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Recommended Citation

James M. Klebba, *Water Rights and Water Policy in Louisiana: Laissez Faire Riparianism, Market Based Approaches, or a New Managerialism?*, 53 La. L. Rev. (1993)
Available at: <http://digitalcommons.law.lsu.edu/lalrev/vol53/iss6/3>

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Water Rights and Water Policy in Louisiana: Laissez Faire Riparianism, Market Based Approaches, or a New Managerialism?

James M. Klebba*

I. DOES LOUISIANA NEED WATER LAW?

Louisiana has historically been regarded as a water-rich state.¹ Water rights have provoked minimal litigation in Louisiana, and the state's legislators and bureaucrats have only recently attempted coordinating the development and protection of water resources and regulating the use of water. Benign neglect may be justified if there is abundant water for all—and Louisiana probably contains more than enough water to meet its foreseeable needs. But that water is not evenly distributed: in some areas, water is not always readily available, particularly when quality requirements are taken into account. One study published in 1957 indicated some concern on the part of industrial businesses and farmers that state water policy could not assure a sufficient water supply in the future.² Indeed, data indicate the future will bring sporadic water shortages in portions of the state.

In fact, many studies discovered actual and anticipate potential water problems in several parts of the state. The most pressing problems have related to ground-water.³

A number of these studies centered on the Baton Rouge area and surrounding parishes and indeed eventually led to legislation establishing the Capital Area Ground Water Control Commission,⁴ which has been, to date, Louisiana's most

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* Victor H. Schiro Professor of Law, Loyola University, New Orleans. I would like to thank my research assistant Robert L. McKnight for his invaluable help in both legal research and translation. This article was made possible in part by the Bonomo and LaNasa endowed funds at Loyola Law School.

1. See, e.g., Warren Viessman, Jr. and Christine Démoncada, U.S. Libr. of Congress, Serial No. 96-12, *State and National Water Use Trends to the Year 2000* (1980).

2. Louisiana Legis. Council, Research Study 11, *Water Problems in the Southeastern States* 45-46 (1957).

3. A national survey in 1978 listed Louisiana as one of only eight states where over half or close to half of the state's land mass is subject to groundwater depletion—the others being Nebraska, Kansas, Oklahoma, Texas, Colorado, New Mexico, and Arizona. In fact, of all of these states, Louisiana appeared to have the largest percentage of its surface area affected by depletion. 2 U.S. Water Resources Council, *The Nation's Water Resources: The Second National Water Assessment* 12, fig. II-2 (1978).

A 1985 study listed Louisiana among the top four states with the highest overall withdrawal (along with Indiana, Texas, and Pennsylvania) of groundwater for industrial purposes. Wayne B. Solley et al., U.S. Geological Survey, Circular 1004, *Estimated Use of Water in the United States in 1985* 30-33 (1988).

4. See *infra* text at notes 237-248.

comprehensive management approach to either ground or surface waters.⁵

Southwestern Louisiana has also received considerable attention in this area. Several monographs have identified saltwater encroachment in that area of the state as an ever-present, if not immediate, danger.⁶

5. Charles O. Morgan, La. Dept. of Public Works, Water Resources Bull. No. 2, Ground-Water Conditions in the Baton Rouge Area, 1954-1959, With Special Reference to Increased Pumpage (1961); R.R. Meyer & J.R. Rollo, La. Dept. of Public Works, Water Resources Pamphlet No. 17, Salt Water Encroachment, Baton Rouge Area, Louisiana 2-3 (1965) (citing data which indicates significant movement of salt water toward pumping centers, stating that "saltwater fronts occur in each of the principle aquifers in the southern part of the [Baton Rouge area]," and speaking of a "crash program" which was begun in 1964 because "it was feared that the leading edge of the salt water fronts in some aquifers would reach pumping centers in as little as five or ten years."); *id.* at 3, 5); Charles O. Morgan, La. Dept. of Public Works, Ground Water Resources of East Feliciana and West Feliciana Parishes Louisiana 39-48 (1963) (study noting long-term declines of groundwater levels over 40 years, with the rate of decline increasing about 1940 because of industrial expansion of the Baton Rouge area). This study implied that many presently existing wells would become unusable because of the long-range decline in water levels. *Id.* at 48. L.H. Falk and W.J. Stober, La. Water Resources and Research Inst., Bull. 2, The Measurement and Comparison of Costs for Alternative Water Replacement Projects 1 (1966) ("[g]eological studies conducted during the past twenty years indicate that the Baton Rouge, Louisiana area is confronted a ground water supply problem of potentially serious proportions"); La. Water Resources Research Inst., Bull. 5, The Present and Future Ground-Water Supply of the Baton Rouge Area (Raphael G. Kazmann ed., 1970) (includes a short appendix by George W. Hardy, III, on a few of the legal problems faced in protecting groundwater). *Id.* at F1-18. La. Water Resources Research Inst., Bull. 3, Salt-Water Encroachment into Aquifers (Raphael G. Kazmann ed., 1968) (comparing the problem in the Baton Rouge area to similar problems in southeastern Florida, Long Island, New York, and in southern California).

6. Alfred H. Harder, U.S. Geological Survey, Water-Supply Paper 1488, Geology and Ground Water Resources of Calcasieu Parish, Louisiana 3 (1960) (expressing concern about salt water encroachment); Alfred H. Harder et al., La. Dept. of Public Works, Water Resources Bull. No. 10, Effects of Ground Water Withdrawals on Water Levels and Salt-Water Encroachment in Southwestern Louisiana 4 (1967) (noting a steady decline in water levels in the Chicot aquifer).

The most imminent threat to the fresh-water resources of southwestern Louisiana from salt water encroachment is the northward movement of salt water in the "500-" and "700-foot" sands and the "upper sand unit." The rate of northward movement of these fresh-salt water interfaces is calculated to range from about 30 feet to about 200 feet per year.

Id. at 46. See also Paul H. Jones et al., La. Dept. of Conservation, Geological Bull. No. 30, Geology and Ground-Water Resources of Southwestern Louisiana at 228 (1954) (noting "the possibility that valuable ground water supplies might be ruined by widespread contamination, or be depleted seriously by over-pumping or improper development," and the problem of saltwater intrusion into the Vermillion River, which is relied on to recharge groundwater). *Id.* at 11. Allen L. Zack, La. Dept. of Public Works, Water Resources Pamphlet No. 27, Ground-Water Pumpage and Related Effects, Southwestern Louisiana, 1970, with a Section on Surface-Water Withdrawals 3 (1971) (noting that three-fourths of all groundwater pumped in southwestern Louisiana is used for rice irrigation). Zack notes rapid water-level declines in the Lake Charles area due to "concentrated industrial pumpage," which creates a "cone of depression, which spreads over most of Calcasieu Parish." *Id.* at 12. He also warns of both water-shortage and water-quality problems if water resources are not wisely managed in southwestern Louisiana. *Id.* at 23. See also Dale J. Nyman, La. Dept. of Public Works, Water Resources Technical Report No. 33, The Occurrence of High Concentrations of Chloride in the Chicot Aquifer System of Southwestern Louisiana (1984).

The literature concerning groundwater in the New Orleans metropolitan area points out that existing sources are too saline or otherwise not satisfactory. Despite the availability of abundant surface water from the Mississippi River, several studies express concern about future, if not existing, water quality problems from two different sources: the accumulated volume of industrial and agricultural pollutants drained from a large portion of the continent of North America and the threat, particularly acute at times of reduced river flow, of a tongue of salt water coming upstream from the Gulf of Mexico.⁷ Other studies look to the north of Lake Pontchartrain for alternate sources of better quality ground or surface water.⁸ Of course, should the Old River Control Structure fail, making New Orleans a saltwater port, the development of such alternatives would then become a "crash project." Thus, other studies also explore what sources of water could be made available on a short- and/or a long-term basis in the event that "Old Man River" overcomes the U.S. Army Corps of Engineers.⁹

Another potential threat to Louisiana water supplies would be a political one; e.g., there have been periodic suggestions that Mississippi River water be used to replenish the declining Ogallala Aquifer, which provides irrigation water for the High Plains of Texas.¹⁰ In response to these suggestions, empirical work has been done to determine whether and under what circumstances such a diversion would be a threat. But, for the foreseeable future it seems that the "threat" is moot because the countermeasures are economically infeasible.¹¹ There are less grandiose but more immediate threats to Louisiana's water supply caused by groundwater

7. James R. Rollo, La. Dept. of Public Works, Water Resources Bull. No. 9, Ground-Water Resources of the Greater New Orleans Area, Louisiana (1966); George T. Cardwell et al., La. Dept. of Public Works, Water Resources Bull. No. 12, Water Resources of the Lake Pontchartrain Area, Louisiana 9 (1967); Don C. Dial, La. Dept. of Transportation and Development, Water Resources Basic Records Report No. 11, Ground-Water Data for the Mississippi River Parishes in the Greater New Orleans Area, Louisiana (1983).

