰ However, like other types of direct government control intended to cure the market defects associated with public goods, the public trust doctrine is a blunt instrument.

IV. THE PUBLIC TRUST: ECONOMIC EFFICIENCY AND TAKINGS

In *Audubon*, the Supreme Court of California held that the state Water Resources Board would have to consider the ecological values of Mono Lake in determining whether to approve the diversion of water from tributary streams by the Department of Water and Power of the City of Los Angeles.⁸¹ The decision was the first in which a state or federal court applied the public trust doctrine to the allocation of private water rights.⁸² The public trust doctrine originally

78. See generally Comment, *Liability Rules as a Solution to the Problem of Waste in Western Water Law: An Economic Analysis*, 76 CAL. L. REV. 671 (1988).

79. This is not to say that liability rules are undesirable. Effective water conservation may be a condition precedent to the augmentation of instream water in many stream systems. Conservation measures alone are not enough, however, to assure instream augmentation.

80. 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346, cert. denied, 464 U.S. 977 (1983).

81. *Id.* at 447-48, 658 P.2d at 728-29, 189 Cal. Rptr. at 365-66. In approving the diversions prior to the decision in *Audubon*, the Water Resources Board found it "unfortunate that the City's proposed development will result in decreasing the aesthetic advantages of Mono Basin," but stated that it had "no alternative but to dismiss all protests based upon . . . the effect that the diversion of water from these streams may have upon the aesthetic and recreational value of the Basin." *Audubon*, 33 Cal. 3d at 428, 658 P.2d at 714, 189 Cal. Rptr. at 351 (quoting the statement of the Water Resources Board).

82. The only earlier public trust case affecting the allocation of water rights is *United Plainsmen Ass'n v. North Dakota State Water Conservation Comm'n*, 247 N.W.2d 457 (N.D. 1976). In that case, however, the North Dakota Supreme Court merely held that the public trust doctrine requires that the state water resources agency issue new water permits in accordance with a long-term water development

stood for the proposition that the title to soils under tidal waters "is . . . held [by the state] in trust for [its] people . . . that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties."⁸³ In *Audubon*, this theory was extended to the scenic beauty and ecological integrity of navigable streams and lakes, and the nonnavigable streams which nourish them.⁸⁴

One conception of the public trust is that it is analogous to a private trust held by a trustee on behalf of beneficiaries who are the equitable owners of the trust assets. State government serves as the trustee over the waters of the state on behalf of the citizens of the state who are the equitable owners of the waters.⁸⁵ This conception is consistent with California's statutory declaration that "[a]ll water within the state is the property of the people of the state, but the right to the use of the water may be acquired by appropriation in the manner provided by law."⁸⁶ It is also consistent with the court's statement in *Audubon* that

the public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust.⁸⁷

The court in *Audubon* was dealing with the specification of ownership entitlements and restrictions. It saw itself as "[a]ttempting to integrate the teachings and values of both the public trust and the appropriative rights system."⁸⁸ The Los Angeles Department of Water and Power acquired appropriative rights to the tributary streams of

plan. The most recent decision applying the public trust doctrine to appropriative water rights is *Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441 (1985) (holding that the state Department of Water Resources must consider the public's interest in the aesthetic and environmental ramifications of the approval of appropriative permits).

83. *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 452 (1892).

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

85. Dunning labels this the "property right scenario," which he contrasts with the "interpretation" and "consideration" scenarios. Dunning, *supra* note 17, at 114. Under the interpretation scenario, the public trust doctrine would merely be "an aid in the interpretation or construction or fortification of other norms." *Id.* at 112. Under the consideration scenario, "the emphasis is on the obligation of a resource allocator to consider all aspects, particularly all environmental aspects, of a resource allocation decision." *Id.* at 113. One current problem with the public trust doctrine is that no one knows which of these conceptions will eventually prevail. The property right scenario would give the state an ongoing responsibility to reconsider appropriated water rights. Since it is retrospective, it will generate takings questions. The interpretation and consideration approaches are not retrospective, but apply to the state's initial decision to issue an appropriation permit. They would not generate takings questions.

86. CAL. WATER CODE § 102 (West 1971).

87. *Audubon*, 33 Cal. 3d at 441, 658 P.2d at 724, 189 Cal. Rptr. at 360-61.

88. *Audubon*, 33 Cal. 3d at 425, 658 P.2d at 712, 189 Cal. Rptr. at 349.

Mono Lake by condemnation in 1935.⁸⁹ In reliance on its appropriate rights, the Department spent millions of dollars constructing dams, aqueducts, and pipelines to transport water to the residents of Los Angeles 340 miles away.⁹⁰ Nevertheless, in deciding that the state Water Resources Board would have to determine whether the Department of Water and Power could be permitted to continue to exercise its acquired rights, the supreme court stated that

[o]nce the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs.⁹¹

If property is a "pattern of behavioral assumptions and ethical values which have come to be associated with institutions dictating some degree of permanence of distribution,"⁹² one might reasonably wonder whether appropriative water rights are still property under *Audubon's* expression of the public trust doctrine. Certainly, water rights could not be characterized as having a degree of permanence. In fact, after the decision in *Audubon*, the California Court of Appeals held that the State Water Resources Control Board had the power to rescind diversion permits held by the City of Los Angeles since 1974 under which it had diverted approximately 89,000 acre-feet of water per year from Mono Lake tributaries.⁹³ From the different perspectives of allocative efficiency and constitutional law, exercise of the public trust doctrine in accordance with *Audubon* is troubling.

A. Political Allocation of Resources

The assertion of a public trust over the exercise of water rights is economically inefficient in two ways. First, the public trust doctrine cannot be relied on to affect only those uses that have less worth than instream uses. In any watershed numerous appropriators use water for various purposes. Municipalities may withdraw water for domestic

89. In fact, the Department of Water and Power was required to compensate the owners of lands riparian to Mono Lake for harm caused by the lowering of the lake level at the time of its initial diversions. *City of Los Angeles v. Aitken*, 10 Cal. App. 2d 460, 52 P.2d 585 (1935) (quantifying the value of the water rights inversely condemned).

90. These facts were used to support the Department of Water and Power's Answer to the Plaintiff's Complaint in *Audubon*. Both documents are summarized in Johnson, *supra* note 17, at 337-38.

91. *Audubon*, 33 Cal. 3d at 447, 658 P.2d at 728, 189 Cal. Rptr. at 365.

92. Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law*, 80 HARV. L. REV. 1165, 1203 (1967) [emphasis in original].

93. See *California Trout, Inc. v. Superior Court*, 207 Cal. App. 3d 585, 593, 598, 255 Cal. Rptr. 184, 187, 190 (1989) (relying on *Audubon* and CAL. FISH & GAME CODE § 5946 (West 1984) to find a public trust interest in fisheries in non-navigable waters).

uses. Ranchers may irrigate pasture. Truck farmers may raise a cornucopia of vegetables.⁹⁴ An efficient policy designed to increase instream flows would weigh more heavily on appropriators engaged in lower-valued uses. Yet the public trust doctrine treats all appropriators alike.

