The Water Moratorium: Takings, Markets, and Public Choice Implications of Water Districts

Sean Callagy[*]

This Comment analyzes a small town's efforts to regulate its municipal water supply by enacting a moratorium on new connections. The Comment relates the history of the policy, discusses the legal underpinnings of a water moratorium, and explores the effects of the moratorium. The Comment then discusses attributes of the moratorium, especially as it concerns the use of a formal governmental body to apportion rights, and queries why the moratorium has remained in place for nearly four decades. Finding that the moratorium represents a rational but imperfect response to scarcity of a critical natural resource, the Comment proposes a regime of tradable rights in water as a means of increasing efficiency in resource allocation while overcoming the institutional, legal, and societal deadlock perpetuated by the moratorium.

[*] J.D., University of California, Berkeley, 2007. The author thanks Professors John Yoo, Robert Cooter, Joseph Sax, Glen Sulmasy, and Brent Haddad. The author also thanks the *Point Reyes Light* and Jim Kravets, Bolinas Community Public Utility District, Adam Daniels, Casey Roberts, Jason Malinsky, and Alice Bodnar.

INTRODUCTION: HOW MUCH WATER DOES A TOWN NEED?

Water is a necessity of life, but in arid and growing California, supply often falls short of ever-increasing demand.[1] The legal status of entitlements to water compounds this problem, as water has attributes of a public good as well as of private property.[2] Solutions to water shortages have varied, with

1. Joseph L. Sax, *Hydraulic Empire*, 91 MICH. L. REV. 1637, 1637 (1993) (reviewing NORRIS HUNDLEY, JR., THE GREAT THIRST: CALIFORNIANS AND WATER, 1770S–1990S (1992)):

> California is an unnatural place, and not just in the way that crude comedians think. It has fabulously fertile land for agriculture stretching north and south for 400 miles, but it lacks sufficient local water sources to put that land into production. Along the coast, all the way from the San Francisco Bay to the Mexican border, it offers the most salubrious settings for urban living in North America, but the entire region is semiarid and incapable of supporting large populations on its native supplies of fresh water.

2. *See, e.g.*, JOSEPH L. SAX, BARTON H. THOMPSON, JR., JOHN D. LESHY & ROBERT H. ABRAMS, LEGAL CONTROL OF WATER RESOURCES v (3d ed. 2000); *see also* CAL. CONST. art. X, § 2:

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

policymakers considering markets to place water in the hands of users who value it most highly.[3] Rather than physical schemes to solve long-term water shortages, such as dams and pipelines,[4] this Comment examines the formal legal structures for managing water rights in the town of Bolinas, California, the public choice reasons for using such structures, and the current system's attributes and flaws. Concluding that there is a "tragedy of the anticommons," this Comment proposes a market to apportion water rights.

Possessing a seasonal water source, the town of Bolinas faces the problem of fairly apportioning water to the community. Part I describes how the town's public utility district in 1971 enacted a moratorium on new connections to the water supply. Though controversial and divisive, the moratorium remains in place to this day. It has mostly halted development in the town, benefiting those whose land has the right to water to the detriment of those without water rights. Recently, a water meter sold at auction for $310,000, indicating that the value of the right to receive water—and develop one's land—can fetch stratospheric sums. Part II describes how the moratorium's losers sought judicial relief, claiming the moratorium was a "taking" that deprived them of property without due process. After years of expensive litigation, the Ninth Circuit held that the perpetual moratorium *might* constitute a taking, but the case was dismissed prior to a decision on the merits. Similarly, California courts have upheld the broad authority of water districts to enact moratoria, and did so with respect to Bolinas's moratorium. As a result, the status quo stands, but interested parties could still relitigate the merits.

Legal scholarship and debate on water moratoria, including the case of Bolinas, have largely focused on environmental justifications for upholding such practices, or private property interests that militate in favor of overturning them.[5] This Comment does not advocate either position, but in Part III analyzes

3. *See* TERRY L. ANDERSON & PAMELA SNYDER, WATER MARKETS: PRIMING THE INVISIBLE PUMP (1997); BRENT M. HADDAD, RIVERS OF GOLD: DESIGNING MARKETS TO ALLOCATE WATER IN CALIFORNIA (2000); NAT'L RESEARCH COUNCIL, WATER TRANSFERS IN THE WEST: EFFICIENCY, EQUITY, AND THE ENVIRONMENT (1992); RODNEY T. SMITH, TRADING WATER: AN ECONOMIC AND LEGAL FRAMEWORK FOR WATER MARKETING (1988); U.S. GEN. ACCOUNTING OFFICE, WATER TRANSFERS: MORE EFFICIENT WATER USE POSSIBLE, IF PROBLEMS ARE ADDRESSED (1994). For a brief but illuminating discussion of the interplay of reclamation policies and legal rules or markets to apportion water, see A. Dan Tarlock, *Current Trends in United States Water Law and Policy: Private Property Rights, Public Interest Limitations and the Creation of Markets*, *in* THE SCARCITY OF WATER: EMERGING LEGAL AND POLICY RESPONSES 183 (Edward H. P. Brans et al. eds., 1997). For a polemic against water markets, see MAUDE BARLOW & TONY CLARKE, BLUE GOLD: THE FIGHT TO STOP THE CORPORATE THEFT OF THE WORLD'S WATER (2002).

4. *See, e.g.*, JOHN WARFIELD SIMPSON, DAM! (2005). For more about the intersection of water and politics in California, and proof of the adage that water flows towards money, see MARC REISNER, CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER (rev. ed. 1993). For the history of San Francisco's search for a dependable water supply, including the damming of the Hetch-Hetchy in Yosemite National Park, see GRAY BRECHIN, IMPERIAL SAN FRANCISCO: URBAN POWER, EARTHLY RUIN (1999).

5. *See* Dennis J. Herman, *Sometimes There's Nothing Left to Give: The Justification for Denying Water Service to New Consumers to Control Growth*, 44 STAN. L. REV. 429 (1992); John D. Leshy, *A*

public choice implications of a water district enacting a moratorium to solve a water shortage. This Part analyzes *how* Bolinas apportions and regulates water rights via a local government, championing formal legal rules and processes over informal norms. The following attributes of the problem contribute to this framework: high transactions costs, a collective action requirement, acute scarcity, a zero-sum game, the lack of competition in governance, state-conferred incentives to use governmental structures, the sophistication and tenacity of the moratorium's proponents, the difficulty of changing fundamental rules of societal organization, and finally, chance. These attributes make formal legal rules and processes a superior means to adjudicate the dispute over water rights at the local level.[6] In other words, the water district is a necessary but incomplete tool for allocating resources fairly. While vesting authority in a transparent, politically accountable body, the district's unitary structure prevents checks and balances, entrenching a tyranny of the majority.

This Comment maps the case of Bolinas among scholarship examining the uses of formal versus informal dispute resolution modes. Bolinas contrasts with studies such as Professor Robert Ellickson's examination of ranchers in rural Shasta County, California, where informal norms—coordinate with or even in direct contravention to the laws—shaped private disputes.[7] The purpose of this line of scholarship is to weigh the role of norms in the creation and maintenance of dispute resolution mechanisms. Bolinas exhibits a puzzling—or perhaps, to a legal positivist, a perfectly logical—absence of normatively-derived dispute resolution modes, and relies entirely on legal rules to adjudicate water rights. Here, wholesale reliance on formal government structures to enact and maintain a water moratorium has created a "tragedy of the anticommons."[8] A tragedy of the anticommons is the flip side of the well-known tragedy of the commons, where inability to exclude anyone from using a resource leads to its utter depletion, and a loss of social utility. The tragedy of the anticommons is

Conversation About Takings and Water Rights, 83 TEX. L. REV. 1985 (2005); Roger Marzulla, Ken Mehlman, Thomas O. Sargentich, Joseph L. Sax & Charles Tiefer, Debate, *Taking "Takings Rights" Seriously: A Debate on Property Rights Legislation Before the 104th Congress*, 9 ADMIN. L.J. AM. U. 253 (1995); Joseph L. Sax, *Rights That "Inhere in the Title Itself": The Impact of the* Lucas *Case on Western Water Law*, 26 LOY. L.A. L. REV. 943 (1993); Matthew G. St. Amand & Dwight H. Merriam, *Defensible Moratoria: The Law Before and After the Tahoe-Sierra Decision*, 43 NAT. RESOURCES J. 703 (2003); Katherine E. Stone & Philip A. Seymour, *Regulating the Timing of Development: Takings Clause and Substantive Due Process Challenges to Growth Control Regulations*, 24 LOY. L.A. L. REV. 1205 (1991).

6. For this analysis and the proposed solution in Part IV, this Comment draws on ROBERT D. COOTER, THE STRATEGIC CONSTITUTION (2000). For a discussion of the political and economic theories underlying this Comment, see *id.* at 6–8.

7. *See* ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991).

8. *See* Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).

underutilization of a resource due to overexclusion of potential users, thereby decreasing aggregate social utility.[9]

In Part IV, I propose a market for water rights as superior to the Bolinas moratorium. This proposal maintains the institutional efficiencies, transparency, and oversight of a public utility district, while also allowing those who value water rights most highly to purchase them, resolving the "tragedy of the anticommons," increasing overall social good—known in economics as "Pareto efficiency"[10]—and fairly distributing resources. A market system for water rights requires landowners to purchase the right to receive water as a precondition to developing property. Opening the possibility of developing land, this system moots latent takings claims, diminishes conflicts of interest and the tyranny of the majority, and acts as a natural brake on unsustainable growth. The market injects dynamism into a system of rights which has ossified over the course of thirty-five years and creates direct incentives for consumers to conserve water, by both reducing usage and increasing storage and recycling.

I. BOLINAS AND ITS WATER SUPPLY

Bolinas, California, faces a chronic water shortage.[11] The town has not remedied this problem with increased supply via new water sources, but by attempting to cap new demand: since 1971, a moratorium has halted new connections to the municipal supply. The following Part describes the community and the genesis of the moratorium—which began as a "temporary" measure—and examines the effects of the "emergency," now in its fourth decade.

A. Bolinas, BCPUD, and the Moratorium

Bolinas is a unique town in Marin County, on the Pacific Coast at the southern tip of the Point Reyes Peninsula. Just an hour's drive from San Francisco, the town exhibits a rural character and slow pace of life. There is a

9. *Id.*

10. Pareto efficiency is a state where no person can be made better off without making another person worse off. It rests upon the assumption, adopted for purposes of this paper, that social good is the aggregate of the good of all individuals. *See* HADDAD, *supra* note 3, at 25–26. Specific to water, certain attributes of the good make application of economic criteria both appropriate and questionable. A principle source that focuses squarely on the question of the value of water rights—and under what circumstances values and Pareto efficiency can be ascertained—is ROBERT A. YOUNG, DETERMINING THE ECONOMIC VALUE OF WATER 27–28 (2005). While the concept of the "value" of water will be discussed more fully in the course of this Comment, it should be noted at the outset that water generally has both a *commodity value* to individual users and *noneconomic values*, such as aesthetic, cultural, and ecological values assigned by individuals or society collectively. These values can be in tension, as is the case in Bolinas. This Comment focuses on the first, narrower meaning of value: water's commodity value.

11. With capacity to store 840,000 gallons—one week's supply in winter or four days in summer—capacity is lower than other water districts in the same geographic area, making it dependent on rain and vulnerable to demand spikes or drops in supply. *See* Jim Kravets, *Reservoirs Full But Spring Rain Needed*, POINT REYES LIGHT, Jan. 6, 2005, at 1.

diminutive downtown with restaurants, saloons, shops, bed-and-breakfasts, a general store, and a grocery co-op. Houses, ranging from rustic to opulent, occupy other areas.[12] Some lots are tiny; many were given away in the 1920s as part of a San Francisco newspaper's subscription drive.[13]

Bolinas views itself as a haven for creative or unique types who care strongly about the environment, peace, and justice.[14] Residents emphasize a sense of community and preference for consensus. Nevertheless, many "residents" are absentee owners of weekend or summer homes.[15] Organic agriculture supports the local economy,[16] as does tourism, but Bolinas does not welcome outsiders and seeks to maintain its low profile and off-the-beaten-path status.[17] Ironically, Bolinas's attempts to isolate itself have attracted considerable attention, such that the town and its water moratorium have become the topic of a book, several major newspaper articles, and a point of discussion in legal scholarship.[18]

12. *See generally* THE BOLINAS COMMUNITY PLAN (1975), *adopted by the Marin County Board of Supervisors*, Resolution 75-471 (Dec. 9, 1975), *as amended by* Resolution 83-110 (Mar. 29, 1983), Resolution 97-117 (Nov. 4, 1997), *available at* http://www.co.marin.ca.us/depts/CD/main/pdf/planning/Bolinas_Community_Plan_1975.PDF; *see also* Bolinas Community Public Utility District, Bolinas Community Plan, http://www.bcpud.org/bcp.htm (last visited Mar. 12, 2008). The Plan, though over thirty years old and in some respects antiquated, remains valid in shaping policy and development choices facing Bolinas. For more information on local planning authority under state law, see CAL. GOV'T CODE §§ 65100–65763 (West 2006).

13. On one wall of the Bolinas Community Public Utility District's office hangs a copy of the original advertisement, from the *San Francisco Bulletin*. It depicts Bolinas atomized, without regard to elevation contours, creeks, or eroding cliff sides, into thousands of miniscule lots.

14. *See, e.g.*, Alex Horvath, *Brigadoon Blues*, PAC. SUN, Dec. 2002, *available at* http://www.bolinas2miles.com/brigadoonblues.html.