8. Dale J. Nyman and Larry D. Fayard, La. Dept. of Transportation and Development, Water Resources Technical Report No. 15, Ground-Water Resources of Tangipahoa and St. Tammany Parishes, Southeastern Louisiana (1978); John R. Harris, La. Water Resources Research Inst., Bull. 12, Add. A, Alternate Water Sources for the Baton Rouge-New Orleans Industrial Corridor 18 (1980) (suggesting the Pearl River as a possible alternate source of water, but noting that this is presently restricted by a Louisiana statute that prohibits the transport of water from St. Tammany Parish).

9. Raphael G. Kazmann & David B. Johnson, La. Water Resources Research Inst., Bull. 12, If the Old River Control Structure Fails? 44 (1980) (suggesting that even if the Old River Control Structure does not fail, the quality of Mississippi River water may be such that the Pearl River should be considered as an alternate source); Harris, *supra* note 8.

10. Executive Summary: West Texas and Eastern New Mexico Import Project (U.S. Department of the Interior, Bureau of Reclamation ed., 1973); High Plains Associates et al., Six-State High Plains Ogallala Aquifer Regional Resources Study (1982).

11. Mohamed Alawady, La. Water Resources Research Inst., Completion Report, Effect of Diverting Mississippi River Water to Texas on Sedimentation in the River (1974); Raphael G. Kazmann and Ottoniel Argüello, La. Water Resources Research Inst., Bull. 9, The Mississippi River—A Source of Water for Texas? Evaluation of a Proposed Water Diversion 5-3 (1973) (pointing out that lifting water from the Mississippi to the high plains would cost more than "buy[ing] all the farms in the affected area and begin[ning] the phased removal of the inhabitants").

withdrawals in Arkansas, Texas, and Mississippi.¹²

Other studies have identified significant groundwater declines in the vicinity of Alexandria,¹³ Leesville,¹⁴ Monroe,¹⁵ Natchitoches,¹⁶ and problems with reliability of surface-water supplies in Natchitoches,¹⁷ Bossier, and Caddo Parishes,¹⁸ Vernon Parish,¹⁹ and the Grand Isle area.²⁰

A 1979 publication prepared for the Louisiana Department of Transportation and Development comprehensively analyzes existing and potential water supply problems in every part of the state.²¹ Other previous studies regarding water

12. 2 Louisiana Dept. of Public Works, Ground Water Resources and Requirements for Louisiana, 1970-2020 13 (1971).

13. J.R. Rollo, La. Dept. of Public Works, Water Resources Bull. No. 1, Ground Water in Louisiana at 51 (1960).

14. *Id.* at 50.

15. *Id.*

16. Roy Newcombe, Jr. et al., La. Dept. of Public Works, Water Resources Bull. No. 4, Water Resources of Natchitoches Parish, Louisiana at 71-72 (1963).

17. *Id.* at 59.

18. Leland V. Page & Harold G. May, La. Dept. of Public Works, Water Resources Bull. No. 5, Water Resources of Bossier and Caddo Parishes, Louisiana 13, 35, and 59 (1964).

19. James E. Rogers and Anthony J. Calandro, La. Dept. of Public Works, Water Resources Bull. No. 6, Water Resources of Vernon Parish, Louisiana 39 (1965).

20. M.B. Walsh et al., La. Water Resources Research Inst., Technical Completion Report, Water Quality Variation in the Potable Water of Grand Isle, Louisiana During Periods of Water Shortage 29 (1983) ("[i]n general it appears that the problem at Grand Isle is one of quantity not quality"); 1 U.S. Army Engineer District, New Orleans-Baton Rouge Metropolitan Area Water Resources Study 196 (1981) (alleging that Grand Isle's acute water supply problem was having an adverse affect on its economic growth).

21. Water Supply Analysis for Louisiana, 1975-2000 (Gulf South Research Institute ed., 1979). This analysis summarizes much of the information published in other publications that focus on specific areas of the state, notably those by the Louisiana Geological Survey, noted in the preceding paragraph of the text. The GSRI study divided the state into six Water Resources Planning Areas (WRPAs): Northwest, North Central, Northeast, Southwest, South Central, and Southeast. (These six WRPAs were further divided into 24 sub-areas whose boundaries follow parish lines.) The problems were summarized by region:

(1) Northwest WRPA, Shreveport metropolitan area: Wilcox Formation has a low yield of groundwater. The primary source of surface water, the Red River, has high chloride content. Not much heavy-water-using industry has developed. Future demands could be met "if ground water is developed carefully" (presumably, if the spacing of wells and/or rate of pumping are controlled) and if use of the Red River as a supply source can be increased (presumably by industries able to use high-chloride water without extensive treatment).

(2) Southwest WRPA, including the Lake Charles area: Streams dependent on tides and with little dependable flow are being used for both agricultural irrigation and industry. Large amounts of water are withdrawn for rice irrigation during the summer when stream flows are low. Saltwater intrusion occurs during these low-flow periods, suggesting the need for low flow augmentation from reservoir releases in other areas. The Chicot aquifer is a good source of groundwater, but this must be developed carefully to avoid local problems during peak irrigation months.

(3) Southeast WRPA, including the New Orleans area: Sufficient surface water is available from the Mississippi River and Bayou Lafourche, but there is some concern about saltwater intrusion during low-flow periods. Fresh groundwater is scarce below Lake Pontchartrain. If a better supply of fresh water is thought needed for Orleans and Jefferson parishes (presumably because of concern

supply and demand projections reached similar conclusions.²² Also, a 1981 study

about the quality of Mississippi River water) St. Tammany Parish could be a possible source, but that seems to be precluded for the present by legal and political considerations. Some canals in the New Orleans area supply water for thermoelectric cooling purposes, but these are under tidal influence and have no dependable flow. Grand Isle has a particularly critical problem. There is no fresh water in the vicinity. Water is currently obtained from another parish, but this supply was not sufficient to meet even their current needs.

(4) North Central WRPA: By 1990 surface waters were expected to be inadequate to meet demand during low-flow months. The shortages would be felt to some extent by agricultural irrigators but mainly by electric plants using water for thermoelectric cooling. If additional surface-water sources are not developed, these electric plants may have to use cooling towers instead of once-through cooling.

In the sub-area including Caldwell, Jackson, and Winn parishes, groundwater resources are marginal and must be managed carefully in order to avoid water-level declines, declining well yields, and local water quality deterioration.

Groundwater resources in Rapides Parish should be adequate, but only if pumping is properly distributed. Excessive pumping of groundwater may adversely affect the flow of surface streams in Rapides Parish.

(5) Northeast WRPA: Morehouse Parish is expected to have shortages of both ground and surface water by 2000. Groundwater resources will require optimum dispersion of pumpage. Even if this is done, inasmuch as groundwater requirements are met by shallow aquifers, depletion of surface streamflow is expected to be a problem.

(6) South Central WRPA, including the Baton Rouge metropolitan area: Generally this area has an abundance of both surface water and groundwater, both categories being influenced by the Mississippi River. However, careful development of groundwater resources will be necessary to avoid "problems" (presumably, water level declines and/or saltwater intrusion).

22. These include Louisiana Department of Transportation and Development (Office of Public Works), *Water Requirements for Louisiana, 1975-2000* (1978); Louisiana Department of Transportation and Development (Office of Public Works), *Louisiana's Water Resources* (1978); Louisiana Department of Transportation and Development (Office of Public Works), *Alternative Solutions to Water Deficient Areas in Louisiana, 1975-2020* (1977); and Louisiana Department of Public Works, *Ground Water Resources and Requirements for Louisiana, 1970-2020* (1971).

References to a number of statewide and localized studies of water resources can be found in two bibliographical sources: Louisiana Dept. of Natural Resources (La. Geological Survey), *Publications of the Louisiana Geological Survey 16-21* (1980), and United States Department of the Interior (United States Geological Survey), *Water Resources Investigations in Louisiana, 1977* (1977). The latter is available from the District Chief, Water Resources Division, U.S. Geological Survey, Baton Rouge, La. A number of the studies referenced in these sources include data on the surface water and groundwater resources of individual parishes.

Also available from the U.S. Geological Survey in Baton Rouge is a monthly summary entitled "Water Situation in Louisiana," which reports on streamflow conditions, groundwater conditions, and ongoing interpretative projects.

