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Sharing the Cup: A Proposal for the Allocation of Florida's Water Resources

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FLORIDA STATE UNIVERSITY LAW REVIEW



SHARING THE CUP:
A PROPOSAL FOR THE ALLOCATION OF
FLORIDA'S WATER RESOURCES

Ronald Christaldi

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SHARING THE CUP: A PROPOSAL FOR THE ALLOCATION OF FLORIDA'S WATER RESOURCES

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I. INTRODUCTION

Florida's population has grown immensely over the past forty years.¹ The state's warm climate and extensive beaches have attracted new citizens from across the nation. By the year 2000, Florida's population is expected to surpass fifteen million.² Because water is a basic necessity for human existence, this increase in population has led directly to an increase in the consumptive use of water.³ Florida has a seeming abundance

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1. In the 40 years between 1950 and 1990, the population in Florida increased nearly 370 percent. Memorandum from Becky Everhart, Chief Legislative Analyst, Fla. H.R. Select Comm. on Water Policy, to Committee Members, Fla. H.R. Select Comm. on Water Policy (Sept. 11, 1995) (on file with comm.) [hereinafter Everhart Memo]. Florida's population in 1950 was 2.77 million; in 1990, it was 12.94 million. 1990 FLORIDA CENSUS HANDBOOK 3 (1994) [hereinafter CENSUS].

2. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, WATER WITHDRAWALS IN FLORIDA DURING 1990, WITH TRENDS FROM 1950 TO 1990, OPEN-FILE REPORT 92-80 (on file with dep't).

3. Everhart Memo, *supra* note 1, at 1. Consumptive use is defined as "any use of water which reduces the supply from which it is withdrawn or diverted." FLA. ADMIN. CODE ANN. r. 62-40.210(2) (1995). Water is defined as "any and all water on or beneath the surface of the

of water;⁴ it receives an average of 175 billion gallons per day.⁵ In addition, Florida's aquifers⁶ contain more than a quadrillion gallons of water, which is 30,000 times the average daily discharge of Florida's thirteen largest rivers.⁷ Florida has 1700 streams and rivers and 7800 freshwater lakes.⁸ Yet, Florida withdraws only 18 billion gallons of water per day,⁹ only 7.5 billion gallons of which are fresh water.¹⁰

However, the apparent abundance of water in Florida is misleading. The water in Florida is generally located at a significant distance from densely populated areas. The population in Florida is concentrated mainly along its coastline. Of Florida's fifty most populous cities, twenty-two are located in the three southeastern coastal counties of Palm Beach, Dade, and Broward alone.¹¹ Additionally, the third and fourth largest cities in the state, Tampa and St. Petersburg, are located adjacent to each other on

ground or in the atmosphere, including natural or artificial watercourses, lakes, ponds, or dif-fused surface water and water percolating, standing, or flowing beneath the surface of the ground, as well as all coastal waters within the jurisdiction of the state." FLA. STAT. § 373.019(8) (1995). To date, the Florida Water Management Districts have indicated through their rules that they do not regulate the consumptive use of seawater. See, e.g., SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, WATER USE PERMIT INFORMATION MANUAL B-xiii (1994) (defining consumptive use as "[a]ny use of fresh or saline water which reduces the supply from which it is withdrawn or diverted") [hereinafter PERMIT MANUAL].

4. See *Deseret Ranches of Fla., Inc. v. St. Johns River Water Management Dist.*, 406 So. 2d 1132, 1139 (Fla. 5th DCA 1981); Richard G. Hamann, *Consumptive Water Use Permitting*, in FLORIDA ENVIRONMENTAL AND LAND USE LAW 10-1, 10-3 (1993); Andrew A. Dzurik, *Water Use and Public Policy in Florida*, in FLORIDA'S WATER FUTURE: CRISIS OR OPPORTUNITY? 17, 17 (1987); Richard C. Ausness, *The Influence of the Model Water Code on Water Resources Management Policy in Florida*, 3 J. LAND USE & ENVTL. L. 1, 3 (1987) (citing F. MALONEY ET AL., WATER LAW AND ADMINISTRATION—THE FLORIDA EXPERIENCE § 11 (1968)).

5. EDWARD FERNALD & DONALD J. PATTON, WATER RESOURCES ATLAS OF FLORIDA 12 (1984). The state receives an average of 150 billion gallons per day (bgd) in rainfall and 25 bgd inflow from Georgia and Alabama. *Id.*

6. Aquifers are defined as "[w]ater-bearing zones under the earth's surface capable of receiving, storing, and transmitting water." *Village of Tequesta v. Jupiter Inlet Corp.*, 371 So. 2d 663, 665 (Fla.) ("Most aquifers in Florida are cavernous limestone or sand and shale beds. Aquifers are separated by relatively impervious layers of shales and clays which are called aquicludes."), *cert. denied*, 444 U.S. 965 (1979). For a discussion of aquifers, see Paul R. Gougelman III, *The Partnership of Water and Land Management*, in FORGING PARTNERSHIPS IN LAND AND WATER MANAGEMENT: THE CENTRAL FLORIDA EXPERIMENT 4 (1987); David J.L. Blatt, *From the Groundwater Up: Local Land Use Planning and Aquifer Protection*, 2 J. LAND USE & ENVTL. L. 107, 110 (1986).

7. FERNALD & PATTON, *supra* note 5, at 39.

8. Everhart Memo, *supra* note 1, at 1.

9. FLORIDA STATISTICAL ABSTRACT 283 (1994).

10. *Id.* Of that 7.5 billion gallons of fresh water, 2.8 billion gallons are drawn from surface water and the remaining is drawn from groundwater. *Id.* The difference between the total water used per day and the freshwater used per day results from saline water use. *Id.*

11. CENSUS, *supra* note 1, at 532. Those cities are West Palm Beach, Boynton Beach, Delray Beach, Boca Raton, Coral Springs, Davie, Deerfield Beach, Ft. Lauderdale, Hollywood, Lauderhill, Margate, Miramar, Pembroke Pines, Plantation, Pompano Beach, Sunrise, Tamarac, North Miami Beach, North Miami, Hialeah, Miami Beach, Coral Gables, and Miami. *Id.*

the western coast of Florida.¹² These coastal regions, unlike those in the middle and northern regions of the state, have direct access to only a limited amount of fresh water.¹³ Concomitantly, aquifers in the coastal areas are more susceptible to saltwater intrusion.¹⁴ Hence, the challenge that Florida faces in managing water resources "is not the allocation of a finite depleting supply, as it is with oil and gas, but rather a geographic and temporal mismatch of supply and demand."¹⁵

Florida is currently divided into five water management districts that fall under the supervision of the Department of Environmental Protection (DEP). These districts were created by the Florida Water Resources Act of 1972¹⁶ (Water Resources Act) to "provide for the management of water and related land resources."¹⁷ The Water Resources Act was patterned after the legislative proposal known as the *Model Water Code*,¹⁸ which was drafted at the University of Florida between 1967 and 1972.¹⁹ The purpose of this Comment is to examine the current system of water management and distribution in Florida, especially in the context of consumptive use, and to recommend policy revisions that will benefit the citizens of the state as a whole. Because the dilemma facing Florida is not one of allocating a finite resource but rather one of distributing an ample, but unevenly distributed, resource, a state-level distribution program is necessary. The current system allocates an excess of authority to the individual water management districts and thus regionalizes the use of Florida's water resources. The result is not only an inefficient use of these water resources but also one with potentially damaging ecological consequences.

12. Tampa is the third largest city and its neighbor St. Petersburg is the fourth. *Id.*

13. Sidney F. Ansbacher & Doug Brown, *A Proposal for Regional Water Management Districts To Regulate Consumptive Use in Minnesota*, 10 *HAMLIN J. PUB. L. & POL'Y* 235, 246 (1989). The aquifers in these coastal regions tend to register greater concentrations of brackish water, tainted by seawater intrusion from the Atlantic Ocean or the Gulf of Mexico; such water is a viable option for some consumptive uses, but it is nonpotable without expensive reverse osmosis treatment or desalination. FLA. H.R. COMM. ON NATURAL RESOURCES, ANALYSIS AND MODELING OF WATER SUPPLY ISSUES FOR THE REGION BOUNDED BY HILLSBOROUGH, MANATEE, PASCO, AND PINELLAS COUNTIES 30, 35 (1994) (on file with comm.) [hereinafter NATURAL RESOURCES REPORT].

14. See Ausness, *supra* note 4, at 3.

15. CHARLES J. MEYERS ET AL., *WATER RESOURCE MANAGEMENT 2* (1988). Meyers notes that "increasingly serious water supply problems are ironically being felt in the humid eastern states where political inattention to water needs and decentralized allocation systems have allowed growth in demand to overtake available supplies." *Id.* This Comment makes an argument that the same type of decentralized allocation system has hindered the most efficient allocation of water in Florida.

16. 1972, Fla. Laws ch. 72-299 (codified as amended at FLA. STAT. §§ 373.012-.197 (1995)).

17. FLA. STAT. § 373.016(2)(a) (1995).

18. FRANK E. MALONEY ET AL., *A MODEL WATER CODE* (1972) [hereinafter MODEL WATER CODE]. Proofs of the book were made available to the Legislature before publication. Hamann, *supra* note 4, at 10-3.

19. Ausness, *supra* note 4, at 3.

Water use must be managed and distributed at the state level for optimal utilization of this resource and adequate protection of the environment.

As a necessary foundation for an analysis of Florida's current system, part I of this Comment presents the background principles of law and policy related to the consumptive use of water. Part II then outlines, discusses, and analyzes Florida's regulation, distribution, and management of the consumption of water. This part reviews the origins of Florida's water policy and the legislative intent behind this policy and connects this policy to today's existing shortfalls. Part III identifies issues that arise in the consumptive use of water and analyzes several proposed solutions. Part IV reviews alternative approaches to consumptive use regulation, distribution, and management and focuses primarily on concrete systems tested by other states. Finally, part V proposes a policy change in the regulation, distribution, and management of water for consumptive purposes in Florida. This part suggests a shift to a state-level water regulation, distribution, and management system and argues that if the water management districts should continue to participate in the consumptive use process, their role must be relegated to that of administrators rather than of policymakers.

II. TRADITIONAL COMMON LAW APPROACHES TO THE USE OF WATER

Within the State of Florida, the statutory standards for the regulation of water are derived fundamentally from the common law.²⁰ The *Model Water Code* and Florida's Water Resources Act—the basis for the current system—were drafted, at least in part, to address the failures of the common law systems. However, Florida's water policy, based on the eastern riparian tradition, differs from that of other states, most notably the western states.²¹ Climate, tradition, economics, and social and cultural needs have all played important roles in the independent development of these varying systems. A basic understanding of these systems, and the flaws inherent to them, is critical to an analysis of Florida's current water policy.

A. *The Riparian System*

Florida and other states east of the Mississippi River developed a water law system called the "riparian system."²² Under this system, land-

20. Hamann, *supra* note 4, at 10-14. For a thorough, yet early discussion of the common law traditions, see JOHN NORTON POMEROY, A TREATISE ON THE LAW OF WATER RIGHTS (1893).

21. Some sources note that "the dichotomy is not absolute," indicating that Florida's current system does borrow from the prior appropriation system of western states. Hamann, *supra* note 4, at 10-4.

22. JOSEPH L. SAX & ROBERT H. ABRAMS, LEGAL CONTROL OF WATER RESOURCES 154, 158-62 (1986). This system is said to have grown out of the English common law. NATURAL RESOURCES REPORT, *supra* note 13, at 9.

owners had the right to appropriate and utilize water adjacent to, or otherwise associated with, their property, so long as they did not unreasonably interfere with another user's right.²³ Thus, water rights were invariably linked to the ownership of land²⁴ and were inherently limited by the rights of other riparian owners.

Riparian systems generally distinguished between surface water and groundwater. Surface water was defined as "water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused."²⁵ Groundwater was simply defined as "water beneath the surface of the ground."²⁶ Traditionally, riparian rights applied only to surface waters; groundwater was treated differently.²⁷ Groundwater was divided into two classes, underground streams and percolating waters,²⁸ with each of these also being treated differently.²⁹ Underground streams were dealt

23. *City of St. Petersburg v. Southwest Florida Water Management Dist.*, 355 So. 2d 796, 798 (Fla. 2d DCA 1977); L.M. Buddy Blain, *A History of Water Management—An Overview, in WATER USE—DIFFICULT DECISIONS FOR THE 90'S* 1.1, 1.12 (1988); Hamann, *supra* note 4, at 10-4. "In its earliest form, the natural flow doctrine, each riparian owner was entitled to receive the full flow of the stream undiminished in either quality or quantity." Hamann, *supra* note 4, at 10-4. However, this early rule was modified during the Industrial Revolution to allow for the degradation of water. *Id.* The reasonable use rule was thus created during this period. *Id.*

24. *See, e.g., Valls v. Arnold Ind., Inc.*, 328 So. 2d 471, 473 (Fla. 2d DCA 1976) (stating that "water[s] . . . which lie beneath the surface are valuable property rights which cannot be divested without due process of law and payment of just compensation"), *overruled*, *Village of Tequesta v. Jupiter Inlet Corp.*, 371 So. 2d 663 (Fla. 1979).

