

UNKNOWN QUANTITY: THE BOTTLED WATER INDUSTRY AND FLORIDA'S SPRINGS

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I. INTRODUCTION

“Springs are bowls of liquid light.”¹

*“The springs throughout Florida are numerous, and many are quite remarkable. They form one of the wonders of the State.”*²

In the autumn of 1998, an enterprising St. Petersburg, FL city council member got an idea. Almost six decades previously, the City of St. Petersburg had purchased a 527-acre parcel of land in

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1. Attributed to Marjorie Stoneman Douglas.

2. BILL LEDYARD, A WINTER IN FLORIDA; OR, OBSERVATIONS ON THE SOIL, CLIMATE, AND PRODUCTS OF OUR SEMI-TROPICAL STATE 133 (Wood & Holbrook 1870).

neighboring Hernando County that included Weeki Wachee Springs for \$150,000.³ Since that time, the springs had been leased and developed into a park replete with boat rides and fauna such as bison, birds, and mermaids. Well, attractive, athletic young women dressed as mermaids, at least, deftly breathing from hoses while eating bananas and performing other entertaining feats underwater. But iconic Weeki Wachee, like many other roadside attractions that were staples of family vacations to Florida in the 1950s and 60s, had been outpaced by the gee-whiz amusements of Walt Disney and his imitators, and sleepy Hernando County never became the tourist destination-on-steroids that the greater Orlando area did. Searching for a new way to turn a profit for St. Petersburg, city council member Kathleen Ford proposed capturing some of Weeki Wachee's clear spring water in bottled and selling it to thirsty — and perhaps nostalgic — consumers. Capitalize on the kitschy attraction and call it "Magic Mermaid Water," she thought.⁴

Arguably, St. Petersburg could have found a market for Magic Mermaid Water. Sales of bottled water shot through the roof in the 1990s. An industry group found that in 1998 alone, the demand for bottled water grew by 10%.⁵ So maybe the councilwoman's proposal would have had a chance if the springs had been located in Pinellas County along with the city that owned it. But Hernando County residents were loath to see their mermaids' water exported to benefit the citizens of St. Petersburg. In fact, it galvanized many in the community to press for alternatives. Ultimately, a voter referendum held in 1999 empowered the St. Petersburg City Council to sell the attraction's underlying parcel of land to the state. In 2001, the Council agreed to sell the real estate to the Southwest Florida Water Management District (SWFWMD) for some \$16.5 million. SWFWMD leased a small portion back to the attraction so that it could continue to operate while the state agency managed the remainder of the property as a nature preserve.⁶

This was neither the first time, nor the last, that citizen reaction would thwart a notion to bottle Florida's clear spring water for sale in the beverage aisles of supermarkets and convenience stores. Often viewed as community treasures—regardless of who might actually hold title to the surrounding property—generations of

3. *Editorial: A good deal for Weeki Wachee*, ST. PETERSBURG TIMES, May 11, 1998, at 8A.

4. Kelly Ryan, *Weeki Wachee Water: For Sale?*, ST. PETERSBURG TIMES, October 21, 1998, available at http://www.sptimes.com/TampaBay/102198/Weeki_Wachee_water_F.html.

5. International Bottled Water Association, *Bottled Water Sales Leaped 10.1% in 1998*, at <http://www.bottledwater.org/public/pressrel.htm> (last visited February 4, 2004).

6. Bryan Gilmer, *Weeki Wachee Land Sale Okayed*, ST. PETERSBURG TIMES, June 22, 2001, available at http://www.sptimes.com/News/062201/news_pf/SouthPinellas/Weeki_Wachee_land_sal.shtml.

Floridians have grown up with freshwater springs as their local swimming holes or family vacation destinations. It should not be surprising, then, that use of the springs for private profiteering has met with public outcry. Spring water bottling is emerging in Florida as a new “LULU”—that is, a locally unwanted land use.

The text that follows aims to: (1) acquaint the reader with the resource at the center of this discussion, providing the most cursory background necessary to appreciate the pressures present to exploit the springs; (2) lay forth a basic history of modern water law and management in Florida, concentrating on the policies codified in the state’s Water Resources Act, with special attention to the consumptive use permitting process, minimum flows and levels, and, to a lesser extent, other regulatory mechanisms; (3) introduce the bottled water industry and its role in springs resource management; (4) detail the series of controversies around north central Florida springs that demonstrate the potential impact the bottled water industry has in local communities and in the statewide debate over springs protection and water resource management; and finally, (5) examine the possible responses to bottled water industry pressure on springs resources from the points of view of various stakeholders interested in ecological protection.

II. NATURAL HISTORY

Although it is nicknamed the Sunshine State, it is water that defines Florida. Bounded by the Atlantic Ocean and the Gulf of Mexico, and tipped by a River of Grass, Florida is also a state rich in natural freshwater springs, a phenomenon borne of its unique geology. Any lengthy discussion of issues affecting the Florida springs must begin with a basic introduction to the physical characteristics and natural history of the resource. The Tertiary Period (~100-20 million years before the present) left the region with a porous limerock substrate that constructs the Florida aquifer, the major drinking water source for the state’s human population today.⁷ Topping this is a confining layer of clays established during the Middle and Upper Miocene Epoch, which is in turn overlain with a final stratum of the sandy soils that blanket much of the state.⁸

The predominance of limestone beneath the surface is responsible for the karst topography so prevalent in the state.⁹ The

7. Randall B. Brown et al., *Soils*, in ECOSYSTEMS OF FLORIDA 35, 36 (Ronald L. Myers & John J. Ewel eds., University of Central Florida Press 1990).

8. *Id.*

9. *Id.* at 37.

limestone is eaten away by a weak carbonic acid formed by carbon dioxide in rainwater, leaving pits and holes in the rock. Thus, karst landscapes are marked by sinkholes, cavern formations, and springs.¹⁰ The springs result where pressure forces water being stored in underground cavities in the limerock upward to natural openings at the surface.¹¹

The density of major springs is highest in the state's Ocala Uplift physiographic district. This uplift is the result of orogenic activity in the Post-Oligocene and is marked by outcroppings of Eocene and Oligocene carbonate rock but minimal Miocene sediment.¹² On the surface, the Ocala Uplift District is a mosaic of mixed hardwood forest, pine flatwoods, and sandhill.¹³

The springs are hotbeds of archaeological and paleontological finds because of their attractiveness to wildlife and humanity throughout the ages and because the oxygen-deprived substrate preserved what fell within. The springs are regarded as "portals to the past" for the finds—from mastodon bones to human remains to cultural artifacts—recovered from their muddy floors.¹⁴

Springs are commonly characterized on the basis of their water discharge. Springs with an average flow of 100 ft³/s or more (see table 1) are deemed to be 1st magnitude springs. Those with a flow between 10 and 100 ft³/s are 2nd magnitude springs. Third magnitude springs have a discharge rate between one and ten ft³/s, and springs of magnitudes four through eight have flows under one ft³/s.¹⁵ Florida has 27 first magnitude springs and approximately 70 second magnitude springs.¹⁶ With only 78 first magnitude springs within the United States, Florida has by far the most 1st magnitude springs of any state.¹⁷

Springs are neither a true end nor beginning. Rather, the springs, aquifer, and their associated rivers and streams are a circle of features interdependent on one another to function as they do. Just as the aquifer supplies the springs with their flows that

10. *Id.* at 38; R.M. SPECHLER & D.M. SHIFER, SPRINGS IN FLORIDA: U.S. GEOLOGICAL SURVEY FACT SHEET FS-151-95 (1995).