Second, the public trust doctrine's reformulation of the appropriative right would have a profoundly negative effect on water markets. Private property has at least the following characteristics in a well-functioning market economy: (1) complete specification of entitlements and restrictions in the rights attaching to the ownership of property; (2) exclusivity of these rights, so that the benefits and costs of exercising them accrue only to the owner; and (3) enforceability (and complete enforcement) of this exclusivity. Without these characteristics, the transfer of resources to more efficient uses is unlikely.⁹⁵ After *Audubon*, the specification of entitlements is cancelled and their transferability is encumbered with uncertainty.⁹⁶

Indeed, three years after *Audubon* the California Court of Appeals extended the reach of the public trust doctrine to parties who had not diverted water themselves, but instead had contracted with California and the federal government for the delivery of a specified supply of water. In *United States v. State Water Resources Control Board*,⁹⁷ the court of appeals upheld the state Water Resources Control Board's modification of appropriation permits to increase the amount of fresh water flushing the Sacramento-San Joaquin Delta. The court of appeals held that because "appropriated water rights are . . . subject to the continuing supervisory authority of the Board [under the public trust doctrine] . . . neither the [appropriators] nor the contractors could have any reasonable expectation of certainty that the agreed quantity of water will be delivered."⁹⁸ No reasonably

94. Corwin, *Are Farms Wasting Water?*, L.A. Times, Oct. 16, 1990, at 1, col. 1.

95. See T. TIETENBERG, ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 39 (1984).

96. As Thomas Graff has noted,

[i]f appropriators of water from a stream are forever subject to the open-ended possibility that a court or a regulatory authority may seek to take back that appropriated water to protect the instream value which that diversion may be threatening, the appropriative right, which may long have been thought by its holder to be a vested right, may turn out instead to be an illusory right. Moreover, the uncertainty which is engendered by the possibility that the public trust doctrine will be invoked may well make the transfer of that appropriative right less likely and it certainly will make the right less valuable. A potential buyer seeking a new water supply may well be deterred from paying the transaction costs of negotiating a water purchase if his prospective supply is subject to a higher and non-compensating use, thus possibly precluding a more efficient use for the water.

Graff, *supra* note 23, at 140.

97. *United States v. State Water Resources Control Bd.*, 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986).

98. *State Water Resources Control Board*, 182 Cal. App. 3d at 147, 227 Cal. Rptr. at 199 (emphasis in original). On the other hand, the court of appeals dismissed, rather summarily, the contractors' argument that their property had been taken without due process in violation of article I, section 10, of the United States Constitution by noting

prudent person would purchase water rights without a reasonable belief that she will gain the full value of the rights she will acquire.⁹⁹ The problem with *Audubon* and the Sacramento-San Joaquin Delta cases is that they make all acquired rights fundamentally unstable.

It is worth reiterating that market allocation of water should be encouraged. Usually, water transactions will transfer water to higher valued uses. Unfortunately, the public trust doctrine (at least as it is laid out in *Audubon*) corrects the market failures associated with in-stream water by impeding market forces. Although water markets are unlikely to be vigorous, when transfers do occur they usually move a scarce resource to a better use. Market failures attributable to the difficulty of providing optimal public goods can be at least partially corrected without threatening all market transactions.

B. *Private Expectations and Preexisting Title*

A further problem with judicial assertion of the public trust doctrine is that it appears to be a taking under the fifth amendment. There is an irony here, for if assertion of the public trust *is* a taking, water markets have less to fear from the doctrine. But it is also true that the public trust is not likely to be exercised with any vigor by judges if each assertion requires the payment of compensation. The United States Supreme Court's decision in *Nollan v. California Coastal Commission* offers instruction on the application of the fifth amendment's takings clause.¹⁰⁰ *Nollan* leads to the conclusion that the current Court is not inclined to look kindly on the public trust doctrine's extension to appropriative rights.

The *Nollan* majority categorized government actions that burden private property as (1) those that physically appropriate private property; (2) those that prohibit a specified use of private property; and (3) those that permit a specified use of private property under specified conditions.¹⁰¹ The majority disposed of the takings question with

that they were not the owners of water rights, but merely licensees. *Id.* at 145, 227 Cal. Rptr. at 198. Fortunately, this decision will favor the fish and wildlife habitat of the estuary.

99. *But see* Stevens, *The Public Trust and In-stream Uses*, 19 ENVTL. L. 605, 617-18 (1989) (also suggesting that the public trust doctrine could be used to modify the rights of purchasers).

100. 483 U.S. 825 (1987).

101. The actual government action in *Nollan* fell into the third category, conditional permission to use private property. The plaintiffs in *Nollan* sought permission from the California Coastal Commission to replace their shorefront cottage with a larger structure. The Commission granted the plaintiffs a building permit on the condition that they would record an easement giving the public the right to enter a strip of beach between the mean high tide line (the seaward boundary of the plaintiffs' property) and a seawall running the length of their beach. The Commission imposed this condition on the basis of a finding that the proposed construction project would interfere with the public's visual access to the ocean, create a psychological barrier to access, and increase beach congestion. The "lateral access" condition allowing the public access to the beach was imposed by the Commission as a *quid pro quo* for these

respect to government actions falling into the first of these categories with little difficulty. It concluded that though the state has the power to appropriate a public easement, it must provide just compensation to the affected property owner.¹⁰² This conclusion has important implications for the exercise of the public trust doctrine, because assertion of the public trust is a physical occupation of property.¹⁰³

As Frank Michelman puts it, state action "requiring the subjection of property to a permanent physical occupation by strangers, or by the property of strangers, is a taking per se—no matter, apparently, how trivial the practical burden thus imposed."¹⁰⁴ In *Nollan*, the easement demanded by the Coastal Commission would have permitted the public to enter the plaintiff's shorefront property in order to enjoy a public beach. With the public trust, the public would be given access to appropriated water required to be left instream.¹⁰⁵ In both cases, private property is subordinated to public interests.

The property in question in *Nollan* was land; with the public trust it is water. The principal legal distinction between land and water is the distinction between usufructory and possessory property rights. Appropriative rights are usufructory, or rights to use rather than to possess property.¹⁰⁶ The term "property" in the fifth amendment, however, encompasses "the [whole] group of rights inhering in the citizen's relation to the physical thing, [including] the right to possess, use and dispose of it The constitutional provision is addressed to every sort of interest the citizen may possess."¹⁰⁷ Al-

burdens on the public. The Supreme Court held, however, that the lateral access condition was a taking without just compensation under the fifth amendment. *Nollan*, 483 U.S. at 828-42.

102. *Id.* at 831 ("Had California simply required the Nollans to make an easement across their beachfront available to the public on a permanent basis in order to increase public access to the beach, rather than conditioning their permit to rebuild their house on their agreeing to do so, we have no doubt there would have been a taking.").

103. Here *Nollan* follows the leading physical invasion case, *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 434-35 (1982) (holding that a regulation allowing cable television companies to run cables across apartment buildings is a physical invasion and thus a taking "without regard to whether the action . . . has only minimal economic impact on the owner"). Michelman reads *Nollan* narrowly, seeing it as confined to cases involving physical invasions. See Michelman, *supra* note 37, at 1608-09.

104. Michelman, *supra* note 37, at 1604.

105. In fact, the effect of the public trust doctrine may be even more injurious to the interests of the property owner than declaration of an easement. If the state had simply taken a lateral easement in *Nollan*, the plaintiffs could still have used the affected property. In contrast, water required to be left instream under the public trust doctrine would be unavailable for most conceivable utilitarian uses. The property owner would be denied any reasonable return on her investment. See *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978) (question in takings case is whether government has unduly interfered with investment backed expectations of property owner); accord *Kaiser Aetna v. United States*, 444 U.S. 164, 175 (1979).

106. See, e.g., CAL. WATER CODE § 1629 (West 1971). It should be noted, however, that not all real property rights are possessory. For example, the easement demanded by the Coastal Commission in *Nollan* would have been a usufruct.