25. FLA. STAT. § 373.016(10) (1995).

26. *Id.* § 373.016(9). The current statutory definition of groundwater does not distinguish between those waters that are flowing through known and definite channels and those that are not. *Id.* However, this was not the case under the earlier common law of riparian rights. NATURAL RESOURCES REPORT, *supra* note 13, at 9.

27. *Sayles v. Mitchell*, 245 N.W. 390 (1932) ("Legally defined, a riparian owner is an owner of land bounded by watercourse or lake or through which a stream flows."). This definition, excluding groundwater from the scope of riparian rights, was made "[b]efore much was understood about hydrological cycles and the interconnectedness between groundwaters and surface waters." NATURAL RESOURCES REPORT, *supra* note 13, at 9.

28. Percolating waters are defined in *Black's Law Dictionary* as follows:

Percolating Waters. Those which pass through the ground beneath the surface of the earth without any definite channel, and do not form part of the body or flow, surface or subterranean, of any water-course. They may be either rain waters which are slowly infiltrating through the soil or waters seeping through the banks or bed of a stream, and which have so far left the bed and the other waters as to have lost their character as a part of the flow of that stream. Those which ooze, seep or filter, through the soil beneath the surface without a defined channel, or in a course that is unknown and not discoverable from surface indications without excavation for the purpose.

BLACK'S LAW DICTIONARY 1427 (6th ed. 1991) (citation omitted).

29. *Nourse v. Andrews*, 255 S.W. 84 (1923).

The only classification of subterranean waters made by the common law is based on the method of transmission through the ground, and is that they belong to one of only two classes, namely: (1) Underground currents of water flowing in known and defined channels or water courses. (2) Water passing through the ground beneath the surface in channels which are undefined and unknown. The rights of the waters of

with as surface waters.³⁰ However, percolating waters were considered "without any permanent, distinct, or definite channel."³¹ As a result, landowners were allowed to remove percolating waters from the soil without limit and despite any detrimental effects such removal had upon neighboring landowners.³²

This rule, known as the "English Rule," was first enunciated in an 1843 English case, *Acton v. Blundell*,³³ and was summarized in a maxim: "To whomsoever the soil belongs, he owns also to the sky and to the depths."³⁴ The system evolved before the complex interdependence of ecosystems was fully understood.³⁵ Florida, along with most other riparian states, has since abandoned this outdated rule of unfettered use of percolating water in favor of the "reasonable use" standard.³⁶ The newer "American Rule" replaced the old maxim with a new one: "Use your own property so as not to injure that of another."³⁷ This rule applies to all water use.

Like the "English Rule," the reasonable use standard allows a landowner to use as much water as necessary. However, the use is subject to the condition that it be "reasonably related to the natural use of the landowner's overlying land."³⁸ This standard applies to surface water as well as groundwater.³⁹ The reasonable use doctrine⁴⁰ does not ensure the right

the first class are governed by the rule of law governing surface streams, while the waters of the second class are treated as mere percolations, and, therefore, as belonging to the owner of the soil wherein they are found.

Hamann, *supra* note 4, at 10-4.

30. *Nourse*, 255 S.W. at 84.

31. *Tampa Waterworks Co. v. Cline*, 20 So. 780, 782 (Fla. 1896).

32. Hamann, *supra* note 4, at 10-4.

33. 152 Eng. Rep. 1235 (1843).

34. *Village of Tequesta v. Jupiter Inlet Corp.*, 371 So. 2d 663, 666 (Fla. 1979); MALONEY ET AL., *supra* note 4, at 155; *Labruzzo v. Atlantic Dredging & Const. Co.*, 54 So. 2d 673, 675 (Fla. 1951).

35. NATURAL RESOURCES REPORT, *supra* note 13, at 9.

36. See, e.g., *Koch v. Wick*, 87 So. 2d 47, 48 (Fla. 1956); *Labruzzo*, 54 So. 2d at 675. For a discussion of the reasonable-beneficial use doctrine, see Phyllis Park Saarinen & Gary D. Lynne, *Getting the Most Valuable Water Supply Pie: Economic Efficiency in Florida's Reasonable-Beneficial Use Standard*, 8 J. LAND USE & ENVTL. L. 491 (1993).

37. See *Village of Tequesta*, 371 So. 2d at 666; *Koch*, 87 So. 2d at 47; *Cason v. Florida Power Co.*, 76 So. 535, 536 (Fla. 1917); *Bassett v. Salisbury Mfg. Co.*, 43 N.H. 569, 574, 579 (1862); see also *City of St. Petersburg v. South West Florida Water Management Dist.*, 355 So. 2d 796, 798 (Fla. 2d DCA 1977).

38. NATURAL RESOURCES REPORT, *supra* note 13, at 10; *Finley v. Teeter Stone, Inc.*, 248 A.2d 106, 111-12 (Md. App. 1968). The rule also applied to percolating waters. *Cason*, 76 So. at 536; *Koch*, 87 So. 2d at 48.

39. *Taylor v. Tampa Coal Co.*, 46 So. 2d 392, 394 (Fla. 1950); *Lake Gibson Land Co. v. Lester*, 102 So. 2d 833, 834-36 (Fla. 2d DCA 1958).

40. RESTATEMENT (SECOND) OF TORTS § 850A (1979). The Restatement lists a number of factors to be considered in determining reasonableness. These include:

(1) the purpose of the use; (2) the suitability of the use to the watershed or lake; (3) the economic value of the use; (4) the social value of the use; (5) the extent and the amount of the harm it causes; (6) the practicality of avoiding the harm by adjusting

of overlying landowners to withdraw quantities equal to their neighbors' withdrawal;⁴¹ however, it does provide for equal rights to make reasonable use of the water.⁴²

The riparian system has been the target of several criticisms. First, the system is flawed because allocation decisions are made by the courts on a case-by-case basis; there is no formal mechanism for planning.⁴³ More fundamentally, the system has been accused of being anachronistic because of its place-of-use restrictions.⁴⁴ The restrictive system, developed in preindustrial England, mandated that only the land adjacent to a water body could be a site of a viable use for that water resource.⁴⁵ However, this is no longer the case and such restrictions may now serve to prohibit the most efficient allocation of a water body. In addition, the reasonable use standard is problematic because "[t]he reasonableness of a use . . . changes over time with changes in technology, available supply, social needs, and the demands of other riparians to make reasonable use."⁴⁶

Other problems with the riparian system include a sense of uncertainty on the part of water users because the amount of water that can be legally used is unclear and the only mechanism for resolving disputes between competing uses is litigation.⁴⁷ Finally, the reasonableness standard applies only to competing riparian users. It necessarily neglects surrounding ecosystems by failing to take them into account as additional "users."

B. *The Prior Appropriation Doctrine*

Water law in the arid western states developed much differently from the riparian system of the East.⁴⁸ The states west of the Mississippi adopted a system known as the prior appropriation doctrine, which made a user's appropriation of water a property right that the user enjoys by virtue of that appropriation.⁴⁹ This system, developed primarily to suit

the use or method of use of one proprietor or the other; (7) the practicality of adjusting the quantity of water used by each proprietor; (8) the protection of existing values of water uses, land, investments and enterprises; and (9) the justice of requiring the user causing harm to bear the loss.

Id.

41. *Village of Tequesta*, 371 So. 2d at 667.

42. Hamann, *supra* note 4, at 10-5.

43. WILLIAM GOLDFARB, WATER LAW 25 (2d ed. 1988) ("Comprehensive record-keeping and water supply planning are impossible in a pure riparian state.").

44. *Id.*

45. *Id.*

46. Hamann, *supra* note 4, at 10-5.

47. NATURAL RESOURCES REPORT, *supra* note 13, at 10. The administrative system that Florida currently employs relies somewhat on administrative hearings for resolving disputes between competing uses.

48. MEYERS ET AL., *supra* note 15, at 238-43.

49. Of course, such a right is restricted by law. *Territory of Montana v. Drennan*, 1 Mont. 41 (1868).

“the needs of gold miners for large quantities of water,”⁵⁰ has often been characterized as derivative from the principle of “first in time, first in right.”⁵¹

The right to use a certain amount of water was established by the act of actually using the water.⁵² This right was subject only to the rights of those who had previously established their own personal appropriation rights.⁵³ By a right not allowed under the riparian law in the eastern states, a “landowner could sell or use water on lands *unconnected* with the water body from which the water was drawn.”⁵⁴

Because the prior appropriation system rewarded prior uses by vesting the amount of water the users had previously withdrawn, the system encouraged overwithdrawal by providing “an incentive to withdraw as much water as possible in order to establish rights to that quantity of water.”⁵⁵ Thus, the system encouraged the waste of water resources. In an attempt to prevent unnecessary waste, courts in the western states developed a “beneficial use” standard,⁵⁶ which they interpreted as similar to the eastern riparian states’ concept of reasonable use.⁵⁷

Several problems arise with the prior appropriation doctrine. First, the doctrine is static, freezing initial allocations of water⁵⁸ and thus making it extremely difficult to establish new uses.⁵⁹ Second, as discussed above, the prior appropriation doctrine encourages waste.⁶⁰ Third, the doctrine is

50. NATURAL RESOURCES REPORT, *supra* note 13, at 10.

51. Hamann, *supra* note 4, at 10-5; NATURAL RESOURCES REPORT, *supra* note 13, at 11; Saarinen & Lynne, *supra* note 36, at 499; DAVID H. GETCHES, WATER LAW IN A NUTSHELL 5 (1984).

52. Hamann, *supra* note 4, at 10-5; NATURAL RESOURCES REPORT, *supra* note 13, at 11; GETCHES, *supra* note 51, at 5, 79.

53. Hamann, *supra* note 4, at 10-5.

54. NATURAL RESOURCES REPORT, *supra* note 13, at 11 (emphasis added).

55. Hamann, *supra* note 4, at 10-5.

56. Saarinen & Lynne, *supra* note 36, at 500. It has been argued that without the development of the beneficial use standard in western states, prior users could have legally diverted all of the water from a water course with no regard for the conservation of that resource. NATURAL RESOURCES REPORT, *supra* note 13, at 11. The development of the beneficial use standard in those western states gave those whose rights were subjugated to prior users “recourse to ensure that water was not wasted.” *Id.* In Florida, uses of water that were existing at the time the Water Resources Act was passed in 1972 were subject to alternate permitting criteria. FLA. STAT. § 373.226 (1995).

57. Frank E. Maloney et al., *Florida’s “Reasonable Beneficial” Water Use Standard: Have East and West Met?*, 31 U. FLA. L. REV. 253, 265 (1979). For a recent discussion on western water law, see A. Lynne Krogh, *Water Right Adjudications in the Western States: Procedures, Constitutionality, Problems & Solutions*, 30 LAND & WATER L. REV. 9 (1995); Charles F. Wilkinson, *Aldo Leopold and Western Water Law: Thinking Perpendicular to the Prior Appropriation Doctrine*, 24 LAND & WATER L. REV. 1 (1991).

58. NATURAL RESOURCES REPORT, *supra* note 13, at 11 (“For example, the holder of a superior claim could use all the water in a stream to the detriment of a later claimant, whose use would have produced more wealth per unit of water.”).

59. GOLDFARB, *supra* note 43, at 40.

60. Hamann, *supra* note 4, at 10-5.

problematic because it allows the appropriation of all of the water in a river, while it provides no protection to "instream uses."⁶¹ The prior appropriation doctrine has "fulfilled its goal—to encourage the maximum, economically beneficial use of water and promote the economic development of the West."⁶² However, the West is now developed, and such a policy in its pure form is no longer practical. Because of these deficiencies, the common law prior appropriation doctrine, standing alone, is inadequate to regulate properly the consumptive use of water.

III. FLORIDA'S WATER MANAGEMENT SYSTEM: THE FLORIDA WATER RESOURCES ACT OF 1972

Prior to the 1950s,⁶³ Florida managed its water resources by creating special single-purpose districts,⁶⁴ which "could only handle specific problems within specifically defined boundaries."⁶⁵ For instance, special districts included irrigation districts, water supply districts, mosquito control districts, sewer districts, and flood control districts.⁶⁶

The Florida Legislature created the Florida Water Resources Study Commission in 1955 because it realized that "Florida's fragmented approach to handling water issues was inadequate and incapable of providing a long-term framework for handling future problems."⁶⁷ The Legislature saw a centralized regulatory board as necessary to administer a state water policy. Subsequently, Florida's first major water management legislation, the 1957 Florida Water Resources Act⁶⁸ (1957 Act), was adopted.⁶⁹ The 1957 Act established a statewide administrative agency for managing

61. *Id.* Instream use is defined as "[a]ny use of water that does not require diversion or withdrawal from the natural watercourse, including in-place uses such as navigation and recreation as well as power generation that requires a continuous flow." Elizabeth Slusser Kelly, *Glossary of Water-Related Terms*, in WATER AND WATER RIGHTS 885, 919 (1991); see also James W. Johnston, *Environmental Significance of Instream Flows*, 17 ST. MARY'S L.J. 1297 (1986); Gregory J. Clifton & Paul J. Zilis, *Recent Developments in Appropriations for Instream Uses*, 22 COLO. LAW. 987 (1993).

62. GOLDFARB, *supra* note 43, at 41.

63. For a discussion of the evolution of Florida's common law regulation of water rights, see *Village of Tequesta v. Jupiter Inlet Corp.*, 371 So. 2d 663 (Fla. 1979).

64. 1913, Fla. Laws ch. 6458.

65. NATURAL RESOURCES REPORT, *supra* note 13, at 11.

66. *Id.* at 11-12.