11. R.M. SPECHLER & D.M. SHIFER, SPRINGS IN FLORIDA: U.S. GEOLOGICAL SURVEY FACT SHEET FS-151-95 (1995).

12. Randall B. Brown et al., *Soils*, in ECOSYSTEMS OF FLORIDA 36, 37 (Ronald L. Myers & John J. Ewel eds., University of Central Florida Press 1990).

13. *Id.* at 38.

14. Florida Department of Environmental Protection, *Florida Archaeology Month Highlights Springs*, available at <http://www.dep.state.fl.us/secretary/comm/2002/02-Archaeology%20spot.htm> (March 8, 2002).

15. *Id.*

16. *Id.*

17. JACK C. ROSENAU ET AL., SPRINGS OF FLORIDA (U.S. Geological Survey, Bull. No. 31, 1977).

nourish the rivers, many rivers and streams disappear from the surface to become a part of the aquifer. As important as rivers and streams are to the water cycle in Florida, a less obvious means of recharge also affects the springs. The porous karst aquifer of Florida is distinguishable from karst systems in more northern states. Because Florida's karst is so penetrable, water seeps through a micropore system to feed the aquifer, and thus the springs. This realization is changing the way that springs systems are conceptualized and has critical implications for land use in areas previously thought not to be closely connected to the springs.¹⁸

Florida is internationally known as a tourist mecca, and springs played an important role in the early development of the state's resort areas and attractions. "Springs abound in all portions of the State, in the western as well as the eastern section; and they are all of more or less interest as curiosities, and will well repay the tourist."¹⁹ The difference in relative air and water temperature plays a significant role in drawing visitors to the springs. The majority of the north and central Florida springs hover around the 70-75°F range, making swimmers feel cool in the heat of summer and relatively warm during the chill of winter.²⁰

Today the springs are important both ecologically and economically, for in addition to being the source of many rivers and providing habitat for countless species—from tiny invertebrates to one-ton manatees—the springs support a host of recreation-oriented businesses such as canoe and tube rentals, dive shops, boat tours, and all the auxiliary concessions that attend such activity. Florida State Parks are nationally recognized for excellence,²¹ and the springs parks are some of the most prized in the park system. These include Ichetucknee Springs, Wakulla Springs, Peacock Springs, Manatee Springs, Rainbow Springs, Homosassa Springs, DeLeon Springs, Blue Spring, Wekiwa Springs, Ponce DeLeon Springs, and the more recently acquired Troy Spring and Fanning Springs.²²

18. Aaron Hoover, *UF Research: Underground Rivers, Springs not the "Pipes" They Appear*, available at <http://www.napa.ufl.edu/99news/sink.htm> (last visited August 6, 2002).

19. BILL LEDYARD, A WINTER IN FLORIDA; OR, OBSERVATIONS ON THE SOIL, CLIMATE, AND PRODUCTS OF OUR SEMI-TROPICAL STATE 141 (Wood & Holbrook 1870).

20. JACK C. ROSENAU ET AL., SPRINGS OF FLORIDA (U.S. Geological Survey, Bull. No. 31, 1977).

21. In 1999, the Florida Department of Environmental Protection, Division of Recreation and Parks received the National Recreation and Park Association's Gold Medal Award for State Parks.

22. See Florida State Parks, *Online Park Guide*, at <http://www.floridastateparks.org/> (last visited December 29, 2003).

Proof of the economic contribution of springs parks is evidenced by a study commissioned by the Florida Department of Environmental Protection. Scrutinizing Ichetucknee, Wakulla, Homosassa, and Blue Springs, researchers found that each park generated an average of \$17 million in sales annually for their respective counties, with individuals spending an average of \$45 per day during a visit to the springs on lodging, admission, food, and shopping.²³

Just as important as their aid to the economy is the springs' contribution to the natural water supply system that supports the state's burgeoning population. Increasingly, though, the populace receives the water that the springs deliver from the aquifer not from a tap, but from a bottle. Fortunately, concurrent to the boom in bottled water consumption, public and political focus on the springs grew considerably in the late 1990s. This newfound attention comes to Florida's springs after many years of patchwork scientific and cultural study and sporadic public attention.

Threats to the integrity of Florida's natural springs generally arise from poor land use decisions. Those threats include careless use of fertilizer and pesticides for agriculture, landscaping, and golf courses; other pollutants in contaminated stormwater runoff; livestock waste, often associated with the North Florida dairy industry; development in high aquifer recharge areas; leaking septic tanks and underground storage tanks; silt buildup and sedimentation that blocks spring flow; and overpumping of the aquifer for consumptive use of the water.²⁴ These threats can be divided into those affecting water quality and those affecting water quantity.

Threats to quality have garnered much attention, perhaps because of the potential negative effects on human health. In response to these threats, government agencies and other research bodies have developed various Best Management Practices (BMPs) for many of the activities that degrade water quality.

Unfortunately, however, quantity issues have proven more difficult to resolve. On the whole, Florida has struggled with water supply and use issues since the late 1950s through the present, with no lasting answer in sight. It is only recently, though, that bottled water has become a significant factor in these policy debates. Public

23. Mark A. Bonn & Frederick W. Bell, *Economic Impact of Selected Florida Springs on Surrounding Local Areas*, available at <http://www.dep.state.fl.us/springs/reports/EconomicImpactStudy.doc> (last visited February 17, 2004).

24. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION & FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS, PROTECTING FLORIDA'S SPRINGS: LAND USE PLANNING STRATEGIES AND BEST MANAGEMENT PRACTICES (2002); ELIZABETH D. PURDUM, FLORIDA WATERS (Florida's Water Management Districts 2002).

water utilities have historically dominated the arena and will continue to do so as Florida's population builds and older urban centers look to rural communities to provide a quick fix for their increasingly inadequate water supplies. But that makes the question of bottling spring water all the more imperative. Can Florida afford to allow the spring water industry to tap its resources if the state's residents are not securely provided with water for now and tomorrow?

III. WATER LAW AND REGULATION IN FLORIDA

Just as it is important to have some geophysical knowledge of Florida's water, it is critical to have a framework from which to understand the legal ramifications of consumptive spring water use. Florida water law since the time of statehood can be divided into several phases, all of which have brought influence to bear on the current water law system, but it is the statutory system crafted in the 1970s that most directly influences the consumptive use of water in the state. Before examining that system, though, it is important to note that English common law contributed the idea of sovereignty lands embodied in the Florida Constitution today. The state constitution specifically provides for the continuation of the common law notion of the public trust doctrine when it proclaims:

The title to lands under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the state, by virtue of its sovereignty, in trust for all the people. Sale of such lands may be authorized by law, but only when in the public interest. Private use of portions of such lands may be authorized by law, but only when not contrary to the public interest.²⁵

This notion that certain property must only be used in a manner not contrary to the public interest is a prominent idea in the policy skirmishes over Florida's water. "It has been applied to restrict the power of the legislature and the executive to alienate submerged lands, to limit the rights of private landowners to develop or adversely affect submerged lands, and to protect public rights to use submerged lands and their overlying waters."²⁶ Whether permission

25. FLA. CONST. art X, § 11.

26. Richard Hamann, *Law and Policy in Managing Water Resources*, in WATER RESOURCES ATLAS OF FLORIDA 302 (Edward A. Fernald & Donald J. Patton eds., Florida State University

of spring water bottling is a violation of the public trust doctrine, or whether it is in the public interest is the controversy over bottling reduced to its simplest form.