Other specialized studies on a variety of water resources issues (with legal issues lurking in the background) can be obtained from the Louisiana Water Resources Research Institute at Louisiana State University. See, e.g., Alawady, *supra* note 11; Salt Water Encroachment into Aquifers, *supra* note 5 (proceedings of a symposium at LSU comparing saltwater intrusion problems in Louisiana to those in southeast Florida, Long Island, and southern California); Harris, *supra* note 8 (focusing on the drastic measures needed to obtain fresh water should the Old River Control Structure fail, diverting most of the present flow of the Mississippi River into the Atchafalaya River); Brenda Worm, La. Water Resources Research Inst., *Completion Report, Information Dissemination for a Better Understanding of Louisiana's Water Resources* (1984); Raphael G. Kazmann, La. Water

of water resources in a twenty-parish area of southeastern Louisiana by the U.S. Army Corps of Engineers, New Orleans District²³ notes two problem areas. First, in East Baton Rouge Parish, an area of projected large increases in water use, the study found grounds for concern over the increasing percentage of total withdrawals from groundwater as opposed to surface-water sources. Despite recent progress in conservation practice and encouragement of industry to use surface water, the Corps study indicated a need for monitoring groundwater use.²⁴ Second, the study emphasized that Grand Isle's acute water supply problem was having an adverse effect on its economic growth.²⁵ Other data on water supply problems is scattered and often accessible only through talking to those in the area affected.²⁶

Satisfactory solutions to a number of the problems identified in the above-mentioned studies may exist within the present framework of Louisiana water law. However, a number of other states which either have suffered water shortages, or in which water shortages have been projected, have found specialized legislation necessary for more control over the use of water and for better coordination of water resources planning.²⁷

Resources Research Inst., Technical Report No. 9, Use of Twin Wells and Water-Source Heat Pumps for Energy Conservation in Louisiana (1981) (discussing the consequential impact that such water source heat pumps can have on groundwater supplies).

23. U.S. Army Engineer District, *supra* note 20.

24. *Id.* at 195.

25. *Id.* at 196.

26. One of the more dramatic conflicts with "Wild West" vigilante overtones was publicized only locally. This happened during June of 1982, when a heated dispute arose between the police jury and farmers in Avoyelles Parish and the police jury of Rapides Parish over the waters of Bayou Boeuf in the wake of drought conditions in central Louisiana. The basic complaint of the downstream Avoyelles rice farmers was that they were not getting enough water. Avoyelles farmers wanted the Rapides police jury to release additional water from reservoirs in Rapides, which were maintained, at least in part, for recreational purposes. There were also charges that "two or three" Rapides Parish farmers were pumping excessive amounts of water. In fact Rapides Parish police juror Darrell Williamson was quoted as saying, "We have people in the parish who are nothing short of water hogs. They're pumping 'round the clock." Jim Leggett, *Jury OKs Bayou Boeuf Adjustment to Supply Two Parishes More Water*, Alexandria Daily Town Talk, June 16, 1982, at D5. At some point in time, weirs on Bayou Boeuf were sabotaged, apparently dynamited, by farmers from Avoyelles who wanted more water. *Id.* See also Jim Leggett, *Parched Avoyelles Wants More Water from Rapides Lakes*, Alexandria Daily Town Talk, June 9, 1982, at A1-2, and Jim Leggett, *Williamson Says Rapides Will Send Avoyelles More Water*, Alexandria Daily Town Talk, June 12, 1982, at A1-2. It appears that a more or less satisfactory arrangement was worked out for the time being, but uncertainty and concern continues as to who has the right to control water usage during episodes of drought conditions. Telephone interviews with Ms. Jerry Hoyt, President, Rapides Parish Farm Bureau (July 23, 1982).

27. See, e.g., Ark. Code Ann. §§ 15-22-201 to 15-22-914 (Michie 1987 & Supp. 1991); Fla. Stat. Ann. §§ 373.011-373.619 (West 1988 & Supp. 1993); Ind. Code Ann. §§ 13-2-1-1 to 13-2-33-7 (West 1990 & Supp. 1992); Iowa Code Ann. §§ 455B.265-455B.275 (West 1990 & Supp. 1993); Ky. Rev. Stat. Ann. §§ 151.010-151.990 (Baldwin 1991 & Supp. 1992); Mass. Ann. Laws ch. 21G, §§ 1-19 (Law. Co-op. 1988 & Supp. 1993); Minn. Stat. Ann. §§ 103G.221-103G.315 (West Supp. 1993); Miss. Code Ann. §§ 51-3-1 to 51-3-55 (1990 & Supp. 1991); N.C. Gen. Stat. §§ 143-215.11-143-215.22H (1990 & Supp. 1992).

This article discusses current Louisiana legislation and jurisprudence concerning water rights²⁸ and explores possible changes in existing regimes, with an emphasis on whether these measures could assure adequate water supplies of the desired quality for the many existing and projected demands. Additionally, this article analyzes the constitutionality of modifying water rights and discusses competition for water with other states. Particular attention is given to the problem of groundwater since the consequences of poor management of this resource have even more long-lasting effects than poor management of surface water.

II. SURFACE-WATER RIGHTS: PRIOR APPROPRIATION AND RIPARIAN DOCTRINES

Surface-water rights are governed under two general regimes: prior appropriation and riparian. The riparian regime is followed by states east of, or bordering on, the Mississippi River, although the doctrine has been modified by

28. Publications about Louisiana water law include the following: William B. Stoebuck, *Condemnation of Riparian Rights, A Species of Taking Without Touching*, 30 La. L. Rev. 394 (1970); Mark E. Borton & Harold H. Ellis, *Some Legal Aspects of Water Use in Louisiana* (1960); La. Water Resources Research Inst., Bull. 1, *Handbook of Basic Water Law (With Special Reference to Louisiana)* (George W. Hardy ed. 1966); *id.* (A.N. Yiannopoulos ed., 2d ed. 1983); Carl T. Johnson & Bobby E. Price, La. Tech Univ., Research Monograph No. 22, *Survey of Louisiana Water Law* (1970); Louisiana Dept. of Transportation and Development (Office of Public Works), *Legal and Institutional Analysis of Louisiana's Water Laws with Relationship to the Water Laws of Other States and the Federal Government* (James M. Klebba ed., 1983); *Water Resources Legislation for Louisiana* (James M. Klebba ed., 1982); Louisiana Legis. Council, *supra* note 2; Joseph Onebane, *Who Owns the Water Bottoms?*, 6 La. B.J. 46 (1958); Ropchand Ramgolam & Floyd L. Corty, *Water Use and Water Rights in Louisiana* (1982); Red River Development Council, *A Master Plan to Utilize Water in the Red River for Economic Development* (Leland Scoggins ed., 1991); Ewell P. Walther, Jr., Comment, *Acquisition of the Right to Use Water*, 29 Tul. L. Rev. 554 (1955); Jerry G. Jones, Comment, *Water Rights in Louisiana*, 16 La. L. Rev. 500 (1956); Steven J. Levine, Note, *Ground Water: Louisiana's Quasi-Fictional and Truly Fugacious Mineral*, 44 La. L. Rev. 1123 (1984).

Other articles that deal peripherally with water law include: Roger H. Doyle, *Ownership of the Beds and Bottoms of Navigable Waters in Louisiana*, in *Mineral and Tidelands Law* 28 (Ralph Slovenko ed., 1963); Stan Millan, *Regulation of Batture Pollution and Ecology*, 33 Loy. L. Rev. 921 (1988); Irl R. Silverstein, *Water Pollution in Louisiana: An Attempt at Control*, 18 Loy. L. Rev. 734 (1972); Richard P. Wolfe, *The Appropriation of Property for Levees: A Louisiana Study in Taking without Just Compensation*, 40 Tul. L. Rev. 233 (1966); A.N. Yiannopoulos, *Five Babes Lost in the Tide—A Saga of Land Titles in Two States: Phillips Petroleum Co. v. Mississippi*, 62 Tul. L. Rev. 1357 (1988); A.N. Yiannopoulos, *Possession*, 51 La. L. Rev. 523 (1991); A.N. Yiannopoulos, *Common, Public, and Private Things in Louisiana: Civilian Tradition and Modern Practice*, 21 La. L. Rev. 697 (1961); A.N. Yiannopoulos, *Public Use of the Banks of Navigable Rivers in Louisiana*, 31 La. L. Rev. 563 (1971); A.N. Yiannopoulos, *Validity of Patents Conveying Navigable Water Bottoms—Act 62 of 1912, Price, Carter, and All That*, 32 La. L. Rev. 1 (1971); A.N. Yiannopoulos, *Violations of the Obligations of Vicinage: Remedies Under Articles 667 and 669*, 34 La. L. Rev. 475 (1974); A.N. Yiannopoulos, *Predial Servitudes; General Principles: Louisiana and Comparative Law*, 29 La. L. Rev. 1 (1968); Kenneth L. Rosenbaum, Note, *Avoyelles Sportsman's League v. Alexander*, 473 F. Supp. 525 (W.D. La. 1974 (Part I); No. 78-1428 (W.D. La. March 12, 1981 (Part II)), 12 Env. L. 231 (Fall 1981).

statute in several of those states. These eastern states have usually enjoyed an adequate water supply. The drier western states, on the other hand, developed the regime of prior appropriation, the basic premise of which is that one who makes an actual diversion of water acquires a vested right to use it—as long as the water goes to a beneficial use.²⁹ The right is transferable and perpetual unless abandoned, and separate from the land on which the user is situated.³⁰ It pertains to a specific quantity of water. It is superior to all later rights to the same supply. Hence, a drought may force junior appropriators to cease drawing water in deference to senior appropriators. The doctrine does not require that an appropriator own the land at the point of diversion, and the diverted water need not be used on riparian land.³¹ The customary law of western miners supplied the regime's basis, but a

29. *E.g.*, in Nevada, "[w]hen the necessity for the use of water does not exist, the right to divert it ceases, and no person shall be permitted to divert or use the waters of this state except at such times as the water is required for a beneficial purpose." Nev. Rev. Stat. Ann. § 533.045 (Michie 1991). Thus, only a beneficial use justifies the right to take water: "Beneficial use shall be the basis, the measure and the limit of the right to the use of water." *Id.* § 533.035. There are other qualifications on this "vested" right. "Twelve western states specify a ranked preference of use that allows preferred uses (municipal and domestic first, often followed by agriculture) to supersede water rights destined for less-preferred uses in time of scarcity." Scarce Water and Institutional Change 8 (Kenneth D. Frederick ed., 1986).