Florida enacted its first major multipurpose water management district, the Central and Southern Florida Flood Control district, in 1949 in response to a major flood which had occurred two years earlier. Other multi-purpose districts were created in the mid-1950s, but no single entity was able to supervise or oversee their projects and operations.

Id.

67. *Id.* at 12. The task of this commission was to determine "whether Florida needed a statewide framework for comprehensively dealing with water management, and if so, how it would be established." *Id.*

68. FLA. STAT. §§ 373.071-.251 (1967) (repealed by 1972, Fla. Laws ch. 72-299).

69. Ansbacher & Brown, *supra* note 13, at 246.

the development of Florida's water resources.⁷⁰ This state-level agency was housed within the State Board of Conservation⁷¹ and had the power to authorize, in certain circumstances, withdrawal and use of surface water and groundwater deemed to be in excess.⁷² Unfortunately, the 1957 Act was inadequate in several respects and, despite its existence, Florida's water dilemmas persisted. Through the 1960s and early 1970s, saltwater intrusion, drought-related water shortages, destruction of wetlands, and deterioration of water quality accelerated.⁷³

Between 1967 and 1972, a group of water law experts at the University of Florida drafted a *Model Water Code* for Florida.⁷⁴ The *Model Water Code* drew concepts from the western states' prior appropriation system and the eastern states' riparian system and blended them into a system of administrative regulation combining the strengths and avoiding weaknesses of both common law systems.⁷⁵ With the *Model Water Code*, the drafters sought to address concerns of both water quantity and quality.⁷⁶ The Legislature, recognizing the extensive water regulation, distribution, and management issues that the state was facing, as well as the failure of the 1957 Act to resolve those issues, drafted a new water resources law that was based on the *Model Water Code*.⁷⁷ In 1972, the passage of the Water Resources Act,⁷⁸ marked "the beginning of the modern era of water management for Florida."⁷⁹

70. NATURAL RESOURCES REPORT, *supra* note 13, at 12.

71. *Id.*

72. Ausness, *supra* note 4, at 9; Ansbacher & Brown, *supra* note 13, at 246.

The 1957 Act allowed a nonriparian to withdraw only when the amount of water in the stream exceeded the average minimum flow at the point of capture. Lake diversion was permitted only in excess of the average minimum level. Ground water users were allowed to extract water only above the mean low level at the point of capture, unless depletion below that level would not harm the aquifer.

Ausness, *supra* note 4, at 9 n.63 (citing FLA. STAT. § 373.141(1) (1967)).

73. NATURAL RESOURCES REPORT, *supra* note 13, at 12.

74. Ausness, *supra* note 4, at 3.

75. NATURAL RESOURCES REPORT, *supra* note 13, at 12; Frank E. Maloney & Richard C. Ausness, *A Modern Proposal for State Regulation of Consumptive Uses of Water*, 22 HASTINGS L.J. 523, 534 (1971) (stating that the reasonable-beneficial use standard of the *Model Water Code* "is an attempt to combine the best features of the reasonable use and beneficial use rules").

76. Ausness, *supra* note 4, at 16-18; Frank E. Maloney & Richard C. Ausness, *Water Quality Control: A Modern Approach to State Regulation*, 35 ALBANY L. REV. 28 (1970) (introducing chapter five of the proposed *Model Water Code* as a basis for a state program of water quality control).

77. Ausness, *supra* note 4, at 18.

78. 1972, Fla. Laws ch. 72-299 (codified as amended at FLA. STAT. §§ 373.012-.197 (1995)).

79. NATURAL RESOURCES REPORT, *supra* note 13, at 12.

A. *The Structure of the Act*

The Water Resources Act⁸⁰ established a regional water management system as a result of the Legislature's perception that "the water resource problems of the state vary from region to region, both in magnitude and complexity."⁸¹ The system established by the Legislature under the Water Resources Act defers substantially to the water management districts, and it localizes resource management. The Water Resources Act divides the state into five water management districts,⁸² drawn on hydrologic boundaries.⁸³ The statute grants each district the authority to subdivide itself into smaller units: "Any areas within a district may be designated by the district governing board as subdistricts or basins."⁸⁴ These basin boards were to be composed of three to five members who would be responsible for "the planning of primary water resource development projects[] and secondary water control facilities for guidance of local governments and private local owners."⁸⁵ This framework further localizes the management of Florida's water resources. Importantly, the Act also granted the districts the power to levy taxes.⁸⁶

The Water Resources Act establishes two levels of administration. The Legislature gave the responsibility of state-level administration to the Department of Natural Resources or its successor agency.⁸⁷ The Florida Environ-

80. 1972, Fla. Laws ch. 72-299 (codified as amended at FLA. STAT. §§ 373.012-.197 (1995)).

81. FLA. STAT. § 373.016(3) (1995). This occurred primarily as a result of the Legislature's recognition that the water resource problems of the state vary from region to region, both in magnitude and complexity. *Id.*

82. *Id.* § 373.069. The statute originally created five permanent districts and a sixth temporary district. Summary: 1976 Water Resources Legislation, SB 1274. In 1976, the sixth district was incorporated into the St. Johns River Water Management District. 1976, Fla. Laws ch. 76-243 (codified as amended at FLA. STAT. § 373.069 (1995)); see also *Deseret Ranches of Florida, Inc. v. St. Johns River Water Management Dist.*, 406 So. 2d 1132, 1135 (Fla. 5th DCA 1981); Hamann, *supra* note 4, at 10-3; Richard Hamann & Jeff Wade, *Regulating Agricultural Surface Water Management in Florida: The Implementation of Chapter 373, Part IV, in WATER RESOURCES LAW: PROCEEDINGS OF THE NATIONAL SYMPOSIUM ON WATER RESOURCES LAW* 225, 228 (1986); Donna R. Christie, *Forward, in FLORIDA'S WATER FUTURE: CRISIS OR OPPORTUNITY?* ii (1987).

83. Ansbacher & Brown, *supra* note 13, at 248; Donna R. Christie, *Florida, in WATER AND WATER RIGHTS* 289 (1991 & Supp. 1995). These districts are the Northwest Florida, Suwannee River, St. Johns River, Southwest Florida, and South Florida water management districts. Ansbacher & Brown, *supra* note 13, at 12; Christie, *supra* note 82, at 289.

84. FLA. STAT. § 373.0693(1)(a) (1995).

85. Hamann & Wade, *supra* note 82, at 228.

86. The statute reads: "The respective basins may, pursuant to s. 9(b), Art. VII of the State Constitution, by resolution request the governing board of the district to levy ad valorem taxes within such basin." FLA. STAT. § 373.0697 (1995); see *infra* notes 148-162 and accompanying text.

87. FLA. STAT. § 373.026 (1995). In 1993, all of the existing legal duties and programs of the Department of Environmental Regulation and the Department of Natural Resources were transferred to the Department of Environmental Protection. 1993, Fla. Laws ch. 93-213, § 3(3).

mental Reorganization Act of 1975 transferred the Department of Natural Resources' water management authority to the Department of Environmental Regulation.⁸⁸ Further reorganization in 1993 transferred that authority to the DEP.⁸⁹

Additionally, the Water Resources Act directed the state-level department, "to the greatest extent possible[,] . . . [to] enter into interagency or interlocal agreements with . . . any water management district."⁹⁰ This has resulted in the DEP's delegating not only the day-to-day management functions,⁹¹ but also a considerable amount of policymaking authority to the five regional water management districts.⁹² Recently, legislation in 1993 and 1994 transferred additional authority to the water management districts.⁹³

The water management districts are governed by boards set up under the Water Resources Act.⁹⁴ The members of these boards are appointed by the Governor⁹⁵ and serve without pay.⁹⁶ Their task is to "adopt rules, set budgets, issue permits, hire an executive director, and otherwise govern the affairs of the districts."⁹⁷ Given the amount of control that these boards exercise over the management of the water resources within their regions, it is clear that they are the primary sources of water resources policy for their own districts. Hence, Florida has five distinct boards, each formulating independent rules and procedures for their respective districts within the confines of chapter 373 and the state water policy.⁹⁸

88. 1975, Fla. Laws ch. 75-22 (codified as amended at FLA. STAT. § 403.801 (1995)); see also Joseph W. Landers, Jr. et al., *Environmental Regulatory Streamlining: A State Perspective*, 2 J. LAND USE & ENVTL. L. 1, 5 (1986).

89. 1993, Fla. Laws ch. 93-213; Christie, *supra* note 82, at 289; see also Bruce Weiner & David Dagon, *Wetlands Regulation and Mitigation After the Florida Environmental Reorganization Act of 1993*, 8 J. LAND USE & ENVTL. L. 521 (1993).

90. FLA. STAT. § 373.026 (1995).

91. Christie, *supra* note 82, at 289.

92. NATURAL RESOURCES REPORT, *supra* note 13, at 13.

93. See, e.g., 1993, Fla. Laws ch. 93-213 (codified at FLA. STAT. § 373.441 (1995); Thomas T. Ankersen & Richard Hamann, *Ecosystem Management and the Everglades: A Legal and Institutional Analysis*, 11 J. LAND USE & ENVTL. L. 473, 484 (1996); Christie, *supra* note 82, at 290. For instance, permitting was transferred to the water management districts, and all permits involving dredging and filling of wetlands impacts, management and storage of surface waters, including stormwater control, and the alteration of mangroves were consolidated into a single permit. See, e.g., FLA. STAT. § 373.427 (1995); FLA. ADMIN. CODE ANN. r. 62-330 (1995). However, in 1996, some authority was taken back from the water management districts. See Donna R. Christie & Ronald A. Christaldi, *Florida, in WATER AND WATER RIGHTS* (Supp. 1996) (forthcoming). CS/HB 2385 and CS/HB 2399 give the Executive Office of the Governor the authority to disapprove, in whole or in part, the budget of each water management district. *Id.*

94. FLA. STAT. § 373.073 (1995).

95. *Id.* § 373.073(2)

96. *Id.* § 373.073(3) ("The chairman and members of the board shall receive no compensation for services as such . . .").

97. Hamann, *supra* note 4, at 10-3.

98. Christie, *supra* note 82, at 290 ("Because each district also has independent rule-making authority to implement these programs, rules and procedures may vary from district to district.").

The intent of the *Model Water Code*, on which the Water Resources Act was based, was to centralize the management of water but leave the administration of state rules and regulations to local water management districts.⁹⁹ As far as the districts were concerned, the *Model Water Code* "created a permit system which would enable planning decisions to be implemented at the operational level."¹⁰⁰ Thus, the *Model Water Code* envisioned the making of policy decisions, both general and specific, at the state level. The water management districts were to make only operational decisions. Given this, the system of water management in Florida is in direct contravention to the *Model Water Code*.

The Water Resources Act directs the state agency, now the DEP, to vest the individual water management districts with a great deal of power. The governing board of a water management district may be authorized to administer and enforce all provisions of chapter 373,¹⁰¹ to plan, construct, operate, and maintain works of the district,¹⁰² and to "[d]etermine, establish and control the level of waters to be maintained in all canals, lakes, rivers, channels, reservoirs, streams, or other bodies of water controlled by the district."¹⁰³ In addition, the Legislature has granted the districts the authority to adopt and enforce regulations that are reasonably necessary to effectuate the statutory powers or duties of the districts.¹⁰⁴ At least one special interest group, the Florida Agricultural Coalition, has called for reform of the current rulemaking authority of the water management districts.¹⁰⁵

Far from centralizing the distribution of the state's water resources, the Water Resources Act seems to authorize the state-level agency to b-

99. Frank E. Maloney & Richard C. Ausness, *Administering State Water Resources: The Need for Long Range Planning*, 73 W. VA. L. REV. 209, 213 (1971) ("The state administrative structure must be constituted so that planning responsibility is concentrated within one agency."); Ausness, *supra* note 4, at 13 ("The drafters of the Model Water Code wanted to establish a regulatory structure at the state level that would take account of the hydraulic cycle.") (emphasis added).

100. Ausness, *supra* note 4, at 13 (emphasis added).

101. FLA. STAT. § 373.103(1) (1995).

102. *Id.* § 373.103

103. *Id.* § 373.103(4)

104. *Id.* § 373.113

105. Letter from Ben Parks, Chairman, Florida Agricultural Coalition, to the Honorable John Rayson, Chairman, H.R. Select Committee on Water Policy 4 (Sept. 19, 1995) (on file with comm.). The Florida Agricultural Coalition is made up of A. Duda & Sons, Dairy Farmers, Inc., Florida Cattlemen's Association, Florida Citrus Mutual, Florida Citrus Processors Association, Florida Farm Bureau Federation, Florida Fertilizer and Agrichemical Association, Florida Forestry Association, Florida Fruit & Vegetable Association, Florida Land Council, Florida Nurserymen & Growers Association, Florida Phosphate Council, Florida Poultry Federation, Florida Pulp & Paper Association, Florida Strawberry Growers Association, FLO-SUN, Inc., Gulf Citrus Growers Association, Indian River Citrus League, Jack M. Berry, Inc., Jefferson Smurfit, Inc., Lykes Brothers, Inc., Peace River Valley Citrus Growers Association, St. Joe Forest Products, Sugar Cane Growers Cooperative of Florida, Turner Foods Corporation, U.S. Sugar Corporation, and Western Agricultural Region. *Id.* at 1.

calize management of the state's water resources. Indeed, one of the drafters of the *Model Water Code* admits that

[D]elegation of extensive regulatory authority to the various water management districts appears to be inconsistent with the Model Water Code's goal of consolidating water management responsibility in the hands of a single agency. The Code's drafters yielded somewhat to political expediency in choosing this approach. At the time the Code was being written, the Florida Legislature had shown little interest in providing substantial amounts of funding at the state level for water management purposes. On the other hand, the water management districts had both the financial resources and the political will to initiate a major water resources regulation effort.¹⁰⁶

Hence, the water resources management system in Florida bears a fundamental difference from the scheme envisioned under the *Model Water Code*: regulation and management in Florida occurs primarily at the district level, whereas under the regime contemplated by the *Model Water Code*, regulation would be a function of the state agency. This misappropriation of authority is the fundamental flaw in Florida's current system of water management and distribution.