15. The 2000 census puts the population at 1,246. Other accounts give higher estimates. *See* Fred A. Bernstein, *One Town Stops Time By Turning Off the Water*, N.Y. TIMES, Oct. 9, 2005, § 11, at 10 (putting population at 1,600).

16. The success of organic farming in Bolinas prompted a visit from Prince Charles in 2005. Peter Jamison, *West Marin Basks in Princely Spotlight*, POINT REYES LIGHT, Nov. 10, 2005. The farms do not share a common water source with the town.

17. *See* Erik Larson, *The Road to Bolinas: Why You May Not Be Able to Find It*, WALL ST. J., June 24, 1985, at A1 (noting that the sign at the turn-off from Highway 1 was torn down, painted over, or peeled up thirty-four times between 1971 and 1985). When the author visited Bolinas, no sign marked the turn-off.

18. *See* ORVILLE SCHELL, THE TOWN THAT FOUGHT TO SAVE ITSELF vii (1976) ("Our town does not crave publicity and does not want to become a subject of glancing fascination for the media."); Bernstein, *One Town Stops Time By Turning Off the Water*, *supra* note 15; Larson, *supra* note 17; *supra* note 5 and sources cited therein. Orville Schell was a resident and a director on the Public Utility District who voted for the water meter moratorium. His account tells the story of the town (dubbed "Briones" to give a veneer of anonymity) during the tumultuous and instrumental years of the 1970s. Most Bolinas residents referred the author to Schell's book as the best account of the moratorium and exposition of the town's values. Schell is currently Dean of UC Berkeley's Journalism School; requests for interviews with Schell were not answered.

The best local newspaper is the venerable, Pulitzer Prize–winning *Point Reyes Light*, which graciously opened its archives to the author. All articles from the *Point Reyes Light* are on file with the author. Bolinas also has a newsletter, the eclectic *Bolinas Hearsay News*. Items from the *Hearsay News* were usually found in the *Light's* archives, and are likewise on file with the author.

The Bolinas Community Public Utility District (District or BCPUD) is the only local government body in this unincorporated community.[19] BCPUD's five elected board members establish rules for the water supply and sewage management. Division 20 of the California Water Code governs municipal water districts, granting these limited local entities legislative and executive powers to regulate water by issuing ordinances, resolutions, and motions.[20] Anyone can attend the monthly meetings and discuss community-related topics. In the minds of some residents, BCPUD's jurisdiction extends to any item involving the town, because such items implicate the Community Plan,[21] or simply because the meetings serve as a forum for issues germane to the community.[22]

Bolinas's main water source is the creek Arroyo Honda, which dwindles in dry summer months when demand is highest and has run dry in drought years. A pipeline transports water several miles to a state-of-the-art filtration and treatment facility and several small holding tanks.[23] At times of acute shortage, Bolinas has drawn emergency supplies from nearby Pine Gulch Creek under temporary agreements with the holders of rights to that source; however, BCPUD lacks permanent riparian rights to this water, which mainly supplies agricultural uses.[24]

During the late 1960s, efforts to maintain an adequate water supply fell short, and Bolinas lacked a proper sewage treatment system. BCPUD approved plans to install a modern sewer costing $8.1 million to serve Bolinas and Stinson Beach, meeting the communities' then-existing needs and providing additional capacity for 20,000 more people.[25] Before work began, a coup changed the course of the town's water and sewage policies. It all began with an oil spill at the Golden Gate in early 1971, which galvanized community

19. Often called the town government, the District is sometimes referred to as "BPUD" or "Bee-pud." *See* THE BOLINAS COMMUNITY PLAN, *supra* note 12, at 54; David Rolland, *A Look at Small-Town Democracy in Action*, POINT REYES LIGHT, June 27, 1996, at 1; *see also* Gregory Foley, *Why Bolinas' Road System Is Such a Mess*, POINT REYES LIGHT, June 1, 2000, at 1 (noting that BCPUD owns and administers the roads on the gridded Big Mesa, a residential neighborhood of Bolinas, "almost by default"); Andrew Pridgen, *Grand Jury Approves of Special Districts Here*, POINT REYES LIGHT, July 11, 2002, at 12 (examining the importance of special forms of limited government in unincorporated West Marin).

20. *See generally* CAL. WATER CODE §§ 71000–73001 (West 2006); *see also id.* § 375 (allowing a water district to implement water conservation programs, implement rate structures to encourage conservation of water, or require installation of water-saving devices); *infra* Part II.A (describing districts' powers to declare water shortage emergencies).

21. *See supra* note 12 and sources cited therein.

22. *See supra* note 19; *see also* THE BOLINAS COMMUNITY PLAN, *supra* note 12, at 54.

23. BCPUD, Water Treatment Improvements Project, http://www.bcpud.org/pjt23.htm (last visited Mar. 12, 2008). For a comparison of Bolinas's storage capacity to other municipalities, see *infra* notes 117–119, sources cited therein, and accompanying text.

24. *See* THE BOLINAS COMMUNITY PLAN, *supra* note 12, at 30.

25. *Id.* at 20.

support for preserving the local environment.[26] That fall, activists organized a recall election, resulting in the ouster of two BCPUD board members and election of directors opposed to the sewer project.[27] Antisewer candidates won two other open seats, giving the antisewer contingent control. The new board created a smaller sewage system to serve Bolinas only, with no significant capacity for expansion.[28] The nascent conservationist ethos also contributed to the genesis and adoption of a Community Plan.[29] In November 1971, BCPUD passed Resolution 93, declaring an emergency water shortage and imposing a "moratorium" on new water hook-ups[30] to address the water shortage and to prevent "runaway growth."[31] While ostensibly the will of the voters, the measure was divisive.[32] In 1971, few expected the moratorium to become permanent, but the moratorium, and the directors who enacted it, stayed in place.[33]

B. The Moratorium Becomes Permanent

The moratorium could not freeze time and instead became a study in the law of unintended consequences. The town became no less popular, and despite the lack of signs on Highway 1, outsider tourists continued to discover the town, some purchasing homes or undeveloped land. The moratorium led to a shortage of living space, and some began living in "outlaw housing": trailers,

26. Locals ignored authorities' instructions to keep away from the spill, and created a makeshift berm across the entrance to Bolinas Lagoon, preventing catastrophic contamination. In the following days, people flocked from the greater Bay Area to scrub oil-drenched birds; some of these people remained, becoming involved in the community. SCHELL, *supra* note 18, at 3–4.

27. *Bolinas Dissenters Organizing Utility District Recall Move*, POINT REYES LIGHT, May 26, 1971.

28. Tom Yarish, *Bolinas Directors Agree to Dump Kennedy Engineers*, POINT REYES LIGHT, 1971 (no date indicated on archived copy on file with author). The board opted for a system of open "sewer ponds," still in operation today, where nature is left to decompose the waste. *See* SCHELL, *supra* note 18, at 16, 89–90.

29. *See* BCPUD, The Pacific Legal Foundation Versus BCPUD, http://www.bcpud.org/plfvspud.htm (last visited Mar. 12, 2008) (providing additional background on this story); *see also* THE BOLINAS COMMUNITY PLAN, *supra* note 12, at 20 ("It would not be facetious to say that Standard Oil had a lot to do with the creation of The Bolinas Community Plan.").

30. BCPUD Resolution No. 93 (Nov. 26, 1971), *superseded by* BCPUD Resolution No. 173 (July 20, 1977) (maintaining the moratorium), *available at* http://www.bcpud.org/res173.htm.

31. SCHELL, *supra* note 18, at 11.

32. In 1972, some residents sought unsuccessfully to recall the board. *See Recall Vote Is Looming In Bolinas*, POINT REYES LIGHT (no date indicated on archived copy on file with author). Other suits to compel lifting the moratorium or improving infrastructure were dismissed by stipulation of the parties without changes to the status quo. *See* Keith Ervin, *Bolinas Building Plan Holding up in the Courts*, POINT REYES LIGHT, Dec. 22, 1977; *Property Owners Drop BPUD Suit*, POINT REYES LIGHT, Apr. 5, 1979; Anne West, *Bolinas Group Will Sue Over Water Hookup Ban*, POINT REYES LIGHT, May 7, 1973.

33. Peter Jamison, *Bolinas Water Meter Sells for $310,000*, POINT REYES LIGHT, Sept. 29, 2005, at 1. The article quotes Jack McClellan, a BCPUD director, who purchased for $250 a water meter one week before the moratorium was enacted. He regretted declining the county clerk's suggestion to buy a second meter, in the event that he developed more property: "I wish to hell I had. . . . I could be a millionaire."

mobile homes, and "10x10s"—small shacks tapping a preexisting meter's water. In response to these efforts to circumvent the restrictions, BCPUD sought with limited success to stop construction of these substandard units.[34]

In 1977, the Board modified the moratorium with Resolution 173,[35] which declared that BCPUD has increased storage and improved transmission and distribution. Resolution 173 emphasizes certain facts and findings: the town has a meager and variable supply from Arroyo Honda and Pine Gulch Creek; the town lacks storage capacity; the transmission system is inadequate; the population is high relative to the available supply; and conservation efforts continue.[36] The Resolution concludes: a "water shortage emergency condition presently prevails," with supply insufficient to meet consumption, sanitation, and fire protection needs.[37]

Echoing the state Water Code, Resolution 173 concludes that BCPUD will "continue said water moratorium until, but only until the water supply of the District is augmented and a water shortage emergency condition no longer exists."[38] Unstated is the fact that the Code vests the Board with plenary and discretionary power to seek supplemental water sources that might augment supply or accommodate new growth.[39] Resolution 173 lists only "voluntary rationing," with "mandatory rationing" if needed as concrete policies.[40] The Resolution excludes units already under construction or for which applications were filed before passage of the moratorium.[41] It allows changes in allotments, so long as expansion does not require a County permit, or in the Board's judgment, will not cause significantly increased demand for water, while changes triggering County permits also require District approval.[42] Moreover, the Board stated that it would consider effects of expansion on the applicant's

34. Jon Berry, *Talks Continue on Bolinas Housing*, POINT REYES LIGHT, July 17, 1980; *Bolinas Endorses Bldg.* [sic] *Restraints*, POINT REYES LIGHT, Oct. 21, 1976 (noting community criticism of units as free riding off of taxpayers). A visit to Bolinas reveals that many "10x10's" still dot the landscape.

35. *See* BCPUD Resolution No. 173 ¶ 8. The past Resolutions were BCPUD Resolution No. 113 (Sept. 13, 1972), and BCPUD Resolution No. 130 (Jan. 2, 1974). *See id.*

36. BCPUD Resolution No. 173 ¶ 8 (July 20, 1977), *available at* http://www.bcpud.org/res173.htm.

37. *Id.* ¶¶ 2, 3.

38. *Id.* ¶ 9(A); *cf.* CAL. WATER CODE §§ 350, 355 (West 2006) (allowing public utility districts to announce emergency shortage conditions and enact moratoria until the supply is replenished or augmented). The phrase "but only until" does not appear in the statute. As with section 355, Resolution 173 uses the passive phrase "until the water supply . . . is augmented," effectively disclaiming an affirmative duty to seek out additional supplies for new consumers. *See* BCPUD Resolution No. 173 ¶ 9(A). The board does, however, resolve to continue to "reasonably repair, maintain, and improve its water storage, transmission, and distribution system" and "reasonably augment its water supply and storage capacity." *Id.* ¶ 9(D)–(E). One must conclude that "reasonable" means in accordance with the wishes of the voters.

39. *See infra* Part II; Herman, *supra* note 5, at 440–43.

40. BCPUD Resolution No. 173 ¶ 9(C).

41. *Id.* ¶ 5.

42. *Id.* ¶ 6; *see infra* Part II.C.

septic system, and may require proof that changes "will not create or cause a public health nuisance or hazard," reflecting a presumption against development.[43] The Resolution asserts veto power over many uses of property, as virtually all construction affects water usage; only minor changes not subject to county permit requirements evade review. Beyond the power to review, regulate, and veto development, the Resolution allows the District to punish violators by discontinuing service.[44] There is no provision for appeal or review: the Board's judgment is final.

Preserving the moratorium indefinitely, Resolution 173 entrenched a winners-and-losers paradigm. It allows adjustments and increases to meter holders' entitlements and punishment of violators, while continuing to exclude nonresident owners of unmetered property. The Resolution reaffirms powers to control the conditions of the water supply, allowing the District to continue the moratorium in perpetuity if it should choose not to augment the water supply. It vests BCPUD with near-unchecked control over the course of growth—or absence thereof—in Bolinas. The "emergency" shortage condition and moratorium continue to this day.

C. Title, Transfer, Adjustment, and Abandonment of Water Rights

The District has issued regulations to establish the boundaries of users' rights to water. The right to water can be transferred pursuant to Resolution 152, which asserts the Board's undefined "discretionary power" to allow a meter to "move"[45] if the landowner shows a lack of future adverse impacts upon safety, health, sewage, traffic, and drainage, as well as conformance with the Community Plan.[46] However, selling a meter is impermissible if the sale leaves the transferor's property without a water hookup.[47] This restriction not only prevents a homeowner from going "off the grid," but also effectively caps the number of properties that can receive water. Additionally, Resolution 152 requires "[s]afety and health reasons" to be "clearly established," reflecting a presumption against transferring meters.[48] In 1978, homeowners asserted water

43. BCPUD Resolution No. 173 ¶ 6 (July 20, 1977).

44. *Id.* ¶ 7, *amended by* BCPUD Resolution No. 471 (Aug. 22, 2001), *available at* http://www.bcpud.org/res471.htm; *see also* Linda Berlin, *BPUD Probes Wash-Water Use*, POINT REYES LIGHT, Sept. 5, 1991.