An example is Colorado's ranking:

[W]hen the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes.

Colo. Const. art. XVI, § 6.

30. *See* Desert Land Act of March 3, 1877, ch. 107, 19 Stat. 377 (codified as 43 U.S.C. §§ 321-323 (1988)); California Oregon Power Co. v. Beaver Portland Cement Co., 295 U.S. 142, 55 S. Ct. 725 (1935); Black v. Taylor, 264 P.2d 502 (1953); Irwin v. Phillips, 5 Cal. 140 (1855); William Goldfarb, Water Law 34 (2d ed. 1988).

These statements are unqualifiedly true in the so-called "pure" appropriation states: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, and Utah. The other western states are sometimes called dual or mixed system states, having some vestigial riparian rights, the extent of which varies from state to state. *See generally* Joseph W. Dellapenna, *Riparianism*, in 1 Waters and Water Rights 85, 345-412 (Robert E. Beck ed., 1991). However, these riparian rights have been severely limited by the courts and decisions involving riparian rights in these states probably are of little use in understanding riparian rights as they have evolved in eastern states. *Id.* § 8.03. In fact, Alaska, Kansas, Oregon, South Dakota, Texas, and Washington have effectively eliminated the pre-existing riparian rights by converting them to appropriative rights. *See* Dan A. Tarlock, Law of Water Rights and Resources § 5.04 (1991).

31. *Id.* For example, in Idaho, sale of water rights is regulated by statute. Idaho Code §§ 42-2601 to 42-2608 (1990). Utah specifies that "[w]ater rights . . . shall be transferred by deed in substantially the same manner as real estate," Utah Code Ann. § 73-1-10 (1989), except that a sale of land includes "use of water appurtenant to the land" absent a reservation or separate conveyance of water rights. *Id.* § 73-1-11. According to one Colorado case,

water rights have been characterized as a freehold, . . . as an interest in real estate, . . . as a property right lacking the dignity of an estate in fee, . . . as personal property, and perhaps most accurately as a "usufructuary right" . . . [but] whatever the exact nature of

statute-based administrative permit system in all appropriation states (except for Colorado³²) now regulates the acquisition of new rights.³³

Riparian rights are of more ancient origin. They existed in Roman law in somewhat the same form as we know them today.³⁴ The term "riparian rights" includes a bundle of rights. Actually, some rights in this bundle are possessed to varying degrees even in the "pure" prior appropriation states. The traditionally recognized riparian rights include those:

- (i) of access to the water;
- (ii) to build a wharf or pier into the water;
- (iii) to use the water without transforming it;
- (iv) to consume the water;
- (v) to acquire accretions (alluvium); and
- (vi) to own the subsoil of non-navigable streams and other "private" waters.³⁵

the property interest, water rights may be bought and sold without regard to the real property over which the water flows.

Navajo Dev. Co., Inc. v. Sanderson, 655 P. 2d 1374, 1377 (Colo. 1982).

32. Colo. Rev. Stat. Ann. §§ 37-82-101 to 37-82-106 (West 1990). Colorado now has a judicial system that operates much like the administrative system of other states. Although a permit is technically not required to divert surface water, adjudication is needed to establish a secure right.

33. Goldfarb, *supra* note 30, at 37. In Utah, for example, "[n]o appropriation of water may be made and no rights to the use thereof initiated and no notice of intent to appropriate shall be recognized except application for such appropriation first be made to the state engineer . . ." Utah Code Ann. § 73-3-1 (1989). See generally 1 Wells A. Hutchins, U.S. Dept. of Agriculture, Misc. Pub. No. 1206, *Water Rights Law in the Nineteen Western States* 298-306 (1971).

34. The Digest of Justinian provides for public and private rivers. Public rivers are defined to be those which are perennial, or ever running (though they may dry up in summer and not lose their legal character as perennials). IV The Digest of Justinian Book 43 §§ 12-2 to 12-4 (Theodor Mommsen Latin text ed., Alan Watson translation ed., 1985).

Provisions dealing with "public" rivers were concerned with protecting navigability:

So if water is drawn off, so that the river is made smaller and hence less navigable, or if it is widened or spread so as to make the water shallow, or if, on the other hand, it is narrowed and the current is made faster or anything else is done to hamper navigation or to make it more difficult or to prevent it altogether, the interdict will apply.

Id. § 12-15.

As to private rivers, the Digest quotes a rule that forbids anything to be done in a private river or its bank "which might cause the water to flow otherwise than it did last summer." *Id.* § 13-1. A person is liable under the interdict "if what he has done changes the current by making the water deeper, or narrower and hence swifter to the inconvenience of the neighborhood." *Id.* § 13-3. Although the rule was designed to protect those "living around" *id.* § 13-6 (fellow riparians, it would seem), it was also said to apply to both navigable and non-navigable public rivers. *Id.* § 13-2.

35. Dellapenna, *Riparianism*, *supra* note 30, at § 6.01(a)(1). Another listing of these rights is given in *Thurston v. Portsmouth*, 140 S.E.2d 678 (Va. 1965), quoting *Taylor v. Commonwealth*, 47 S.E. 876 (Va. 1904):

First. The right to be and remain a riparian proprietor and to enjoy the natural advantages thereby conferred upon the land by its adjacency to the water.

Second. The right of access to the water, including a right of way to and from the navigable part.

In a riparian state, the water right is "part and parcel" of the land that borders on or contains a watercourse.³⁶ The right is either to enjoy the watercourse's undiminished natural flow³⁷ or its flow as diminished by upstream users' reasonable uses.³⁸ Hence, riparian rights states were often distinguished as either "natural flow" or "reasonable use."³⁹

Third. The right to build a pier or wharf out to navigable water, subject to any regulations of the state.

Fourth. The right to accretions or alluvium.

Fifth. The right to make a reasonable use of the water as it flows past or leaves the land.

Id. at 680.

36. This phrase is often quoted in court opinions on riparian rights. *See, e.g., Hudson v. West*, 306 P.2d 809, 811 (Cal. 1957) (Carter, J., concurring); *Lux v. Haggin*, 10 P. 674, 753 (Cal. 1886); *Meriwether Sand & Gravel Co. v. State*, 26 S.W.2d 57, 61 (Ark. 1930).

37. *Collens v. New Canaan Water Co.*, 234 A.2d 825 (Conn. 1967). The logic of the natural flow doctrine dictates that a riparian can sue to enjoin a consumptive use by another riparian without any proof of injury to the plaintiff. While frequent dicta support this thesis, seldom is a case found where the facts do so. Dellapenna, *Riparianism*, *supra* note 30, at § 7.02(c).

38. *Alburger v. Philadelphia Elec. Co.*, 535 A.2d 729, 731 (Pa. 1988).

39. The natural flow/reasonable use distinction can arise in the context of diversion, obstruction, or pollution of streams. *See, e.g., Harold I. Apolinsky, Comment, The Development of Riparian Law in Alabama*, 12 Ala. L. Rev. 155, 170 (1959). It is difficult to say whether any state today explicitly follows the natural flow theory, at least in the context of a diversion or use of a stream that does not change the course of the stream.

It has been suggested that the natural flow doctrine gained favor in the early Industrial Revolution when mills and factories were powered by water and the overarching societal need was to insure that water passed down from one mill to the next. On the other hand, when it became apparent that many beneficial, but somewhat consumptive, uses, such as irrigation, were hindered by the natural flow system, the reasonable use rule gradually replaced it. Richard C. Ausness, *Water Use Permits in a Riparian State: Problems and Proposals*, 66 Ky. L.J. 191, 198-201 (1977). On the other hand, a more modern environmental argument may be made in favor of the natural flow doctrine in that it provides a greater measure of protection for instream flow maintenance. Tarlock, *supra* note 30, at § 3.12(2). Some recent cases invoke the term "natural flow" in situations involving a material diminution of the level of a water body such as would harm both public and private interests. Such cases include *Collens v. New Canaan Water Co.*, 234 A.2d 825, 831 (Conn. 1967); *Greenwood v. Evergreen Mines Co.*, 19 N.W.2d 726, 730 (Minn. 1945); and *Snyder v. Callaghan*, 284 S.E.2d 241, 246 (W. Va. 1981). However, it is probably not accurate to generalize that these states adhere to the full-blown natural flow doctrine. The newer decisions seem to be very fact-sensitive.