B. *The Substance of the Act*

The Water Resources Act requires the DEP to develop a Florida water plan¹⁰⁷ and a state water use plan.¹⁰⁸ While the Florida water plan is defined simply as a combination of the state water use plan and the water quality standards,¹⁰⁹ the statutory definition of the state water use plan is much more detailed. The DEP is directed "to study existing water resources in the state; means and methods of conserving and augmenting such waters; existing and contemplated needs and uses of water for the protection and procreation of fish and wildlife, irrigation, mining, power development, and domestic, municipal and industrial uses."¹¹⁰ The statute then sets out eight factors that the DEP must consider in formulating the state water use plan. These factors include:

- (a) The attainment of the maximum reasonable-beneficial use of water for such purposes
- (b) The maximum economic development of the water resources consistent with other uses.

106. Ausness, *supra* note 4, at 14.

107. FLA. STAT. § 373.039 (1995) ("The state water use plan together with the water quality standards and classifications of the department or its successor agency shall constitute the Florida water plan.").

108. *Id.* § 373.036.

109. *Id.* § 373.039.

110. *Id.* § 373.036(1).

- (c) The control of such waters for such purposes as environmental protection, drainage, flood control and water storage.
- (d) The quantity of water available for application to a reasonable-beneficial use.
- (e) The prevention of wasteful, uneconomical, impractical, or unreasonable uses of water resources.
- (f) Presently exercised domestic use and permit rights.
- (g) The preservation and enhancement of the water quality of the state and the provisions of the state water quality plan.
- (h) The state water resources policy as expressed [in chapter 373, *Florida Statutes*].¹¹¹

The Water Resources Act requires the water management district governing boards "to aid in conducting surveys and investigations and to advise DEP on technical matters."¹¹² Additionally, the DEP or the district governing boards, using the best available information, must establish the minimum flow for each surface watercourse¹¹³ and the minimum water level for watercourses within each district.¹¹⁴

The DEP and the water management districts have neglected to fulfill the full intent of the Water Resources Act. The Act contains provisions pertaining to both planning and regulation. Unfortunately, the DEP and the water management districts have focused on regulation of the waters of the state to the exclusion of efforts to develop integrated planning. More emphasis has been placed on the state water use plan since the enactment of the Growth Management Act of 1985,¹¹⁵ yet much of the planning required under the Act has not occurred.¹¹⁶ The water management

111. *Id.* §§ 373.036(2)(a)-(h).

112. *Id.* § 373.0391; NATURAL RESOURCES REPORT, *supra* note 13, at 14.

113. FLA. STAT. § 373.042(1) (1995) ("The minimum flow for a given watercourse shall be the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area."); *see also infra* notes 122-25 and accompanying text (discussion of groundwater availability).

114. FLA. STAT. § 373.042(2) (1995) ("The minimum water level shall be the level of ground water in an aquifer and the level of surface water at which further withdrawals would be significantly harmful to the water resources of the area.").

115. 1985, Fla. Laws ch. 85-55 (codified as amended in scattered sections of FLA. STAT. chs. 161, 163, 380 (1995)). For discussions of the Growth Management Act, see Mary Dawson, *The Best Laid Plans: The Rise and Fall of Growth Management in Florida*, 11 J. LAND USE & ENVTL. L. 325 (1996); Donna R. Christie, *Growth Management in Florida: Focus on the Coast*, 3 J. LAND USE & ENVTL. L. 33 (1987); Charles Siemon, *The Growth Management Act of 1985: A Bitter Pill, But Better than "Growth Management Anarchy,"* 16 ENVTL. & URBAN ISSUES 1 (Winter 1988); JAMES A. KUSHNER, *SUBDIVISION LAW AND GROWTH MANAGEMENT* (1992).

116. NATURAL RESOURCES REPORT, *supra* note 13, at 14-15; *Pinellas County v. Southwest Fla. Water Management Dist.*, FLWAC Case No. RFR 95-001 (Final Order, Feb. 14, 1996) ("Over twenty-three years after the adoption of the Florida Water Resources Act of 1972, neither the Department of Environmental Protection, the Department's predecessors, nor the water management districts have been entirely successful in the adoption of minimum flows and levels on a broad scale.").

districts are required by statute to set minimum flows and levels.¹¹⁷ A recent report prepared by the staff of the Florida House of Representatives Committee on Natural Resources noted: "Despite the fact that the requirement for minimum flows and levels has been in law since 1972, neither the DEP nor the governing boards [has] fulfilled this mandate."¹¹⁸

The Act mandates that a water quality standards system be developed and coordinated with the state water use plan.¹¹⁹ These two components constitute the Florida water plan, set out in section 373.039. The DEP and the districts have not produced the state water use plan required by section 373.036 and, therefore, have failed to complete the Florida water plan. As the House of Representatives Committee on Natural Resources stated:

Although a document called the state water use plan was created in the mid-1980s, it appears never to have been used and may not have been adopted by DER [now DEP]. Thus, although statutory provisions for a Florida Water Plan have existed since passage of the Florida Water Resources Act, no such plan has ever been implemented.¹²⁰

The DEP is currently requiring the water management districts to develop individual plans for their respective districts in order "to provide a

117. FLA. STAT. §§ 373.0391(2)(g), .0395(4) (1995); Maloney & Ausness, *supra* note 99, at 226-27 (outlining *Model Water Code* approach to minimum flows and levels).

118. NATURAL RESOURCES REPORT, *supra* note 13, at 14.

The Southwest Florida Water Management District has developed minimum flows for almost all the surface watercourses, and expects to establish minimum levels for its aquifers by the end of 1994. The remaining districts are at various stages in completing their minimum flows and levels determinations. The Northwest Florida and Suwannee River Water Management Districts assert they have been unable to complete these studies due to lack of funding.

Id. at 14-15; see also *Concerned Citizens of Putnam County for Responsive Gov't, Inc. v. St. Johns River Water Management Dist.*, 622 So. 2d 520, 522 (Fla. 5th DCA 1993) (finding that the St. Johns River Water Management District has "ignored for twenty years" the requirement of establishing minimum flows and levels under section 373.042, *Florida Statutes*, and enjoining the District from issuing any additional permits until such levels are established under legislative mandate); *Lake Brooklyn Civic Assoc., Inc. v. St. Johns River Water Management Dist.*, DOAH Case No. 92-5017 (Sept. 30, 1993) (before the Land and Water Adjudicatory Commission) (finding that "the fact that this case is before the Commission illustrates the importance of the establishment of minimum flows and levels"); *Pinellas County v. Southwest Fla. Water Management Dist.*, FLWAC Case No. RFR 95-0001 (final order, Feb. 14, 1996) (requiring the Southwest Florida Water Management District to "set forth a clear, detailed schedule for establishing minimum flows and levels").

In 1996, the Legislature enacted CS/HB 2385 and CS/HB 2399, which require the Southwest Florida Water Management District to develop, by November 1, 1996, a priority list of water resources in Hillsborough, Pasco, and Pinellas counties for which minimum flows and levels must be established. See *Christie & Christaldi*, *supra* note 93. The law then directs the Southwest Florida Water Management District Governing Board to set the levels by October 1, 1997. See *id.*

119. FLA. STAT. § 373.039 (1995).

120. NATURAL RESOURCES REPORT, *supra* note 13, at 15.

guide to managing water and related natural resources in each district."¹²¹ If these district level plans were used to compile a state water use plan that adopted a state-level outlook, then such district plans would at least serve an identifiable purpose—such district-level information gathering would facilitate the development of an efficient state water use plan. However, if the district plans are allowed to become separate water use plans, they will serve only to further the disjunctive and inadequate policy decisions currently regionalizing Florida water use.

The districts have also failed to complete safe yield studies as mandated by the Legislature in 1982.¹²² In that year, the Legislature expressed its intent "that future growth and development planning reflect the limitations of the available groundwater or other available water supplies."¹²³ Accordingly, the water management districts were directed to develop "a groundwater basin resource availability inventory."¹²⁴ It appears that the water management districts have not taken this instruction to heart, as none of the five districts, according to the House of Representatives Committee on Natural Resources, had completed its required inventory as of October 1994.¹²⁵

C. *Permitting the Consumptive Use of Water*

Part II of chapter 373 regulates the permitting of consumptive uses of water.¹²⁶ The water management districts are directed to set minimum thresholds below which a water user need not apply for a permit.¹²⁷ The districts can provide for exemptions; however, the sole statutory exemption is for domestic consumption of water by individuals.¹²⁸ Uses existing at the time of implementation of a water use permitting program are treated differently from new uses. Section 373.226 governs "existing uses of water."¹²⁹ Under this section, all water uses existing before implementa-

121. *Id.*; see also W. VIESSMAN ET AL., COMPREHENSIVE REVIEW OF WATER RESOURCES POLICIES, PLANNING AND PROGRAMS IN FLORIDA 14 (1986) (report to the Florida Water Management Districts); LAND USE AND WATER PLANNING TASK FORCE, FINAL REPORT 21 (1994).

122. 1982, Fla. Laws ch. 82-101, § 6 (codified at FLA. STAT. § 373.0395 (1995)).

123. FLA. STAT. § 373.0395 (1995).

124. *Id.* A groundwater basin resource availability inventory is commonly called a "safe yield study." NATURAL RESOURCES REPORT, *supra* note 13, at 15 ("This inventory, once completed, must be given to each affected municipality, county, and regional planning agency. These agencies in turn are required to review the inventory for consistency with local government comprehensive plans and consider the inventory in future revisions of the plans.")

125. NATURAL RESOURCES REPORT, *supra* note 13, at 15.

126. FLA. STAT. §§ 373.203-.249 (1995).

127. Hamann, *supra* note 4, at 10-6.

128. FLA. STAT. § 373.219(1) (1995) ("[N]o permit shall be required for domestic consumption of water by individual users."); Maloney & Ausness, *supra* note 75, at 524.

129. Section 373.226 states:

tion of a water use permitting program within a water management district had to apply for a permit within two years after the start-up of such a program, or the uses would be deemed abandoned.¹³⁰ In order to obtain permits, section 373.226(2) requires an existing user to demonstrate that the "existing use is a reasonable-beneficial use" and that it "is allowable under the common law of the state."¹³¹ These permitting criteria constitute the "two-prong test."

Section 373.223 lists three conditions that a permit applicant must meet in order to receive a consumptive use permit for a use arising after the implementation of the water use permitting program. The districts do not have authority to add additional criteria.¹³² This is known as the "three-prong test."

First, the use must be a reasonable-beneficial use.¹³³ Reasonable-beneficial use is defined 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."¹³⁴ This standard is designed to synthesize the positive attributes of the common law riparian and prior appropriation doctrines as well as avoid some of the shortcomings of those doctrines.¹³⁵

(1) All existing uses of water, unless otherwise exempted from regulation by the provisions of this chapter, may be continued after adoption of this permit system only with a permit issued as provided herein.

(2) The governing board or the department shall issue an initial permit for the continuation of all uses in existence before the effective date of implementation of this part if the existing use is a reasonable-beneficial use as defined in s. 373.019(4) and is allowable under the common law of this state.

(3) Application for a permit under the provisions of subsection (2) must be made within a period of 2 years from the effective date of implementation of these regulations in an area. Failure to apply within this period shall create a conclusive presumption of abandonment of the use, and the user, if he or she desires to revive the use, must apply for a permit under the provisions of s. 373.229.

FLA.STAT. § 373.226 (1995).

130. *Id.* § 373.226(3).

131. *Id.* § 373.226(2). At common law, a landowner could withdraw from his or her property all the groundwater that landowner could possibly use to the extent that it did not injure the adjacent owner's property. *City of St. Petersburg v. Southwest Fla. Water Management Dist.*, 355 So. 2d 796, 798 (Fla. 2d DCA 1977).

132. *West Coast Regional Water Supply Auth. v. Southwest Fla. Water Management Dist.*, Fla. Admin. Order 10 F.A.L.R. 4239-4260 (May 17, 1988) (invalidating the "5-3-1 Rule" of the district, which prohibited the issuance of permits that would result in withdrawal causing levels to drop below a certain threshold, because the rule was an improper expansion of the delegated statutory authority beyond the statutory criteria).

133. FLA. STAT. § 373.223(1)(a) (1995). For a discussion of Florida's reasonable-beneficial use standard, see Maloney et al., *supra* note 57, at 253.

134. FLA. STAT. § 373.019(4) (1995); see, e.g., *Miakka Community Club v. El Jobean Philharmonic Group*, Fla. Admin. Order 89 ER F.A.L.R. 124 (Sept. 26, 1989); *Friends of Fort George v. Fairfield Communities*, Fla. Admin. Order, 24 Fla. Supp. 2d 192 (Dec. 9, 1986).