45. It is unclear what "move" means, but the context indicates that it is not simply repositioning a meter, but rather transferring a meter from one property to another. BCPUD Resolution No. 152 (Mar. 17, 1976), *available at* http://www.bcpud.org/res152.htm.

46. *Id.*

47. *See id.* ¶ 3 (requiring that it be "reasonably established what to do with the old site in terms of sewage, water and drainage"); *see also* BOLINAS COMMUNITY PUBLIC UTILITY DISTRICT, CAL., ORDINANCE NO. 29, §§ 2–3 (1994), *available at* http://www.bcpud.org/ord29.htm (setting forth conditions for hooking up to municipal sewer system).

48. BCPUD Resolution No. 152 ¶ 1; *cf.* BCPUD Resolution No. 173.

rights BCPUD contended it had never granted.[49] The specter of litigation and of encouraging others to assert rights by retroactively approving meters made the District reluctant to confer legitimacy upon the "phantom meters."[50] It addressed the problem with a Resolution "eliminat[ing] 'grandfathered' exceptions to water moratorium,"[51] setting a time limit for individuals to assert premoratorium rights. Later Resolutions have allowed the District to disconnect "abandoned" meters.[52] In other words, BCPUD can cut off the water to a property, but the owner can petition to have it reinstated upon paying a fine. He thus would not permanently lose the right to receive water.

The mechanism for transfer of a meter has seldom been invoked over the last several decades, most recently in an auction by the Bolinas Community Land Trust in 2005.[53] Some attempted transfers have proved newsworthy, such as when the District proposed allowing the transfer of ten to fourteen meters, and the Bolinas museum sought to sell a surplus meter (it owned two).[54] Other efforts to transfer water rights have stoked controversy. In one case, a proposal to rent a meter to a home without water sparked allegations of favoritism and criminal misconduct.[55] In another case, a proposed transfer of a meter from a property that was no longer inhabitable prompted neighbors to speak up over concerns of compliance with septic and other regulations.[56] Altering allotments appears to be less controversial, such as when the District increased the town bakery's allotment, unaccompanied by any fanfare.[57] However, in 1987 an individual sought to *reduce* her allotment but could not, sparking community debate.[58] Under a system with lower transactions costs and restraints on alienability, one would predict far more frequent transfers of rights to a valuable commodity like water.[59] In sum, under Bolinas's current legal

49. Melissa McMillon, *'Phantom' Meters Worry Bolinas Utility Board*, POINT REYES LIGHT, Nov. 16, 1978 (noting that at least five claimed such a right).

50. *Id.* Litigation would soon become an unpleasant reality for Bolinas. *See infra* Part II.B.

51. BCPUD Resolution No. 207 (Feb. 21, 1979), *available at* http://www.bcpud.org/res207.htm. Resolution 207 acknowledged that the District lacked records for cases meeting the conditions of Resolution 173 ¶ 5, and thus required any individual with a claim to a meter to apply for one by May 1, 1979, or relinquish his claim.

52. *See* BCPUD Resolution No. 439 (Aug. 18, 1999), *available at* http://www.bcpud.org/res439.htm.

53. *See infra* Part I.D. Only two other transfers of meters have occurred since 1971, one after a home collapsed and another when a home fell over an eroded cliff. *See* Jamison, *supra* note 33. Official records are not available; therefore, this Comment relies on reporting from the *Point Reyes Light* for information regarding transfers.

54. Elizabeth Bourne, *Bolinas Water Hookup Debate*, POINT REYES LIGHT, Sept. 24, 1998.

55. Ned Riley, *Bolinas Utility Directors Rapped For 'Illegal' Agenda*, POINT REYES LIGHT, Apr. 28, 1994.

56. Rhonda Parks, *Bolinas Meter Focus of Tiff*, POINT REYES LIGHT, Mar. 20, 1986.

57. *See* Parks, *supra* note 54 (the Board increased the allotment of water to the bakery, which had been exceeding its quota); *cf.* BCPUD Resolution No. 173 ¶ 6 (July 20, 1977), *available at* http://www.bcpud.org/res173.htm.

58. Ken White, *Unlikely Protest Hits Bolinas Utility District*, POINT REYES LIGHT, July 30, 1987.

59. *Cf. infra* Part IV (proposing a system under which individuals can sell surplus water rights).

framework, individuals rarely transfer water rights, and sometimes must overcome significant hurdles to do so.

D. Life After Moratorium: Housing Shortages and a $310,000 Water Meter

With new construction halted and Bolinas's desirability unabated—or enhanced—after the moratorium, housing became pricier. In 1979, to create more affordable housing, the District allowed property owners to build second units on their property.[60] Today, property owners waiting for a chance to develop outnumber property owners with meters,[61] and homes can easily fetch $1 million.[62] Many residents exploit loopholes, for instance, by obtaining agricultural permits and subsequently erecting "sheds"—actually homes—on the property.[63] In September 2005, when BCPUD auctioned off a water meter to raise money for affordable housing, Steve Hodge, a well-regarded local, made the highest of the four bids, at $310,000.[64] Bolinas's residents did not miss the irony: high housing prices—caused in part by the moratorium—were ameliorated by what amounted to a tax on Steve Hodge for the right to build a family home.

II. MUNICIPAL DISTRICTS AND WATER RIGHTS: AUTHORITY, LITIGATION, AND TAKINGS

We have seen that a body of complex rules supports the moratorium, with enforcement problems and persistent disputes. Before examining the ramifications of BCPUD's power to allocate water rights, the following Part examines the powers of water districts, and federal and state litigation attacking Bolinas's moratorium.

60. THE BOLINAS COMMUNITY PLAN, *supra* note 12, at 53; Jon Berry, *Bolinas to Consider Second-Homes*, POINT REYES LIGHT, July 10, 1980; *cf.* Editorial, *Segregating the Poor*, POINT REYES LIGHT, July 12, 1979 (opposing the policy).

61. Jamison, *supra* note 33. BCPUD's website warns prospective buyers: "Th[e] moratorium . . . should be taken into consideration when contemplating the purchase of undeveloped real estate." BCPUD, Water Moratorium Information, http://www.bcpud.org/mora.htm (last visited Mar. 12, 2008).

62. *See* Herman, *supra* note 5, at 462 n.202 (noting that "the value of already developed property skyrockets when a moratorium or other water-based growth restriction is imposed" (internal citation omitted)). The cost of housing has increased throughout the greater Bay Area since the 1970s; Bolinas's moratorium has contributed to Bolinas housing price inflation, but is certainly not the sole factor.

63. "Once these sheds are in place, permission to dig a well is applied for. Once the wells are dug property owners don't need [BCPUD's] water anymore. The result is the development of property in Bolinas." Jonah Owen Lamb, *Agricultural Building Loophole in Bolinas*, POINT REYES LIGHT, Jan. 11, 2007.

64. Bernstein, *One Town Stops Time By Turning Off the Water*, *supra* note 15. Quipped resident Don Smith: "The fact that it went to a local guy is making everybody satisfied where previously there was controversy. . . . It feels a lot better than having some out-of-town speculator buy it." Jamison, *supra* note 33. Some speculated that Hodge's good standing led the Board to consider his bid more favorably. *See* Bernstein, *One Town Stops Time By Turning Off the Water*, *supra* note 15.

A. The Powers of Water Districts

The water district is a well-established form of limited local government in California and pervades the western United States.[65] A district's purpose is to provide water to its current consumers, whose needs take precedence over potential customers.[66] The means by which a district can fulfill its function, and the possible forms of organization it may assume, vary.[67] There is no size requirement or limit to a district's ability to look beyond its boundaries for a water supply, nor a requirement that it do so.[68] The rules governing water district elections also vary.[69]

The California Water Code grants districts considerable latitude in determining the scope of service and the purposes to which water may be put. A district may establish priorities for domestic use, sanitation, and fire protection, but cannot discriminate between consumers using water for similar purposes.[70] Enforcement powers include denying service hookups and punishing willful violations of the rules.[71] Salient to this Comment, the Code authorizes districts to declare a water shortage emergency and a moratorium.[72] In sum, water districts such as BCPUD wield tremendous power in regulating access to and use of water.[73]

California courts rarely review water districts' decisions. In rejecting a challenge to an emergency-shortage declaration, a California Court of Appeal

65. *See* SAX ET AL., *supra* note 2, at 599–601; *see also* Justice Gregory Hobbs, Jr., *The Role of Climate in Shaping Western Water Institutions*, 7 U. DENV. WATER L. REV. 1, 29–30 (2003) (noting that Colorado water and sanitation districts have "responsibility for water planning and delivery").

66. Residents for Adequate Water v. Redwood Valley County Water Dist., 41 Cal. Rptr. 2d 123 (Ct. App. 1995).

67. A district can be a quasi-private venture, or, as in the case of BCPUD, a more traditional governmental body. SAX ET AL., *supra* note 2, at 595–98.

68. Wilson v. Hidden Valley Mun. Water Dist., 256 Cal. App. 2d 271, 285 (Ct. App. 1967). For critiques of looking beyond the district's boundaries for supplemental supplies, see BRECHIN, *supra* note 4; REISNER, *supra* note 4.

69. *See* Ball v. James, 451 U.S. 355, 368 (1981) (holding that districts need not adhere to the rule of one person, one vote); Moores v. Edelbrock, 272 Cal. Rptr. 919, 926–27 (Ct. App. 1990) (voting can be restricted to property owners or holders of a certain acreage). *But see* Bjornestad v. Hulse, 272 Cal. Rptr. 864 (Ct. App. 1990), *vacated & remanded*, 801 P.2d 1071 (Cal. 1990); *see also* Tim de Young, *Governing Special Districts: The Conflict Between Voting Rights and Property Privileges*, 1982 ARIZ. ST. L.J. 419, 424 (noting that voting rights can be apportioned by acreage, or on an *ad valorem* basis).

70. CAL. WATER CODE § 354 (West 2006).

71. *Id.* § 356.

72. *Id.* § 350:

> The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, may declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

See also id. §§ 351–353, 355 (requiring districts to provide notice and hold a hearing, but granting discretion in declaring a present or future emergency, and when it has ended).

73. *See supra* Part I.

in *Swanson v. Marin Municipal Water District* illustrated the scope of the delegation of power to districts, suggesting that a plaintiff's remedies outside the political realm—including constitutional challenges—are few and circumscribed.[74] *Swanson* also rejected the charge that the very act of imposing a moratorium constituted a taking of land without due process of law, but indicated in dictum that one could articulate a valid constitutional claim under other circumstances.[75] The court stated that it was

> not unmindful of the somewhat dire consequences which flow from our decision in this matter. Politically, the power to "cut off one's water" by the simple expedient of imposing a moratorium such as the one here involved is a potent weapon in effecting a no-growth policy within a community. Since District has neither the power nor the authority to initiate or implement such a policy, the imposition of any restriction on the use of its water supply for that purpose would be invalid.[76]

Despite these remarks, the appellate court hastened to add that it found no evidence showing such an invalid purpose. However, the court did note that a water district should "exert every reasonable effort to augment its available water supply in order to meet increasing demands," as the legislature did not intend to allow a moratorium to continue indefinitely.[77] Thus, a moratorium alone will not be a taking if justified by a shortage, but the failure to remedy the shortage, whether the result of indifference or deliberate inaction, can be.[78]

While problematic in certain respects, the limited judicial review of district actions typically available to aggrieved parties is on the whole sound policy: judicial intervention does not make the process faster, cheaper, or better informed.[79] Resource distribution decisions, legislative and executive in nature, are inherently political and may require rapid and decisive responses. As BCPUD's actions in 1971 illustrate, popular will can change quickly. It is thus reasonable for courts to supersede districts' judgment only in egregious cases,

74. Swanson v. Marin Mun. Water Dist., 128 Cal. Rptr. 485, 489 (Ct. App. 1976) ("[A] water district is empowered to anticipate a future water shortage and to impose appropriate regulations and restrictions where, lacking such control, its water supply will become depleted and it will be unable to meet the needs of its consumers."); *see also* Bldg. Indus. Ass'n v. Marin Mun. Water Dist., 1 Cal. Rptr. 2d 625 (Ct. App. 1991); *cf. infra* Part III (examining problems with this framework).

75. 128 Cal. Rptr. at 492.

76. *Id.* at 493.

77. *Id.* (citing CAL. WATER CODE § 355).

78. The lack of a bright-line test for what constitutes a "taking" would become problematic once waterless landowners challenge Bolinas's moratorium. As will become evident, the question is unresolved even today. *See infra* Part I.B–D.

79. History soon bore out the wisdom of *Swanson* in respecting the judgment of the Marin Municipal Water District (MMWD), which shares a common regional climate to Bolinas. Rainfall was ample when the suit was filed, but the years 1975–1977 witnessed a severe drought. *See* Sam Spiewak, *The Light Endorses David Behar for Water District*, POINT REYES LIGHT, Oct. 12, 2006. Nor were the problems temporary. MMWD lifted its moratorium, but still faces chronic shortages, which occasionally necessitate purchasing water from elsewhere. Currently the MMWD is considering a desalinization plant in the San Francisco Bay in addition to more storage capacity and conservation and recycling programs. *See id.*

as local knowledge is most often best suited to finding a solution conducive to the public good.[80] On the other hand, as the Federalists argued over two centuries ago, the Jeffersonian ideal of locally vested power carries a greater risk of capture by narrow interest groups or a tyranny of the majority.[81] Such ideas should be kept in mind in the following discussion of litigation over moratoria.