States that have at some time in the past adhered to the natural flow doctrine but that have recently adopted the reasonable use doctrine are Pennsylvania (*Alburger v. Philadelphia Elec. Co.*, 535 A.2d 729, 731 (Pa. 1988)); New Jersey (*Johns-Manville Sales Corp. v. New Jersey Water Supply Auth.*, 511 A.2d 1194, 1195-96 (N.J. Super. Ct. App. Div. 1986)); and Georgia (*Stewart v. Bridges*, 292 S.E.2d 702, 704 (Ga. 1982)) ("Georgia's water rights law is based on the natural flow theory of the riparian rights doctrine modified by a reasonable use provision").

In Maine, the reasonable use rule applies between riparians, but may not be invoked for a non-riparian use. *Stanton v. Trustees of St. Joseph's College*, 254 A.2d 597, 600 (Me. 1969).

North Carolina "formally adopt[ed] the rule of reasonable use with respect to *surface water drainage*" in *Pendergrast v. Aiken*, 236 S.E.2d 787, 796 (N.C. 1977), but the court's summary of North Carolina drainage law, *id.* at 791-96, may indicate a preference for the reasonable use rule in all contexts.

In common-law riparian states, the right is at least superior to (and in some of the natural flow formulations of the doctrine, perhaps exclusive of) that of non-riparians.⁴⁰ In theory, diverted water cannot be used on lands owned by a non-riparian, or even on lands owned by the riparian owner if the destination is legally classified as non-riparian.⁴¹ While it is not always clear whether another tract of land owned by the same person is classified as riparian, decisions in some states hold that land so owned, but located in another watershed, does not qualify as riparian.⁴² Thus, diversion of water by a riparian to another watershed could be enjoined by his fellow riparian proprietors. However, the classic restrictions against non-riparian use have been vitiated by what has been called a "harmless use" rule, i.e., a riparian must demonstrate injury in order to enjoin a non-riparian use,⁴³ and by legislation specifically permitting such transfers.⁴⁴

Another contrast is that the riparian right is not premised on actual use by the landowner. An oft-quoted phrase about riparian rights is that "use does not create the right and disuse cannot destroy or suspend it."⁴⁵ While most riparian states seem to allow non-riparians to obtain prescriptive rights to water and accretion, these rights are typically difficult to acquire.⁴⁶ Once prescriptive rights are obtained, these can impact the other riparians on the stream by reducing the total flow of water.

Neither the existence of riparian rights nor the precise content of the riparian doctrine has practical import when there is enough water for everyone. For example, many non-riparians have been able to establish and continue water diversions that they had no "right" to, but because no one was harmed, no one complained or filed suit. But when water is scarce, the riparian doctrine can

40. Ausness, *supra* note 39, at 205; C. Graham Waite, *Beneficial Use of Water in a Riparian Jurisdiction*, 1969 Wis. L. Rev. 864, 875.

41. Some states hold that land located in a watershed other than the one from which the water is diverted is not riparian to the diversion point. *Gordonsville v. Zinn*, 106 S.E. 508, 513 (Va. 1921); *Crawford Co. v. Hathaway*, 93 N.W. 781 (Neb. 1903); *Kennebunk, Kennebunkport and Wells Water Dist. v. Maine Turnpike Auth.*, 84 A.2d 433 (Me. 1951). Definitions of "riparian land" differ from one jurisdiction to another. See William H. Farnham, *The Permissible Extent of Riparian Land*, 7 Land & Water L. Rev. 31 (1972).

42. Goldfarb, *supra* note 30, at 21-22, 56-58, and Corwin W. Johnson & Larry D. Knippa, *Transbasin Diversion of Water*, 43 Tex. L. Rev. 1035, 1036 (1965). See also cases cited *supra* note 41.

43. *Water Rights of the Fifty States and Territories* 12 (Kenneth R. Wright ed. 1990). To some extent, the "harmless use" concept may be inherent in the substantive doctrine of what constitutes reasonable use, but in other contexts it may be based on the traditional requirements for granting equitable relief.

44. Those states which have modified the watershed limitation by statute have not completely eliminated it but have substituted a *per se* prohibition with a requirement of obtaining administrative approval. Tarlock, *supra* note 30, at § 3.20(6)(b).

45. *Lux v. Haggin*, 10 P. 674, 753 (Cal. 1886) (emphasis in original).

46. *Gordonsville v. Zinn*, 106 S.E. 508, 515 (Va. 1921); Ausness, *supra* note 39, at 205-07; 5A Richard R. Powell and Patrick J. Rohan, *Powell on Real Property* § 720 (Frederic White ed. 1991). Tarlock, *supra* note 30, at § 3.19.

penalize the landowner who has invested time and effort in putting water to an economically beneficial use while others just let it flow by. For example, a non-user in a natural flow jurisdiction could enjoin industrious upstream users from withdrawing water.⁴⁷ Even in reasonable use jurisdictions, a person's long-term non-use would probably not prevent a claim by others who have previously been non-users. The riparian will, absent some statutory modification of the doctrine, be entitled to a share of the stream's waters. The only basic requirement is that water use be "reasonable." While some courts take into account previous uses and investments made by earlier users, these are not determinative, but merely among several factors to be balanced. The outcome of litigation under a given set of facts is difficult to predict.⁴⁸

One commentator describes the problem:

Allocation decisions in pure riparian states are made by the courts, an institution lacking the expertise and administrative continuity to assure a predictable diversion rights system. Case-by-case judicial decision making results in inconsistent and impermanent results. . . . This absence of definite, quantifiable diversion rights inhibits investment. It also precludes drought planning and management, because court decisions on water allocations are ad hoc and restricted to actual litigants. Comprehensive record-keeping and water supply planning are impossible in a pure riparian state.⁴⁹

47. *E.g.*, in *Dimmock v. New London*, 245 A.2d 569 (Conn. 1968), the plaintiffs alleged but failed to prove any damages. *Id.* at 572. Nevertheless, the court held that plaintiffs were entitled to at least nominal damages for the infringement of their riparian right, *id.* at 573, and that the trial court erred in unconditionally refusing to enjoin the city's diversion of water. *Id.* at 574. The court wrote, "[T]his is an ancient common-law right [i.e., the riparian's right to the stream's natural flow] which a riparian owner can protect without reference to any beneficial use of the water actually made by him." *Id.* at 572.

Interestingly, the defendant sought to divert the water to ensure adequate supplies for citizens and businesses, and the appellate court did not dispute the trial court's finding that the diversions were undertaken in the public interest. *Id.* at 573. That fact, however, "did not make the contemplated diversion any the less wrongful . . ." *Id.* Cases such as *Dimmock*, where a court grants relief to a riparian without any showing of injury, appear to be rare. See Dellapenna, *Riparianism*, *supra* note 30, at 29. More common are such cases as *Collens v. New Canaan Water Co.*, 234 A.2d 825 (Conn. 1967), in which an award of both compensatory and punitive damages was upheld against a public utility company in favor of plaintiffs, whose enjoyment of a bordering river was aesthetic and recreational (fishing, swimming, and boating), and there was a measurable loss of market value of plaintiff's land. See also *Ausness*, *supra* note 39, at 198-99.

48. Dellapenna, *Riparianism*, *supra* note 30, at § 7.02(d)(1) (citing *Dumont v. Kellog*, 29 Mich. 420 (1874), and *Bless v. Kennedy*, 43 Ill. 67 (1867)). See also Frank E. Maloney et al., *Florida Water Law* 16 (1980), and John S. Grimes, *Lex Aquae Arkansas*, 27 Ark. L. Rev. 429, 444 (1973).

49. Goldfarb, *supra* note 30, at 25.

III. RIPARIAN RIGHTS IN LOUISIANA

A. *Is the Louisiana Riparian Right Different Than the Common-Law Right?*

Does the riparian right in Louisiana, and in particular the riparian right to use water, differ in significant respects from the riparian right in common-law jurisdictions in the United States? Or, are such differences merely matters of semantics and terminology? Some commentators who write on water law, but who have no civil law background, intimate that there are fundamental differences.⁵⁰

Is there anything in the Civil Code that supports the proposition that Louisiana deviates from the common law in this field? Perhaps, if one focuses on categories and terminology. But, Louisiana jurisprudence offers no basis for the conclusion that the result in Louisiana differs from that in the typical common-law jurisdictions. Although this is partially so because of the dearth of decisions on water law aspects of riparian rights, there is little basis for anticipating that Louisiana courts would strike out on a different path than their common-law counterparts even if disputes over water become more numerous. Nor is this similarity surprising, given that American common-law riparianism also evolved from the continental civil law system.⁵¹

However, the deviations seem greater between Louisiana and the continental code jurisdictions than between Louisiana and the common-law jurisdictions of the United States.⁵² According to a nineteenth-century commentator on French water law, "the necessary limits on the use of running water derive only from the right of other riparians, and if one placed in a single owner all the land crossed by a stream,

50. Dellapenna, *Riparianism*, *supra* note 30, at 20-21 (Louisiana doctrine treated as related to, but distinct from, other states' riparian doctrines); David H. Getches, *Water Law in a Nutshell* 216-18 (1984). Louisiana is treated there in a chapter entitled "Hybrid Systems and Other Variations"—with Louisiana being one of the "other variations" which category also includes Hawaiian water law and the Spanish/Mexican-derived pueblo water rights of the southwest. Although Getches admits that Louisiana is often listed as a "riparian state," he justifies his separate classification on the fact that "its system of water law is based on a civil code with French and Spanish origins." He finds that the Louisiana Civil Code "sets forth rudiments similar to a riparian system," but does not point to any instances where there would be a different result under the Civil Code than in a typical common-law jurisdiction. *Id.* at 216-17.