135. MODEL WATER CODE, *supra* note 18, at 40. The authors wrote that the code "includes the standard of reasonable use but it also requires efficient economic use of water, a characteristic of beneficial use." *Id.* at 86.

Next, the use must not cause harm to other users.¹³⁶ This condition originates in Florida's common law tradition and protects only users who draw water from the same system.¹³⁷ If the harm to an existing user is not detected until after a new use has been permitted, the permit may possibly be modified to abate the adverse impacts.¹³⁸

Finally, the use must be consistent with the public interest.¹³⁹ This condition presents a challenge to the agency making the determination because it is not easily definable. Generally, the determination of whether a use is consistent with the public interest is made on a case-by-case basis.¹⁴⁰ As criteria for determining whether the use was in the public interest, in *Friends of Fort George v. Fairfield Communities*¹⁴¹ the hearing officer relied upon district rules requiring consideration of water conservation and reuse, total amount of water allocated, lack of saltwater intrusion, lack of impact to potentiometric surface, reduction of estuarine pollution, and development of new water sources.¹⁴²

Since 1972, thousands of consumptive use permits have been issued by the five water management districts.¹⁴³ Traditionally, the water management districts "have allocated water on a first-come, first-served basis while nominally meeting the consumptive use permit criteria."¹⁴⁴ Regardless of ecological concerns, permits are issued whenever they meet the three criteria outlined above. Hence, the question arises whether a regional district system is, in fact, the best way to allocate Florida's water resources.

136. FLA. STAT. § 373.223(1)(b) (1995).

137. Hamann, *supra* note 4, at 10-8; West Coast Regional Water Supply Auth. v. Southwest Fla. Water Management Dist., Fla. Admin. Order 89 ER F.A.L.R. 166 (Aug. 30, 1989) (holding that a farmer who depended on soil moisture levels was not an existing use and that lakes and wetlands were not protected as existing uses because "[w]ater must be physically withdrawn or diverted to qualify as a legal use of water"); Harloff v. City of Sarasota, Fla. Admin. Order 91 ER F.A.L.R. 40 (Fla. 2d DCA 1991) (holding that a municipal wellfield was an existing use entitled to protection against a new user). For a discussion of the court's decision in *Harloff*, see Johnny C. Burris, *Administrative Law: 1991 Survey of Florida Law*, 16 NOVA L. REV. 7, 108-11 (1991).

138. FLA. STAT. §§ 373.239, .243 (1995). The water management districts have claimed such authority. FLA. ADMIN. CODE ANN. r. 62-40.401(6) (1995). This is part of the state water policy. It should also be acknowledged that this is an administrative rule promulgated by the DEP and, as such, is inherently less authoritative than a statute. It is debatable whether Rule 62-40.401(6), *Florida Administrative Code*, is within the statutory scope of authority. FLA. STAT. § 373.171 (1995).

139. FLA. STAT. § 373.223(1)(c) (1995).

140. Hamann, *supra* note 4, at 10-8.

141. 24 Fla. Supp. 2d 192, DOAH Case Nos. 85-3537, 85-3596 (Final Order dated Dec. 9, 1986).

142. *Id.*

143. See Saarinen & Lynne, *supra* note 36, at 491.

144. *Id.*; Carlyn Harper & Elizabeth D. Ross, *The Reasonable-Beneficial Test: Maximizing the Water Supply Pie Before Relinquishing the Last Piece*, FLA. B.J., May 1990, at 68.

D. Funding for the Management of Water Resources

Florida's water management districts receive funding from four different sources. First, the costs of administration are underwritten by the Florida General Revenue Fund through an account known as the Water Resources Development Account.¹⁴⁵ Second, the districts have the statutory authority to issue bonds.¹⁴⁶ Third, the districts have the power to assess fees for permit applications.¹⁴⁷ Finally, the districts have the authority to levy ad valorem taxes.¹⁴⁸

The taxing authority is problematic on several levels. First, it allows the water management districts to operate in virtual independence of the Legislature. This autonomy allows the districts to set their own priorities and to disregard those legislative mandates in which they are not interested. In addition, the taxing authority is problematic because the system is structured so that those who have the taxing authority have no direct accountability to those whom they are taxing.¹⁴⁹ The water management district governing boards are appointed by the Governor.¹⁵⁰ These appointed officials are granted taxing authority.¹⁵¹ Clearly, one of the founding principles of American government is accountability of those with taxing authority through the election process. Despite this, the nonelected water management district officials continue to exercise taxing authority.

On another level, the taxing authority presents an impediment for moving water management to the state level. Under Article VII, section 1(a) of the Florida Constitution, the DEP does not have the power to levy ad valorem taxes. This constitutional provision provides that "[n]o state ad valorem taxes shall be levied upon real estate or tangible personal property."¹⁵² Concomitantly, section 373.503(2)(a) specifically prohibits the DEP from collecting ad valorem taxes.¹⁵³

The constitutionality of the districts' taxing authority was challenged in *Deseret Ranches of Florida v. St. Johns River Water Management District*.¹⁵⁴ Article VII, section 9(a) of the Florida Constitution authorizes

145. FLA. STAT. §§ 373.495-.501 (1995).

146. *Id.* § 373.563.

147. *Id.* § 373.503.

148. *Id.* In 1976, the Florida Constitution was amended to authorize the water management districts to assess such taxes. FLA. CONST. art. VII, § 9(6); Ansbacher & Brown, *supra* note 13, at 254.

149. THE FLORIDA LEGISLATURE WATER MANAGEMENT DISTRICT REVIEW COMMISSION, BRIDGE OVER TROUBLED WATER: RECOMMENDATIONS OF THE WATER MANAGEMENT DISTRICT REVIEW COMMISSION 4 (December 29, 1995) [hereinafter REVIEW COMMISSION].

150. FLA. STAT. § 373.073(2) (1995).

151. *Id.* § 373.503; FLA. CONST. art. VII, § 9(6).

152. FLA. CONST. art. VII, § 1(a) (emphasis added).

153. FLA. STAT. § 373.503(2)(a) (1995).

154. 406 So. 2d 1132 (Fla. 5th DCA 1981).

“special districts” to levy ad valorem taxes.¹⁵⁵ In upholding the authority of the water management districts to levy ad valorem taxes,¹⁵⁶ the court noted that “[t]he availability of adequate fresh water supplies is of critical local interest.”¹⁵⁷ The issues of this case raise an interesting and complex question about the funding for a state-level allocation program. The apparent restrictions on the DEP’s authority to tax raise constitutional concerns regarding restructuring of the current allocation system to provide for state-level distribution and control.

One solution to this problem would be create a “federalized” water policy system that retains the water management districts but restructures their policymaking authority to limit its scope and that urges them to focus on the regulation and management of local water use. At the same time, the DEP would control the state-level policy and assume ultimate authority for Florida’s integrated water policy system. In this way, the districts may still be permitted to levy ad valorem taxes, while the goal of state-wide allocation of water resources is achieved. As an alternative or a supplemental solution, the Legislature should also consider other potential avenues of raising revenue.

The Legislature has recognized that a problem exists and is trying to fashion an appropriate solution by exploring alternative methods for funding the management of the state’s water resources. One proposed alternative is the assessment of “water use fees.”¹⁵⁸ In 1987, such a bill was filed to authorize the Northwest Florida Water Management District to impose water use fees to supplement the district’s ad valorem tax revenues.¹⁵⁹ Although this proposal was aimed primarily at changing the semantics of the revenue funding to make it more palatable to the district’s residents, the bill ultimately did not become law.¹⁶⁰ Four years later, in 1991, a bill was proposed that would have required all of the water management districts to impose water use fees in lieu of ad valorem taxes.¹⁶¹ This proposed legislation likewise was never passed into law.¹⁶²

155. FLA. CONST. art. VII, § 9(a).

156. *Deseret Ranches*, 406 So. 2d at 1140.

157. *Id.*

158. Memorandum from W. Ray Scott, Legislative Analyst, H.R. Select Committee on Water Policy, to the Members of the H.R. Select Committee on Water Policy 1 (Sept. 18, 1995) (on file with comm.) [hereinafter Scott Memo].

159. *Id.* at 2.

The total amount of water use fees collected was to be capped at a level such that the combined annual sum of water use fees and ad valorem revenues would not exceed an amount that would be generated by an ad valorem assessment of 1.0 mill within the district—an interesting attempt to equalize the District’s revenue generating capability without increasing its ad valorem taxing authority.

Id.

160. *Id.* at 1-2.

161. *Id.* at 2.

162. *Id.*

Water use fees are an appealing alternative to ad valorem taxes for several reasons. First, such a fee charges only those who actually use the water. Basic principles of equity dictate that those who are using the most water and creating the management costs should bear the burden of such costs.¹⁶³ In addition, the imposition of water use fees would encourage conservation,¹⁶⁴ which is always a laudable goal. These fees facilitate conservation because "the less water one uses the less one pays."¹⁶⁵

Problems have also been pointed out in respect to the imposition of water use fees. One criticism has been that a flat water use fee fails to take into consideration the differential value of water.¹⁶⁶ Although part of this differential is a function of the differences in economic return realized by different types of water users, much of the differential is due to the regionalization of water use.¹⁶⁷ Because of such regionalization, a shift in Florida's water use system from a regional to a state level may alleviate some of these concerns.¹⁶⁸

IV. WATER MANAGEMENT AND REGULATION: PROBLEMS AND PROPOSED SOLUTIONS

A. *Practical Problems with Consumptive Use Regulation*

Several problems arise in the regulation of the consumptive use of water.¹⁶⁹ On one level, a number of competing interests seek permits for the consumptive use of water.¹⁷⁰ These competing interests break down into public uses, such as local water supply utilities, and private uses, such as agriculture and golf courses.¹⁷¹ In areas where local water is plentiful, these distinctions may be considered trivial. But this belies the underlying problem that coastal areas face. In these areas where the supply

163. For another area of law where the Florida Legislature has clearly dictated that a citizen should bear only his or her fair share of a burden resulting from public need, see 1995, Fla. Laws ch. 95-181 (codified at FLA. STAT. § 73.001 (1995)). See Ellen Avery, *The Terminology of Florida's New Property Rights Law: Will It Allow Equity to Prevail or Government to be "Taken" to the Cleaners?*, 11 J. LAND USE & ENVTL. L. 181, 183 (1995). The Bert J. Harris, Jr., Private Property Rights Protection Act, requires a governmental agency under certain circumstances to compensate a landowner for an inordinate burden resulting from a state action to benefit the general public. 1995, Fla. Laws ch. 95-181, § 1(4)(d) (codified at FLA. STAT. § 73.001(4)(d) (1995)).

164. Scott Memo, *supra* note 158, at 2.

165. *Id.* ("In addition, this 'conservation effect' is enhanced when credit is awarded for the use of alternative water supplies.")

166. *Id.* at 2-3. Water may have different values depending on its availability and its potential to produce monetary returns.

167. *Id.* at 3.

168. Although additional issues, such as varying water utility rates, arise in the assessment of water use fees, the equity concerns involved seem to outweigh these difficulties.

169. See *supra* notes 126-44 and accompanying text.

170. NATURAL RESOURCES REPORT, *supra* note 13, at 38-47; see also Appendix.

171. NATURAL RESOURCES REPORT, *supra* note 13, at 38-47.

of local water is limited, competing interests are overtly adverse to one another and constantly competing for what each considers its fair portion of the water supply.¹⁷²

Limited water supply alone might not cause a crisis situation if the consumptive use of that water were tightly regulated through careful permitting procedures. However, water management districts continue, somewhat recklessly, issuing consumptive use permits while failing to determine the limits of the water resources in their districts. As a result, concerns have arisen as to whether the resources are being overused.¹⁷³ Although debate continues as to whether overpumping is the sole cause, or even a partial cause, of phenomena such as the water level reduction of natural lakes¹⁷⁴ and saltwater intrusion into coastal aquifers, such environmentally destructive phenomena are occurring daily with little intervention on the part of the water management districts. For instance, although such environmental problems have existed for many years¹⁷⁵ in the Southwest Florida Water Management District,¹⁷⁶ very few, if any, permits are denied.

B. Solutions Proposed Under the Current System

Several solutions to the problem of inefficient water distribution have been proposed within the confines of the current system. The problem, simply stated, is that Florida has an ample supply of water but the state's water resources are not evenly distributed temporally and geographically. This causes "artificial shortages" in many of the coastal areas where Florida's largest cities are located. In an effort to retain the power that

172. *Id.*

173. See, e.g., *In re Emergency Conditions Existing Within the Region of the West Coast Regional Water Supply Central Well Field System*, Executive Director Order No. 94-58 (June 29, 1994).

174. See, e.g., *DER v. Falls Chase Special Taxing Dist.*, 424 So. 2d 787 (1st DCA 1982) ("At times in the past, portions of this property have been subject to inundation by waters of the lake, but a sinkhole development in the lake, a natural phenomenon, has caused the lowering of the water level."); Teresa D. Brown, *Sinkhole Opens Wide, Guzzles 2 Retention Ponds*, ST. PETE. TIMES, Aug. 31, 1995, at A1. ("Sinkholes occur when limestone is close to the ground surface and there is a high rainfall for a long period. The rainfall gradually will dissolve the limestone, creating cavities. Over time, the cavities will get larger and the ground eventually will collapse.")