107. *United States v. General Motors Corp.*, 323 U.S. 373, 378 (1945).

though the appropriative right is usufructory, it is the sort of property interest the fifth amendment protects.¹⁰⁸

But does the public trust doctrine insulate the state from the proscriptions of the fifth amendment? Any explanation for an insulating effect would have to posit (1) that the state has perpetually held a preexisting title to instream water; (2) that the private holders of water rights should have been cognizant of the state's title; and (3) that consequently they need not be compensated if their rights are appropriated by the state.¹⁰⁹ The justification for appropriation without compensation under the preexisting title theory depends on prior notice to the water user.¹¹⁰ In none of the states where the public trust doctrine has been extended to appropriative rights could prior notice be said to have been given.¹¹¹

The public trust doctrine has now been extended to appropriative rights in California,¹¹² Idaho,¹¹³ and North Dakota.¹¹⁴ In each of these

108. *Id.* See also *Almota Farmers Elevator & Warehouse Co. v. United States*, 409 U.S. 470 (1973) (holding that an unexpired leasehold interest in land is a compensable interest). Indeed, the California Supreme Court has held that usufructory rights may be as fully vested as possessory rights. See *Dannenbrink v. Burger*, 23 Cal. App. 587, 595, 138 P. 751, 754-55 (1913) ("having . . . appropriated [water] and for about 25 years used and applied [it] . . . to a beneficial purpose, [defendants] acquired a vested right or usufruct therein of which they cannot now justly be divested by the plaintiffs").

109. See *Manzanetti, The Fifth Amendment as a Limitation on the Public Trust Doctrine in Water Law*, 15 PAC. L.J. 1291, 1306 (1984); *Schultz & Weber, Changing Judicial Attitudes Towards Property Rights in California Water Resources: From Vested Rights to Utilitarian Reallocations*, 19 PAC. L.J. 1031, 1108 (1988). That the state holds preexisting title is the premise of *Audubon*, though the decision is silent on the takings question. See also *Michelman, supra* note 92, at 1239 (the justification for payment of compensation is obviated if the holder of property rights has knowledge of a still valid preexisting title). A preexisting and continuing title theory would seem to be a *sine qua non* of the notion that the public trust doctrine does not implicate the fifth amendment. The alternative would simply allow the state to avoid the takings clause by merely redefining property interests in water by adopting the "property right scenario" after their creation and allocation to private persons. See *Dunning, supra* note 17, at 114. This the state cannot arbitrarily do. See *Webb's Fabulous Pharmacies, Inc. v. Beckwith*, 449 U.S. 155, 164 (1980) ("[a] State by *ipse dixit*, may not transform private property into public property without compensation").

110. See *Manzanetti, supra* note 109, at 1307; *Michelman, supra* note 92, at 1239.

111. The question of prior notice of the public trust doctrine in the context of the preexisting title theory is thoroughly explored in *Manzanetti, supra* note 109. The author concludes that the exercise of the public trust doctrine without compensation would be a taking. Other commentators have expressed concern about the use of the public trust doctrine to insulate state actions from the takings clause. See *Ausness, supra* note 43, at 436; *Huffman, Avoiding the Takings Clause Through the Myth of Public Rights: The Public Trust and the Reserved Rights Doctrine at Work*, 3 J. LAND USE & ENVTL. L. 171 (1987); *Huffman, A Fish Out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENVTL. L. 526 (1989); *Lazarus, Changing Conceptions of the Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986). *Huffman and Lazarus* argue that judicial application of the public trust doctrine is antidemocratic.

112. *Audubon*, 33 Cal. 3d at 419, 658 P.2d at 709, 189 Cal. Rptr. at 346.

113. *Shokal v. Dunn*, 109 Idaho 330, 707 P.2d 441 (1985).

114. *United Plainsmen Ass'n v. North Dakota State Water Conservation Comm'n*, 247 N.W.2d 457 (N.D. 1976). The conception of the public trust doctrine in both

states, the doctrine was applied to water rights after prior appropriation law was fully mature.¹¹⁵ Indeed, in Idaho and California prior appropriators have been held to possess *vested* water rights.¹¹⁶ The question is whether appropriators should have expected this expansion of the public trust doctrine anyway.¹¹⁷ Put another way, the question is whether they have reasonably believed that they would be able to put their water rights to beneficial use in perpetuity.

The preexisting title theory cannot justify failure to pay compensation if application of the public trust doctrine to appropriative rights inaugurates "a sudden change in state law, unpredictable in terms of relevant precedents."¹¹⁸ Proponents of the preexisting title theory point to the "long-established Supreme Court authority recognizing the inapplicability of rigid private property concepts to water"¹¹⁹ and "the nearly universal declaration in western states of the public nature of the water resource."¹²⁰ These assertions deserve examination.

That water law is not composed of precise and inflexible rules is a

Shokal and United Plainsmen is the "consideration scenario" described by Dunning, rather than the "property right scenario" postulated by *Audubon*. The state water rights agency must merely take the public interest into consideration when allocating appropriative rights. See Dunning, *supra* note 17, at 113-14. Since the consideration requirement identified by the Idaho and North Dakota Supreme Courts applies to new rather than existing rights, there is no takings question.

115. See *Eddy v. Simpson*, 3 Cal. 249, 252 (1853); *Sturr v. Beck*, 6 Dakota 71, 50 N.W. 486 (1888), *aff'd*, 133 U.S. 52 (1890); *Malad Valley Irr. Co. v. Campbell*, 2 Idaho 411, 18 P. 542 (1890).

116. See, e.g., *McDonald & Blackburn v. Bear River & Auburn Water & Min. Co.*, 13 Cal. 220 (1859); *Payette Lakes Protective Ass'n v. Lake Reservoir Co.*, 68 Idaho 111, 189 P.2d 1009 (1948).

117. Originally, the public trust doctrine was confined to navigable tidelands. See Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 727-30 (1986) (analyzing early public trust cases).

118. *Hughes v. Washington*, 389 U.S. 290, 296 (1967) (Stewart, J., concurring); *accord Summa Corporation*, 466 U.S. at 209 ("California cannot at this late date assert its public trust easement over petitioner's property, when petitioner's predecessors-in-interest had their interest confirmed without any mention of such an easement in proceedings taken pursuant to the [Treaty of Guadalupe Hidalgo] Act of 1851.").

119. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENVTL. L. 573, 587 (1989). In support of this proposition, Blumm cites *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 427 (1940) ("there is no private property in the flow of the stream"); *New Jersey v. New York*, 283 U.S. 336, 342 (1930) ("A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it"); *Hudson County Water Co. v. McCarter*, 209 U.S. 349, 356 (1908) ("few public interests are more obvious, indisputable and independent of particular theory than the interest of the public of a State to maintain rivers that are wholly within it substantially undiminished"). None of these cases implies, however, that water cannot be alienated by the state, nor that once alienated it can be retaken without paying compensation. Even *Appalachian Electric* merely states what was not controversial at the time: that individuals could not own instream water.

120. Blumm, *supra* note 119. In support of this proposition, Blumm notes that the constitutions of several western states declare that water is a public resource. See *infra* note 127.

truism.¹²¹ The rights of an appropriator cannot be explained "except in connection with the rights of others and in the context of specific water use practices."¹²² Appropriative rights are continually adjusted to changes in the uses of other appropriators, in the weather, and in the law itself.¹²³ But it does not follow from this elasticity that appropriative rights are not protected by the fifth amendment. Rights in real property have a certain amount of flexibility too.¹²⁴ Indeed, some observers detect a shift in the direction of *greater* flexibility in real property standards,¹²⁵ without arguing that the owners of realty can

121. As Eric Freyfogle has said,

Water reflects almost completely our planetary resource predicament: It is vital to life, short in supply, easily polluted, and difficult to transport. What is less obvious is that water—at least as water lawyers speak of it—is not a physical thing It is a use-right—the right to make use of a particular water flow—and not a right to control some physical object that you can point to and seize. When we think about water, then, we are forced to cast aside all of our reassuring, but ultimately confining, notions about what it means to own private property.

Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529, 1530 (1989). See also Freyfogle, *The Evolution of Property Rights: California Water Law as a Case Study*, in PROPERTY LAW AND LEGAL EDUCATION: ESSAYS IN HONOR OF JOHN E. CRIBBET 73 (P. Hay & M. Hoefflich eds. 1988).