B. Lockary v. Kayfetz*: A Decade of Fruitless Litigation*

The District defended Bolinas's moratorium against sundry challenges, but at a high cost. Ten years after its inception, the moratorium was no longer "temporary," and the 1980s witnessed a costly, protracted lawsuit in federal court against BCPUD and its directors followed by a suit in state court in the 1990s. Owners of undeveloped property first sued BCPUD in federal court in 1982, challenging the moratorium on constitutional grounds as a regulatory taking.[82] The Bolinas landowners contended that when BCPUD deprived them of water, it destroyed the value of their land because they could no longer develop it. They also challenged the District and the state's regulatory powers to maintain the moratorium. Although discussion of the litigation illustrates

80. *But see* CAL. WATER CODE § 358 (West 2006):

> Nothing in this chapter shall be construed to prohibit or prevent review by any court . . . of any finding or determination by a governing board of the existence of an emergency or of regulations or restrictions adopted by such board, pursuant to this chapter, on the ground that any such action is fraudulent, arbitrary, or capricious.

Cf. Swanson v. Marin Mun. Water Dist., 128 Cal. Rptr. 485 (Ct. App. 1976):

> [E]ven in the absence of such statute, the scope of review would be so limited since, by declaring a water shortage emergency condition and enacting a moratorium on new water service, District was acting in a legislative, rather than an adjudicatory, capacity. Thus District's actions [sic] were not subject to judicial review under § 1094.5 of the Code of Civil Procedure, but were reviewable only by means of ordinary mandate (Code Civ. P. § 1085) . . . .

See also Kelo v. City of New London, 545 U.S. 469, 483–84 (2005). The Court in *Kelo* rejected plaintiffs' claims that condemnation under a town's eminent domain power constituted a due process violation, where the property was given to a private corporation, as this could constitute "public use." *Kelo* is significant because it emphasizes the limited scope of constitutional review over governments' policymaking.

81. *See* THE FEDERALIST NO. 10 (James Madison). Madison noted this it was a common sentiment of the time "that measures are too often decided, not according to the rule of justice and the rights of the minor party, but by the superior force of an interested and overbearing majority." More presciently to the present context of water and other property rights, Madison also surmised that "the most common and durable source of factions has been the various and unequal distribution of property." *Id.*

82. Lockary v. Kayfetz (*Lockary I*), No. C 82 6191 SW, 1983 WL 21363, at *1 (N.D. Cal. July 5, 1983); *see also supra* note 32 and sources cited therein (noting earlier challenges to the moratorium). A "taking" is when the government "takes" one's property without due process of law, such as without a legal basis for forfeiture, or under eminent domain without providing just compensation to the owner. U.S. CONST. amend. V, *made applicable to the states by* U.S. CONST. amend. XIV. A "regulatory taking" is an action by a government that does not divest the owner of title to property, but rather destroys its value through regulation. Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992); COOTER, *supra* note 6, at 292–94.

problems inherent in the moratorium, we will see that the litigation created only sound and fury, changing nothing.

1. District Court Litigation: Lockary I–III

The moratorium's opponents initially fared poorly in federal court. The plaintiffs sued BCPUD and its directors for "knowing acts, omissions, and conspiracies. . . in excess of any and all jurisdiction or authority granted to a local public utility district."[83] The complaint did not directly attack BCPUD's authority to enact the moratorium, but alleged its actions were overbroad, depriving the plaintiffs of due process through regulatory takings.[84] The court required the plaintiffs to refile and allege facts and claims with specificity.[85] The court expressed reluctance to discourage citizens from acting as government officials and warned plaintiffs that if the lawsuit was frivolous or sought to "'punish[]' defendants for their political beliefs or actions," it would grant monetary relief to compensate for lost time and resources.[86]

The plaintiffs fared better in the court's next order, which denied dismissal of the takings claims, but pared away most other causes of action.[87] Their "continuing wrong" theory resonated with the court: "although a temporary water moratorium is one thing, an 'emergency' lasting twelve years is a taking."[88] Although the court declined to dismiss claims against the individually sued BCPUD directors[89] and Marin County,[90] the court ultimately granted summary judgment for defendants on all claims.[91]

83. *Lockary I*, 1983 WL 21363, at *1 (internal citation omitted).

84. *See id.* Similarly, the plaintiffs did not challenge the state's power under section 355 of the Water Code to delegate authority to the District.

85. This requirement was due partly to contradictory allegations. *Id.* at *2. Statutes of limitations on some actions could have run, as some allegations concerned actions that took place more than a decade earlier. Plaintiffs alleged both that the defendants concealed their actions (which would toll the statute of limitations) and that they openly stated an intent to create a de facto no-growth policy. *Id.* at *2.

86. *Id.* at *3.

87. Lockary v. Kayfetz (*Lockary II*), 587 F. Supp. 631, 634–35, 642–43 (N.D. Cal. 1984).

88. *Id.* at 636. The "continuing wrong" exception applied because the ongoing moratorium continued to deprive the property owners of the use of their land. *Id.* The court dismissed allegations of antitrust violations for "monopolizing the tourist and water development industries in Bolinas," as BCPUD had authority to govern the water supply, declare water shortage emergencies, and impose connection moratoria. *Id.* at 640 (citing CAL. WATER CODE §§ 350–359).

89. While *legislative* actions merit absolute immunity, plaintiffs' amended complaint also alleged unequal enforcement of the moratorium. Actions taken in an *executive* capacity are subject only to qualified immunity, which attaches if there is evidence that the "actions were taken in good faith, i.e., with a reasonable belief that they were lawful." *Id.* at 638 (internal quotation omitted).

90. *Id.* at 639–40.

91. Lockary v. Kayfetz (*Lockary III*), No. 82-6191 (N.D. Cal. Nov. 16, 1987). The order is not available in commercial databases; therefore it is not possible to evaluate the district court's reasoning.

2. Plaintiffs' Defeat

In *Lockary IV*, the plaintiffs would receive their greatest, but fleeting, grounds for hope in the Ninth Circuit, which reversed summary judgment on the takings claim.[92] Because Marin County required a water meter as a precondition to issuing a building permit, the court held that triable issues of fact existed as to whether the moratorium denied the plaintiffs all economically viable uses of their land.[93] The court reasoned that it was insufficient that the plaintiffs could "still walk on, or ride a bike on, or look at their land," as this would fall short of their "reasonable investment-backed expectation."[94]

The plaintiffs had also presented an issue of fact as to whether a water shortage justified the moratorium, or whether the measure was an "arbitrary denial of water to their properties by BCPUD."[95] The court expressed concern that the denial of water constituted a violation of plaintiffs' due process and equal protection rights. The court noted that there is no fundamental right to water for real estate development, and thus, defendants could prevail by showing that the moratorium bore a rational relation to a legitimate state interest.[96] However, they did not, and the plaintiffs had presented evidence that, postmoratorium, the District's water consumption increased 70 percent, and storage capacity 1100 percent, while BCPUD provided water for second units and swimming pools.[97] An expert affidavit indicated a systemic leakage rate "at least double that of accepted norms," opining that there was "sufficient water to permit population growth within the Bolinas area."[98] The affidavit supported allegations that BCPUD furthered the metered landowners' interests at the cost of owners of undeveloped land. If the plaintiffs' allegations were correct, the moratorium might have denied them of the right to due process in seeking to obtain water, and also violated their right to equal treatment to similarly situated landowner who had water meters.[99] In sum, the Ninth Circuit found a genuine issue of fact existed that the denial of water to nonmetered property owners was not a rational response to a water shortage, but rather, was

92. Lockary v. Kayfetz (*Lockary IV*), 917 F.2d 1150, 1155 (9th Cir. 1990); *see also* Eric Firpo, *Appeals Court Ruling May Cost Bolinas Utility $500,000*, POINT REYES LIGHT, Aug. 2, 1990.

93. *Lockary IV*, 917 F.2d at 1155. The water meter requirement put land owners in a Catch-22 to obtain the necessary permits from BCPUD and Marin County. They could not obtain a building permit without a water meter, but they also could not obtain a water meter until they possessed a building or use permit. *See* BCPUD Resolution No. 152 (Mar. 17, 1976), *available at* http://www.bcpud.org/res152.htm.

94. *Lockary IV*, 917 F.2d at 1155.

95. *Id.*

96. *Id.*

97. *Id.* at 1155–56.

98. *Id.* at 1156; *see also* Rhonda Parks, *Suit Against Bolinas PUD Countered By Directors*, POINT REYES LIGHT, Mar. 3, 1987 (noting claims that the water shortage was fabricated as a pretext to prevent growth, and that BCPUD could accommodate more water meters).

99. *Lockary IV*, 917 F.2d at 1155–56.

"arbitrary or malicious" conduct on the part of BCPUD.[100] The ruling was a significant victory for property rights advocates, representing the only successful takings claim related to a water moratorium.[101]

Unfortunately, the Ninth Circuit's ruling in *Lockary IV* is the final word by the federal courts on the merits of the plaintiffs' claims. The next installment of the story is odd. After the plaintiffs obtained reversal of summary judgment, the Ninth Circuit dismissed their claims with prejudice *at the plaintiffs' own request* in 1991.[102] In 1992, the parties were again before the Ninth Circuit, but on an entirely separate issue: whether to affirm sanctions entered against plaintiffs' counsel, the Pacific Legal Foundation (PLF). The pro-property rights public interest law firm requested dismissal with prejudice after *Lockary IV*, abandoning its clients after obtaining the favorable and precedent-setting reversal of the defendants' motion for summary judgment:

> [O]nce this court reversed in part the district court's grant of summary judgment against PLF's "clients," thereby setting in the appellate court opinion the kind of precedent PLF sought, the nominal plaintiffs petitioned the district court to dismiss the suit with prejudice. While the original complaint sought substantial monetary and injunctive relief for the named plaintiffs, alleging great harm to their economic interests, suddenly, when the road to recovery was reopened, the case was abandoned. The named plaintiffs gained nothing.[103]

Given the misconduct of the PLF, the Ninth Circuit affirmed a grant of sanctions against it.

Had plaintiffs prevailed on the merits, precedent would state that a permanent "emergency" cannot serve as a no-growth policy, and that in sustaining the moratorium, BCPUD exceeded its delegated authority, "taking" plaintiffs' property.[104] Reversal of summary judgment, of course, is not the same as prevailing on the merits.[105] If the PLF had not abandoned its clients, the court would have grappled with difficult questions: when does a legitimate

100. *Id.* at 1156. The court's reasoning contradicts rather simplistic assertions that a moratorium cannot give rise to an equal protection claim. *Cf.* Herman, *supra* note 5, at 455 ("'Ins' and 'outs' alike are forced to bear the burden of a moratorium: The 'ins' cannot significantly expand their water consumption, while the 'outs' cannot get any water at all.").

101. *See supra* Part II.A; SAX ET AL., *supra* note 2, at 622. However, the Ninth Circuit affirmed dismissal of procedural due process claims and a facial challenge to the moratorium: under California law, plaintiffs did not have a property right in water they had never received. *Lockary IV*, 917 F.2d at 1156 (citing Hollister Park Inv. Co. v. Goleta County Water Dist., 82 Cal. App. 3d 290, 294 (1978)).

102. *See* Lockary v. Kayfetz (*Lockary V*), 974 F.2d 1166, 1169 (9th Cir. 1992), *cert. denied*, 508 U.S. 931 (1993).

103. *Id.* at 1171. The community's response to its eventual victory was positive. *See, e.g.*, *Legal Foundation Fined in Property Rights Suit*, LAND USE & DEV. UPDATE, Nov. 27, 1992 (*reproduced with commentary by Paul Kayfetz*, *in* BOLINAS HEARSAY NEWS, Dec. 28, 1992); Dave Mitchell, *Suit Against BPUD Was to Bully and Raise Funds*, POINT REYES LIGHT, Sept. 14, 1989; BCPUD, *supra* note 29.

104. *See* Susan Dianne Rice, *PLF's Water Fight in Bolinas Starts To Dry Up Under Threat of Sanctions*, S.F. DAILY J., July 17, 1991, at 1.

105. *Cf.* Herman, *supra* note 5, at 466 ("The decision may have had more to do with the procedural posture of the case . . . than with the court's actual reflection on the underlying merits.").

moratorium become a taking? What is the proper remedy—an injunction against enforcing the moratorium, monetary compensation, or water meters for all? The court never addressed these questions. Even if the court had ultimately found that the moratorium was unconstitutional, it would have been hard pressed to find a proper and sustainable remedy to balance the competing interests at stake. If the court had ended the moratorium, the court or BCPUD would have quickly needed to shape a comprehensive water policy to fill the void and prevent a return to the chronic shortages which characterized the premoratorium paradigm.

C. California Courts Reject Claims: Gilbert v. State

Plaintiffs also pursued litigation in state court, which like the *Lockary* litigation, failed to end the moratorium. In *Gilbert v. State*, plaintiffs sought to compel the District to lift the moratorium following unsuccessful administrative challenges.[106] *Gilbert* articulated theories similar to those in the *Lockary* litigation, but through a more limited challenge that did not allege a constitutionally impermissible taking. The plaintiffs "attack[ed] the validity of the Bolinas moratorium on additional water hookups and the administrative process by which petitioners were denied those hookups."[107] The state court likewise denied relief.[108]

The court noted that under *Swanson*, its review is limited to District actions which are "arbitrary, capricious, or entirely lacking in evidentiary support."[109] Because the District sufficiently justified its finding of a water shortage, the court held that BCPUD had no ministerial duty to provide water to potential users.[110] The court found that the District had taken reasonable steps to ensure adequacy of supply and storage, and reasonably carried out its other duties free of conspiracies to deny water to plaintiffs.[111] Moreover, the duration of the moratorium itself could not make it facially invalid: "there are no specific limits on the duration of a moratorium."[112] Finally, because a bona fide water shortage supported the moratorium, any antigrowth motivations of the BCPUD or members of its board simply did not matter.[113]

106. No. 636481-0 (Cal. Super. Ct., Alameda County Oct. 8, 1991). Dismissal of claims in *Gilbert* against the California Department of Health Services had already been affirmed by the Court of Appeals. *Gilbert v. State*, 266 Cal. Rptr. 891, 906 (Ct. App. 1990).