51. The concept of riparian rights first appeared in this country in the early nineteenth century writings of Kent and Story, who adopted the theory of riparian rights from civil law sources, particularly the Code Napoleon. The writings and decisions of these two American jurists were influential in the adoption of the riparian rights theory by English law several decades later.

Walther, *supra* note 28, at 554 (footnotes omitted). *But see* Powell, *supra* note 46, at 713[1] n.2 (suggesting that riparianism originated in no one legal system).

52. Certainly this is not true of most other aspects of Louisiana property law. "The Louisiana law of property is characterized by a number of principles and fundamental precepts that reflect the ideas of the French Revolution." A.N. Yiannopoulos, *Property* § 9, at 16, in 2 *Louisiana Civil Law Treatise* (3d ed. 1991) (footnote omitted).

these restrictive conditions would disappear."⁵³ Championniere concludes that there exists the possibility of a property right in running water.⁵⁴ His view of French law, however, was apparently not unanimous then and does not predominate today.⁵⁵ The English common law, on the other hand, provides (consistently with Louisiana) that

flowing water is *publici juris*, not in the sense that it is *bonum vacans*, to which the first occupant may acquire an exclusive right, but that it is public and common in this sense only, that all may reasonably use it who have a right of access to it, and that none can have any property in the water itself, except in the particular portion which he may choose to abstract from the stream and take into his possession⁵⁶

In Louisiana, riparian rights are listed under the codal category of natural servitudes, which are in turn a type of predial servitude.⁵⁷ Despite the categorization in the Civil Code, Professor Yiannopoulos classifies the riparian right to take water not as a natural servitude, but rather as a *sui generis* real right "part and parcel of the ownership of an estate fronting on or traversed by running water."⁵⁸ His terminology is closer to that of the common-law authorities, but he does not say what distinction ought to be made in any given dispute between riparians *inter se* or between riparians and members of the general public, the state, or municipalities.

One possible difference is on the issue of prescription. Louisiana apparently does not permit prescription *against* riparian rights.⁵⁹ But on closer examination,

53. "Il est si vrai que les limites nécessaires de l'usage des eaux courantes ne dérivent que du droit des autres riverains, que si l'on suppose dans une seule main la propriété de toutes les terres parcourues par un ruisseau, ces conditions restrictives disparaissent." Paul L. Championniere, *De la Propriété des Eaux Courantes* 21-22 (1846).

54. "[J]'insisterai à mon tour sur cette preuve incontestable de la possibilité du droit de propriété des eaux courantes . . ." (I will in turn insist on this incontestable proof of the possibility of a property right to running water.) *Id.* at 23.

55. Some "repetent avec tant d'insistance, pour faire de l'eau courante une chose resistant au droit de propriété, ou une chose publique." (Some insistently repeat the counter-argument that renders running water a thing resistant to a property right, i.e., a public thing.) *Id.*

56. Allen S. Wisdom, *The Law of Rivers and Watercourses* 81 (4th ed. 1979) (quoting Embrey v. Owen, 6 Ex. 353, 369 (1851)).

57. "A predial servitude is a charge on a servient estate for the benefit of a dominant estate. The two estates must belong to different owners." La. Civ. Code art. 646. The charge arises through law, La. Civ. Code arts. 659-96, contract, La. Civ. Code arts. 697-774, or nature, La. Civ. Code arts. 655-58. (La. Civ. Code art. 646).

The riparian right does not fit neatly into this definition, although one could say that it is in part a reciprocal servitude and in part a charge on the upstream estate for the benefit of the owners of downstream estates.

58. A.N. Yiannopoulos, *Predial Servitudes* § 22, at 78, in 4 Louisiana Civil Law Treatise (1983) (citing 5 Gabriel Baudry-Lacantinerie et Maxime E. Chauveau, *Traité Théorique et Pratique de Droit Civil* 582 (2d ed. 1899) and 3 Marcel F. Planiol & Georges Ripert, *Traité Pratique de Droit Civil Français* 494 (2d ed. Picard 1952)). See also Powell, *supra* note 46, § 713[1] n.2.

59. The Civil Code provides that "[t]he prescription of nonuse does not run against natural servitudes." La. Civ. Code art. 758. The Code articles defining riparian rights, La. Civ. Code arts.

it appears that the rules on prescription would be the same whether we look to French civil law doctrine, the Louisiana Civil Code, or common-law authorities.⁶⁰ There is a lurking paradox in saying that one landowner may not lose his riparian rights by non-use, but that the other person can *acquire* riparian rights to the same shared body of water. If the competing demands for the water are greater than the available supply, then the rights of the original landowners will be *diminished* by the recognition of rights in the newcomer.

Louisiana Civil Code articles 657 and 658 provide as follows:

The owner of an estate bordering on running water may use it as it runs for the purpose of watering his estate or for other purposes.⁶¹

The owner of an estate through which water runs, whether it originates there or passes from lands above, may make use of it while it runs over his lands. He cannot stop it or give it another direction and is bound to return it to its ordinary channel where it leaves his estate.⁶²

If the water does not run, then these Civil Code articles do not apply. Hence, a riparian along a non-running water body may be prevented from putting his water to beneficial use, as happened in *Verzwyvelt v. Armstrong-Ratterree, Inc.*⁶³ The case involved a riparian's purported right to pump water for irrigation out of an oxbow lake created when the Red River abandoned one course for another. Under article 518 of the 1870 Louisiana Civil Code (now Louisiana Civil Code article 504 (1979)), the plaintiffs acquired title to the old channel, which had become the lake

657 and 658, are classified under Chapter 2, "Natural Servitudes," which constitute in turn a category of predial servitudes. See Jones, *supra* note 28, at 508. While Professor Yiannopoulos says that the riparian right to take water is not a natural servitude, at the same time he states that "[r]iparian rights may not be lost by non-use." 4 Yiannopoulos, *supra* note 58, at 78 (1983) (citing 3 Marcel F. Planiol & Georges Ripert, *Traite Pratique de Droit Civil Francais* 491-93 (2d ed. Picard 1952); 3 Charles C. Aubry & Charles Rau, *Droit Civil Francais* 90 (5th ed. 1900)).

60. See *supra* notes 45-46, 59 and accompanying text. But common-law states have not found it inconsistent to say that disuse cannot bring about a destruction or abandonment of the riparian right, and yet it is possible under some circumstances to obtain a riparian right by prescription. By the same token, although the issues have not arisen, it is possible to accept the classification of riparian rights as a natural servitude, accept the principle in La. Civ. Code art. 758 that the "prescription of non-use does not run against" riparian rights, but still allow riparian rights to be *acquired* by prescription. Conversely, even if riparian rights are not to be classed as a natural servitude, and La. Civ. Code art. 758 does not explicitly apply, this would not necessarily mean that the "prescription of non-use" would or should run against riparian rights because this notion, for better or worse, has been regarded as an axiomatic part of the riparian doctrine. Dellapenna, *Riparianism*, *supra* note 30, § 7.04(d). This is also the position taken by French authorities who do not recognize riparian rights as a servitude. See *supra* note 53.

61. La. Civ. Code art. 657.

62. La. Civ. Code art. 658.

63. 463 So. 2d 979 (La. App. 3d Cir. 1985). The Second Circuit followed this case in *State v. Bourdon*, 535 So. 2d 1091 (La. App. 2d Cir. 1988), *writ denied*, 536 So. 2d 1223 (La. 1989), as did the North Dakota Supreme Court in *J.P. Furlong Enters., Inc. v. Sun Exploration & Prod. Co.*, 423 N.W.2d 130 (N.D. 1988).

in question.⁶⁴ Thus, the plaintiff owned all the land underlying the water, while the defendant's title extended only to the water's edge. The defendant argued that it had a riparian right, under Louisiana Civil Code article 657, to use the lake's water. The court denied the defendant's alleged natural servitude on grounds that the article applied only to bodies of running water, and that the plaintiff had proved that the lake was not running.⁶⁵ Because the riparian servitude did not apply (even though the defendant's land bordered the lake), and because Louisiana has no system for recognizing beneficial appropriation of water, the plaintiff successfully enjoined the defendant's use.