The historical use of water in Florida rests on a system of riparian rights, in contrast to the doctrine of prior appropriation common to the western U.S. This is important because “[t]he doctrine of riparian rights is much more protective of water resources.”²⁷ Florida long enjoyed the relatively flexible riparian rights doctrine by virtue of plentiful stocks of water²⁸ seemingly untaxed by heavy agriculture or development for decades. It was not until the post-WWII population boom caught up with the state in the 1970s that, for the first time, Florida faced the inevitable reality: its water resources were not infinite.

Thus, the modern statutory phase of Florida water regulation began in 1972 with the adoption of the Water Resources Act, a scheme lifted largely from *A Model Water Code* (MWC), written at the University of Florida by Dean Frank E. Maloney and his associates.²⁹ The authors of the MWC announced prophetically, “As a nation, the United States is in the early stages of a water crisis. . . . [T]he population explosion, accompanied by great technological advances in industry and agriculture, has resulted in progressively increasing demands on an essentially limited resource. . . . At the same time, as the demand for water for consumptive uses has been burgeoning, the interest of ecologists and recreational users in maintaining streamflows and surface and ground water levels has assumed greater importance in the minds of the public and the state legislatures.”³⁰

The legacy of the MWC is the constellation of five Water Management Districts (WMDs), divided along hydro-political lines, that oversee the state's water resources. The Water Management Districts—Northwest, South, Southwest, Suwannee River, and St. Johns River—were created by statute in 1976³¹ and are governed by rules set forth in the Florida Administrative Code.³²

1998).

27. *Id.* at 304.

28. William L. Earl & Thomas T. Ankersen, *Slicing the Water Supply Pie: Competing Applications Under Florida's Water Resources Act*, 61 FLA. B. J. 87 (1987).

29. Richard G. Hamann, *Consumptive Water Use Permitting*, in 1 FLORIDA ENVIRONMENTAL & LAND USE LAW 10-1 (Florida Bar Environmental and Land Use Law Section, 1997).

30. FRANK E. MALONEY, RICHARD C. AUSNESS, & J. SCOTT MORRIS, *A MODEL WATER CODE WITH COMMENTARY V* (University of Florida Press 1972).

31. FLA. STAT. ch. 363.069 (2001).

32. FLA. ADMIN. CODE r. 40.

A. Consumptive Use Permitting

Headed by governing boards with members appointed by the Florida governor, the WMDs are responsible for “planning and water resource development,”³³ including the issuance of consumptive use permits (CUPs). Each district has conditions that applicants must meet in order to obtain their permit. In the Southwest Water Management District, for instance, permit applicants must demonstrate that the water use is reasonable and beneficial,³⁴ is in the public interest, and will not interfere with any existing legal use of water, by providing reasonable assurances, on both an individual and a cumulative basis, that the water use: (a) Is necessary to fulfill a certain reasonable demand; (b) Will not cause quantity or quality changes which adversely impact the water resources, including both surface and ground waters; (c) Will not cause adverse environmental impacts to wetlands, lakes, streams, estuaries, fish and wildlife or other natural resource; (d) Will comply with the provision of 4.3 of the Basis of Review described in Rule 40D-2.091, F.A.C.;³⁵ (e) Will utilize the lowest water quality the Applicant has the ability to use; (f) Will not significantly induce saline water intrusion; (g) Will not cause pollution of the aquifer; (h) Will not adversely impact offsite land uses existing at the time of application; (i) Will not adversely impact an existing legal withdrawal; (j) Will utilize local water resources to the greatest extent practicable; (k) Will incorporate water conservation measures; (l) Will incorporate reuse measures to the greatest extent practicable; (m) Will not cause water to go to waste; and (n) Will not otherwise be harmful to water resources within the District.³⁶

B. Minimum Flows and Levels

Once again drawing from the concepts extolled in *A Model Water Code*, a statute mandating the Water Management Districts to establish minimum flows and levels for each surface water and aquifer within their jurisdiction was also passed into state law in 1972.³⁷ A minimum flow is the flow for a surface waterbody that is

33. FLA. STAT. ch. 373.0831 (2001).

34. “Reasonable-beneficial use” is a term of art that F.S. 373.019(13) defines as “the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest.”

35. FLA. ADMIN. CODE r. 40-D-2.091 incorporates by reference the District’s “Basis of Review for Water Use Permit Applications” of April 18, 2001 into chapter 40D. The document can be found at <http://www.swfwmd.state.fl.us/rules/rules.htm>. 4.3 requires buildings to be elevated as a flood protection measure.

36. FLA. ADM. CODE r. 40D-2.301.

37. FLA. STAT. ch. 373.042 (2003).

the boundary at which any further withdrawals from the waterbody would result in significant harm to the water resources or ecology of the area. A minimum level, for aquifer groundwater and surface water, is the level at which any further withdrawals would result in significant harm to the area's water resources. The "significant harm" standard of the statute is the one notable distinction between it and the original idea contemplated by *A Model Water Code*, which used a lower bar of mere "harm" to mark the minimums.³⁸

Unfortunately, despite the 1972 enactment, the statutory mandate went largely unheeded for two decades. One writer has conjectured that this was due to the separation between MFLs and the State Water Use Plan imposed when the state legislature wrote them into law. "[I]t is likely that the drafters of the MWC intended MFLs to be part of a comprehensive water resource protection program."³⁹ MFLs and water supply planning were reunited in the 1997 legislative revision.⁴⁰

The spur to Water Management District action on MFLs came via a 1993 case in which the Fifth District Court of Appeal of Florida held the legislature intended establishment of MFLs to be mandatory.⁴¹ The court also decided that the lack of a statutory deadline for the establishment of MFLs meant that the WMDs were to "act within a reasonable time."⁴²

Various factors for determining MFLs are enumerated in the Florida Administrative Code. These include recreation in and on

38. Cecile I. Ross, *Minimum Flows and Levels*, in 1 FLORIDA ENVIRONMENTAL & LAND USE LAW 13-3 (Florida Bar Environmental and Land Use Law Section, 2001), at 13.3-2.

39. *Id.* at 13.3-3.

40. Note language at FLA. STAT. ch. 373.036: (2) DISTRICT WATER MANAGEMENT PLANS:

(a) Each governing board shall develop a district water management plan for water resources within its region, which plan addresses water supply, water quality, flood protection and floodplain management, and natural systems. The district water management plan shall be based on at least a 20-year planning period, shall be developed and revised in cooperation with other agencies, regional water supply authorities, units of government, and interested parties, and shall be updated at least once every 5 years. The governing board shall hold a public hearing at least 30 days in advance of completing the development or revision of the district water management plan.

(b) The district water management plan shall include, but not be limited to:

1. The scientific methodologies for establishing minimum flows and levels under s. 373.042, and all established minimum flows and levels; and F.S. 373.0361(2)(g), requiring each regional water supply plan to include "The minimum flows and levels established for water resources within the planning region."

41. *Concerned Citizens of Putnam County for Responsive Government, Inc. v. St. Johns River Water Management District*, 622 So.2d 520 (5th Fla. Dist. Ct. App. 1993).