122. Freyfogle, *Context and Accommodation*, *supra* note 121, at 1530.

123. Robert Dunbar illustrates this ongoing adjustment:

Among the many diversions of the [Cache la Poudre River], the John G. Coy Ditch, dating from 1865, has the thirteenth priority right to 31 cubic feet per second flow during the irrigation season. The Union Colony's Canal No. 2, commenced in the fall of 1870, has the thirty-seventh priority to 110 cubic feet per second, while the larger Larimer and Weld Canal, dating from 1878, carries the eighty-eighth priority to 571 cubic feet per second. When Cache la Poudre is at flood stage in the spring, all three of these canals will receive their full allotments of water, but when in early July the flow is not sufficient to supply all three canals, the water commissioner will order closed the headgate of the upstream Larimer and Weld Canal so that the other two can receive the full appropriations. Similarly, when the river's flow drops so low that the appropriations of both Coy and the Colony No. 2 ditches cannot be satisfied, the Coy ditch, which heads above the No. 2 canal, will receive its full entitlement before the colony canal receives any of its allotment.

R. DUNBAR, *supra* note 7, at 209. For cases dealing with conflicts over adjustments, see, e.g., *Mitchell Irr. Dist. v. Whiting*, 59 Wyo. 52, 136 P.2d 502 (1943); *Johnston v. Little Horse Creek Irrigating Co.*, 13 Wyo. 208, 79 P. 22 (1904).

124. See Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623, 675-76 (1986) (showing that real property rights—in the context of animal trespass disputes—are continuously adjusted by community understandings among neighbors); Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 610 (1988) (asserting that property law has always been—and is destined to be—a dialogue between rules of fixed specificity and rules of accommodative generality).

125. See generally Cribbet, *Concepts in Transition: The Search for a New Definition of Property*, 1986 U. ILL. L. REV. 1 (discerning a shift from rules of fixed specificity to standards of accommodation in zoning, landlord-tenant, warranty and other areas of real property law). Cribbet attributes this shift to recognition of the "social side" of real property law. Freyfogle argues that this shift presages the future of real property law. He believes that

[i]n many ways, water is the most thoroughly advanced form of property, and its model should prove particularly influential. Private property in the coming decades, like water today, might well exist principally in the form of specific use-rights. . . . Property use entitlements will be phrased in terms of responsibilities and accommodations rather than rights and autonomy. A property entitlement

no longer maintain reasonable expectations that their interests will not be appropriated by the state.¹²⁶ The fact that water law has been, and will continue to be, somewhat fluid does not suggest that water rights are not covered by the fifth amendment. Water is not so different from land that it is not property at all.

It is also true that several western constitutions declare or imply that water is the property of the state.¹²⁷ Yet in all of these states the law of prior appropriation has long recognized private interests in water use.¹²⁸ If these constitutional provisions have any meaning, it is that water is common property until it is assigned to private individuals. Indeed, three of the five constitutional provisions expressly declaring that water is the property of the state add that public ownership is subject to private appropriation.¹²⁹ Given the development of appropriative rights in every western state, the constitutional provisions that do not expressly state this qualification must be read as if they do. An example is *Lake DeSmet Reservoir Company v. Kaufmann*, holding that Wyoming's constitutional provision declaring water to be property of the state means that it is property of the state subject to private appropriation.¹³⁰

will acquire its bounds from the particular context of its use, and the entitlement holder will face the obligation to accommodate the interests of those affected by his water use.

Freyfogle, *Context and Accommodation*, *supra* note 121, at 1530-31.

126. Freyfogle welcomes what he believes will be the future of property law. But he does not foresee a future in which the fifth amendment is no longer operative. As he says, "the court[s] cannot reasonably claim the power to ignore all settled expectations." Freyfogle, *Context and Accommodation*, *supra* note 121, at 1553-54. He points out that the *Summa Corporation* and *Nollan* cases are proof that there are limits to the power of courts to redefine property at will. *Id.* at 1553 n.107.

127. Blumm, *supra* note 119, at 576 n.12, cites COLO. CONST. art. XVI, § 5 (waters of all natural streams are public property, subject to appropriation); MONT. CONST. art. IX, § 3 (waters are the property of the state, subject to appropriation); N.M. CONST. art. XVI, § 2 (unappropriated waters are the property of the public); N.D. CONST. art. XI, § 3 (waters shall remain state property); and WYO. CONST. art. VIII, § 1 (waters are the property of the state). He also asserts that the following constitutional provisions in other western states imply that water is public property: CAL. CONST. art. X, § 2 (reasonable use is in the public interest); IDAHO CONST. art. XV, § 1 (use of waters is a public use); NEB. CONST. XV, § 4 (appropriation may be denied if denial is in the public interest); TEX. CONST. art. 16, § 59(a) (referring to waters in Texas as "its"—or the state's—waters).

128. See *Eddy v. Simpson*, 3 Cal. 249 (1853); *Schilling v. Rominger*, 4 Colo. 100 (1878); *Sturr v. Beck*, 6 Dakota 71, 50 N.W. 486 (1888), *aff'd*, 133 U.S. 541 (1890); *Malad Valley Irr. Co. v. Campbell*, 2 Idaho 411, 18 P. 52 (1890); *Gallagher v. Basey*, 1 Mont. 457 (1872), *aff'd*, 87 U.S. 670 (1874); *Crawford Co. v. Hathaway*, 67 Neb. 325, 93 N.W. 781 (1903); *Albuquerque Land & Irrigation Co. v. Gutierrez*, 10 N.M. 177, 61 P. 357 (1900); *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926); *Moyer v. Preston*, 6 Wyo. 308, 44 P. 845 (1896). All of these cases are still good law.

129. COLO. CONST. art. XVI, § 5 (waters of all natural streams are public property, subject to appropriation); MONT. CONST. art. IX, § 3 (waters are the property of the state, subject to appropriation); N.M. CONST. art. XVI, § 2 (unappropriated waters are the property of the public).

130. *Lake DeSmet Res. Co. v. Kaufmann*, 75 Wyo. 87, 99, 292 P.2d 482, 486 (1956).

At any rate, the salient question is not whether the state has the ability to alienate an entitlement to use water,¹³¹ but whether individuals claiming to hold such entitlements have reasonably believed that their interests have a degree of permanence. The preexisting title theory boils down to the fact of notice. Have the holders of appropriative water rights known all along that their rights were subject to a public trust that insulated state action from the fifth amendment? How have ordinary people ordinarily understood the nature of their property rights?¹³² These are empirical questions. Nevertheless, the absence of any legal precedent clearly anticipating the holding in *Audubon*, or any of the other decisions extending the public trust doctrine to appropriative water rights, supports an inference that holders of water rights did *not* understand that their rights were so limited.¹³³ And if this is the case, extension of the public trust doctrine to appropriative rights is a taking.

V. LEGISLATIVE INCENTIVES: EXACTIONS AND PRIVILEGES

The difficulty of augmenting instream flows is in converting an economic resource from a private to a collective good. As we have seen, it is doubtful that either water marketing or extension of the public trust to appropriative rights will accomplish this conversion. For different reasons, neither is economical. Because instream water is a public good, the profit-oriented are unlikely to invest in it. Furthermore, the cost of providing enough instream water, particularly in the most needy watersheds, is beyond the means of most philanthropists. Government, the best supplier of public goods, has not spent significant amounts of public money on instream water. Unfortunately, public values have embraced instream uses at a time when many governments are facing budget constraints.