107. *Gilbert*, No. 636481-0, at 1; *see* CAL. CIV. PROC. CODE §§ 1085, 1094.5 (West 2006).

108. *Gilbert*, No. 636481-0, at 1.

109. *Id.* at 2 (quoting Swanson v. Marin Mun. Water Dist., 128 Cal. Rptr. 485 (Ct. App. 1976)); *cf.* CAL. CIV. PROC. CODE § 1094.5.

110. *Gilbert*, No. 636481-0, at 3, 13–14. This conclusion rested in part on the report of a court-appointed expert.

111. *Id.* at 15–27.

112. *Id.* at 29 (citing CAL. WATER CODE § 355).

113. *Id.* at 31–36.

D. Effects of the Litigation: Is Bolinas Saved?

The price of keeping the moratorium was exacted in legal fees. Water users paid hundred of dollars per year to the District throughout the 1980s, often with the District's bankruptcy looming.[114] However, the moratorium came to symbolize Bolinas's self-determination.[115] The town has flirted with, but always rejected, the idea of lifting the moratorium.[116] Decades of debate and litigation over Bolinas's power to keep the policy have likely made its residents all the more loath to lift it. Bolinas must nevertheless grapple with the question of how many people and homes it can sustain. Given a limited storage system—BCPUD can store a week's supply in winter or four days in summer—capacity is lower than other West Marin districts, making it dependent on frequent rains and vulnerable to demand spikes.[117] Some individuals have accused BCPUD of using the moratorium as a cover for neglecting to fix the water and sewage systems and giving the "winners" opportunities to further develop their property with a second unit or swimming pool.[118] Still, there is evidence of a chronic water shortage which BCPUD for decades has made some efforts to ameliorate.[119] One can only conclude that the presence of an ongoing "emergency" shortage, and proper solution, is in the eye of the beholder, voter, or policymaker. At its core, whether the moratorium is justified is best characterized as a question of politics, and not a question of law or hydrology.[120]

114. *See, e.g.*, Linda Berlin, *Lawsuits Against BPUD Costing Bolinas Plenty*, POINT REYES LIGHT, May 30, 1991 (noting that each water customer had to pay a special assessment of $420 in 1991, $120 of which would go to legal fees, and that the legal costs would likely increase to $240 the following year); Christopher Calder, *Bolinas Water Bills Swamped by Litigation*, POINT REYES LIGHT, Aug. 2, 1984; L.A. Craig, *BPUD Must Raise Fees to Avert Bankruptcy*, POINT REYES LIGHT, Feb. 21, 1985; *The Cost of Bolinas Fights*, POINT REYES LIGHT, July 16, 1987 (noting that one-third of the district's budget would go to legal and insurance costs that fiscal year).

115. *See* Laura Riley, *Bolinas Residents Praise BPUD's Defiance in Lawsuit*, POINT REYES LIGHT, July 22, 1993, at 1. *See generally* SCHELL, *supra* note 18. A photograph from the *Point Reyes Light* is telling: it depicts BCPUD president Paul Kayfetz at a party he threw at his Bolinas home to commemorate the moratorium's 15th anniversary. Kayfetz sports a shirt with a water pump crossed out by the word "MORATORIUM," below which reads "Bolinas '71–'86." *15th Anniversary*, POINT REYES LIGHT, Nov. 26, 1986; *cf.* BCPUD, *supra* note 29; Mitchell, *supra* note 103.

116. *See, e.g.*, *Bolinas PUD May Lift Town Water Moratorium*, POINT REYES LIGHT, Mar. 1, 1979; *Giacomini Ready to Meet With BPUD on Town Plan*, POINT REYES LIGHT, Oct. 11, 1976 (describing plans to allow construction of up to 120 new homes over a 20-year period).

117. *See supra* note 11 and accompanying text.

118. *See supra* Part II.B & notes 98–99 and accompanying text. There is some evidence that BCPUD has sought to increase its storage capacity for winter water. Linda Berlin, *Bolinas Looking For Way to Store More Winter Water*, POINT REYES LIGHT, Apr. 25, 1991, at 10. However, an explicit purpose of the "sewer pond" system was to constrain future expansion. SCHELL, *supra* note 18, at 35.

119. *See 18 BPUD Leaks Make Water Scarce*, POINT REYES LIGHT, Sept. 20, 1990; Linda Berlin, *BPUD Worried By Low Water Supply*, POINT REYES LIGHT, Feb. 21, 1991; Eric Firpo, *Bolinas Water Not Clear Enough*, POINT REYES LIGHT, Sept. 20, 1990.

120. *Cf.* Herman, *supra* note 5, at 446 ("In a political debate there is no right answer, because everything is a matter of perspective. But in a technical debate there is always a right answer: Either there is a water shortage or there isn't . . . ."). This dichotomy is false, as the question of "scarcity" is

III. THE ROLE OF LEGAL RULES AND SOCIAL NORMS

This Comment has discussed the political and legal history of Bolinas's water moratorium, and the creation, structure, and maintenance of formal legal rules regarding entitlements to water. The following Part examines the attributes of the legal regime Bolinas uses to apportion water rights. Drawing on public choice theory, it discusses attributes of a water shortage, and asks a basic question: why use a formal governmental body to resolve water-related disputes? This Part engages studies that employ public choice analysis, and finds that the creation of rigid rules has created an "anticommons" in the allocation of water rights in Bolinas, which overexcludes potential users, resulting in inefficient distribution and use of resources. The public choice and anticommons analysis serves as a prelude to Part IV, where I suggest that a market can better distribute water rights. I argue that a new policy approach, informed by public choice theory and basic market economics, will permit compromise, moving past policymakers' and scholars' monolithic focus on whether a moratorium is justified at all, and resolving the problematic takings questions latent in Bolinas's water moratorium.

A. Legal Rules and Informal Norms

It is axiomatic that our society is one of laws, not men, and is governed by formal rules derived via the democratic process. Bolinas, with its sophisticated legal framework to support the water moratorium, is no exception. However, there are lessons to draw from instances where actors opt not to use formal, positive laws to achieve their goals. Scholars examining dispute resolution modes often map case studies along a spectrum of informality, with a highly informal "neighbor" approach characterizing one end,[121] and formal, binding dispute resolution mechanisms, whether within or outside of the formal legal system, occupying the other end.[122] Employing a law and economics framework, Robert Ellickson examined disputes among ranchers in Shasta County, California, and found that residents typically resorted to social norms before litigation to solve problems of liability for trespassing cattle.[123] This study led to the thesis, derived from the Coase theorem,[124] that close-knit groups develop and maintain norms that maximize aggregate well-being.[125] In the paradigm explored by Ellickson, law plays a coordinate role second to

just as relative as other political questions; characterizing this issue as fundamentally "technical" is misleading. To evoke Tolstoy, Herman fails to ask, "how much water does a man need?"

121. *See, e.g.*, ELLICKSON, *supra* note 7, at 40–64.

122. *See, e.g.*, Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115 (1992).

123. ELLICKSON, *supra* note 7, at 52–55.

124. Ronald Coase, in a seminal article, posited that regardless of legal entitlements, with zero transaction costs private bargaining will lead to the most efficient distribution or resources. Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

125. ELLICKSON, *supra* note 7, at 167–83.

social norms, influencing but not necessarily determining the resolution of disputes.[126]

Lisa Bernstein's study of conflict resolution mechanisms among diamond merchants showed that internal dispute resolution entailed lower transactions costs than use of formal legal rules or litigation.[127] This study led to a corollary of Ellickson's thesis: private dispute resolution regimes supplant legal rules in a given context when doing so advances participants' interests more efficiently than formal legal norms.[128] Another recent case study, examining a formal Japanese court that quickly and cheaply adjudicates disputes in Tokyo's largest tuna auction, countervails this thesis.[129] Thus, the academy increasingly appears cognizant of actors' occasional preference to conduct their affairs in the shadows, rather than the unfaltering light of the law. However, as the Tokyo tuna court demonstrates, there are counterexamples in which legal recourse produces optimal outcomes. The next subpart compares and contrasts these patterns with Bolinas, where the community allocates water rights exclusively through the use of formal, positive law.

B. The View from Bolinas

Along the spectrum suggested by these case studies, Bolinas falls at a point where formal rules clearly trump informal dispute resolution mechanisms. As described above, the community relies exclusively on legal rules to apportion water rights. As I will explain in detail, Bolinas's reliance on formal legal rules is an understandable, perhaps inevitable, result of the following factors: high transactions costs; a collective action problem; the scarcity of water; a zero-sum political stalemate; the lack of "competition" for governance; state-conferred structural incentives to organize; the sophistication and tenacity of the moratorium's proponents; the difficulty of changing fundamental rules of societal organization; and chance. Regardless of what precise confluence of factors prompted Bolinas to enact the moratorium, the policy has yielded negative side-effects. This Comment contends that relying on dispute resolution via the BCPUD has forced aggrieved parties to pursue litigation to seek change where politics has failed to address the desires of the waterless minority. This litigation has come at a very high monetary cost to BCPUD ratepayers and yet has failed to change the distribution of water resources, or to help those locked out by the moratorium, or even to clarify whether a quasi-permanent moratorium is legal.[130] As a solution to the lack of clarity, I propose a hybrid system, retaining a formal governmental superstructure, but with private actors

126. *Id.* at 104–20.

127. Bernstein, *Opting Out of the Legal System*, *supra* note 122, at 148–51.

128. *Id.* at 117.

129. Eric A. Feldman, *The Tuna Court: Law and Norms in the World's Premier Fish Market*, 94 CAL. L. REV. 313 (2006).

130. *See supra* Part II.

able to participate in a market in transferable water rights. This system would lead to better distribution of water resources, reduce externalities such as the lack of housing and the cost of litigation, and encourage private transactions as a more effective means of dynamically altering entitlements. The following subparts describe the attributes of Bolinas' water shortage and link these attributes to the observed reliance on formal dispute resolution mechanisms.

1. High Transactions Costs

Unlike private disputes, which paradigmatically involve a dispute between two individuals (e.g., buyer-seller or tortfeasor-victim), water rights touch upon every member of a community. Not every action necessarily affects every other resident, but given a finite supply of a public good such as water, most major changes in legal entitlements have far-reaching effects. Solutions to problems must have some form of legitimacy in a community, but it is prohibitively difficult for over a thousand people to agree on a single thing through bargaining: transaction costs of finding a suitable solution are simply too high.[131] Because it would not be feasible to seek informal resolution of most water rights disputes, it is far more sensible and efficient to allow a governmental body to oversee such problems. We are reminded then of the very reasons that people create governments—some problems simply cannot be resolved without a formal process that binds everybody.

2. The Collective Action and Free-rider Problems

Water districts are coercive, meaning consumers within a given district cannot opt out of membership or payments.[132] This structure is a logical government response to high transaction costs due to the presence of many players, as well as a means of preventing free-riding. A collective action and holdout problem arises if each consumer decides to engage in harmful conduct by taking more water than he is entitled to—in itself behavior typical of a tragedy of the commons—or not joining the water and sanitation district and creating negative externalities, such as by releasing untreated sewage.[133] A formal governmental body is capable of addressing externalities created by its own rules, which private parties would be disinclined, or perhaps unable, to resolve.[134]

131. COOTER, *supra* note 6, at 53–54.
132. *Id.* at 111.
133. *See id.*
134. *See id.* at 108–09; Jamison, *supra* note 33.

3. Severe, Long-Term Scarcity

The presence of BCPUD, as well as the moratorium, is a response to a chronic shortage of sufficient water to support demand.[135] If only occasional shortages plagued Bolinas, history likely would have taken a different course. Because there is no end in sight to the lack of water, retaining BCPUD as a formal body adds a long-term dimension to decisions that would likely be absent in the aggregate decisions of individuals. Through BCPUD, the community is better able to take account of anticipated droughts, and even to factor in long-term trends, such as changes in precipitation that might occur as a result of climate change.[136]

4. High-Stakes, Zero-Sum Political Equation

The moratorium may have great staying power because under the state Water Code, it is the most powerful and enduring policy tool a water district can employ when facing a water shortage. The statutory framework of the Water Code presents the moratorium as a binary choice under the law: there is or is not an emergency water shortage, and the moratorium does or does not stand. The Code does allow districts considerable latitude in shaping policy, especially conservation measures. Nevertheless, the Code does not permit a limited growth, or a "moratorium light" policy: the moratorium stands or falls. Because the stakes are all-or-nothing for opponents of a moratorium, there is little incentive not to bring suit once political options are exhausted. The Bolinas water situation represents a high-stakes, zero-sum game about determining who calls the shots. The dispute concerns many parcels of valuable real estate, and millions of dollars are at stake, creating a great incentive for parties to seek the most legally secure footing.[137] Other policies may permit a compromise, but policymakers and scholars have heretofore focused only on whether the moratorium should remain in place.[138] No scholarship addresses whether there are alternative means to allocate resources dynamically, efficiently, and sustainably.[139]

135. *See supra* note 1.

136. *See* Herman, *supra* note 5, at 432 ("We can never be absolutely certain how much water will be available at any time or place in the future, nor can we rely on past wet years to sustain us in times of drought." (internal citation omitted)).