42. *Id.* at 523.

the water; fish and wildlife habitats, including fish passage; estuarine resources; transfer of detrital material; maintenance of freshwater storage and supply; aesthetic and scenic attributes; filtration and absorption of nutrients and other pollutants; sediment loads; water quality; and navigation.⁴³

C. Water Reservations

The legislature has granted WMD governing boards and the DEP power to reserve water, in space, time, or quantity, from use by consumptive use permittees. The power to reserve water in this fashion is subject only to “periodic review and revision in the light of changed conditions” and a restriction that protects existing legal water uses that are not contrary to the public interest.⁴⁴ Despite its seldom use, this power has nonetheless come under recent attack by lawmakers, who sought to repeal the statute in the 2003 legislative session, but were unsuccessful.⁴⁵

IV. THIRSTING FOR LIQUID LIGHT: THE BOTTLED SPRING WATER INDUSTRY IN FLORIDA

The bottled water industry has witnessed enormous growth in the past few decades, from producing less than 500,000 gallons in 1976 to producing almost 3,500,000 gallons in 1997.⁴⁶ The federal government regulates the industry primarily through the Food and Drug Administration. The FDA has established rules on the quality of various bottled waters for health safety purposes. These rules include definitions differentiating bottled water products, such as artesian water, ground water, and spring water. According to the FDA, “water derived from an underground formation from which water flows naturally to the surface of the earth” may be labeled as “spring water.”⁴⁷ The agency further mandates that:

Spring water shall be collected only at the spring or through a bore hole tapping the underground formation feeding the spring. There shall be a natural force causing the water to flow to the surface through a natural orifice. . . . Spring water collected

43. F.A.C. 62-40.473.

44. FLA. STAT. 373.223(4) (2003).

45. H.B. 1005, 2003 Reg. Sess. (Fla. 2003).

46. Natural Resources Defense Council, *Bottled Water: Pure Drink or Pure Hype?*, available at <http://www.nrdc.org/water/drinking/bw/chap2.asp> (last visited December 2, 2001). This figure represents all bottled waters, not solely bottled spring water.

47. 21 C.F.R. § 165.110(2)(vi) (2001).

with the use of an external force shall be from the same underground stratum as the spring, as shown by a measurable hydraulic connection using a hydrogeologically valid method between the bore hole and the natural spring, and shall have all the physical properties, before treatment, and be of the same composition and quality, as the water that flows naturally to the surface of the earth. If spring water is collected with the use of an external force, water must continue to flow naturally to the surface of the earth through the spring's natural orifice.⁴⁸

Despite the FDA's efforts in the mid-90s, special interest groups continue to accuse the bottled water industry of using packaged water to prey upon the public via misconceptions regarding the health value of the product. One of the most high-profile critics has been the Natural Resources Defense Council, which in its report, *Bottled Water: Pure Drink or Pure Hype?*, stated, "No one should assume that just because water comes from a bottle that it is necessarily any purer or safer than most tap water. Testing commissioned by NRDC and studies by previous investigators show that bottled water is sometimes contaminated." The NRDC study adds that there are "gaping holes in federal regulatory controls for bottled water" and harshly criticizes "the trivial FDA resources dedicated to protecting bottled water." The NRDC ultimately recommends that regulators ensure the safety of the public drinking water supply so that the public will not feel the need to purchase bottled water.⁴⁹

In addition to government regulation, an industry group, the International Bottled Water Association, has promulgated a model code.⁵⁰ Unfortunately, like the FDA standards, this model code is overwhelmingly concerned with water quality in terms of product contamination and does not address issues of resource environmental protection and sustainable corporate practices.

As the bottled water industry has grown it has had to find new sources for its spring water products and increase production at sources already in use. The following series of case studies illustrates the impact that the bottled water industry has had on local Florida communities.

48. *Id.*

49. Natural Resources Defense Council, *Bottled Water: Pure Drink or Pure Hype?*, available at <http://www.nrdc.org/water/drinking/nbw.asp> (last visited June 3, 2001).

50. International Bottled Water Association, *IBWA Model Bottled Water Regulation*, available at <http://www.bottledwater.org/public/indreg.html> (last visited May 25, 2001).

A. *Crystal Springs*

Crystal Springs is situated off the Hillsborough River in Pasco County, near the towns of Zephyrhills and Crystal Springs. Although privately owned, the springs were for a long time operated as a park for swimming and picnicking. Partially lined in concrete, the bowl of the multi-vented springs measures approximately 400 by 150 feet.⁵¹ Average discharge between the years of 1923 and 1974 equaled 60 ft³/sec with a minimum of 20 ft³/sec recorded on July 1, 1946 and a maximum of 147 ft³/sec recorded on July 19, 1941.⁵²

Crystal Springs's modern history as a community resource began in 1911, when A.B. Hawk of Ohio began the Co-operative Homestead Company and marketed the Crystal Springs Colony on 24,000 acres surrounding the springs.⁵³ As incentive, Hawk guaranteed his buyers "perpetual access to the springs with their purchase . . . which would forever provide homesteaders with clean water to drink and a swimming hole to enjoy."⁵⁴ He failed to deliver on his promise, however, and as Hawk became unable to meet his debts with his land sales, he reformed the venture. During the 1920s, the rights to the springs were signed over to the new company and then sold.⁵⁵

After changing hands several times, Crystal Springs was purchased in 1975 by Robert Thomas, who continued to maintain the property as a park open to the general public under the name Crystal Springs Recreational Preserve (CSRP).⁵⁶ That arrangement changed in 1996, when access to the springs by the recreating public was barred by gate and lock.⁵⁷ Thomas announced various reasons for the closure, including fear of legal liability for accidents (the potential for damages in lawsuits, he contended, could not be covered by the revenue generated by the park's small admission charge,⁵⁸ a need to study and preserve the springs, and plans to

51. JACK C. ROSENAU ET AL., SPRINGS OF FLORIDA (U.S. Geological Survey, Bull. No. 31, 1977).

52. *Id.*

53. Save Our Springs, *Crystal Springs History*, at <http://www.saveourspringsinc.org/history.htm> (last accessed January 13, 2002).

54. *Id.*

55. *Id.*

56. *Id.* It seems that the park under Thomas was run with, at the very least, a modicum of environmental stewardship, as Goggin records the park as having both capacity and erosion control policies at the time of her research. Susan Elizabeth Goggin, A Comparison Analysis of Property Arrangements and Resource Management of Florida Springs 56, 57 (1992) (unpublished M.S. thesis, Florida State University) (on file with the Florida State University Library).

57. *Id.*

58. *Crystal Springs: Public Swimming Area or Preserved Private Land?*, ASSOCIATED

construct a nature center on site. Whatever the motivation, the decision to close the preserve angered many local citizens, who had their own suspicions as to why the park had been locked.

Since the 1980s, Thomas sold water from the springs to a local bottler, the Zephyrhills Spring Water Company.⁵⁹ Perrier Group of America, a subsidiary of Nestlé, then bought the Zephyrhills Spring Water Company in 1987. Nestlé Corporation is a European company that produces not only the popular Perrier bottled waters but the European water brands S.Pellegrino, Vittel, Acqua Panna, and the Canadian brand Aberfoyle.⁶⁰ In addition to Zephyrhills, Perrier markets the American water brands Arrowhead (source: San Bernadino Mountains), Calistoga (a mineral water from the Napa Valley in California), Deer Park (source: an Allegheny Mountain spring near Deer Park, Maryland), Great Bear, Ice Mountain, Oasis (from Texas), Ozarka (also a Texas water) and Poland Spring (spring water from Maine).⁶¹ In its corporate information, The Perrier Group of America promotes itself as an environmentally-sensitive company, and its corporate website is rife with claims of environmental consciousness on the part of the bottler.⁶²

Perrier's demand for water has grown greater over time, and in 1997 CSRP, on behalf of Perrier, applied for an increase in the amount of water that SWFWMD would allow it to pump from the spring—from 300,000 gallons per day (gpd) to a whopping 1.8 million gallons per day (mgpd), ultimately increasing to 2.6 mgpd in the last four years of the ten-year permit. Critics speculated that the preserve was closed in order to protect Perrier's activities from prying eyes. Out of this speculation, Save Our Springs, Inc. (SOS) was born.