The limits of public funds are also relevant in the public trust context. If extension of the public trust to appropriative rights is

131. Proponents of the preexisting title theory argue, in effect, that this title is inalienable. This is a central element of the public trust doctrine. See, e.g., *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387 (1882) (holding that navigable tidelands could not be alienated by the state unless the alienation would advance the public good); see also *Rose*, *supra* note 117, at 728 (noting that under the original theory, tidal lands and waters were considered to be "impressed with public 'trust' . . . in the nature of an inalienable easement assuring public access"). Yet even *Illinois Central* did not cast doubt on all alienations, only those which failed to provide public benefits. 146 U.S. at 453 ("[t]he control of the state for the purposes of the trust can never be lost, except as to such parcels as are used in promoting the interests of the public"). Cf. *Pollard v. Higgins*, 44 U.S. 212, 232 (1845) (Catron, J., dissenting) (maintaining that the power of the government to alienate navigable tidelands is coextensive with that of any other property owner).

132. "Interpreting the law with at least an eye to ordinary discourse is fundamentally important if the law is to function as a guide for the behavior of ordinary persons." Huffman, *A Fish Out of Water*, *supra* note 111, at 530 n.11.

133. To the contrary, the holders of the appropriative rights described by Dunbar must believe beyond doubt that they possess verifiable and enforceable usufructory rights. It should also be noted that these rights are venerable. See note 123 *supra*.

eventually held to be a taking, states will have to think twice about bringing public trust claims. Moreover, with the *First Lutheran* decision holding that the property owner can recover compensation even for temporary takings, the stakes in fifth amendment cases are considerably higher.¹³⁴ State and local governments held to be engaged in a taking will no longer be able to avoid the payment of compensation by simply returning things to the *status quo ante*. After *First Lutheran*, states held to have taken property will have to pay damages even if they subsequently back away from their actions.

Given these problems with both water markets and public trusts, state governments must search for other solutions. The new Oregon conserved water statute¹³⁵ may serve as a model. By requiring an exaction as a condition on a private activity involving the use of property, the statute captures a private good to enhance a public value. In operation it is similar to the lateral easement condition imposed by the California Coastal Commission on the property owners in *Nollan*.¹³⁶ The exaction imposed by the state in *Nollan* was a public easement across the landowners' beach. The exaction imposed by the conserved water statute is a percentage of all water conserved and transferred to a better use by all holders of appropriative rights.

The Oregon statute encourages conservation by enabling appropriators to retain rights to use the water they conserve. This is a key feature of the statute. Classic prior appropriation law does not recognize the original appropriator's right to use conserved water. In a fully appropriated watershed, conserved water would be allocated to existing appropriators. In a watershed that is not fully appropriated, conserved water would be available for appropriation by any interested party. Classic prior appropriation law treats conserved water as if it had never been appropriated in the first place.¹³⁷ This rule does not encourage appropriators to implement conservation measures. Under the Oregon statute, on the other hand, the appropriator is rewarded for her conservation efforts. Because she retains the right to use conserved water, and in fact can transfer it to a higher use, she has an incentive to conserve.¹³⁸

134. See *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304 (1987).

135. OR. REV. STAT. §§ 537.455-537.500 (Butterworth 1988).

136. The United States Supreme Court noted in *Nollan* that the state could have denied the Nollans their permit outright—without compensation—if denial would have substantially advanced a legitimate state interest. Furthermore, the Supreme Court “assume[d], without deciding,” that enhancing the public's ability to use a beach is a legitimate state interest. *Nollan*, 483 U.S. at 834-35.

137. See *supra* note 41 and accompanying text.

138. To retain rights in conserved water, an appropriator must first submit a conservation proposal to the Water Resources Commission. OR. REV. STAT. § 537.465 (Butterworth 1988). The Commission's approval of the proposal permits the appropriator to put conserved water to a new use. It also permits the appropriator to sell or lease conserved water. *Id.* § 537.500 (1990 Supp.).

The conservation statute imposes a significant restriction on the transfer of conserved water to a new use, however, by requiring the conveyance of a portion of the water to the state for instream dedication.¹³⁹ The statute directs the Water Resources Commission to "allocate 25 percent of the conserved water to the state, unless [it] finds that more or less water should be allocated to the state under the criteria established by rule by the commission pursuant to [Oregon Revised Statutes] 537.480."¹⁴⁰ This allocation to the state is a condition imposed on the appropriator's right to use conserved water. When this condition is satisfied, water remains instream and is converted from a private to a public good.¹⁴¹ If the Oregon statute imposes an exaction similar in effect to the condition imposed in *Nollan*, however, one must ask whether its implementation would constitute a taking requiring just compensation.

A. *Nollan on Exactions*

The development exaction is a tool used by urban land-planning agencies to supply public goods. The prototypical example is the subdivision development permit requiring the developer to dedicate property for streets, sewers, water mains, sidewalks, curbs and gutters, storm drains, parks, and other public amenities.¹⁴² The Oregon conservation statute adopts this urban planning tool and applies it to water.

139. *Id.* § 537.480 (1988).

140. *Id.* § 537.470 (1990 Supp.). Among other things, the Water Resources Commission is required to determine how much water is "necessary to satisfy identified instream needs." *Id.* § 537.480 (1988).

141. Whether the dedication rate selected by the Oregon legislature is efficient (that is, whether it will not inhibit the transfer of water to better uses) remains to be seen, of course. An economic resource will be transferred to a higher use when the owner expects to capture benefits generated by the change. When the state is going to capture a portion of these benefits itself, the owner may decide that the change in use is not worth the effort. There are numerous other potential costs associated with changes in use. For example, new conveyance systems may have to be built. An exaction like the one imposed by the Oregon statute, when added to these other costs, may consume so much of the expected gains that the owner would derive little or no net benefit from the transfer. What Colbert had to say about taxes is pertinent to exactions of many kinds: "[r]aising taxes is like plucking a goose: you want to get the maximum number of feathers with the minimum amount of hiss." P. SAMUELSON & W. NORDHAUS, *supra* note 70, at 785 (quoting J. Colbert).

142. See Schultz & Kelley, *Subdivision Improvement Requirements and Guarantees: A Primer*, 28 WASH. U.J. URB. & CONTEMP. L. 3 (1985). In some situations, impact fees are charged by the planning agency in lieu of the dedication of property, the revenue to be used to purchase property for parks, school, or the like. See Juergensmeyer & Blake, *Impact Fees: An Answer to Local Governments' Capital Funding Dilemma*, 9 FLA. ST. U.L. REV. 415 (1981). Occasionally, the developer is required to both finance and construct public property. Developers have been required, for example, to construct low-income housing as a condition on permission to construct new office buildings. See Diamond, *The San Francisco Office Housing Program: Social Policy Underwritten by Private Enterprise*, 7 HARV. ENVTL. L. REV. 449 (1983).

Prior to *Nollan*, challenges to exactions did not fare well.¹⁴³ Most of these challenges were brought in state courts, however, and resulted in an array of different decisional theories.¹⁴⁴ When the United States Supreme Court noted probable jurisdiction in *Nollan*, observers looked forward to the definitive word on the constitutional issues raised by land-use exactions.¹⁴⁵ The word from the Court was that an exaction is constitutional provided it (1) imposes a condition on a use of property that could be prohibited entirely as a legitimate exercise of the police power¹⁴⁶ and (2) bears a relationship to the objective of the prohibition for which it is substituted.¹⁴⁷ *Nollan* requires a nexus between the prohibition and the condition. Although the majority opinion failed to provide a standard for determining the sufficiency of any nexus the government might advance,¹⁴⁸ it did offer a framework for analyzing the takings implications of exactions.¹⁴⁹

B. Conservation, Changes in Use, and Instream Water

The Oregon conserved water statute uses an exaction mechanism to abate two prohibitions of classic prior appropriation law. The first of the prohibitions is the principle that water conserved may not be used by the appropriator who conserves it, but instead returns to the stream.¹⁵⁰ For purposes of this discussion, this principle will be called the conservation rule. The second prohibition is the appurtenancy rule, providing that a change from one beneficial use to another results in loss of the original priority date.¹⁵¹ Courts have had no diffi-

143. See note 37 *supra* (citing cases).

144. See Delaney, Gordon & Hess, *The Needs-Nexus Analysis: A Unified Test for Validating Subdivision Exactions, User Impact Fees and Linkage*, 50 LAW & CONTEMP. PROBS. 139, 145-56 (1987).