137. *See supra* note 61 and accompanying text; *cf.* ELLICKSON, *supra* note 7, at 62 ("Trespass victims who sustain an unusually large loss are more likely to take the potentially deviant step of making a claim for monetary relief.").

138. *See supra* notes 5, 18 & 116 and sources cited therein.

139. *See infra* Part IV.

5. The Lack of "Competition" in Governance of Bolinas

BCPUD controls more than just water or sewage, acting as Bolinas's "town government,"[140] because there is no other governmental body in Bolinas. One can debate whether BCPUD's de facto powers over far more than water and sewage is good or bad; this Comment does not provide a normative analysis. Strictly speaking, BCPUD has no authority to govern matters not implicated by the carrying out of its necessary functions.[141] However, the District can and does take heed of and shape pertinent community issues, such as the lack of affordable housing, when deciding how to resolve a given water or sewage issue. Private, self-interested citizens likely would not weigh these issues.[142] The District's public meetings provide a monthly forum for any person to bring up a matter that concerns the town, encouraging BCPUD to take a comprehensive view of its actions and decisions. No other agencies or offices exist to assert jurisdiction over matters beyond water and sewage, or to provide a check on BCPUD's actions. This state of affairs allows BCPUD to remain a strong and influential body, beyond what one would likely infer from its statutorily-defined duties alone.

6. The Institutional Framework Encourages Use of Formal Rules

The California Water Code contains extensive rules governing municipal water districts. Communities have a choice whether to create and rely on institutions, allowing them to opt for formal rulemaking bodies and procedures, as opposed to relying solely on private bargaining or the common law of property and water to shape rights.[143] Devolution of authority to limited local governments, an intrastate federalism, reflects a policy favoring local self-determination in finding appropriate solutions.[144]

The Water Code is permissive toward the creation of governmental bodies. A community could choose to share water from a common source without being compelled to import the rules of the Water Code. Yet, as BCPUD illustrates, at a certain threshold, transaction costs, free-rider problems, and externalities create stresses which an informal system cannot effectively manage. This Comment does not seek to determine where this threshold lies, but rather, to emphasize that the Code never mandates the creation of a water district. It may sound strange, in an era where the private water utility company

140. BCPUD controls, for example, implementation of the Community Plan. *See supra* note 19 and accompanying text.

141. *See* People *ex rel.* City of Downey v. Downey County Water Dist., 21 Cal. Rptr. 370 (Ct. App. 1962).

142. *See* COOTER, *supra* note 6, at 108–09; Jamison, *supra* note 33.

143. *See supra* Part II.

144. *See* CAL. WATER CODE § 380(c) (West 2006) ("The Legislature hereby finds and declares as follows: . . . Many water management decisions can best be made at a local or regional level, to the end that local and regional operational flexibility will maximize efficient statewide use of water supplies.").

has mostly disappeared, to suggest that a sophisticated water procurement system could exist without being an organ of the state, or without the imprimatur of local, regional, state, and federal law. Nevertheless, California's Water Code countenances such a state of affairs.

As an aside, one might consider why the Code is permissive. The history of water districts as private or quasi-municipal corporations suggests one reason. While "private" water companies have mostly disappeared post–New Deal, the public bodies that now stand in their shoes have inherited their quasi-private nature and the limited ability to discriminate in favor of current users over residents who are merely potential users—a power which a police force, for example, could not constitutionally exercise.[145] A second reason for water districts' permissive nature is the principle that a democracy allows the people to determine what form of government, if any, should bind them. Municipal codes do not typically mandate that a community incorporate into a town, city, or village. Otherwise, BCPUD would probably not be the only "town government" for Bolinas.

Despite this permissive nature, the Water Code creates strong incentives for the creation and maintenance of formal, legal, rule-based rights-allocating and dispute-resolving systems. The Code confers these systems immunity from most regulatory and judicial challenges. Other than through the political or electoral process, it is virtually impossible to challenge decisions of a water district.[146] A rational community wishing to effectively manage a scarce resource, shape its future, or even halt growth, can utilize considerable powers by forming or gaining control of a water district. Though litigation remains a risk, no water moratorium has ever been held to constitute a taking. Thus, the municipal water district represents a state-sanctioned, virtually unassailable means of self-determination.

7. Sophistication, Inertia, and Chance

Other, perhaps more minor, factors merit discussion, for the history of water rights in Bolinas is complicated and multifaceted. Primarily, one should not discount the role impassioned individuals play in working relentlessly toward a common goal. The antisewer activists of 1971 proved formidable upon taking and maintaining control of BCPUD. They rallied the support of the community, grasped the complex ramifications of controlling a water district,[147] and tenaciously defended their policies against myriad political and legal challenges over several decades.

Moreover, one can see the 1971 District takeover as a paradigm shift or an experiment which has helped to "save" Bolinas. The moratorium has become integral to the town's identity, likely giving the moratorium greater staying

145. *See* Swanson v. Marin Mun. Water Dist., 128 Cal. Rptr. 485 (Ct. App. 1976).

146. *See supra* Part II.A.

147. *See* SCHELL, *supra* note 18, at 4.

power than lesser-known rules. Instituting popularly cognizable changes in legal structures entails much more than drafting a new law, especially when a certain rule is central to a community's identity.[148] Ellickson noted that a change in the rules governing cattle trespass liability for a small area of Shasta County proved highly contentious both to the ranchers it affected, and to ranchers in other parts of the County concerned about how a similar change might affect them in the future.[149] This story demonstrates the significant costs of absorbing rule changes that alter fundamental structures in and realities of citizens' lives. Major changes to long-standing policies must contend with considerable societal inertia.

Finally, one cannot rule out that the possibility that chance played a large role in shaping Bolinas politics. Would the *Lockary* litigation, had it proceeded, have changed how the District operates? Or, thinking back to the genesis of the moratorium in 1971, had the antisewer bloc failed to defeat the original sewer plan, would the political landscape of Bolinas be recognizable at all today? An examination of Bolinas's institutional choices illustrates how the factors discussed above might generally influence communities, but one should not draw more than general conclusions. Similar factors elsewhere may elicit fairly similar political and legal structures, but no two snowflakes are ever identical.[150]

C. The Water Regime as Anticommons

The use of legal structures, specifically the moratorium, to address Bolinas's water shortage has many positive aspects. It has granted the town a means of self-determination, and allows decisions concerning local resources to be made where the effects will be intimately felt. The moratorium has prevented rampant and unsustainable growth, while ensuring a reasonable degree of transparency, accountability, and a political check against unpopular actions. On the other hand, relying on a single elected body free of checks and balances to render all local decisions creates problems. A primary concern is the tyranny of the majority. A political entity combining executive and legislative powers, and immune from most judicial review, can reduce bargaining costs and break deadlock. However, the entity has little incentive to mind minority interests or underrepresented voices, and can demand involuntary redistribution. In the case of Bolinas, this takes the form of BCPUD, in effect expropriating the water rights of owners of undeveloped

148. *See* ELLICKSON, *supra* note 7, at 29–40.

149. *Id.* at 32. The ranchers' reaction was to "chide" the County Supervisor who was instrumental in setting this "lamentable precedent" by referring to the affected tract as "Caton's Folly." *Id.*

150. An additional question beyond the scope of this Comment is how Bolinas's moratorium compares with actions of districts facing similar problems of unpredictable water supply, burgeoning population pressures, and political resistance to development. MMWD of *Swanson* fame is one possible comparison point. *See supra* note 74.

land. This, notes Robert Cooter, is a primary reason to constitutionally protect property rights.[151] However, with no other local government to impose checks and balances, these problems persist. The only legitimate avenue for redress beyond the District's political process is expensive and time-consuming litigation.[152] Ossification of legal entitlements lowers Pareto efficiency by failing to place resources where they are valued most highly.[153]

Given the presence of norm-influenced, extralegal dispute resolution modes in other close-knit groups, one wonders why Bolinas has steadfastly employed a far less dynamic governmental body, the BCPUD, as sole arbiter of water rights.[154] Attributes of the problem, discussed above, help to explain the town's reliance on formal structures to adjudicate all disputes. However, the absence of any private bargaining whatsoever to redistribute what all recognize is a scarce and valuable resource appears puzzling in light of Ellickson's and Bernstein's theses that private transactions and community norms will evolve efficient dispute resolution mechanisms. The problem lies in the nature of the good itself—water in Bolinas—which as a result of the moratorium, suffers from what Michael Heller terms the "tragedy of the anticommons."[155] This phenomenon prevents efficient allocation under "a property regime in which multiple owners hold effective rights of exclusion in a scarce resource."[156] The power of rightholders to exclude others characterizes the anticommons, as opposed to a commons, where none has the right to exclude.

Under Heller's analysis, the tragedy of the anticommons can mean, in a broad sense, underuse of a resource due to rightholders exercising their powers of exclusion.[157] Exclusion need not be absolute. Underuse in itself indicates presence of this phenomenon. Bolinas fits this model. The power of meter holders to exclude other landowners from accessing the water supply via the ongoing moratorium has prevented water resources and rights from being placed where they are valued most highly. This ability (or more accurately, requirement) to withhold water from non-meter-holders has led to underutilization and inefficiency. Heller notes that anticommons property need not be exclusively anticommons in nature. The public good can have anticommons attributes at a broad level, but more closely resemble alienable

151. *See* COOTER, *supra* note 6, at 61–62. Defenders of moratoria have failed to address this problem; Herman ignores the tyranny of the majority entirely, finding that less local government creates a *greater* justification for municipal water districts' power to control all aspects of growth in a community. Herman, *supra* note 5, at 448.

152. Some residents instead find loopholes to the moratorium or simply take illegal actions. *See supra* Part I.D.

153. *Cf.* COOTER, *supra* note 6, at 32; HADDAD, *supra* note 3, at 25–26.

154. *Cf.* ELLICKSON, *supra* note 7, at 167; Bernstein, *Opting Out of the Legal System*, *supra* note 122, at 117.

155. *See* Heller, *supra* note 8, at 668.

156. *Id.*

157. *See id.* at 669.

private property at other levels.[158] The BCPUD reflects this structure. The District has sole authority to take a public good—the water from Arroyo Honda—out of the commons and place it into anticommons. The BCPUD has power to exclude people who do not hold meters, or even to shut off the water of meter holders who disobey the rules and regulations.[159] The water is apportioned to meter holders, where it takes on attributes of private property, as users can do with the water more or less as they please. Recipients of water, however, are not allowed to freely trade in water rights and historically have not attempted to do so; the regulations forbid any such transfer not sanctioned by BCPUD.[160] Inalienability of individual entitlements is an attribute of anticommons property when placed in private hands, where "objects may not be readily alienable, [or] available for productive use."[161] The near-prohibition of water rights transfers by private citizens under Resolution 152 demonstrates the presence of this anticommons phenomenon.

Finally, Heller reasons that a tragedy of the anticommons can manifest as both under- and overexclusion from the anticommons.[162] Bolinas's water distribution regime exhibits attributes of both forms. Overexclusion occurs insofar as property owners lacking a water meter may not purchase any water from the anticommons, diminishing their utility in the land greatly, perhaps to the extent that the exclusion constitutes a "taking."[163] On the other hand, underexclusion of the entitlements of current meter holders also occurs. Meter holders have an incentive to prevent the complete depletion of the anticommons property. But they also have no incentive to apportion among themselves *less* than the entirety of BCPUD's supplies. Because it is illegal to trade in water or water rights, there is no legal incentive, only normative reasons, to conserve or capture excess supply, encouraging overconsumption of supplies on hand.

The mere presence of the tragedy of the anticommons does not necessarily lead to the conclusion that the anticommons itself must be overturned. Heller explains that maintaining the anticommons can be superior to allowing purely private possession of a public good.[164] The case of Bolinas suggests that overturning the BCPUD's power to exclude would quickly lead to a tragedy of the commons, as no rational actor would have sufficient incentives not to overuse the scarce resource.

158. *Id.* at 669. "Private property" is viewed for purposes of Heller's (and this) analysis as bundle of core rights exhibiting certain basic attributes, including alienability. *Id.* at 662 (citing A.M. Honoré, *Ownership*, *in* OXFORD ESSAYS IN JURISPRUDENCE 107, 112–28 (A.G. Guest ed., 1961)).

159. *See* BCPUD Resolution No. 173 ¶ 7 (July 20, 1977), *available at* http://www.bcpud.org/res173.htm.

160. *See* BCPUD Resolution No. 152 (Mar. 17, 1976), *available at* http://www.bcpud.org/res152.htm.

161. Heller, *supra* note 8, at 673.

162. *Id.* at 676.

163. This takings issue is legally unresolved. *See supra* Part II.B.

164. *See* Heller, *supra* note 8, at 674.

The solution to the flaws in Bolinas's regime of water regulation is therefore not to scrap BCPUD's power to regulate and exclude from the anticommons, but rather to recognize a transferable private property right in the meter holders' entitlement to receive water from the District.[165] This approach would allow rights to be allocated where they are valued most highly. BCPUD could end the moratorium and allow rights to be traded, leading to Pareto efficiency and opening the possibility of further development in the town without creating a new tragedy of the commons. The following Part outlines this proposal.

IV. CAN A MARKET ACHIEVE MORE EFFICIENT WATER DISTRIBUTION?

This Comment has now discussed the legal regime governing water in Bolinas and factors giving rise to its establishment and preservation, and concluded that the allocation of water rights suffers under a tragedy of the anticommons. This Part proposes a market solution to the "anticommons" problem that Bolinas's water regime presents. This solution would recognize limited private property rights in water entitlements and allow these rights to be traded on a local market.