PRESS, June 29, 1999, available at http://www.polkonline.com/stories/062999/sta_springs.shtml; The admission fee in 1992 was \$2.00. Susan Elizabeth Goggin, *A Comparison Analysis of Property Arrangements and Resource Management of Florida Springs 54* (1992) (unpublished M.S. thesis, Florida State University) (on file with the Florida State University Library).

59. David Pedreira, *Residents Show Water Company Their Anger*, TAMPA TRIBUNE, March 13, 1997.

60. Perrier Group of America, *Our Imported Waters*, at <http://www.perriergroup.com/waters/imports/default.asp> (last accessed January 13, 2002).

61. Perrier Group of America, *Our Domestic Waters*, at <http://www.perriergroup.com/waters/us/default.asp> (last accessed January 13, 2002).

62. For example, "A Message from the President" quotes Perrier Group of America President and CEO Kim E. Jeffery as stating, "We are very proud of being a spring water company, and of the environmental stewardship we practice at our sources. Every decision about our springs is based on sound science and the result is that we only collect what nature can safely replenish. This ensures that our sources will always be there for future generations."

SOS is a citizens' activist group primarily opposed to the closure of the Crystal Springs park and to the consumptive use of Crystal Springs water by Perrier. Its official policy statement cites environmental concerns as the rationale for its strident efforts to bring down the Perrier enterprise.⁶³ Among the litany of ills that SOS uses to support its position are decreased spring flow, reduced input to the Hillsborough River (depriving the region of drinking water), the capacity of the borehole technique to remove water faster than natural processes can replace it,⁶⁴ harm associated to wildlife and to ecosystems such as wetlands, and increased saltwater intrusion.

To express its opposition, SOS has mounted protests, petitions,⁶⁵ and, most expansively, a boycott of Perrier products. The group instructs concerned consumers to "Boycott the water miners!!! And help take back your 'natural right' . . . an unspoiled earth."⁶⁶

In 1997, the Florida Department of Protection (DEP) began investigating the possibility that the state might have a legitimate claim to ownership of the springs based on the navigability of the spring run.^{67, 68} By virtue of the public trust doctrine, submerged

63. The "Policy of Save Our Springs, Inc." reads: "Waters of the Crystal Springs shall be considered to be put to the most reasonable and beneficial use by being allowed to flow freely into the Hillsborough River. Save Our Springs, Inc., contends that the most reasonable and beneficial use of the waters of Crystal Springs is to supply and nourish the Hillsborough River in an unobstructed and undiminished volume, just as they did before civilization appeared. Save Our Springs, Inc. will take any action deemed necessary to inform, educate and encourage any interested party about returning springs around our state to their historical flows. Save Our Springs, Inc. wants all springs open to the public because the magic of the springs can not be appreciated if the people can not visit and enjoy them at their leisure. Save Our Springs, Inc. considers the most reasonable and beneficial use of Crystal Springs waters is to help dilute the phosphate contamination released in the Hillsborough River by the phosphate industry. Save Our Springs, Inc. believes the most unreasonable and non-beneficial use of Crystal Springs is to be bottled, shipped, and sold, never to return to our aquifer again." Save Our Springs, *Policy of Save Our Springs, Inc.*, at <http://www.saveourspringsinc.org/home.htm> (last visited November 29, 2001).

64. It is this technique, particularly offensive to critics such as SOS, which is known as "water mining."

65. Save Our Springs, *Petition Against Pumping Increase*, available at <http://www.saveourspringsinc.org/email.htm> (last visited January 13, 2002).

66. Save Our Springs, *Introduction Page*, at <http://www.saveourspringsinc.org/> (last visited November 29, 2001).

67. See FLA. STAT. ch. 253.12 (2003), "Except submerged lands heretofore conveyed by deed or statute, the title to all sovereignty tidal and submerged bottom lands, including all islands, sandbars, shallow banks, and small islands made by the process of dredging any channel by the United States Government and similar or other islands, sandbars, and shallow banks located in the navigable waters, and including all coastal and intracoastal waters of the state and all submerged lands owned by the state by right of its sovereignty in navigable freshwater lakes, rivers, and streams, is vested in the Board of Trustees of the Internal Improvement Trust Fund." See also FLA. STAT. ch. 177.28(1) (2003), "Mean high-water line along the shores of land immediately bordering on navigable waters is recognized and declared to be the boundary between the foreshore owned by the state in its sovereign capacity and upland

lands beneath navigable waters belong to the state to administer in the public interest. Legal navigability in this instance means that, "In general, bodies of water that at the time of statehood in 1845 were used or capable of being used in their ordinary and natural condition for trade or travel by the means common in the local area for waterborne transportation, are deemed navigable."⁶⁹ In 1998, the DEP decided that "based on our historic research and field trips, we cannot conclusively state that the river is navigable and therefore state-owned in the vicinity of the spring."⁷⁰

In January of 1999, SWFWMD denied CSRP's request to increase pumping six-fold on the basis that reasonable assurances had not been provided that the greater pumping would comply with conditions for consumptive use permit issuance under F.A.C. 40D-2.⁷¹ SWFWMD staff's primary concern was that increased pumping

subject to private ownership. However, no provision of this part shall be deemed to constitute a waiver of state ownership of sovereignty submerged lands, nor shall any provision of this part be deemed to impair the title to privately owned submerged lands validly alienated by the State of Florida or its legal predecessors." See also 78 Am. Jur. 2d WATERS § 60.

68. In her 1992 M.S. thesis, Susan Goggin almost presciently recognizes the potential for controversy that barriers to the public will bring to the Crystal Springs issue. "Springs are usually located adjacent to major navigable streams which are considered part of the Public Trust. . . . [S]prings with barriers include . . . Crystal Springs (Pasco County). It is not known whether any litigation has ensued over the presence of these barriers; there may be little advantage for an individual to file suit against the private owner when entrance fees are considerably less than the costs of a legal contest." There is no speculation as to what the balance of advantages is when there is no opportunity to simply pay an entrance fee for access. It is interesting to note that Goggin seems to assume navigability of the springs almost as by default and states, "Access to the springs from navigable runs must be ensured—otherwise, there is a net loss of the resource to society, and an advantage to the private landowner." Susan Elizabeth Goggin, *A Comparison Analysis of Property Arrangements and Resource Management of Florida Springs 46-49* (1992) (unpublished M.S. thesis, Florida State University) (on file with the Florida State University Library).

69. Richard Hamann & Jeff Wade, *Ordinary High Water Line Determination: Legal Issues*, 42 Fla. L. Rev. 323 (1990).

70. James Thorner, *Perrier Clears Water Rights Hurdle*, ST. PETERSBURG TIMES, October 13, 1998, available at http://www.sptimes.com/Pasco/101398/Perrier_clears_water_.html. SOS disputes this decision, claiming that photos, maps and anecdotal accounts of area old-timers show otherwise. The group also finds fault with the manner in which the DEP conducted its field research into the matter, such as attempting to conduct a boat trip on the water in the middle of the dry season. SOS has since made efforts to get the federal government to step in where the state declined; *Morrill v. Ball*, No. 73-401 (Wakulla County Cir. Ct. June 29, 1973); It appears that this did not quell all claims of state interest in the parcel as in August of 1999, CSRP filed a Motion for Partial Summary Final Order during the proceedings of its DOAH appeal "suggesting that issues raised by the [Southwest Florida Water Management] District as to whether Crystal Springs is within sovereign lands of the State of Florida [were] beyond the jurisdiction of the District and therefore not properly" within the bounds of the hearing. This resulted in a stipulation among the parties that this particular issue would be dropped from the purview of the DOAH proceeding. *Crystal Springs Recreational Preserve, Inc. v. SWFWMD*, 2000 Fla. Div. Adm. Hear. LEXIS 4935, 3 (DOAH 2000).