145. See, e.g., Strasser, *Just Whose Land Is It—Anyway?*, Nat'l Law J., Dec. 22, 1986, at 1, col. 3.

146. *Nollan*, 483 U.S. at 836 (“[t]he Commission’s assumed [police] power to forbid construction of the house in order to protect the public’s view of the beach must surely include the power to condition construction upon some concession by the owner, even a concession of property rights”). A valid exercise of the police power is one that substantially advances a legitimate state interest. Observers have concluded that *Nollan* indicates the Supreme Court’s intention to subject legislative purposes to intensified scrutiny in takings cases. See, e.g., Rudolph, *Let’s Hear it for Due Process—An Up to Date Primer on Regulatory Takings*, 23 LAND & WATER L. REV. 355 (1988).

147. *Nollan*, 483 U.S. at 837 (“[C]onstitutional propriety disappears, however, if the condition substituted for the prohibition utterly fails to further the end advanced as the justification for the prohibition. . . . [T]he lack of nexus between the condition and the original purpose of the building restriction converts that purpose to something other than what it was.”).

148. See *infra* note 156 and accompanying text.

149. This is not to imply that this two-part test is sound. To the contrary, its logic is flawed. See *infra* note 157 and accompanying text. Since it now appears to be the law of takings and exactions, however, one must consider how it might apply to the Oregon statute.

150. *Salt River Valley*, 3 Ariz. App. at 28, 411 P.2d at 201.

151. *Thorne v. McKinley Bros.*, 5 Cal. 2d 704, 56 P.2d 204 (1936) (holding that water diverted for use during the day could not be used at night); *Oliver v. Skinner*, 190 Or. 423, 226 P.2d 507 (1951) (holding that water diverted to irrigate hay, and so

culty with these prohibitions. In no case has either been held to be a taking. The result is that appropriators are unable to conserve water and put it to better use. The Oregon statute, on the other hand, permits appropriators to do what classic prior appropriation doctrine prohibits, subject to the condition that the appropriator conveys a percentage of the conserved water to the state for instream uses.

At first glance, conditional permission to use conserved water is not problematic. As the majority in *Nollan* points out, the power to prohibit a use of property necessarily includes the power to permit the use under a specified condition.¹⁵² Here, the conservation rule prohibits the appropriator from using conserved water. This rule is a valid exercise of this power since it substantially advances a legitimate state interest.¹⁵³ *Nollan* requires more, however. The purpose of the exaction must be related to the purpose of the condition. It is this nexus requirement that throws the constitutionality of the Oregon statute into doubt.

The prior appropriation doctrine that conserved water returns to the stream for further appropriation, the conservation rule, is based on the notion that water, a scarce and precious resource in the arid West, should not be monopolized by early appropriators.¹⁵⁴ Instead, the law should make water available to new users and accommodate new uses. In the words of the Arizona Court of Appeals,

[a]ny practice, whether through water-saving procedures or otherwise, whereby appellees may in fact reduce the quantity of water actually taken *inures to the benefit of other water users* and neither creates a right to use the waters saved as a marketable commodity nor the right to apply same to adjacent property having no appurtenant water rights. It is believed that any other decision would [be inconsistent with] the concept of beneficial use.¹⁵⁵

never used after July 1st in any year, could not be used to irrigate other crops requiring water after that date); *Clark v. Briscoe Irr. Co.*, 200 S.W.2d 674 (Tex. 1947) (holding that state water officials could prohibit changes in use). A water right is a use-right. The appurtenancy rule extinguishes the original use-right if diverted water is applied to a new use. In other words, the appropriator is prohibited from applying her original use-right to a use other than the one for which the water was originally diverted. Instead, she acquires a new and inferior appropriative right. Indeed, her new right may be so far subordinate to the older rights of other appropriators that it is worthless.

152. *Nollan*, 483 U.S. at 836.

153. It is beyond dispute that (1) the maintenance of instream water is a legitimate state interest, and (2) a regulation exacting up to twenty-five percent of each permitted water conservation project substantially advances that interest. Indeed, the public trust doctrine seems to fortify the presumption that the wise use of water is a legitimate state interest. See *Dunning*, *supra* note 17, at 112 (the public trust doctrine can be used as "an aid in the interpretation or construction or fortification of other norms"). Unless the public trust doctrine means nothing at all, it means at a minimum that the state's interest in water is a broad and special one.

154. For this observation, I am indebted to Philip Norvell.

155. *Salt River Valley*, 3 Ariz. App. at 31, 411 P.2d at 204 (emphasis added).

The identities and characters of these new users and uses can be expected to change as social values and necessities change. By returning water to the stream, the conserved water rule ensures that water-use patterns will not be completely frozen in time.

The goal of the Oregon conserved water statute is also the return of water to the stream. To that extent, the prohibition contained in the prior appropriation conservation rule and the condition contained in the Oregon statute are identical. Both rules are designed to make water available to new users. If the inquiry were to end there, implementation of the statute would not result in a taking under the *Nollan* test. The exaction promotes a legitimate state interest identical to the interest promoted by the prohibition for which it substitutes. Both aim to make water available for new uses.

However, the Oregon statute goes one step further. It does not just make water available to other users, it makes it available to a particular set of users: those who attach value to water that will not only be returned to the stream, but will remain there. From the rivals for new water, the Oregon legislature has chosen to favor fishermen and hunters, boaters and hikers, riparian animal and plant communities, and those who simply enjoy knowing that rivers are running in their natural channels. Like the conserved water doctrine of prior appropriation law, the purpose of the Oregon statute is to make water available to a new set of users. Unlike the conserved water doctrine, the Oregon statute chooses who these users will be.

Whether or not this additional and more specific purpose would turn the exaction into a taking under *Nollan* depends on how close the nexus between potential prohibition and actual exaction must be. Yet with respect to whether the nexus must be substantial, reasonable, modest, or merely tenuous, *Nollan* is silent. The majority noted that it could accept, "for purposes of discussion," the reasonable relationship test offered by the appellees, but only because the fit between prohibition and exaction did not satisfy "even the most untailed standards."¹⁵⁶ The majority believed it to be unnecessary to supply a standard for determining the sufficiency of the nexus since it found no nexus between the prohibition and the exaction at all.

Time will tell what, if anything, the *Nollan* nexus requirement really means. Indeed, it is conceivable that a future Supreme Court will find that the search for nexus is irrelevant. If both the prohibition and condition¹⁵⁷ substantially advance legitimate state interests, it seems pointless to inquire as to whether these interests are related. A legitimate state interest promoted by a condition should not be delegitimized simply because it is unrelated to a different state interest promoted by a prohibition for which the condition presumably substi-

156. *Nollan*, 483 U.S. at 838.

157. The condition is the exaction imposed by the regulation.

tutes. In this author's view, it makes no sense to invalidate a condition promoting a legitimate state interest because the interest is unrelated to one that would support a prohibition the state could also impose.

But predicting the future of the law of takings is hazardous. As Justice Holmes said, government under constitutional law is "an experiment, as all life is an experiment."¹⁵⁸ As will be discussed shortly,¹⁵⁹ though the Oregon statute offers a measure of hope that instream values can be advanced constitutionally, instream values will be difficult to secure in exaction cases if the focus is on rights, as in *Nollan*, rather than on privileges.