A. BCPUD as Water District and Regulator

I propose creating a market on which the people of Bolinas can trade the right to receive water.[166] This proposal preserves the benefits of formal government while eliminating many of BCPUD's flaws. The District would retain its core functions—treating, storing, and distributing water—and would also regulate the market. The precise form of the market (e.g., auction or private transactions) is for BCPUD to decide; this Comment addresses the principle of a market for water rights, not its finalized form.[167] A neutrally administered system recognizing transferable property in the right to receive water will end the inefficiency of the anticommons, diminish conflicts of interest, and foreclose future takings litigation.

This proposal requires BCPUD to end the moratorium and allow any landowner to obtain a meter. To build, owners of undeveloped property would first have to obtain long-term rights to the minimum water allotment required to supply the building. This requirement would check unsustainable development by capping the water the community appropriates. Primarily, the market would

165. *See id.* at 677–78.

166. *See* COOTER, *supra* note 6, at 303–08. Because the right to receive water is inextricably linked with the right to develop land in Bolinas, this system resembles a regime of transferable development rights. *See id.* For an explanation of what is meant by "market" and how the concept can apply to water, see HADDAD, *supra* note 3, at 21–25.

167. HADDAD, *supra* note 3, at 28 (noting the multiplicity of forms that market institutions may assume to reduce transactions costs as needed in response to the nature of the problem they resolve). Ceding to BCPUD the authority to create the market presumes, of course, that it would act in good faith to create a fair and open market.

redistribute rights already in existence. This regime could even reduce overall consumption, furthering the cause of environmental protection.[168] The current benefits of a water district—transparency, political legitimacy, and authority to bind all users equally—all would remain prominent features. Moreover, a regime of transferable rights forecloses the takings problem inherent in the moratorium, which has become a subject of political interest in the wake of the Supreme Court's *Kelo v. City of New London* decision.[169]

B. Legal Viability of a Water Market

A market for water rights is unprecedented within a municipal water district.[170] Experimentation and transfer of water, however, are expressly encouraged under the state Water Code.[171] A market system conforms to the statutory preference for localized solutions to water shortages.[172] The thesis of this proposal is that market signals will cause consumers to become attuned to the true costs of their consumption, ultimately leading them to use less water and promoting conservation of water.[173] Moreover, because price signals are individualized to each meter holder, and therefore can internalize the

168. *See* HADDAD, *supra* note 3, at 34–35. The total amount of water consumed would decline if, for instance, BCPUD allowed environmentally-minded citizens to purchase and "retire" rights to water.

169. 545 U.S. 469 (2005). *See* Christopher Cooper, *Court's Eminent-Domain Edict Is a Flashpoint on State Ballots*, WALL ST. J., Aug. 7, 2006, at A4; *Questions, Questions*, ECONOMIST, Oct. 14, 2006. While *Kelo* did not involve regulatory takings per se, it reignited furor at governments' power to take away or diminish private property rights. This hostility toward diminutions in the value of private property as a result of government regulation mirrors a broader trend against wide-ranging environmental protections without compensation to owners of private property. *See, e.g.*, Marzulla et al., *supra* note 5; Joseph L. Sax, *Using Property Rights to Attack Environmental Protection*, 19 PACE ENVTL. L. REV. 715 (2002); *see also* CAL. CTR. FOR ENVTL. LAW & POL'Y, BOALT HALL SCHOOL OF LAW, PROPOSITION 90: AN ANALYSIS (2006), *available at* http://www.law.berkeley.edu/centers/envirolaw/prop90packet.pdf (discussing an ultimately unsuccessful 2006 California Ballot Initiative which would have required compensation for diminutions in private property values caused by state actions such as environmental regulation).

170. *See generally* HADDAD, *supra* note 3 (focusing on rural-to-urban water transfers).

171. While not specifically authorized, a market is entirely consistent with the policy enumerated in the California Water Code in favor of innovative, localized solutions to water shortages, CAL. WATER CODE § 378 (West 2006), as well as with policies allowing transfer of water:

> (a) . . . . It is hereby declared to be the established policy of this state to facilitate the voluntary transfer of water *and water rights* where consistent with the public welfare . . . .
>
> (b) . . . including, but not limited to, providing technical assistance to persons to identify and implement water conservation measures which will make additional water available for transfer.

CAL. WATER CODE § 109 (emphasis added); *see also id.* § 1011(b) ("Water, . . . the use of which has ceased or been reduced as the result of water conservation efforts . . . may be sold, leased, exchanged, or otherwise transferred . . . ."); McDonald v. Bear River & Auburn Water & Mining Co., 13 Cal. 220 (1859) (recognizing that property rights inhere in water, and that water can be sold or transferred).

172. *See* CAL. WATER CODE § 380(c). It also makes more sense from a public choice perspective for a local government to administer a local public good such as water resources. COOTER, *supra* note 6, at 107.

173. *See id.* § 1011(a) ("the term 'water conservation' shall mean the use of less water to accomplish the same purpose or purposes of use"); SAX ET AL., *supra* note 2, at 223–24.

externalities of overconsumption, this system would not succumb to a collective action failure.

As noted, municipal water districts have broad authority to change allotments and to transfer water, a power which BCPUD has exercised.[174] In contrast to the BCPUD system, where water transfers must be approved by the District, a market system operates via transactions between private parties. Pursuant to BCPUD's statutory authority, these transactions could be subjected to review for health concerns, fire protection needs, or other relevant considerations.[175] Landowners already in possession of a meter would retain rights to their water allotments.[176] BCPUD would then allow the sale of new water meters for a relatively low price—based, for instance, on administrative and hook-up costs.[177] The purchase of a meter would not entitle the user to water rights, but rather would be a condition precedent to the user purchasing water rights: a water meter would be the entry ticket to participating in the water market. The District would require, before a user could actually receive water or be allowed to build on the property, that the owner have procured a minimum allotment via:

1. purchasing water rights from other users,
2. obtaining water via an outside source,
3. creating storage to offset the increased demand attributable to that parcel, or
4. some combination of the above.

It would be up to private actors—the prospective homebuilder or property developer—to obtain rights to the requisite minimum allotment. BCPUD would mandate that owners of parcels already served by a meter must maintain a minimum allotment for health, sewage, and fire protection, but otherwise would leave meter holders free to obtain more water rights or sell preexisting water rights down to the minimum allotment. The District could also govern whether water rights obtained from a residential parcel must also be used for residential purposes.[178] This market system would remove a significant impediment to development, potentially leading to the creation of more housing,[179] and would end Bolinas's winners-and-losers paradigm, dividing

174. CAL. WATER CODE §§ 381–387; BCPUD Resolution No. 173 ¶ 6 (July 20, 1977), *available at* http://www.bcpud.org/res173.htm.

175. BCPUD could also contract operation of the market to a governmental or private entity. *See* CAL. WATER CODE § 378 ("A public entity may enter into agreements with other public entities, businesses, community associations, or private entities to provide water conservation services and measures and materials . . . .").

176. Because no current owners' existing rights to water would diminish, but rather present entitlements would henceforth be treated as a tradable commodity, there would not be a taking.

177. The cost of a water meter in 1971 was $250. *See* Jamison, *supra* note 33. The cost of a new meter post-moratorium could simply be a function of hook-up, administrative, and infrastructure costs.

178. *See* CAL. WATER CODE § 354 (West 2006).

179. A water market would certainly not be a panacea to high housing costs, however, given the desirability of property in Bolinas and the high housing costs found throughout the region. At the very

landowners with and without meters. The market system would also remove incentives to cheat or find loopholes in the moratorium, thereby strengthening the rule of law.[180]

Adoption of the market-based system would usher in a new paradigm for the role of the District. Such a system would leave building and use permit decisions to the county, remove the nearly unreviewable growth and development vetoes that Resolutions 152 and 173 imposed, and allow BCPUD to focus on water and sewage, which is the core authority delegated to it by the state. BCPUD would be less of a "town government," and more of a true limited government, consistent with its statutory grant of authority under the California Water Code. As a limited government, BCPUD would be less vulnerable to judicial review and liability for impermissible acts beyond its delegated statutory authority, thereby reducing the risk that disastrous episodes, such as the *Lockary* and *Gilbert* lawsuits, would recur.[181]

A market for water rights would clarify water's legal status in Bolinas by recognizing private property rights in a public good.[182] Allowing valuation and transfer of this property promotes efficiency, ending the tragedy of the anticommons: "When the effects of resource use are fairly localized, private property better aligns each owner's interest with the efficient level of use because each owner faces the full costs of overconsumption."[183] Every consumer would confront the ramifications of his water usage via a pricing signal. Either he would pay more to acquire the right to additional resources, or would profit by relinquishing that which he does not need. He would be immediately cognizant—in a fiscal sense—of when his behavior created externalities, as well as when his behavior contributes to the common good.

Additionally, recognition of the "anticommons" character of Bolinas's water regime helps to move the debate beyond an artificial scholarly impasse. Many scholars have approached moratoria and conservation measures with a mindset that conservation of natural resources and respect for private property rights are diametrically opposed interests.[184] Too often, scholars have insisted

least, however, it can provide would-be residents a greater opportunity to be a part of the community, even if they cannot spare $310,000 for a water meter.

180. *See supra* Part I.

181. *See supra* Part II. Nevertheless, because BCPUD would remain a governmental entity, residents would still be able to challenge the District's actions as takings or as "arbitrary and capricious" decisions under federal and state law, respectively. *See id.*

182. *See* Tarlock, *supra* note 3, at 183 ("Water law serves two primary functions: (a) the creation of correlative private property rights in scarce resources; and (b) the imposition of public interest limitations on the exercise of these rights." (internal citation omitted)).

183. Heller, *supra* note 8, at 678.

184. *See, e.g.*, Herman, *supra* note 5, at 434–35 ("If conservation and water importation cannot provide enough water to accommodate the state's growth, then growth itself must be limited."). One should note that a frequent criticism of water markets—their complexity and difficulty of administration—would greatly diminish: no change in appropriative rights would be necessary, nor would there be a clear need to distinguish between classes of users, as virtually all of Bolinas's users are

that either the environment or private property must lose. A water market recognizes and furthers protection of the environment by allocating only as much water as can be taken sustainably—in other words, it prevents a tragedy of the commons. However, the market recognizes the societal value of private property as well. The market's dynamic regime of alienable property rights treats ownership of natural resources as an incident of land ownership—as one of the sticks in the property owner's bundle. Therefore, a water market gives scholars and policymakers a third way when seeking to balance two highly important objectives.

To further promote efficiency, BCPUD can retain its current pricing scheme, which charges consumers a flat rate—ensuring that it provides basic necessities at an affordable rate—until a consumer has used his full lawful allotment.[185] The District would assess charges at a higher rate or sliding scale to deter excessive use, or use without prior legal entitlement. Such policies are well established and statutorily permissible.[186] Seasonally variable prices, which Bolinas does not currently use, would prove especially useful given predictable annual supply and demand spikes: during the winter rain is more common, but usage lower; during the summer demand spikes, but users quickly exhaust supply and rainfall fails to replenish stores. Seasonal pricing, of course, can also be implemented and improved upon independently of the market for water rights.[187] Nevertheless, the implementation of a water market would not strip BCPUD of all necessary authority to respond to drought by, for example, requiring rationing, differential pricing, or other conservation measures.[188]

residential dwellings. In sum, Bolinas makes an appealing case study. *Cf.* SAX ET AL., *supra* note 2, at 227–36 (providing a hypothetical illustrating many problems not at issue in Bolinas).

185. *See* Bolinas Community Public Utility District, Water Rates, http://www.bcpud.org/Rates.html (last visited Mar. 24, 2008).

186. CAL. WATER CODE § 375 (West 2006). Conservation-minded pricing takes the form of charging more for uses above a daily, weekly, or monthly allotment on a sliding scale. California courts have upheld such schemes. *See* Brydon v. E. Bay Mun. Util. Dist., 29 Cal. Rptr. 2d 128 (Ct. App. 1994). The practices of variable-rate pricing, automatic supply reduction, and instantaneous—not merely monthly or quarterly—usage feedback fall under the rubric sometimes referred to as "smart metering." Utility companies in California are currently establishing pilot programs to implement smart metering in electricity and gas usage. *Itron's Technology Sends Meter Man Into Retirement*, INVESTOR'S BUS. DAILY, Sept. 10, 2007, *available at* 2007 WLNR 17676468; *see also* Press Release, Pac. Gas & Elec. Co., Pacific Gas and Electric Company's SmartMeter Proposal Approved by California Public Utilities Commission (July 20, 2006), *available at* http://www.pge.com/about/news/mediarelations/newsreleases/q3_2006/060720a.shtml. While the idea can apply equally well to water, there are at this time few indications that business leaders and policymakers see this as a potential means of more efficient water use, and only a few signs of nascent pilot programs implementing smart metering for water. *Cf. Blue Gold Opportunities*, INVESTOR'S CHRON., Oct. 30, 2007, *available at* 2007 WLNR 21810952; Press Release, U.S. Dep't of Agric. Natural Res. Conservation Serv. Colo., Colorado Natural Resources Conservation Service Approves Approximately $618,000 in Conservation Innovation Grants (July 6, 2007), *available at* 2007 WLNR 13548906.

187. Unlike a spot market, which reflects price changes according to current market conditions, the market for water rights proposed in this Comment would act more like a futures market, which prices the value of a commodity at a future date or over a given period of time.

188. *See supra* note 186 and sources cited therein.