71. *Id.* at 2.

from a spring feeding the Hillsborough River, an important water source for the City of Tampa, would negatively impact the water supply for the populace.⁷² The agency also decided that the application had not demonstrated reasonable assurances that the increase was necessary to fulfill a certain reasonable demand, that the increase would not cause a change in water quality or quantity such that there would be no adverse impact on surface and groundwater resources, that the increase would not adversely impact wetlands, wildlife, and other natural resources, and that the increase would not cause salt water intrusion in the aquifer.⁷³

Unhappy with SWFWMD's decision, Thomas appealed to the Florida Department of Administrative Hearings (DOAH), contending that, in fact, the application had included the reasonable assurance necessary for increased pumping approval. In addition to its original argument, CRSP was allowed to add "allegations challenging the manner in which the District applied the applicable statutes and rules to the Application," although its motion to include an amendment attacking the validity of F.A.C. Rule 40D-2.301 itself was denied.⁷⁴ Although the administrative judge would ultimately disagree with the agency,⁷⁵ SWFWMD was allowed to add to its arguments that CRSP failed to provide reasonable assurances concerning water conservation measures and water waste in addition to the other application deficiencies.⁷⁶

Though SOS is perhaps the most persistently vocal critic of CRSP, it was a Pasco County citizen, Stewart Loeblich, and a regional water supply authority, Tampa Bay Water, that joined the proceeding as intervenors on the side of the water management district.⁷⁷

In early 2000, the administrative law judge issued his recommendation "that the Southwest Florida Water Management District enter a final order determining that Crystal Springs Recreational Preserve, Inc., has failed to satisfy the requirements . . . regarding conditions for issuance of water use permits, and

72. A SWFWMD report stated that the application requesting the permit modification did "not provide reasonable assurance that the proposed withdrawal . . . will not interfere with the City's existing legal withdrawal by reducing the existing water supply available to the City, or causing the City to increase measures to augment the volume of water in the reservoir." *Swiftmud: Perrier Too Thirsty*, TAMPA TRIBUNE, January 26, 1999, available at <http://archive.tampatrib.com/>.

73. *Crystal Springs Recreational Preserve, Inc. v. SWFWMD*, 2000 Fla. Div. Adm. Hear. LEXIS 4935, 22 (DOAH 2000).

74. *Id.* at 3.

75. *Id.* at 85.

76. *Id.* at 22, 23.

77. *Id.*

deny” the request for permit modification.⁷⁸ The judge found that, among other failings, the application for modification had not shown that the increase was necessary to meet a certain reasonable demand,⁷⁹ and although it was successful in demonstrating that there would be no changes in quality to water resources, it did not show that the increase would not adversely impact quantity.⁸⁰ Perhaps most importantly, the application did not show that the increase would not adversely impact an existing legal withdrawal (i.e., the Tampa water supply).⁸¹

Not surprisingly, Thomas took advantage of the availability of appeal to the Second District Court of Appeal of Florida. In the midst of these proceedings, Thomas was cited by SWFWMD for overwithdrawal from the springs. The amount of overdraw was relatively small — about 5,000 gpd too much in July of 2000 and 3,000 gpd in August — and the operation swiftly came back into compliance.⁸² However, the incident only exacerbated the Zephyrhills Water public relations problem. The president of SOS stated her belief that, despite Thomas’s claim, the overdraw was no accident.⁸³

In February of 2001, the 2nd DCA returned its decision without a published opinion: a per curiam affirmance of the DOAH recommendation to deny the permit modification.⁸⁴ Two months later, SWFWMD gave approval for the Preserve to withdraw up to an additional 30,000 gpd, provided that the operation return an equal amount of water from outside the Hillsborough River basin of comparable quality in order to prevent a net loss.⁸⁵

B. Three Sisters Springs

Three Sisters Springs, also known as Middle Springs, is part of the Crystal River Springs Group, a series of thirty springs in the vicinity of Kings Bay, the origin of the Crystal River. This area is a famous wintering spot for the Florida manatee (*Trichechus manatus*), as the area springs keep the bay warmer than the Gulf of Mexico at that time of year. The density of manatees has made

78. . at 112.

79. *Id.* at 33.

80. *Id.* at 49.

81. *Id.* at 81.

82. Brady Dennis, *Rancher Lets Too Much Spring Water Be Taken*, ST. PETERSBURG TIMES, October 5, 2000, available at <http://pqasb.pqarchiver.com/sptimes/>.

83. *Id.*

84. *Crystal Springs Recreational Preserve, Inc. v. SWFWMD*, 782 So. 2d 390 (2nd Fla. Dist. Ct. App. 2001).

85. Neil Johnson, *More Pumping at Crystal Springs OK'd*, TAMPA TRIBUNE, April 26, 2001, available at <http://drought.tbo.com/drought/MGAD3XJKYLC.html>.

the area a popular draw with tourists, and the springs have been described by enthusiasts as “a string of blue sapphires, . . . spectacular blue oases of pristine water”⁸⁶

Beginning in 1998, landowner Harvey Goodman began seeking a permit from SWFWMD to pump 1.2 mgpd from the spring but later revised the request to start at 100,000 gpd in year one and increase over ten years to 426,000 gpd. From early on the state had sought to buy the land but could not come up with a sum competitive to the worth of the parcel as it could be developed. Thus, Mr. Goodman’s attorney stressed that water bottling was the environmentally sensitive choice for the parcel, which could otherwise be developed for the real estate market. SWFWMD originally denied the permit and Goodman appealed to DOAH. Save the Manatee Club intervened in the process but the case never reached a hearing. Instead it was dismissed as SWFWMD reached a settlement with Goodman in 2001 to allow pumping from a lake sharing the property with the spring. Predictably, this result met with mixed reaction from the public.

C. Rainbow Springs

Rainbow Springs is located north of Dunnellon in Marion County. Dunnellon is known as the “Boomtown of the 1890s” because of the thriving phosphate industry located there in that era. Because of the interest in the area at that time, Rainbow Springs is distinguished among many of the other Florida springs for its rich human history. The period of record for the springs stretches back to 1898.⁸⁷ Rainbow Springs averages a discharge of 763 ft³/sec and a temperature of 73° F.⁸⁸ The springs feeds the Rainbow River (sometimes known in the past as Blue Run), a 5.7 mile body that snakes to the Withlacoochee River. Rising from the Green Swamp and flowing north, the Withlacoochee is one of several rivers emptying freshwater into an estuary that reaches from the Anclote Keys off of Pinellas County to the Ochlocknee River in Florida’s Big Bend region.⁸⁹

Broadest at the headsprings, the Rainbow River ranges between 150 and 250 feet in width.⁹⁰ The headsprings spews remarkably soft

86. Joe Follman & Richard Buchanan, *Three Sisters Springs*, at <http://tfn.net/Springs/ThreeSisters.htm> (last visited February 18, 2003).

87. JACK C. ROSENAU ET AL., SPRINGS OF FLORIDA (U.S. Geological Survey, Bull. No. 31, 1977).

88. *Id.* The discharge has ranged from a low of 487 to a high of 1230 ft³/sec.

89. Robert J. Livingston., *Inshore Marine Habitats*, in ECOSYSTEMS OF FLORIDA 554 (Ronald L. Myers & John J. Ewel eds., University of Central Florida Press 1990).