C. Privileges and Rights

[The] story of human rapaciousness begins to be accompanied by a vein of light which . . . originates in the idea of land as a gift—not a free or a deserved gift, but a gift given upon certain rigorous conditions.¹⁶⁰

The truth is, we never owned all the land and water. We don't even own very much of them, privately. And we don't own anything absolutely or forever. . . . Our rights to property will never take precedence over the needs of society. Nor should they, we all must agree in our grudging hearts. Ownership of property has always been a privilege granted by society, and revokable.¹⁶¹

Although the expectations of the users of property are the essence of property, "predictability and security do not depend on bold, monolithic property definitions based on individual autonomy and absolute dominion. The limits on ownership can be tailored, as well as clear."¹⁶² Although the utility of property depends on the specification of rights attached to it,¹⁶³ these rights need not be absolute. The value of property is not undermined by the existence of limits on its use, but by uncertainty about the nature of these limits.¹⁶⁴

The Oregon conserved water statute affects appropriative rights by prohibiting the use of a certain percentage of any water conserved, but it does *not* unsettle the expectations of appropriators. To the contrary, this very limitation is an accepted element of prior appropria-

158. *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

159. See *infra* notes 165-172 and accompanying text.

160. W. BERRY, *The Gift of Good Land*, in *THE GIFT OF GOOD LAND: FURTHER ESSAYS CULTURAL AND AGRICULTURAL* 267, 270 (1981).

161. W. KITTEREDGE, *Owning It All*, in *OWNING IT ALL: ESSAYS* 55, 64 (1987).

162. Freyfogle, *Context and Accommodation*, *supra* note 121, at 1555.

163. See note 95 *supra* and accompanying text.

164. Markets for property are undermined by uncertainty about the status of property rights. This accounts for the great attention property law pays to questions concerning marketable title. See generally Payne, *Increasing Land Marketability Through Uniform Title Standards*, 39 VA. L. REV. 1 (1953).

tion law. Indeed, the original conserved water doctrine imposes an even more restrictive limitation on the use of salvaged water. The appropriator cannot use the water conserved.¹⁶⁶ The Oregon statute disturbs no expectations that reasonably could have been held under the conserved water rule.

From this perspective, it is apparent that the Oregon statute creates property. It permits appropriators to make a new use of conserved water, rather than limiting its use. The statute does not frustrate an expectation of appropriators. It permits a use never reasonably expected. It would strain logic to argue that because the statute imposes a condition on this newly permitted use, it restricts settled expectations. The confinement of a privilege does not implicate the takings clause. When the state grants a privilege to private citizens, it does not exercise its authority to regulate private property. It does not dash expectations; it creates them.

A few courts deciding exaction cases have accepted this reasoning.¹⁶⁶ Commentators have not looked favorably on these cases, however, arguing that the broad grant of discretion conferred by the privilege approach "permitted the municipality to burden the developer with arbitrary and unreasonable conditions."¹⁶⁷ This criticism misses the point. No burden is associated with the attachment of conditions to a privilege granted by the government. In fact, it is misleading to call these conditions "exactions." There is no exaction when the government confers a privilege in the first instance.¹⁶⁸

A true exaction occurs when an existing set of expectations is reduced by the subtraction of one expectation from the whole. This is not what occurs when a privilege is first extended. When the state grants a privilege, it cannot be said to exact something by granting less rather than more. The state need not have granted anything at all. This is the essential difference between a settled entitlement and a newly granted privilege. The takings clause protects established expectations. It is not concerned with the extension of unexpected privi-

165. See *Salt River Valley*, 3 Ariz. App. at 28, 411 P.2d at 204.

166. See, e.g., *Ross v. United States ex rel. Goodfellow*, 7 App. D.C. 1 (1895) (city may require developer to dedicate streets to public use as a condition of privilege to undertake development); *Ridgefield Land Co. v. City of Detroit*, 241 Mich. 468, 217 N.W. 58 (1928) (city may require developer to widen public streets as a condition of privilege to undertake development).

167. See, e.g., Pavelko, *Subdivision Exactions: A Review of Judicial Standards*, 25 WASH. U.J. URB. & CONTEMP. L. 269, 283 (1983). See also Johnston, *Constitutionality of Subdivision Control Exactions: The Quest for a Rationale*, 52 CORNELL L. REV. 871, 884 (1967) (criticizing the courts in *MacFarland* and *Ross* for failing to raise "the question of the effect of the fifth amendment on the scope of permissible subdivision regulation").

168. For a forceful argument along these lines, see Justice Brandeis' opinion for a unanimous Court in *Atlantic Refining Co. v. Virginia*, 302 U.S. 22 (1937). In upholding an entry fee imposed by the state on foreign corporations, Justice Brandeis concluded that when the state grants a privilege, "[i]t may demand a corresponding price." 302 U.S. at 31.

leges. The takings clause does not require the government to enlarge a privilege that is being granted for the first time.

The Oregon conserved water statute grants to appropriators the privilege of profiting from the transfer of seventy-five percent of the water they conserve. This is an innovation in the state's prior appropriation law. Prior to the extension of this privilege, appropriators received no profit from their conservation efforts since all conserved water was subject to appropriation by other interested parties. It follows that Oregon cannot now be said to have exacted twenty-five percent of the value of a conservation-minded appropriator's conserved water. The conservation-minded appropriator has merely been given a privilege, which never before existed, to profit from his actions.

This is not to say that every exactions case involves the original grant of a privilege. The majority in *Nollan* was correct in conceptualizing the condition imposed by the state as the regulation of a right possessed by property owners. Privileges have a way of settling into rights. At some moment in the past, the state extended to littoral property owners the privilege of excluding the public from the dry sand portion of the state's beaches.¹⁶⁹ By the time the state attempted to place a condition on this power to exclude the public, the privilege had settled into a right.¹⁷⁰ However, there is a fundamental distinction between a freshly minted privilege and an established expectation. Only the latter implicates the fifth amendment.

It is said that the right/privilege distinction, which has occasionally been used to uphold exactions,¹⁷¹ "has been discredited by the United States Supreme Court."¹⁷² If this is true, it is unfortunate. The difference between newly granted privileges and settled expectations goes to the core of fifth amendment jurisprudence. As long as the Supreme Court continues to engage in the analysis of property owners' expectations in takings claims, it will be dealing with historical contingencies. Property rights are created at a point in time, either by a single act of the state or by the multiple acts of private persons,¹⁷³ and

169. In California, littoral private property runs down to the mean high tide line. This is the average height of all high tides on a particular beach over a particular period of time. See Law Note, *Californians Need Beaches—Maybe Yours!*, 7 SAN DIEGO L. REV. 605, 607 (1970).

170. See, e.g., *City of Manhattan Beach v. Cortelyou*, 10 Cal. 2d 653, 76 P.2d 483 (1938); *F.A. Hihn Co. v. City of Santa Cruz*, 170 Cal. 436, 150 P. 62 (1915).

171. See *supra* note 166.

172. D. MANDELKER, *supra* note 35, at 373. Presumably, Mandelker makes this assertion because neither the majority nor the dissent in *Nollan* refers to the distinction between rights and privileges.

173. Cooter and Ulen suggest that private property comes into existence when individuals realize that a cooperative agreement recognizing private rights can generate a cooperative surplus in which all parties can share. See R. COOTER & T. ULEN, *supra* note 57, at 94-99. Sometimes individuals act through the state to create property. A recent example is the enactment of Plant Variety Protection Act creating private property rights in seed germplasm. See 7 U.S.C. §§ 2321-2582 (1988). Sometimes individuals do not bother with the state. For a study of the emergence of a cooperative agree-

they cannot carry expectations prior to their creation.

Oregon may decide someday to allocate not twenty-five but fifty percent of all conserved water to instream uses. Were it to do so, a court engaging in expectations analysis could conclude quite logically that the fifth amendment would require the payment of compensation. The holders of appropriative rights in Oregon are already acting with the reasonable expectation that they will be able to profit from the transfer of seventy-five percent of the water they conserve.¹⁷⁴ But even when the transition from freshly minted privilege to settled right is virtually instantaneous, the passage is important. The distinction between privileges and rights is an essential element in any analysis of the reasonable expectations of property owners.