175. In 1987, Richard C. Ausness, one of the drafters of the *Model Water Code* wrote: "Many of today's water management problems have existed for years. In the late 1960s, some areas of south and central Florida were beginning to experience periodic water shortages." Ausness, *supra* note 4, at 6 (citing Neitzke, *Salt Water Intrusion: Florida's Legal Response*, 55 FLA. B.J. 759, 759 (1981)); see also *Pinellas County v. Lake Padgett Pines*, 333 So. 2d 472 (Fla. 2d DCA 1976) (determining whether consideration must be given to the detrimental effects of withdrawal in suit to enjoin the continuation of a well field project).

176. The Southwest Florida Water Management District comprises several counties in southwest Florida and includes the large coastal cities of Tampa, St. Petersburg, and Clearwater. For the legal boundaries of the district, see § 373.069(2)(d), *Florida Statutes* (1995).

they have acquired, the water management districts have proposed several solutions to this problem.¹⁷⁷

1. *Seawater Desalination*

One proposed remedy is the development of desalination. Desalination is the process by which sea or brackish water is processed to remove minerals, leaving fresh, potable water.¹⁷⁸ Brackish water desalination is used extensively in Florida.¹⁷⁹ The Southwest Florida Water Management District has proposed a seawater desalination plant for the Tampa Bay area.¹⁸⁰ Because of the comparative abundance of seawater, the thought of turning seawater into drinking water has caused great excitement and enthusiasm in water-rich areas concerned about invasion by the water-poor locales of the state.¹⁸¹ This enthusiasm relates to the public's perception of the existence of an abundant supply of seawater that can be converted to drinking water at a reasonable expense and without environmental impact.¹⁸² However, this faith in technology and hasty enthusiasm overlooks certain realities of the situation.

Seawater desalination plants continue to be somewhat impractical and unreasonable for several reasons. First and foremost, seawater desalination is very expensive. For example, the proposed Tampa Bay area de-

177. One solution to which most parties can agree is conservation. Measures implemented to reduce water use are critical to preservation of Florida's ecosystem and to such practical factors as maintaining reasonable water rates. However, even the best conservation measures do not totally remove the need for consumptive uses of water. Thus, for the purposes of this Comment, conservation of water will be assumed as a goal and the resulting discussion will address measures to alleviate Florida's water problems beyond conservation.

178. PERMIT MANUAL, *supra* note 3, at B-xiii (defining desalination as "[t]he process of removing or reducing salts and other chemicals from seawater or highly mineralized water"); Jean Heller, *Water Woes May Find Salty Solution*, ST. PETE. TIMES, Apr. 2, 1995, at B1 ("It can turn the salt water of the Gulf of Mexico or the brackish water that long ago overwhelmed the aquifer beneath Pinellas County into reliable sources of fresh drinking water.").

In 1996, the Legislature enacted CS/HB 831, which deregulates the sale of desalinated water to governmental authorities by making such sales exempt from regulation by the Florida Public Service Commission. See Christie & Christaldi, *supra* note 93. The exemption applies to desalination of both seawater and brackish water. See *id.*

179. CRAIG W. DYE ET AL., SEAWATER DESALINATION: AN INVESTIGATION OF CONCENTRATE DISPOSAL BY MEANS OF A COASTAL OCEAN OUTFALL 1 (Sept. 1995) ("Desalination is utilized extensively throughout Florida which has the most such facilities of any state in the U.S. Currently, Florida has 176 desalination plants, *all brackish water* except for a sea water facility in Key West.") (emphasis added).

180. The district wants the West Coast Regional Water Supply Authority to construct the plant. It is important to note that although the water management district has offered some funds, these funds would cover only about one percent of the cost of construction of the plant, and the district has generally refused to allow any of its funds to be used in a feasibility study.

181. See, e.g., *Desalination Cost May Be Lower than Purported*, CITRUS COUNTY CHRONICLE, Mar. 27, 1995, at B1; Carlos Moncada & Kathleen Beeman, *Water Solution Sought*, TAMPA TRIB., Mar. 28, 1995, at B1; Michael D. Bates, *Desalination Plant Seen as "Wave of the Future,"* HERNANDO TODAY, Apr. 1, 1995, at A1.

182. This is because the public is aware that about 97.5 percent of the earth's water is contained in the oceans. A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 2.02 (1992).

salination plant, capable of producing 20-50 million gallons per day (mgd) would cost about 200 million dollars just to construct.¹⁸³ Although 20-50 mgd may sound as if it is a large amount, the estimated 1993 use in the Southwest Florida Water Management District alone was 1281.5 mgd (see Appendix).¹⁸⁴ Furthermore, the projected use in that district for the year 2020 is 2369.5 mgd (see Appendix).¹⁸⁵ The 200-million-dollar price tag will likely be passed directly to the users of the water.¹⁸⁶ Clearly, this large expense, which goes only to the construction of the plant and not the high operational costs,¹⁸⁷ would provide a tiny fraction of the actual water needs of the region.

In addition, the operation of a desalination plant requires excess generating capacity, a requirement that necessitates using fossil fuels to drive the generators.¹⁸⁸ This raises all of the concerns that come with the burning of fossil fuels, including those regarding increased air pollution. As one commentator noted, "It is not exactly a scenario that conservationists or administrators of clean-air laws would write."¹⁸⁹

The desalination of seawater also raises concerns about safe disposal of the brine concentrate that is left as a by-product of the process. While this may not be much of a problem if the water being desalinated is brackish aquifer water, it is a major concern with the desalination of seawater. This is because only about forty percent of the water that runs through the desalination plant is recovered as fresh water.¹⁹⁰ The remainder, which is an equal amount of water "with a saline content twice as high as the Gulf of Mexico,"¹⁹¹ is waste by-product.¹⁹² Hence, if forty mgd of potable water were generated, sixty mgd of waste product would also be produced.

183. Earle Kimel, *Two Companies Eye Desalination*, CITRUS COUNTY CHRONICLE, Mar. 31, 1995, at A1. While the Kimel article sets the production at 50 mgd, other estimates claim that a 20 mgd output is "about as big a plant as is practical from a cost standpoint." Heller, *supra* note 178, at B7. This does not include operational costs. See *infra* note 187 and accompanying text.

184. NATURAL RESOURCES REPORT, *supra* note 13, at 39; see Appendix.

185. NATURAL RESOURCES REPORT, *supra* note 13, at 39; see Appendix.

186. NATURAL RESOURCES REPORT, *supra* note 13, at 39.

187. Seawater desalination would cost \$3.40 to \$5.80 in operational costs per 1000 gallons of sellable water. JOHN E. POTTS, PRESIDENT, SOUTHEAST DESALTING ASSOCIATION, ADVANTAGE AND COSTS OF SEAWATER VERSUS BRACKISH WATER 3 (undated report, prepared for the Florida Water Law and Regulation Conference). Conventional water, in comparison, costs \$0.85 to \$1.90 per 1000 gallons in operational costs. *Id.* The average home uses 10,000 gallons per month. *Id.*

188. Heller, *supra* note 178, at B7.

189. *Id.*

190. DYE ET AL., *supra* note 179, at 4 ("A forty percent recovery of fresh water (60 percent [by-product] concentrate) was generally obtained when running the RO [reverse-osmosis] unit."); Heller, *supra* note 178, at B7 (setting the rate at about fifty percent.).

191. Heller, *supra* note 178, at B7.

192. This by-product is referred to as concentrate. DYE ET AL., *supra*, note 179, at 4. Tests have shown that concentrates from seawater desalination can show chloride values exceeding state standards. *Id.* at 5.

Disposal of this by-product can have a damaging environmental impact.¹⁹³ Oftentimes, this by-product can be acutely toxic.¹⁹⁴ Accordingly, the wastewater cannot simply be dumped on the ground or poured directly into the Gulf of Mexico or Atlantic Ocean.¹⁹⁵

While the Saudi Arabian use of seawater desalination is seen as evidence that such use of seawater is feasible, there is not in the entire United States a single operational seawater desalination plant on the scale of that proposed by the Southwest Florida Water Management District for the Tampa Bay area. Also, as a differentiation, Saudi Arabia is an oil-rich nation with independent financial resources to promote the development of high-technology desalination plants and to maintain their high operational costs; the West Coast Regional Water Supply Authority,¹⁹⁶ which is the regional public water supplier for the Tampa Bay area, is not. In addition, the seawater desalination plant in Saudi Arabia is not subject to the strict environmental laws of Florida or the United States. Proponents of the desalination plant point to California as having an existing desalination plant. A desalination plant does exist in Santa Barbara; however, the plant has *never* been used to process water.¹⁹⁷ The plant was constructed as a "backup in case of drought,"¹⁹⁸ not as a primary producer of water for public supply. Little convincing evidence exists that a desalination plant would be an efficient producer of water in the United States.

2. Brackish Water Desalination

Salt water intrusion into aquifers is a serious problem.¹⁹⁹ One solution to this problem is to process the brackish water in tainted aquifers to pro-

193. *Id.*

194. *Id.* at 5-6. Acute toxicity means:

The presence of one or more substances or characteristics or components of substances in amounts which:

(a) are greater than one-third (1/3) of the amount lethal to 50 percent of the test organisms in 96 hours (96 hr LC₅₀) where the 96 hr LC₅₀ is the lowest value which has been determined for a species significant to the indigenous aquatic community; or
 (b) may reasonably be expected, based upon evaluation by generally accepted scientific methods, to produce effects equal to those of the concentration of the substance specified in (a) above.

DEP 62-301.100 REG Files (1995). Some sources claim that such toxicity is not a problem because potentially adverse environmental effects could be lessened through dilution and mixing with normal saltwater. DYE ET AL., *supra* note 179, at 6.

195. *Id.*

196. The West Coast Regional Water Supply Authority was created on October 25, 1974, pursuant to ch. 74-114, *Laws of Florida*. *Pinellas County v. Lake Padgett Pines*, 333 So. 2d 472, 478 n.6 (Fla. 2d DCA 1976); Jan Platt, *A Local Experience—Hillsborough County*, in FORGING PARTNERSHIPS IN LAND AND WATER MANAGEMENT: THE CENTRAL FLORIDA EXPERIMENT 21 (1987).

197. Heller, *supra* note 178, at B7.

198. *Id.*

199. NATURAL RESOURCES REPORT, *supra* note 13, at 32.

duce potable water. Florida does make use of brackish water desalination within its boundaries.²⁰⁰ According to the Florida House of Representatives Committee on Natural Resources, "The City of Dunedin has gained national and international attention since 1992, with its reverse osmosis (RO) treatment of brackish water mixed with fresh groundwater. . . . Dunedin's facility is the only one in Florida and the largest in the United States to utilize greensand filtration as a pretreatment to RO."²⁰¹ While this treated water supplements the city's supply of drinking water, it is questionable whether such processing is viable on a larger scale. Of course, many of the problems that were pointed out in the above discussion dealing with desalination of seawater²⁰² are equally as valid with respect to processing of brackish water. For instance, the RO process produces a by-product whose disposal is problematic. The highly mineralized water that is a by-product of the RO process in Dunedin is "piped to the city's wastewater plant, mixed with wastewater and used for irrigation."²⁰³ However, larger quantities of this by-product may not be so easy to discard.

Additionally, logic dictates that if removal of water from the aquifer initially caused the saltwater intrusion in the first place, removal of the brackish water makes the problem worse—that is to say, additional withdrawals will allow more saltwater intrusion. This will cause the concentration of minerals to rise, the cost of processing to rise, and the amount of by-product to increase.

V. THE WATER MANAGEMENT APPROACH TAKEN IN OTHER STATES

In formulating suggested changes for Florida, it is useful to examine the approaches taken in a sampling of other states. This part will examine the water allocation systems of Alabama and California. Although Florida is geographically and geologically unique from these states in many respects, its water allocation problems may be resolved through implementation of approaches taken in other states.

200. Florida has 175 brackish water desalination facilities. DYE ET AL., *supra* note 179, at 1. "About 1,000 desalting plants are in operation nationwide. Most United States plants are used to clean brackish (moderately salty) groundwater, a less expensive process than seawater desalting, or to produce highly purified water for industrial uses." AMERICAN DESALTING ASSOCIATION, DESALTING FACTS 1 (undated).

201. NATURAL RESOURCES REPORT, *supra* note 13, at 53. "The treatment also is used to remove lead and other minerals from groundwater." *Id.*

202. See *supra* notes 183-98 and accompanying text.

203. NATURAL RESOURCES REPORT, *supra* note 13, at 53.

A. *Water Management in Alabama*

On February 23, 1993, the Alabama Legislature enacted the Alabama Water Resources Act.²⁰⁴ Like Florida, Alabama is a riparian state and, prior to this enactment, users' consumption of water was governed exclusively by the common law of riparian rights.²⁰⁵ Although Alabama's Water Resources Act is not intended to "change or modify existing common or statutory law,"²⁰⁶ the law does make significant strides in managing Alabama's water resources at the state level.²⁰⁷

Section 4 of the Act creates the Office of Water Resources,²⁰⁸ and section 5 enumerates the powers and duties of that office.²⁰⁹ The Office of Water Resources "may develop long-term strategic plans for the use of the waters of the state; implement water resource programs and projects for the coordination, conservation, development, management, use, and understanding of the waters of the state."²¹⁰ In addition, the Act establishes the Alabama Water Resource Commission.²¹¹ Noticeably absent from the statutory scheme set out by the Alabama Legislature is the system of politically strong and somewhat independent water management districts existing in Florida. In contrast to Florida's system, the Alabama system is set up so that "Critical Use Stud[ies],"²¹² conducted by the Office of Water Resources, perform the planning and management functions of the Act.²¹³ It has been suggested that "[a] Critical Use Study should

204. ALA. CODE § 9-10B-1 (Supp. 1995); William S. Cox, III, *An Introduction to the Alabama Water Resources Act*, 55 ALA. LAW. 176 (1994).