90. JACK C. ROSENAU ET AL., SPRINGS OF FLORIDA (U.S. Geological Survey, Bull. No. 31,

water compared to other Florida springs, even those present further downstream the Rainbow River. An early study suggests that the spring is recharged by aquifer through rainfall over a 645 mi.² area generally towards the north/northeast of the springs.⁹¹

Prominent citizen Albertus Vogt recorded his impressions of the springs and river in 1888:

Immediately at the head of the springs are beautiful residences, lit by gas, with dancing pavilions, pleasure boats, and post-office stores. Stone terraces encompass the springs.

A railroad track barely keeps out of the beautiful clear waters, so near is its approach, and as we float with the current down the stream we find orange groves and villas on the magnificent bluffs where we used to hunt. We have never passed over this wonderful river but what we've found something along the banks or in the depths more beautiful than anything we'd ever seen before and to us entirely new.⁹²

In February 2000, landowner Joe Priest requested a special use zoning permit from Marion County to lease a parcel of Rainbow Riverfront land to the Zephyrhills Water Company for bottled water withdrawal. The County denied the permit and Priest sued in Circuit Court. The Court found for Priest, unconvinced by the county's claims about road impacts from additional truck traffic. On appeal to the 5th District Court of Appeal, the county was successful in having the ruling overturned. The Court was apparently swayed by the concerns of 3 citizens bolstering the county's claims. Priest appealed to the Florida Supreme Court, but the court declined to accept jurisdiction, and so did not review the decision.

Does this mean that Rainbow Springs has been protected? Maybe not. Left without the opportunity to develop the bottling interest, Priest has claimed that he will pursue residential development as an alternative, an alternative that brings with it its own problems and is likely to be more difficult to keep at bay.

1977).

91. *Id.*

92. J. LESTER DINKINS, DUNNELLON: BOOMTOWN OF THE 1890'S 50 (Great Outdoors Pub. Co. 1969) (1997).

D. Silver Springs

*“The water is of a high degree of purity, crystal-clear; so clear, indeed, that photographs and motion pictures can be taken under water almost equally as well as in the open air.”*⁹³

*“The waters of Silver Springs teem with a great variety of fish, swarms of which are visible at depths of 40 feet or more through the glass bottoms of the boats provided for visitors. The beautiful rock formations and the under-water vegetation add to the interest which everyone displays in this remarkable scenic wonder.”*⁹⁴

Silver Springs is one of the oldest and best-known Florida springs attractions. Steamboats were introduced to the area in 1860 and glass bottom boats originated at Silver Springs in 1878.⁹⁵ In the early era of cinema, Silver Springs became a popular setting for films including the *Tarzan* series of the 30s and 40s, *The Yearling*, and *The Creature from the Black Lagoon*. Silver Springs also shot to fame as the home of herpetologist Ross Allen, whose legacy lives on in reptile shows at the attraction today.⁹⁶

Lying northeast of Ocala in Marion County, Silver Springs is the headwater of the Silver River, a five-mile-long tributary of the Oklawaha River. The headspring is about 250 feet in diameter, around which survives the private Silver Springs attraction, featuring glass bottom boat tours and musical entertainment. A large chunk of the original attraction surrounding the Silver River has been turned over to the state, and is now featured as Silver River State Park. Discharge of the spring has ranged between 539 ft³/s and 1,290 ft³/s during the period on record.⁹⁷

Silver Springs also hosts one of the most recent bottled water controversies. In 2002, the Margaret C. Dickson Trust requested a 20-year consumptive use permit to pump 36.5 million gallons per year from a well within ¼ mile of Silver Springs. The St. Johns River Water Management District approved the permit, but the Marion County Board of County Commissioners, as in the Rainbow

93. FRANK PARKER STOCKBRIDGE & JOHN HOLLIDAY PERRY, *SO THIS IS FLORIDA* 204 (Robert M. McBride & Co. 1938).

94. *Id.* at 205.

95. Silver Springs, *Our History*, at <http://www.silversprings.com/index-flash.htm> (last visited February 17, 2004).

96. Silver Springs, *Attractions: Reptiles of the World*, at <http://www.silversprings.com/index-flash.htm> (last visited February 17, 2004).

97. JACK C. ROSENAU ET AL., *SPRINGS OF FLORIDA* (U.S. Geological Survey, Bull. No. 31, 1977).

Springs case, sought to block the venture by claiming that the amount to be pumped required a special use permit from the county that the Trust had not applied for. The Trust believed there was room for argument over whether a special use permit was in fact needed for a well of the size proposed.

The Marion County Board of Commissioners, represented by the County Attorney, was set to oppose the Dickson Trust and the St. Johns Water Management District in an administrative hearing in February of 2003. However, the parties resolved the dispute through settlement a month later that amended the Trust's consumptive use permit application so that the Trust would become a secondary user under the CUP of Silver Springs Regional Water and Sewer, Inc. The agreement also imposed additional responsibilities upon the Trust to improve roads used by its tanker trucks, remove septic tanks, limit the operating time of bottling operations, and buffer its filling facility.

V. PROBLEMS . . . AND SOLUTIONS?

One point is as clear as the water that flows from the springs: quantity must be given as much concern as quality. But how? Each of the case studies described above featured an array of players at various levels resorting to a mosaic of remedies on an ad hoc basis. Citizens form coalitions or speak as individuals before decisionmakers. Local governments block industry development through special use permits, administrative review, and by courting state-funded land acquisition. The Water Management Districts use standards set forth in the Florida Administrative Code to judge the Consumptive Use Permit applications of the industry. But this piecemeal fashion of response deals with only one conflict at a time. That is not necessarily a bad thing — environmental decisionmaking is complex, and sometimes the most sensitive and responsive decisionmaking processes are those undertaken on a case-by-case basis. But this approach is reactive, not proactive, and it has resulted in uneven water resource protection. Improvement will come only when the public and its governmental officials recognize and anticipate the growth of the bottled water industry.

A. Change Needed at Federal and Industry Levels

Big picture changes are necessary to ensure that springs resources in Florida and elsewhere in the nation are being afforded the best protection possible even while being used for commercial purposes. Industry groups and government regulators can take steps to improve stewardship across the multitude of spring water firms. The International Bottled Water Association should similarly

overhaul its model code to reflect a greater consciousness on the part of bottlers concerning the source of their profits. Urging more responsible stewardship for the resources will pay off with greater respect from aware consumers, and with neighbors in the communities the water firms set up shop.

At the federal level, a reconsideration of FDA rules is in order. Why is it important that “spring water” be taken from the spring or from the underground stratum from which the spring flows? If “spring water” is substantially similar to the water in the adjacent river or in the aquifer 6 miles away, why endanger the sensitive spring resource?

B. Maximizing the Mechanisms for Protection in Florida

While the impact of the bottled springwater industry is felt globally and nationally, because of the state’s unique resources — the young, porous karst landscape and the incomparable density of powerful springs — it is especially important that Florida policymakers carefully consider the consequences of encouraging the industry to grow within the state. The tools to protect spring water quantity exist, but they must be utilized, even maximized.

A moratorium on CUPs for bottlers should be considered until MFLs are set for the resource being affected. And CUPs should be issued following the highest standards: precautionary principle should be heeded. CUPs must take into account the effect pumping will have during worst-case scenario (drought) situations. A permit for 100 mgpd withdrawal might be fine during average or rainy years, but devastating during the periodic droughts experienced in Florida. As global climate change occurs, this may have increasingly magnified effects.