VI. CONCLUSION

Water, always a scarce resource in the arid West, seems to be getting more scarce by the day.¹⁷⁵ Yet western water law is only beginning to promote conservation.¹⁷⁶ Instream use is one of many possible uses for conserved water.¹⁷⁷ Oregon hopes to increase the allocation of instream water by encouraging conservation consistent with market principles. Instead of simply appropriating water rights by asserting the public trust doctrine, and inhibiting the emergence of a water market in the state, Oregon hopes to increase instream flows by siphoning water away from market transactions.

This article concludes, somewhat tentatively, that assertion of the public trust doctrine as in *Audubon* is a fifth amendment taking. Concededly, the issues are complex and arguable. But the best justifica-

ment establishing private property rights in fishing grounds (unsanctioned by the law of the state but enforced by self-help) see J. ACHESON, *THE LOBSTER GANGS OF MAINE* (1988). Of course the latter are "rights" to the anthropologist, but not to the lawyer, since a fisherman trespassed against cannot "initiate that sequential combination of powers and acts involved in obtaining a [legal] judgment against another person." Goble, *A Redefinition of Basic Legal Terms*, 35 COLUM. L. REV. 535, 540 (1935).

174. *Cf. Coolidge v. Long*, 282 U.S. 582 (1931). The Court noted that an exaction imposed by the state on intestate succession is supported by the principle that the right of inheritance "is not a natural one but is in fact a privilege only, and that the authority conferring the privilege may impose conditions upon its exercise." The Court noted further, however, that "when the privilege has ripened into a right it is too late to impose conditions . . ." *Id.* at 603 (quoting *Matter of Craig*, 97 App. Div. 289, 296 (1904), *aff'd*, 181 N.Y. 551 (1905)). Consequently, the exaction could not be imposed retroactively on prior conveyances under the intestate succession statute.

175. *See, e.g., Wallace, In Drought, Fair May Not Always Mean Equal*, L.A. Times, March 12, 1991, at B1, col. 2 (reporting announcement of a fifty percent cut in water deliveries to southern California as of April 1, 1991). The enormous significance of water in the West is a central theme of W. STEGNER, *BEYOND THE HUNDREDTH MERIDIAN: JOHN WESLEY POWELL AND THE SECOND OPENING OF THE WEST* (1953); W. WEBB, *THE GREAT PLAINS* (1931).

176. *See Shupe, supra* note 34.

177. *See, e.g., F. BROWN & H. INGRAM, WATER AND POVERTY IN THE SOUTHWEST* (1987) (documenting the connection between poverty and lack of access to water among Indians and Hispanics in the West).

tion for the public trust doctrine—the preexisting title theory—holds very little water. Takings jurisprudence is centered on the expectations of property owners.¹⁷⁸ An assumption that the state *has* preexisting title does not answer the question of whether prior appropriators *simultaneously* have reasonable expectations that their property rights are relatively settled and certain. The vast body of prior appropriation law gives appropriators good reason to hold these expectations.

The Oregon conservation statute does not suffer from this constitutional infirmity as long as it is seen to be granting, as it does, a privilege to appropriators. No one can reasonably expect to exercise a property right that has never before been recognized. As Karl Llewellyn noted, “a right is best measured by effects in life. Absence of remedy is absence of right. Defect of remedy is defect of right. A right is as big, precisely, as what the courts will do”¹⁷⁹ Until the state, acting through its lawmaking agencies, establishes rights that can be “measured by effects in life,” the takings clause does not enter the picture. If expectations analysis does not mean this, it means nothing.

The Oregon conservation statute suffers from a different infirmity though, for it depends on the functioning of a dynamic water market. Although water rights transfers may produce a modest amount of water dedicated to instream uses, they are unlikely to produce an optimal amount. Transaction costs, public goods problems, and the common belief that water should not be commodified¹⁸⁰ belie the promise that water markets can optimize instream flows. Certainly the experience thus far is inauspicious. Water transfers in Oregon have been few and far between.¹⁸¹

Perhaps the only viable prospect for instream water is the power of the western states to condemn existing water rights. Government purchase is the classic method of supplying public goods.¹⁸² But the

178. See generally Anderson, *Takings and Expectations: Toward a “Broader Vision” of Property Rights*, 37 U. KAN. L. REV. 529 (1989).

179. K. LLEWELLYN, *THE BRAMBLE BUSH: ON OUR LAW AND ITS STUDY* 94 (1951).

180. This is the “water is different” syndrome. Opinion surveys have shown that many people think that the selling of water—the basic necessity of life—is simply wrong. See F. BROWN & H. INGRAM, *supra* note 177, at 28-45. The authors attribute this attitude to acknowledgment of the community value of water, as opposed to its commodity value.

181. M. REISNER & S. BATES, *supra* note 3, at 106. The authors speculate that this lack of activity among Oregonians is “owing primarily to the abundance of unappropriated water available in their streams.” It is not likely that markets will be any stronger, however, in more arid and heavily appropriated states. In California, where the state has set up a water bank to promote water rights transfers from rural to urban users during the current drought, water markets have not taken off. See Eaton, *Cotton, Rice, Sugar Beet Growers Seek U.S. Disaster Relief*, L.A. Times, March 8, 1991, at A3, A28, col. 2. (reporting legislative testimony of William Huffman of the Farmers’ Rice Cooperative of Sacramento that “there was surprisingly little enthusiasm among rice farmers for state efforts to get them to sell their water rights . . . even though the initial offers have been [financially] attractive”).

182. See *supra* notes 73-76 and accompanying text. Moreover, the Oregon con-

power awaits the will. The costs of condemnation would be high and the social dislocations could be painful. Yet the West appears to be on the verge of painful social dislocations from conflicts over water in any event.¹⁸³ Decades of rapid urban growth and industrialization are leading ineluctably to a major redistribution of western water resources from rural to urban users.¹⁸⁴ Today, too much western water is used to irrigate low valued crops with inefficient irrigation methods.¹⁸⁵ In one way or another, this water regime will come to an end. When it does, let us hope that some of the water rights in transition will be reserved for the rivers.

served water statute suggests another way in which instream water could be provided. The state could impose a transfer tax on changes in use, for example, and earmark the revenue for the purchase of instream rights. Constitutional obstacles to the imposition of a "special assessment" tax would certainly be less formidable than they are with respect to a requirement that private property be dedicated to a public purpose. See Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L.J. 385, 469-73 (1977) (noting that the federal courts have relegated this area of constitutional law to the state courts). *But see* Weber Basin Home Builders Ass'n v. Roy City, 26 Utah 2d 215, 487 P.2d 866 (1971) (holding that building permit fee violated equal protection clause because it placed excessive burden on new households). A tax equal to twenty-five percent of the value of a transfer of water to a new use might be held to be excessive.

183. See, e.g., Warren, *State Faces Price Haggles in Search for Water*, L.A. Times, March 13, 1991, at A3, col. 2; Wallace, *supra* note 175; Houston, *supra* note 25; Jones, *Guess Who's at the End of this Straw*, L.A. Times, February 19, 1991, at A3, col. 1; LaGanga, *Drought Spells Big Changes on the Farms*, L.A. Times, February 8, 1991, at A3, col. 1; Corwin, *supra* note 94.

184. The West has become the most urbanized part of the country. Urbanites are not intimately connected to agriculture, they place a high value on environmental quality, and they enjoy outdoor recreation. Calls for the establishment of water markets and application of the public trust are associated with this demographic change which has transformed the West.

185. See generally, M. REISNER & S. BATES, *supra* note 3.