205. Cox, *supra* note 204, at 176. The common law of riparian rights in Alabama was expressed by the supreme court of that state as follows:

[E]very riparian proprietor has an equal right to have [a] stream flow through his lands in its natural state, without material diminution in quantity or alteration in quality. But this rule is qualified by the limitation . . . that each of said proprietors are entitled to a reasonable use of the water for domestic, agricultural, and manufacturing purposes.

Crommelin v. Fain, 403 So. 2d 177, 184 (Ala. 1981) (citations omitted). For a history of Alabama's water policy, see William L. Andreen, *Alabama*, in WATER AND WATER RIGHTS 185, 185-90 (1994).

206. ALA. CODE § 9-10B-27 (Supp. 1995).

207. "Prior to the enactment of the Alabama Water Resources Act, the State of Alabama lacked a statewide agency or office charged with the management of quantitative water resources within the state." Cox, *supra* note 204, at 177; William S. Cox III, *The Alabama Water Resources Act: A Hybrid Model of "Regulated Riparianism,"* in WATER LAW: TRENDS, POLICIES, AND PRACTICE 151, 153 (1995).

208. ALA. CODE § 9-10B-4 (Supp. 1995).

209. *Id.* § 9-10B-5.

210. Cox, *supra* note 204, at 177.

211. ALA. CODE § 9-10B-12 (Supp. 1995). The Commission acts "as an advisor on matters relating to the waters of the state; develops, promulgates, adopts, and repeals the rules and regulations authorized by the Act; and hears appeals of administrative actions of the [Office of Water Resources]." Cox, *supra* note 204, at 177; ALA. CODE § 9-10B-16 (Supp. 1995).

212. ALA. CODE § 9-10B-3(7) (Supp. 1995).

213. Andreen, *supra* note 205, at 190-91.

permit state, regional, and local planners to identify immediate and potential problems and formulate plans to address those problems in areas where the current or future demand for water is found to exceed the available supply."²¹⁴ All such fact-finding and information gathering is undertaken at the state level, and all planning and management decisions are made at the state level.

Alabama's water use system cannot effectively address all of the problems that Florida faces with water allocation because of the variances between the two states. For instance, Alabama and Florida have many geological differences. Alabama has only one major coastal city—Mobile—and has no ecological equivalent to the Florida Everglades. In addition, Alabama lacks Florida's regional complexity, large population, and complex aquifer system. However, these differences do not mean that Alabama's state-level system should be overlooked. Florida's size and varying ecology might require different regions to be treated differently, but the overall policy decisions could still be made at the state level as they are in Alabama.

B. *Interregional Cooperation in California*

The state of California presents a water usage system bearing several close comparisons to that of Florida. Particularly, this section will focus on the transfer of water within the state as a means of allocating California's water resources. In California, "over 70 percent of the stream flow lies north of Sacramento, [while] nearly 80 percent of the demand for water supplies originates in the southern regions of the state."²¹⁵ In fact, more than 50 percent of the water consumed in southern California is imported from outside that region.²¹⁶ Even though California is a western state, the examples of its use of water transfers may be helpful in Florida.²¹⁷

The most pressing problem in California, as in Florida, is that "sources of water supply do not align geographically with areas of de-

214. Cox, *supra* note 204, at 179.

215. United States v. State Water Resources Control Bd., 227 Cal. Rptr. 161, 166 (Ct. App. 1986).

216. Frederick M. Muir & Virginia Ellis, *Unprecedented 7th Year of State Drought Forecast*, L.A. TIMES, Nov. 17, 1992, at A1.

217. Although California has experienced some negative effects from certain attempted remedies to its water supply problems, these effects stem mainly from the fact that California does not have the tradition of balancing environmental concerns with development that Florida has. Hence, the positive aspects of California's water transfers can be applied, within the scope of attempting to find an ecological balance in the State of Florida, to provide all water users with an ample supply while preserving the environment. Additionally, it should be noted that "only fifteen percent of California's water is used for drinking and bathing by people, or by industry." LAURENCE PRINGLE, *WATER: THE NEXT GREAT RESOURCE BATTLE* 106 (1982). Agriculture uses the remaining eighty-five percent. *Id.*

mand."²¹⁸ Of particular interest is a 1988 agreement in California to transfer 100,000 acre-feet²¹⁹ of water per year from the Imperial Irrigation District (IID) to the Metropolitan Water District (MWD).²²⁰ The IID serves primarily as a supplier to agricultural water users. As such, a good portion of the water used is wasted in the form of runoff.²²¹ In this particular circumstance, the irrigation runoff was going into a nearby saltwater body and rendering the runoff unsuitable for further consumptive use.²²²

Under the 1988 agreement between the IID and the MWD, the runoff water is conserved and made available for use by the MWD. This has been effectuated through the MWD's paying for conservation measures in the IID.²²³ Both parties draw water from the same river at different points.²²⁴ Because the IID does not need to withdraw the conserved water from the river, the MWD can draw a greater quantity upstream.²²⁵ Although this situation is a specific example somewhat factually dependent on the case at hand, it is a prime instance of how solutions derived through mutual cooperation and planning can resolve regional problems. If these districts had not worked together to form this supradistrict agreement, the citizens of the state would have suffered as a whole from possible overdepletion of water resources and increased transaction costs.

In addition, during the past several years in response to drought conditions in the state, California has employed a consolidated water allocation approach, called the California Drought Emergency Bank (Bank).²²⁶ This water bank is, in essence, a statewide centralized water transfer mechanism. Prior state law had been muddled in regard to such transfers and, as a result, transfers had been costly and time-consuming, if administratively

218. Morris Israel & Jay R. Lund, *Recent California Water Transfers: Implications for Water Management*, 35 NAT. RESOURCES J. 1, 2 (1995); Matthew Levinson, Comment, *California Water: An Economic Consideration*, 12 UCLA J. ENVTL. L. & POL'Y 183, 183 (1993). Recent statistics show the major California cities as large importers of water: San Diego, eighty-eight percent; Los Angeles, eighty-four percent; and San Francisco, eighty percent. Robert E. Beck, *The Water Resource Defined and Described*, in WATER AND WATER RIGHTS 3, 45 n.37 (1991 & Supp. 1995) (citing U.S. WATER NEWS, June 1989, at 1).

219. This term refers to the amount of water necessary to cover an acre of ground to a depth of one foot. An acre-foot equals roughly 320,000 gallons of water. Levinson, *supra* note 218, at 184. It has been remarked that an acre-foot of water is "enough water to flush approximately 60,000 suburban toilets simultaneously." ROBERT H. BOYLE ET AL., *THE WATER HUSTLERS* 135 (1971).

220. Levinson, *supra* note 218, at 183 (arguing for water transfers in western states with increased government intervention); Israel & Lund, *supra* note 218, at 21-22.

221. Levinson, *supra* note 218, at 188.

222. *Id.*

223. *Id.*

224. *Id.*

225. *Id.*

226. Martha H. Lennihan, *The California Drought Emergency Water Bank: A Successful Institutional Response to Severe Drought*, in WATER LAW: TRENDS, POLICIES, AND PRACTICE 127 (1995); Israel & Lund, *supra* note 218, at 21-22.

possible at all.²²⁷ The Bank was established and implemented by a Governor-appointed "drought action team" and, with few exceptions, became "the exclusive mechanism to transfer water."²²⁸ The Bank served as an agency for the allocation of water resources by buying water from willing sellers and then reselling the water to interested users.²²⁹ At least one commentator has remarked that this system has "worked remarkably well."²³⁰

VI. PROPOSED CHANGES IN FLORIDA'S WATER MANAGEMENT POLICY

As discussed above,²³¹ the central problem that Florida faces is the distribution of an ample,²³² but unevenly distributed, natural resource. The state-level management system envisioned by the drafters of the *Model Water Code* may have successfully dealt with this problem. However, the Florida Legislature did not enact the Water Resources Act that the drafters of the *Model Water Code* had envisioned. In fact, insofar as the Legislature vested policymaking ability in the districts,²³³ it erroneously perceived the problem in Florida as being localized and regional and it, therefore, patterned the Florida Water Resources Act accordingly.²³⁴ Furthermore, the successive state agencies charged with implementing the statute have consistently delegated authority and policymaking ability to the water management districts. This not only does little to solve Florida's distribution problems but actually perpetuates them.

As one commentator has noted:

Rational decisions regarding the allocation of water resources must be based on knowledge of the physical availability of water, demands for the use of it, environmental needs, and alternatives for action. The Water Resources Act envisioned planning for water use and supply as a part of a comprehensive state planning effort that never has been realized.²³⁵

227. Lennihan, *supra* note 226, at 128-30.

228. *Id.* at 130. The California Legislature soon afterward enacted legislation dealing with the transfers. *Id.*; CAL. WATER CODE §§ 1745.02-.11, 1011.5 (1992).

229. Harrison C. Dunning, *California*, in WATER AND WATER RIGHTS 243, 246-47 (Supp. 1995).

230. Lennihan, *supra* note 226, at 127.

231. See *supra* notes 4-15, 169-72 and accompanying text.

232. *Dialogue with Pam McVety, Assistant Secretary, Florida Department of Environmental Protection*, in FLORIDA ENVIRONMENTS, Mar. 1996, at 12 ("The fact is that water is not limited in this state. What is limited is deep easily accessible water, but there is plenty of water for all users and natural systems in this state.") [hereinafter *Dialogue*].

233. This policymaking authority is subject to the state water policy.

234. *But see Osceola County v. St. Johns River Water Management Dist.*, 504 So. 2d 385 (Fla. 1987) (finding that the Legislature enacted the Florida Water Resources Act "in order to implement a statewide and comprehensive administrative system of regulation, resource protection, and water use permitting").

235. Hamann, *supra* note 4, at 9-10.

Clearly, Florida is in need of a legislative revision that will provide for more action by the DEP in order to allocate the water resources of the state more effectively.²³⁶

The initial reason Florida's dual plans, the state water use plan and the Florida water plan, never fully came into being was that the Legislature in 1972 doomed them with inadequate funding.²³⁷ Hence, the Legislature must first make a commitment to funding the DEP for the purpose of implementing an active state-level water management system.

A second step must be the transfer of authority from the water management districts to the DEP. The water management districts provide an excellent tool for the completion of administrative tasks. However, policy decisions, including distribution decisions, must be made at the state level. This is because state-level administration of water policy will not then be subject to the local political pressures that now plague the regional system. Local officials, concerned primarily with the best interests of their areas and secondarily with state considerations, tend to view the issue parochially.²³⁸ The maintenance of politically powerful water management districts serves only to create a regional view that promotes an "us against them" feeling. However, citizens of Tampa and citizens of Tallahassee are both citizens of the State of Florida and, therefore, both should be equally entitled to the state's resources. The DEP is in the best position to allocate the water resources of the state.

A. *Interdistrict Transfers of Water*

A possible solution to Florida's water use problems involves the transfer of water from the water-rich rural northern areas to the densely populated southern coastal areas.²³⁹ Generally, because the water management districts in Florida were drawn along hydrologic boundaries, interdistrict

236. To be certain that water resources legislation is a key issue, *Florida Environments*, a journal of Florida's environmental industry, had predicted water resources to be the top issue with Florida's law makers in the 1996 session. Kathleen Laufenberg, *Water District Legislation To Make a Big Splash This Year*, FLORIDA ENVIRONMENTS, Jan. 1996, at 6.

237. Hamann, *supra* note 4, at 9-10 ("Despite the statutory directive, no funds were appropriated at the state level for several years to undertake planning.").

238. A recent report of the Water Management District Review Commission suggested the creation of both a permanent position in the executive office of the Governor and a standing legislative committee on water resources to oversee the financial and programmatic activities of the five water management districts. REVIEW COMMISSION, *supra* note 149, at 6-7. The House Select Committee on Water Policy interim project report for 1995 calls the legislation an attempt to clarify "the relevance of political boundaries in providing for the development of water supplies." H.R. SELECT COMMITTEE ON WATER POLICY STAFF, WATER SUPPLY POLICY CONSIDERATIONS: INTERIM PROJECT REPORT 28 (Dec. 1995).

239. For a discussion of the interstate use of water, which is outside the scope of this Comment, see Frank J. Trelease, *Interstate Use of Water—Sporhase v. El Paso, Pike & Vermejo*, 22 LAND & WATER L. REV. 315 (1987); GETCHES, *supra* note 51, at 383-406.

transfers are essentially interbasin transfers.²⁴⁰ Prior to 1987, such transfers were governed by common law. After a pivotal decision that year, the Legislature codified the right of the DEP to authorize interbasin transfers.