While minimum flows and levels should be set for a particular water body before a CUP affecting that water body is issued, MFLs can not be relied upon as the sole indicator of the health of a water body. Several commentators have noted the shortcomings of MFLs and urge caution. At the 2nd Florida Springs Conference, Alik Moncrief of Earthjustice’s Tallahassee office reminded the audience that minimums are just that and that we need to aim higher in protecting the state’s water resources.⁹⁸ Douglas E. Barr, Executive Director of the Northwest Florida Water Management District echoed these concerns at the first Florida Water Congress a year

98. Alik Moncrief, Protecting Spring Flow, Presentation to the 2nd Florida Springs Conference (February 7, 2003).

later when he encouraged protecting the range of flows, not just the minimum.⁹⁹

Governments and the Water Management Districts are faced, however justly, with the fact that the spring water industry is emerging as a new locally unwanted land use (LULU). State agencies must embrace without hesitation their role as conservation stewards. This means utilizing the tools given them by the legislature boldly and unapologetically. Water reservations should be made as scientific data flows in on the importance of water quantity for healthy Florida ecosystems. This necessitates protecting the legislative authority for creating reservations, even while the power to reserve remains dormant.

C. Land Use Controls

Given the outcry in not only Florida, but in other states where water bottling is a growth industry (notably California, Texas, and Pennsylvania), state regulatory agencies should reevaluate their preparedness to handle present and future controversies. Land use controls are one approach, but are limited in what they can achieve as far as springs protection, especially in regards to quantity. Proposals have been made to introduce a Florida Springs Protection Act into the legislature that would amend the comprehensive planning statutes of Chapter 163 to expressly enable local governments to plan for the protection of springs and springsheds. Suggested language mandates future land use plans to include land use strategies and development controls to protect springs against incompatible land uses and land use activities that may directly or indirectly adversely impact the spring's water quantity and other characteristics. Additionally, the planning firm of Lane Kendig, Inc. submitted a "Proposal to Produce a Model Land Use Code to Protect Florida's Springs" to the Florida Department of Community Affairs in August 2003. However, the question will remain for local governments to decide: is water bottling an incompatible land use in springsheds?

Most governmental entities seem to have recognized that the answer to that question is not black or white, but lies in a vast gray area. Local governments are learning this as their interest in monitoring the consumptive use of water increases. In 2001, the Board of County Commissioners of Alachua County considered its limited ability to regulate water withdrawals. In revising the county's comprehensive plan, the Board struck language stating

99. Douglas E. Barr, Remarks During State of the Art: A Water Management Update, Florida Water Congress (December 4, 2003).

that “Alachua County shall rely upon the WMDs to permit and monitor large volume withdrawals of ground water” and adopted a policy reading: “The County shall take an active role in participating in water management district review, permitting and maintenance of operations such as bottled water plants and mining activities that use large volumes of ground water on an ongoing basis.”¹⁰⁰ This policy language strikes a balance that shies away from condemning local bottled water industry, but indicates the county government’s guardedness to wholesale acceptance of the activity.

As William Whipple cautioned in his 1996 book, *Comprehensive Water Planning Regulation: New Approaches for Workable Solutions*, “[G]eneral land use planning is not water resource planning; and it is not easy to see how advanced land use plans could be implemented within our present institutional framework for water resources. . . . It should not be assumed that comprehensive planning is all-inclusive.” Whipple did not have his eye on Florida in particular — he was commenting on the state of planning in the nation as a whole — but still the criticism is appropriate in this context: land planning alone will not solve conflicts with the water bottling industry. Enabling local governments to plan for springs protection may be best suited for protecting water quality and for monitoring inputs to the aquifer, but it remains to be seen whether this strategy can guard against the bottled water industry’s consumptive use from becoming overuse.

D. Land Acquisition

Acquisition of the sensitive lands surrounding a spring and those contributing to the recharge of the spring’s aquifer by state or private conservation organizations is important for the long-term protection of the resource. This is made evident in the case studies presented herein, and by many other acquisition projects not discussed are playing a role in saving the springs: the state’s Florida Springs Coastal Greenway project, for example, protects the springs associated with the Homosassa and Crystal Rivers in Citrus County,¹⁰¹ while the Gulf Coast Conservancy has been instrumental

100. *Amendments to the Alachua County Comprehensive Plan, Conservation & Open Space Element, Policy 4.5.10(3), Adopted April 8, 2002, available at* http://growth-management.alachua.fl.us/complanning/amended_docs/COSE%20GOPS%204-8-02.pdf (last visited February 5, 2004).

101. Florida Department of Environmental Protection, *Florida Springs Coastal Greenway Expands Boundaries, available at* http://www.dep.state.fl.us/secretary/comm/2004/feb/0206_greenway.htm (last visited February 9, 2004).

in connecting the Weeki Wachee Preserve to a larger network of conservation lands in the Nature Coast Greenway and Wildlife Corridor.¹⁰²

While the state, through its agencies, the WMDs and DEP, often take the lead, contributions from private land trusts and individuals are important and have the potential to spearhead protection efforts when politics or budget shortfalls prevent state agencies from doing so. In Missouri, for instance, a private individual purchased a 6900 acre parcel surrounding Greer Spring on the Eleven Point River for the express purpose of preventing Anheuser-Busch from bottling and selling the spring's water. "Godfather of Missouri Conservation"¹⁰³ Leo Drey "bought the land for 4.5 million dollars, held it until the federal government would authorize a repurchase, then sold it to the federal government in early 1993 for 3.5 million dollars."¹⁰⁴

To understand the benefit of land acquisition, one need only look to Florida's Fanning Springs, a relatively recent acquisition to the state park system. Once under the state's control, an existing CUP attached to the spring was voluntarily relinquished. Because the state manages lands for the benefit of the public as a whole, has the wherewithal to manage springs as parks open to the general public, and is accountable to the voters and taxpayers in ways that corporations and private trusts could never be, it is less inclined to resort to the corporate activity of mass-production of bottled spring water that many citizens find so objectionable.

With any call for land acquisition programs there is the inevitable question regarding how to pay for it. In this case, the natural answer that has been proposed is to tax bottled water to fund state acquisition and management of sensitive, high recharge lands. Taxes are never universally well-received, and the bottled water industry would likely resist any movement towards such. But given that consumers have willingly shelled out dollars for what they can receive at home for fractions of a penny, it stands to reason that the market can bear a small tax on the sale of what is largely a luxury item.

What is clear is that Florida is a state of vast wealth in terms of natural resources, and water is ever more valued as an asset of that wealth. The state, in its form as both the government and the

102. The Gulf Coast Conservancy, *Accomplishments*, at <http://www.gulfcoastconservancy.org> (last visited February 17, 2004).

103. Senate of Missouri, *Resolution No. 18, January 12, 1997*, available at <http://www.senate.state.mo.us/97info/journals/DAY03.htm>.

104. John W. Ragsdale, Jr., *The Buffalo River: A Jurisprudence of Preservation*, 21 B.C. Env'tl. Aff. L. Rev. 429.

populace, must appreciate the value of the spring water resources now, for it is certain that the bottled water industry has already done so and is planning its future accordingly. For some communities, inviting the bottled water industry in may be a desirable means to prevent the rural landscape that envelops the springs from being platted and paved over. These communities must then set into place solid policies for monitoring this industry and ensuring that it and its resource are sustainable. Other communities, that decide they would rather not share the springs resource with corporate bottlers, must be proactive in protecting the springsheds through careful comprehensive planning and land acquisition. What is apparent is that in either direction, Florida must confront its responsibility to act as steward for the blue jewels set within its forests and river basins. And Florida must confront it now, before it wakes to find its responsibilities abdicated to amoral corporate governance, and disappeared with those responsibilities, Florida's privilege to enjoy these spoils of nature, these bowls of liquid light.