The Civil Code provides that a natural servitude cannot be lost by failing to exercise it.⁶⁶ The Louisiana First Circuit Court of Appeal applied that principle to find that the owner of a dominant estate had not lost his right to enjoin the owner of a servient estate from blocking drainage.⁶⁷ Although the issue of whether prescription runs against the riparian's right to draw water has not been addressed in a reported decision in Louisiana, the same rationale applied in drainage cases should prevail if the right to draw water is a natural servitude. This would be in accord with the riparian doctrine as it has evolved in common-law jurisdictions. On the other hand, if Professor Yiannopoulos's characterization of the riparian right to take water as being *sui generis* is accepted, then this issue would still theoretically be an open one in the Louisiana jurisprudence.

But even if it is assumed that a riparian right cannot be *lost* by non-use, a non-riparian owner may be able to *acquire* through prescription a riparian-type right to draw water. Louisiana Civil Code article 742 permits acquisitive prescription of apparent predial servitudes.⁶⁸ Hence, the issue resolves into whether a water-

64. If a river or stream, whether navigable or not, opens itself a new bed by leaving its former channel, the owners of the soil newly occupied shall take, by way of indemnification, the former bed of the river, every one in proportion to the quantity of land he has lost.

They shall again take their former property, if the river or stream returns to its former channel.

La. Civ. Code art. 518 (1870).

65. 463 So. 2d at 985. Some other jurisdictions appear to connect the riparian right with whether the water runs. See, e.g., *People's Counsel for Baltimore County v. Maryland Marine Mfg. Co.*, 560 A.2d 32, 33 (Md. Ct. Spec. App. 1989); *Reppun v. Board of Water Supply*, 656 P.2d 57, 58 (Haw. 1982). See generally 1 *Waters and Water Rights*, *supra* note 30, §6.02(b) and (d). Rights of owners whose land abutted or included non-navigable lakes or ponds are sometimes different than of those who own land through which a running stream flows. But this is a distinction which divides riparian states generally. Louisiana is not unique.

66. "The prescription of nonuse does not run against natural servitudes." La. Civ. Code art. 758. Other types of predial servitudes, however, prescribe after ten years of nonuse. La. Civ. Code art. 753.

67. *Dyer & Moody, Inc. v. Dynamic Constructors, Inc.*, 357 So. 2d 615, 617-18 (La. App. 1st Cir. 1978). The right to drainage—the right not to have water—is a species of water rights, but an extended treatment of it is not consistent with this article's emphasis on water use and water supply problems.

68. "The laws governing acquisitive prescription of immovable property apply to apparent servitudes." La. Civ. Code art. 742.

drawing arrangement (listed in Article 699 as an example of a predial servitude⁶⁹) satisfies the codal definition of an "apparent" servitude.⁷⁰ No reported Louisiana case appears to have posed that question. But other states allow *acquisition* of riparian rights by prescription,⁷¹ and in the absence of a showing that Louisiana's code-based riparian rights are fundamentally different than those in common-law states, there is no reason to think that Louisiana courts would reach a different result. Thus, Louisiana would probably adhere to the uneasy riparian compromise by which these rights cannot be lost *directly* by non-use, but can be lost *indirectly* if there is insufficient water for all users, by the operation of prescription in favor of others.⁷²

B. The Riparian Right Vis-A-Vis Non-Riparians

The tying of the water right to the land by categorizing it as a predial servitude prevents, or at least hinders, its efficient exchange among persons who are willing to buy and sell it. This issue is not unique to Louisiana and not necessarily dependent on whether the riparian right is a servitude. It is characteristic of the riparian doctrine.⁷³ The question is whether this is a desirable state of affairs for Louisiana or other riparian jurisdictions.

Would a legal regime which encouraged, or at least permitted, the free transfer of water rights promote economic development? The basic argument for free transferability is that "[m]arkets are the customary means in our society for allocating scarce resources."⁷⁴ Because surface water is generally not scarce in

69. La. Civ. Code art. 699.

70. "Apparent servitudes are those that are perceivable by exterior signs, works, or constructions; such as a roadway, a window in a common wall, or an aqueduct." La. Civ. Code art. 707. See also *Acadia-Vermilion Rice Irrigating Co. v. Broussard*, 175 So. 2d 856, 863 (La. App. 3d Cir. 1965) (through prescription plaintiff acquired a servitude of an aqueduct across defendant's lands). A drainage servitude is another type that can be acquired through prescription. *Bonnabel v. Police Jury*, 216 La. 798, 44 So. 2d 872 (1950).

71. See, e.g., *Cary v. Daniels*, 49 Mass. (8 Met.) 466, 479 (1844); *Pugh v. Wheeler*, 19 N.C. (2 Dev. & Bat.) 50, 53 (1836); *Saxon v. DuBois*, 26 Cal. Rptr. 196, 201 (Dist. Ct. App. 1st Cir. 1962). See generally Richard S. Harnsberger, *Prescriptive Water Rights in Wisconsin*, 1961 Wis. L. Rev. 47 (1961); Dellapenna, *Riparianism*, *supra* note 30, § 7.04(c).

72. Quoting civilian treatises, Professor Yiannopoulos supports this statement. "Riparian rights may not be lost by nonuse. However, these rights may be lost by voluntary alienation, renunciation, or by the accrual of acquisitive prescription in favor of another person." Yiannopoulos, *supra* note 58, at 78 (citing 3 Marcel F. Planiol & Georges Ripert, *Traite Pratique de Droit Civil Francais* 491-93 (2d ed. Picard 1952); 3 Charles C. Aubry & Charles Rau, *Droit Civil Francais* 90 (5th ed. 1900)).

73. The concept of the riparian right as "part and parcel" of land ownership has arisen in many contexts. One of the more unusual cases involved a Florida condemnation dispute over whether the state could condemn riparian land without taking, and paying for, the appurtenant riparian rights. (The court held that it could not.) *Belvedere Dev. v. Department of Transp.*, 476 So. 2d 649, 652 (Fla. 1985).

74. *Scarce Water*, *supra* note 29, at 9. For an economist's critique contending that existing water laws significantly misallocate the nation's water resources because they do not permit free transferability of water rights, see Laurence H. Falk, *Economic Aspects of Ground-Water Basin*

Louisiana, it has not become the object of large-scale markets. However, the common-law riparian rights doctrine has been interpreted to actually prohibit transfer of water rights,⁷⁵ and Louisiana law also may currently prohibit it. "A predial servitude [the riparian's right to use water] . . . cannot be alienated or encumbered separately from the dominant estate [the riparian land]."⁷⁶ Furthermore, the codal distinction between natural predial servitudes and conventional predial servitudes, the latter of which are created by contract,⁷⁷ suggests that natural predial servitudes are not meant to be bought or sold.

In this regard, Professor Yiannopoulos's classification of riparian rights as *not* being a natural servitude⁷⁸ may at first glance give more flexibility. But if treating these rights as *sui generis* means that they are to be regarded as the same as common-law riparian rights, then the problem of non-transferability remains essentially the same.⁷⁹

On a more practical level, does the prohibition against buying and selling riparian rights prevent water from being brought to where it is needed—to its "highest and best use"? Even if one concedes that neither the Civil Code nor riparian doctrine in general prohibits the riparian from giving a non-riparian *access* to the water (as distinguished from transferring the servitude),⁸⁰ the possibility remains that other riparians may have a right to enjoin that non-riparian's use.

Control 13-17, 69-71 (1970).

75. See, e.g., *Gould v. Eaton*, 49 P. 577 (Cal. 1897); *Hendrix v. Roberts Marble Co.*, 165 S.E. 223 (Ga. 1932) (*Pyle v. Gilbert*, 265 S.E.2d 584, 589 (Ga. 1979) overruled *Hendrix* to hold that "the right to the reasonable use of water in a non-navigable watercourse on non-riparian land can be acquired by grant from a riparian owner."); *Roberts v. Martin*, 77 S.E. 535 (W. Va. 1913). See generally Dellapenna, *Riparianism*, *supra* note 30, § 7.04.

76. La. Civ. Code art. 650. The National Water Commission, *A Summary-Digest of State Water Laws* 353 (Richard L. Dewnut & Dallin W. Jensen eds. 1973), cites La. Civ. Code arts. 652-654 (1870) for this proposition. (These articles correspond to La. Civ. Code arts. 649-650 (1977).) However, these authors appear to confuse an outright transfer of the riparian right with mere use of the water by non-riparians.