To pay for this new system, BCPUD could impose transaction fees on water-right transfers. This fee would discourage speculative purchases and waste—both of which BCPUD can prohibit outright[189]—and would also garner surplus revenue to improve the operations, capacity, and infrastructure of BCPUD. Transaction fees could achieve greater efficiency than the 2005 meter auction. The auction supported affordable housing via what in essence was an extractive "tax" on an individual landowner, in effect for nothing more than the right to receive water and hence develop land. This transfer also did not contribute anything towards improving the District's infrastructure.[190] In contrast, a transfer fee would help to internalize the externalities created by an increased number of users or by changes in usage patterns.

Transferable water rights provide direct and palpable incentives to conserve water; BCPUD could allow construction of storage or recycling systems for non-human-consumption uses, such as fire prevention, sewage, and gardening.[191] Individuals could build capacity for storing treated excess winter rainfall for use in the dry summer months, reducing the allotment they would need from the municipal supply.[192] By increasing transactions, the market-based system would better value the "right" to receive water, as numerous transactions provide more market information.[193] The District would have better information regarding the value of the good it controls. Sophisticated price information would allow the District to better decide whether it is cost-effective to invest more in its infrastructure. For example, the District might decide that demand is so great that it should pursue other sources of water, by importing it via pipeline from another district, by creating a desalinization plant, or by pursuing other policy options. It bears emphasizing that market participation would be strictly optional for preexisting users. An individual who wishes to retain her preexisting allotment, and neither buy nor sell water rights, would not be compelled to do so. If no land owners participated, the experiment could simply be scrapped.

189. *See* Sax, *supra* note 1, at 1639 ("Relatively speaking, western water law is strongly focused on community needs. Unlike most property law, it prohibits both waste and speculation, and it permits ownership only of what one can use."); *cf.* Tarlock, *supra* note 3, at 188 ("Water is different from land because it is subject to use restrictions intended to distribute a scare resource widely among similarly situated users.").

190. As noted, this "tax" was really an appropriation by the individual who purchased the right to water. Because the "tax" did not benefit BCPUD, it did not internalize the externality to the District. *See supra* Part I.D.

191. BCPUD could even sell treated water, making sewage a profitable enterprise. *See* SAX ET AL., *supra* note 2, at 225.

192. *See* Berlin, *supra* note 118. Bolinas has lower storage capacity than other regional districts. *See supra* notes 117–119 and accompanying text.

193. *See* COOTER, *supra* note 6, at 305 (demonstrating that transferable development rights allow planners to "economize on information"); Jamison, *supra* note 33 (reporting the sale of a water meter, the first in decades, for $310,000). Perhaps $310,000 overvalues the right to receive water. However, it is impossible to test this supposition without more data points.

C. Hypothetical Examples

A few examples demonstrate how a water market works better than the moratorium. First suppose that a user has obtained rights to 600 cubic feet per month, while the minimum allotment is 500 cubic feet per month, or 6000 cubic feet per year, for consumption, sanitation, and fire prevention needs.[194] Under a regime of transferable rights to water, the owner can sell the right to 100 cubic feet per month. Alternately, the owner can install a 500-cubic-foot tank, which she would fill in the winter with excess supply, and sell the right to 500 cubic feet per year. The owner's storage capacity would help address the community's seasonal water shortages that result from reduced supply and increased demand in the summer months. Assuming that the right to a full allotment is worth $310,000, as the 2005 auction suggests, and that this allotment entitles a user to 500 cubic feet per month, the value of a 500-cubic-foot tank to the homeowner should be over $25,000.[195] The right to 100 cubic feet per month in perpetuity would fetch more than $60,000.[196]

At such values, even sales of minor allotments—a few dozen cubic feet per year from among hundreds of users—would be economically efficient and generate conservation savings sufficient to allow some new users to develop their land. This income-generating opportunity would encourage investment in infrastructure and result in efficiency gains without all benefits inuring to vested meter holders. At the same time, there would be reasonable development within sensible limits, without opening the gates to a crush of new development which would overburden resources and offend community values. Even much lower water values would provide powerful conservation incentives.[197] A modest transfer fee could give BCPUD a new source of revenue, offsetting the costs to the District of monitoring the market and compensating it for the strain on the infrastructure that new users would create. Such new funds could also

194. 500 cubic feet per month is taken from BCPUD Resolution No. 173 ¶ 6 (July 20, 1977), *available at* http://www.bcpud.org/res173.htm. It is the maximum increase that may be allocated to a single water meter when the parcel's allotment is changed, such as upon to the construction of a second unit. A cubic foot is about 7.5 gallons.

195. First assume the annual allotment is 6000 cubic feet, or 500 cubic feet per month:

$500\ ft^3/mo.\ X\ 12\ mo./year = 6{,}000\ ft^3/year.$

Taking the recent water meter sale as the value of that allotment, calculate the cost of the continuing right to receive a single cubic foot of water per year:

$\$310{,}000 / 6{,}000\ ft^3/year = \$51.67/(ft^3/year).$

Finally, can calculate the "value" of installing storage which saves 500 cubic feet per year.

$500\ ft^3/year\ X\ \$51.67/(ft^3/year) = \$25{,}835.00.$

196. Taking the same figures from the above example:

$100\ ft^3/mo.\ X\ 12\ mo./year = 1200\ ft^3/year.$

$1200\ ft^3/year\ X\ \$51.67/(ft^3/year) = \$62{,}004.00.$

197. This Comment does not present a statistical or econometric analysis of the effect of a market for water rights on consumer demand. *Cf.* YOUNG, *supra* note 10, at 249–62 (citing studies and models). Rather, it provides a basic legal framework and illustration of how incentives would work.

contribute to capital improvements, reducing the leakage rate in the District's pipelines.[198] These examples demonstrate that recognizing private property rights in what was previously anticommons property gives individuals incentives for more efficient use, increasing efficiency.[199] At the same time, the public resource is not depleted because the amount of rights created is finite and closely tied to a sustainable level. The market would allow individuals to exchange only the rights that currently exist. This would prevent the rapid depletion one would anticipate if BCPUD simply lifted the moratorium without precondition. In sum, the market would prevent a tragedy of the anticommons from becoming precisely what it is in place to prevent: a tragedy of the commons.

D. Efficacy and Fairness

Whether a market-based system of water rights is superior to the current system or any other system, or how fair it is in practice, is unknown.[200] Transferable water rights allow private transactions to redirect resources in response to current needs, not the citizens' needs as they stood at the time BCPUD enacted the moratorium. Private transactions aggregate, increasing individual utility and the community's utility as a whole, until no further redistribution of rights would increase any one individual's utility more than it decreased another's: a state of Pareto efficiency.[201] Following changes, the market allows new equilibria to emerge. The market mechanism is far more responsive than governmental fiat.

Water has value to consumers and the community, for cultural, ecological, and aesthetic purposes. Depleting a water source, though it increases aggregate utility, may decrease social utility by depleting or destroying a public good. A pure market-based system does not brake or counteract these effects. However, continuing oversight by BCPUD and political accountability to the community provide a sensible check, requiring the market to "price" the externalities it creates, such as environmental harms or greater stresses to District infrastructure.[202] BCPUD would also retain authority over how much water to draw from Arroyo Honda,[203] and could even treat the market as a cap-and-trade system. System constraints, such as the capacity to process sewage, would prevent unsustainable growth and require consideration of ecological, cultural,

198. *See supra* note 98 and accompanying text.

199. *See* COOTER, *supra* note 6, at 32; HADDAD, *supra* note 3, at 25–26; YOUNG, *supra* note 10.

200. At least one market-based water system has been adopted, albeit in scaled-down form, on California's Monterey Peninsula. But it is unclear how common transfers are under this regime. E-mail from Brent M. Haddad, to author (Apr. 23, 2007) (on file with author); *see also* MONTEREY PENINSULA WATER MANAGEMENT DISTRICT, CA., Rule 28 (2007), *available at* http://www.mpwmd.dst.ca.us/rules/Dec2007/TOC.htm.

201. *See supra* note 10.

202. *See* HADDAD, *supra* note 3, at 46 (noting that a market may create negative externalities).

203. *See supra* Part II.A.

and aesthetic impacts.[204] Finally, BCPUD must consider climate change, and cautiously allocate rights in response to changing water availability models. The current proposal can accommodate climate change concerns because it does not require increasing aggregate water use but primarily sketches a system of transferable rights to promote efficiency gains.

Distribution of rights to water has remained largely unchanged since 1971, and so ossified, may be antiquated relative to the needs of Bolinas's residents. A private property regime can unfreeze inefficient entitlements by allowing private exchange.[205] Currently, any changes to water allocations must be approved by the District under strict criteria,[206] providing little direct incentive for individuals to conserve. One may critique the market for granting the wealthy greater access to water and giving the poor incentives to leave. However, unfairness and arbitrariness, with benefits inuring to the wealthy, are features of the *current* institution-oriented system: most cannot pay $310,000 merely for the right to receive water. Moreover, residents who own a home with a water connection in Bolinas currently have a great incentive to leave, as real estate with a water meter incorporates a premium over undeveloped land.[207] Allowing individuals to extract the value of the surplus water provides an incentive and the means to stay in the community.

E. Hurdles to Establishing a Market for Water

The societal importance of water is manifest. Water signifies far more than a mere commodity—a fact that will likely prove a significant political hurdle to creating a market for water rights.[208] Beneficiaries of the moratorium have especially little incentive to abandon a system that has vested them with valuable rights, expressed community values, and increased the value of their holdings. Many probably find the status quo of the last thirty-five years unobjectionable—suggested by the very fact that it is the status quo.[209] Skeptics would need to be convinced that a market system would increase their individual well-being. Such arguments could indeed be made. Levies on transactions would defray the cost of maintaining and upgrading the water supply. Additionally, encouraging recycling and catchments hedges the risk of drought or fire and provides a buffer against seasonal shortages. Finally, the cost of water would likely decrease owing to efficiency and storage gains.

204. Such constraints would presumably be controlled at the county permitting stage, where Marin County retains general jurisdiction over planning of unincorporated communities such as Bolinas.

205. Heller, *supra* note 8, at 683 ("[Market] mechanisms ensure that decisions by private owners to create anticommons property will not paralyze the alienability of scarce resources for too long or diminish their value too drastically.").

206. *See supra* Part I.

207. *See* Herman, *supra* note 5, at 462 n.202.

208. *See* YOUNG, *supra* note 10, at 8–9.

209. Changing the status quo would likely require overcoming significant inertia in attitudes, rules, and institutions. *See supra* Part III.B.7.

Nevertheless, it is difficult to overcome thirty-five years of policies which, despite creating unintended consequences, have reflected Bolinas's character and values.

The transactions costs of a political change will prove great, perhaps insurmountable, if what this Comment proposes is to be accomplished.[210] If Bolinas prefers to adopt a wait-and-see approach, that is a valid political choice. However, if a transferable water rights system elsewhere proves fair, efficient, and socially beneficial at the outset, the case for adopting such a system in Bolinas will become stronger. Until that day, owners of undeveloped Bolinas property have three options: (1) seek political change within BCPUD; (2) mount a renewed effort to challenge the moratorium as a taking; or (3) bide their time, hoping that the town will, of its own volition, open the taps under a market-based system or some other program.

F. Summary of the Water Rights Proposal

A market can accomplish what the moratorium and associated policies have failed to achieve since 1971 by finding an efficient, dynamic, and fair means of allocating a scarce resource. A market would reduce conflicts of interest, allow reasonable development of property, and avoid political and financial collateral damage from protracted litigation. The market regime would end the moratorium's "winners and losers" paradigm by spreading the incidence of the water shortage over all users—not merely those whose property did not have the right to a water meter on November 26, 1971.[211] The proposed market-based system is a reversible experiment. If it fails to ameliorate the shortage, BCPUD can declare a new emergency and reimpose the moratorium.[212]

CONCLUSION

This Comment has analyzed why and how Bolinas, California, has for over thirty-five years maintained an "emergency" moratorium on new connections to the town's water supply. The moratorium exists at a cost to the owners of undeveloped land and the ratepayers who endured decades of litigation. Despite the District's legal successes, the legality of its policy remains unsettled. BCPUD should not become complacent. The Ninth Circuit's *Lockary IV* holding is a loaded gun, and shifts in public opinion about takings and regulation of private property may presage future litigation. This Comment has analyzed how legal rules and institutions are a response to the nature of the problem faced by Bolinas and posits not that the current system has failed to

210. *Cf.* HADDAD, *supra* note 3, at 36.

211. *See* COOTER, *supra* note 6, at 305 ("The state can restrict development by reducing the number of [transferable development rights], which harms many owners a little. In contrast, the usual building restrictions harm a few people a lot, thus raising constitutional questions about takings.").

212. CAL. WATER CODE § 355 (West 2006).

achieve important objectives, but that the system suffers under inefficient utilization of resources stemming from a "tragedy of the anticommons." This Comment then proposed a market for water rights as a superior means of resource allocation. A market creates incentives for citizens via transferable rights which allow property owners the chance to develop land. Market-based water allocation would not occur under a zero-sum paradigm at the expense of those on the wrong side of the moratorium, but would allow all citizens to engage in a dynamic, efficiency-promoting market. A market would also restore BCPUD to the bounds of its statutorily granted authority, foreclosing the risk of ruinous litigation, and efficiently protecting an essential public good.

The market proposal squarely confronts Bolinas with questions that concern the very purposes of its chosen policy: To what extent is the moratorium based on a chronic and incurable shortage of water? And to what extent does the moratorium serve as an excuse for an impermissible no-growth policy? The moratorium may have represented the best policy available in 1971, but Bolinas should consider whether it now ought to adopt a superior policy. As Ellickson noted, "[e]vents in a remote corner of the world can illuminate central questions about the organization of social life."[213] Stay posted; the next thirty-five years in Bolinas just may prove interesting.

213. ELLICKSON, *supra* note 7, at 1.