1. Case Law of Interdistrict Transfers of Water

The seminal case on this issue was *Osceola County v. St. Johns River Water Management District*.²⁴¹ The factual scenario involved Brevard County's application to the water management district, through the South Brevard Water Authority, for a consumptive use permit that would allow the use, in Brevard County, of water drawn from Osceola County.²⁴² While Brevard County is within the St. Johns River Water Management District, Osceola County is entirely within the South Florida Water Management District.²⁴³ This suit arose when Osceola County sought a writ of prohibition to enjoin the St. Johns River Water Management District from considering the application.²⁴⁴ The claim was essentially that an individual water management district lacked jurisdiction to consider a consumptive use permit for waters outside its boundaries.²⁴⁵

In denying the writ, the Fifth District Court of Appeal held that the district did, in fact, have the authority through delegation by the Department of Environmental Regulation (predecessor to the DEP).²⁴⁶ The Florida Supreme Court affirmed this decision and rejected the petitioner's assertion that no such authority existed in the absence of express enumeration.²⁴⁷ The court determined that the spirit of the Florida Water Resources Act dictated that interdistrict transfer be permitted.²⁴⁸

The court found no cause to be concerned that the administrative practice of allowing interdistrict transfers would "result in anarchy among the districts and the possible depletion of some districts' water resources by overly thirsty neighboring districts."²⁴⁹ It determined that the consent of both districts was required and ordered both districts to study the proposed use to determine whether such a transfer would meet the statutory criteria, including consistency with the public interest, as required in sec-

240. Ansbacher & Brown, *supra* note 13, at 253 (quoting W. EARL & T. ANKERSON, COMPETING APPLICATIONS, INTER-DISTRICT TRANSFERS, AND ASPECTS OF COMPETITION FOR CONSUMPTIVE WATER USE 3 (Undated)).

241. 504 So. 2d 385 (Fla. 1987).

242. *Id.* at 387.

243. *Id.*

244. *Id.* The writ was filed before the St. Johns River Water Management District was able to hold a public hearing on the permit, but after the district staff had recommended its denial. *Id.*

245. *Id.*

246. *Id.*

247. *Id.* at 388.

248. *Id.*

249. *Id.*

tion 373.223(1)(c).²⁵⁰ Ultimately, the court found that the problem was statewide and refused to view Osceola County as having any special right to such waters.²⁵¹

The Florida Supreme Court properly concluded that statewide distribution of water was not only within the authority of the DEP and, by delegation, the water management districts, but also that such transfers, given proper study and consideration, could be most beneficial in addressing statewide consumptive water use. The court's conclusion can be enhanced by realizing that the DEP, not the water management districts, is in the best position to administer intrastate water transfers. While the gathering of technical, scientific, and environmental information is best handled at the district level, decisions of allocation must be made at the state level. The state is better suited to handle allocation for several reasons. To understand these reasons, the Legislature's 1987 enactment concerning interbasin transfers must be reviewed.

2. Legislative Authority for Interdistrict Transfers of Water

In response to the *Osceola County* decision, the Legislature passed a law expressly authorizing the interdistrict transfers of groundwater.²⁵² This law attempts to streamline the process of permit approval by vesting the authority to consider the application in the district from which the groundwater would be withdrawn.²⁵³ Although the procedure leaves the ultimate decision to the DEP, the district from which the water is drawn is charged with the responsibility of reviewing the actual application.

This law differs from the prior administrative practice under consideration in the *Osceola County* decision. Under that practice, the agency permitted both the receiving district and the withdrawal district to take part in the decisionmaking process.²⁵⁴ The process has made such transfers susceptible to local political pressures and the type of regionalism

250. *Id.*

251. *Id.*

252. 1987, Fla. Laws ch. 87-347, § 1 (codified at FLA. STAT. § 373.2295 (1995)).

253. FLA. STAT. § 373.2295(6)(c) (1995). The governing board of the agency in which the groundwater is to be withdrawn is to issue a notice of intended agency action. Then, under section 373.2295(8), the DEP shall issue a final order.

In 1996, the Legislature proposed a bill requiring DEP and the water management districts, when evaluating applications for water transport, to consider the proximity of the proposed water source to the area in which it is to be used and other environmentally, economically, and technically feasible alternatives to the proposed water transfer, including, but not limited to, desalination, reuse, stormwater, and aquifer storage and recovery. See Christie & Christaldi, *supra* note 93. However, this bill ultimately did not pass. See *id.*

254. The rule in question in the *Osceola County* case was *Florida Administrative Code* rule 17-40.05. However, the law enacted in 1987 grants the authority to review the application to the district from which the water is to be withdrawn. FLA. STAT. § 373.2295(2) (1995); *cf. id.* § 373.2295(5) (authorizing the district to which the water will be transferred to *comment* on the application); see also Ansbacher & Brown, *supra* note 13, at 254.

that can defeat the most efficient and beneficial allocation of water throughout the state. Even the process under the 1987 law lends itself to regionalism by permitting the districts to present data supporting the position that a regional system may, in fact, be the most beneficial and efficient allocation of the state's water resources.

It is important to note that section 373.2295 grants express authority to transfer *groundwater*²⁵⁵ but is silent on the transfer of surface waters. At least two commentators have noted that "[i]mplicitly . . . the legislature has failed to authorize . . . such [surface water] transfer."²⁵⁶ Furthermore, the maxim "*expressio unius est exclusio alterius*" dictates that the inclusion of one thing in a statute is the exclusion of all others.²⁵⁷ Therefore, under this maxim, the interdistrict transfer of surface waters is not permitted under chapter 373.

This disallowance of surface water transfer may not have been the best decision of the Legislature for several reasons. First, the allocation of surface waters is just as much a statewide concern as that of groundwater. Second, the Legislature would be remiss if it considered these two types of withdrawals as separate and without intermixed effects.²⁵⁸ Therefore, the interdistrict transfer of surface waters should also be permitted under the statute.

B. *The Environment and Interbasin Allocation*

Concerns about interbasin water allocations must be addressed in developing a state-level system. These concerns include issues of controlling water loss in transfers and ensuring environmental preservation with a minimal negative impact.

The first criticism is that interbasin transfers are subject to loss of water in transmission due to leakage or evaporation.²⁵⁹ The charge is that such loss is an unnecessary waste of the resource. However, this shortcoming is not severe and need not be seen as a critical flaw in the plan.

255. FLA. STAT. § 373.2295 (1995).

256. Ansbacher & Brown, *supra* note 13, at 254.

257. TVA v. Hill, 437 U.S. 153, 188 (1978).

258. A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 2.02(2) (1994).

The persistence of these categories makes it difficult to subject physically interrelated sources of water to a common system of property rights or regulatory regime. The result is that water laws and policies designed to conserve water often fail to achieve their objective because not all sources of a common supply are subject to the same limitations. For example, what good does it do to limit surface withdrawals if the extraction of sub-surface flows that support the stream . . . are not similarly restricted?

Id.; see also NATURAL RESOURCES REPORT, *supra* note 13, at 9 ("Before much was understood about hydrological cycles and the interconnectedness between groundwaters and surface waters, courts made legal distinctions between [groundwaters] . . . and surface water courses.").

259. Beck, *supra* note 218, at 46 n.37 (citing U.S. WATER NEWS, June 1989, at 1).

With technological advances, such losses can be reduced. A weighing of the merits of interbasin transfers and such water losses should be made. If the merits outweigh the losses, then interbasin transfers should be effectuated. Clearly, some loss of water occurs when public utilities provide water to the public. However, the benefits of public supplies of water far outweigh the loss in transport. The same analogy holds true in the context of interbasin transfers.

The second concern involves the environmental implications of imposition of such a state-wide allocation system. The environment is surely a paramount priority and must be protected.²⁶⁰ However, the fact remains that people live in Florida and those people need water to survive. Hence, the question becomes one of balancing community needs against environmental concerns.²⁶¹ It is only in this light that a statewide allocation system should be considered.

First, studies must be done to determine the ecological effects of such interbasin transfers. This initial research must aim to measure the minimum flows of rivers and streams and the minimum levels of lakes and aquifers. Any system of water allocation must be ecologically sensitive.

Although, at first blush, the interbasin transfer of water may appear to degrade the ecological system from which the water is to be withdrawn, upon closer inspection, such transfer may prove better ecologically than the current system. Under the current system, permits for consumptive use of water in the areas where water is scarce may result in ecologically detrimental use of water resources. Overpermitting and overpumping pose serious threats to the environment. Would it not make sense to alleviate these threats with waters from areas that maintain an abundance of the resource so long as such withdrawals do not have a negative impact on the host area? The primary goal of this proposed policy shift is to avoid environmentally damaging behavior. Therefore, to implement such a plan without proper investigation into its short- and long-term impacts would be counterintuitive. However, to continue to exploit resources in areas where water levels are dangerously low while other areas "overflow" is simply poor resource management. "All organisms have a legitimate inter-

260. See, e.g., *Pinellas County v. Lake Padgett Pines*, 333 So. 2d 472, 478 (Fla. 2d DCA 1976).

Environmental aspects were emphasized by the Legislature in 1974, when it amended Ch. 373 to direct that the water management districts and the regional water supply authorities develop, store, and supply water . . . in such a manner as will give priority to reducing any adverse environmental effects of excessive or improper withdrawals of water from concentrated areas.

Id. (citations omitted).

261. For an excellent discussion of the balance needed between property rights and environmental concerns, see Heather Fisher Lindsay, *Balancing Community Needs Against Individual Desires*, 10 J. LAND USE & ENVTL. L. 371 (1995).

est in the wise and sane use of the planet's resources. . . ."²⁶² The state must protect this interest by properly managing the state's water resources.

The current policy of the water management districts is to develop local sources first.²⁶³ Implicit in this policy is that once local sources are fully developed, other options, such as interbasin transfers, will be considered. As Florida DEP Assistant Secretary Pam McVety has stated: "You have to understand that the statute says you look at all options including inter-basin transport."²⁶⁴ Given the water supply problems facing some areas of the state, the districts must look at interbasin transfers.

VII. CONCLUSION

The State of Florida has an ample supply of water resources. Despite this fact, several areas in Florida are suffering from water shortages due to reasons such as drought and population increase. Hence, a problem in efficient allocation exists. This is primarily because Florida's system of water allocation is highly regionalized and localized. This Comment has pointed to the flaws in the current system and called for the imposition of a state-level mechanism for allocating the state's water resources.

For several reasons, allocative decisions about the consumptive use of water are better made at the state, rather than the district, level. First, by making these decisions at the state level, the DEP will serve administrative efficiency. By requiring the water management district from which water is withdrawn in an interbasin transfer to agree, the current system allows for the possibility that districts will disagree; such friction not only slows down the gears of administration, but inflicts unnecessary expense on taxpayers.²⁶⁵ Next, the DEP will avoid the subjection of such consumptive use decisions to local interests and factions. Much recent talk about "water wars" indicates a battle among regional interests.²⁶⁶ Discussion pits one county against another in a conflict arguably to the detriment of all citizens of the state. The state's ecosystem is one large web of interconnected systems; likewise, its citizens' health, safety, and welfare are inextricably linked. Therefore, the current system, which promotes

262. *Id.* at 402.

263. *Dialogue*, *supra* note 232, at 12.

264. *Id.*

265. See generally Leonard Shabman & William E. Cox, *Costs of Water Management Institutions: The Case of Southeastern Virginia*, in SCARCE WATER AND INSTITUTIONAL CHANGES 134, 153-69 (Kenneth D. Frederick ed., 1986) (analyzing proposed water transfers in Virginia and concluding that ample water supplies exist and that "water transfer conflicts arise and persist because of institutional inadequacies that could be remedied by reforms tailored to the specific nature of the state's water problem").

266. See, e.g., Savannah Blackwell, *Water Wars Loom on Florida's Horizon*, TALL. DEM., Apr. 2, 1995, at B1; Mary Ward, *Water Wars: Does Florida Have a Water Crisis? Some Say There Is No Crisis But That the State Is Faced with a Critical Water Management Problem*, FLORIDA AGRICULTURE, Jan. 1995, at 1; Phillip Longman, *What Water Crisis?*, FLORIDA TREND, June 1991, at 49-50.

regionalism and has resulted in "water wars," must be replaced by a system that removes such water allocation decisions from the regional level and places them under the broader, more objective perspective of a state agency.

APPENDIX: COMPARISON OF CURRENT FRESHWATER USE AND
PROPOSED FUTURE USE IN THE SOUTHWEST FLORIDA WATER
MANAGEMENT DISTRICT²⁶⁷

User Groups	1993 Actual Metered Use*	1993 Estimated Use**	2020 Projected Use
Agriculture	62.4 mgd+	463.9 mgd	1,049.4 mgd
Public Supply	160.3 mgd	462.3 mgd	835.4 mgd ***
Mining/Dewatering	51.0 mgd	192.2 md	181.8 mgd
Industrial/Commercial	63.8 mgd	115.2 mgd	209.4 mgd
Recreational/Aesthetics	15.9 mgd	47.9 md	93.5 mgd
Total	353.4 mgd	1281.5 mgd	2,369.5 mgd

Data supplied by SWFWMD

+ mgd: million gallons a day

* Does not represent actual amounts of water used because only 1204 of the District's 8038 water use permits require submittal of pumpage reports.

** Includes actual metered amounts plus estimates of water used by permitted, but unmetered, users. Does not include estimates of unpermitted water use.

*** Includes 86.9 mgd of projected use either by people who withdraw water from private wells or by private companies that do not meet water use permitting thresholds.

267. This table is reprinted from the NATURAL RESOURCES REPORT, *supra* note 13, at 39.