77. La. Civ. Code art. 654.

78. Yiannopoulos, *supra* note 58, at 78. See also *supra* note 59 and accompanying text.

79. The risks faced by the grantee of severed consumptive riparian rights is described in *Tarlock*, *supra* note 30, § 3.18(2)(b). The traditional view is that riparian rights must be exercised within the watershed and on riparian land. *Harvey Realty Co. v. Borough of Wallingford*, 150 A. 60 (Conn. 1930); *Town of Purcellville v. Potts*, 19 S.E.2d 700 (Va. 1942). But there is a developing minority view that water rights may be conveyed for use on non-riparian land, but only if "reasonable" with regard to the rights of a riparian other than the party who made the purported transfer. *Texas Co. v. Burkett*, 296 S.W. 273 (Tex. 1927); *Consol. Water Supply Co. v. State Hosp. for Criminal Insane*, 66 Pa. Super. 610 (1917). (As with other water law issues, care should be used in assigning a state to the "traditional" or "developing minority" view because cases tend to be fact-specific.)

80. In some limited situations, one might even "own" the water itself. See discussion of *Verzwyvelt*, *supra* note 63 and accompanying text. The Civil Code provides that "[u]nless otherwise provided by law, the ownership of a tract of land carries with it the ownership of everything that is directly above or under it." La. Civ. Code art. 490. Thus, an owner with title to a waterbottom may also own the water above it if the water is non-navigable and non-running.

Hence, the potential for lawsuits exists where non-riparians have obtained (by purchase or simply by permission) access to water from riparians, even though a plaintiff may have no motive other than to establish a point of principle.⁸¹

Non-riparians may and do obtain water by means of agreements with riparian landowners, and these agreements are usually not contested. Probably more significant in terms of the volume of water involved have been specific legislative authorizations. Municipalities,⁸² waterworks districts,⁸³ waterworks companies,⁸⁴ irrigation companies and irrigation districts,⁸⁵ as well as a number of special purpose districts,⁸⁶ are authorized by statute to use water for clearly non-riparian purposes. As long as their withdrawals are surplus to riparians' needs, only a theoretical conflict exists between legislatively authorized withdrawals and legislatively codified preexisting riparian rights. A riparian could bring suit as a matter of principle or perversity, although such a suit probably would not be successful.⁸⁷ More realistically, a riparian might be able to make a plausible argument that she has been harmed by a specific, legislatively authorized withdrawal. A court might then have to decide whether a statute was intended to displace the Civil Code rights of riparians and whether such a displacement is an unconstitutional infringement on the riparian servitude, inasmuch as predial servitudes are a species of property.⁸⁸

One case involving a right to draw water from the Mississippi River contains dicta to the effect that riparians do have unique rights to use the waters of that river.⁸⁹ However, the context may require concluding that the only way in which the riparian's right was superior to others' was by virtue of his access to the river, and that any other member of the public who gained legitimate access to the river (in that case, by permission from the City of New Orleans) would have *equal* rights to use the water.⁹⁰ In this case the riparian owner did not, and in all likelihood

81. However, at least one Louisiana case suggests that the riparian would have to show actual damages in order to obtain an injunction. *Jackson v. Walton*, 2 La. App. 53 (2d Cir. 1925), *infra* note 100 and accompanying text.

82. La. R.S. 33:841 (1988).

83. La. R.S. 33:3815 (Supp. 1993).

84. La. R.S. 19:2(4) (1979).

85. For companies, *see* La. R.S. 45:61 (1982); for districts, *see* La. R.S. 38:2112 (1989).

86. *See, e.g.*, La. R.S. 38:2551-2572 (1989) (Bayou D'Arbonne Lake Watershed District); La. R.S. 38:2551-2661 (1989) (Recreation and Conservation District St. Helena Parish); and La. R.S. 38:3085.1-3085.8 (1989) (Iatt Lake Water Conservation District). A number of other special purpose districts are authorized in Chapter 38 of the Revised Statutes to use and distribute surface water. The Capital Area Groundwater Conservation District would seem to have implied authority to use surface water for the purpose of operating "injection wells to create fresh-water barriers against saltwater intrusion or the intrusion of any other pollutant." La. R.S. 38:3076(18) (1989).

87. *See, e.g.*, *Jackson v. Walton*, 2 La. App. 53 (2d Cir. 1925).

88. La. Civ. Code. art. 649.

89. *New Orleans Waterworks Co. v. Louisiana Sugar Refinery Co.*, 35 La. Ann. 1111 (1883), *writ dismissed*, 125 U.S. 18, 8 S. Ct. 741 (1888).

90. This case did not directly involve riparian rights. Plaintiff waterworks company held an exclusive franchise from the legislature to supply the city of New Orleans with water. Nevertheless,

could not, claim that the use of river water by the (apparently) non-riparian defendant diminished the plaintiff's ability to use the water of the Mississippi, only that it impinged on the plaintiff's exclusive franchise.

C. Extent of the Riparian Right to Draw Water: How Much is Too Much?

Louisiana's current system of riparianism poses another set of problems inherent in the flexible, open-ended nature of the riparian system. These involve the general topic of how much water a riparian owner has a right to take.

The riparian's right in Louisiana to use the water that runs through or along an estate is similar to the "*tres etendu*" right⁹¹ under French law held by riparian owners *along watercourses not in the public domain*.⁹² This restriction to "waters not in the public domain" significantly limits the scope of riparian rights. Though the right of use is said to be extensive, commentators stress that even where the right does exist, it is limited by a standard of reasonable use. Hence, "the water does not belong to the shore owners. They have only the right to draw the water *they need*."⁹³ According to a modern commentator:

the City Council authorized the defendant sugar refinery to lay pipes to the Mississippi to obtain water for its own use. The supreme court, affirming a judgment for defendant, held that this authorization was not inconsistent with the exclusive privilege given to the waterworks company of supplying *others*. *Id.*

It is not clear whether the defendant was a riparian, but one may infer that it was not, since plaintiff seemed to have conceded that defendant could lay pipes to the river if it were a riparian proprietor. The charter, which gave the public supply franchise to plaintiff, did reserve to "persons contiguous to the river" the privilege of laying pipes to the river for their exclusive use. *Id.* at 1112. The court said that riparians would have this right even if there were no such declarations in the charter, and further that "[the riparians] had, clearly, not only the privilege, *in common with all others*, to draw the running water from the river for domestic purposes, . . . but also, on principle, that, without the need of a *previous permission*, of laying pipes from the river to their premises." *Id.* at 1114 (emphasis supplied). The court cited La. Civ. Code art. 450 (1870) and related articles (concerning rights of the general public to running waters) but *not* La. Civ. Code art. 661 (1870). The latter would be the appropriate article to cite if the court wanted to base its decision on the defendant's riparian rights.

91. 2 Henri Mazeaud et al., *Biens: Droit de Propriete et Ses Demembrements* 124, in 2 *Lecons de Droit Civil* (7th ed. 1989).

92. Watercourses in France are divided into three categories: in the public domain, not in the public domain, and mixed. *Id.* at 120-21. Generally, a watercourse is in the public domain if it is navigable or can be used to float barges. *Id.* at 120. Mixed waters are so designated by statute. Riparians have bed ownership and the right to fish there, but the state generally has the right to use the water. *Id.* at 121.

It would seem that under this definition, few watercourses would fall into the second category. *See infra* at note 104 and accompanying text.

Louisiana's riparian rights, as noted *supra* note 28, are much broader than those in France and Quebec in that—at least insofar as the right to take water is concerned—the Louisiana riparian right extends to waters in the public domain (navigable waters).

93. 2 Charles C. Aubry & Charles Rau, *Droit Civil Francais* 47 (Louisiana State Law Inst. trans., 7th ed. 1966) (emphasis added).

The use of water by a riparian can be rather extensive, on condition that he does not impede the exercise of the same right granted to other riparians. . . . Finally, the judge is prepared, in case of litigation, to resolve the dispute by establishing water usage among the parties to the conflict. This is what is called a regulation of water, by which the judge is given the job of elaborating a *modus vivendi* among the parties with respect to water use.⁹⁴

Quebec, like France, does not extend riparian rights to landowners along navigable waters, but to the extent riparian rights do exist, it appears that Quebec has codified the reasonable use rule: "He whose land borders on a running stream, not forming part of the public domain, may make use of it as it passes, for the utility of his land, but in such manner as not to prevent the exercise of the same right by those to whom it belongs"⁹⁵

Louisiana courts seem to have followed the French rule of reasonable use,⁹⁶ but it is not clear whether they were influenced by French sources, or by other (common-law) states that follow the riparian system. Thus, court decisions from those states might be indicative of how Louisiana courts would decide similar disputes. Perhaps because Louisiana generally has such an abundance of water, the Louisiana cases that have attempted to interpret the meaning of "reasonable use" are few. In *Long v. Louisiana Creosoting, Co.*,⁹⁷ the Louisiana Supreme Court upheld the authority of the trial judge or jury to decide whether an upstream creosote plant was entitled to pollute the stream as part of its "reasonable use of the stream."⁹⁸ The court did not cite any codal provision in reaching its decision; rather, it cited one common-law authority.⁹⁹

In *Jackson v. Walton*,¹⁰⁰ the Louisiana Second Circuit Court of Appeal reversed an injunction against a non-riparian defendant who had been taking water out of a bayou pursuant to a contract with the owner of the land across the bayou from the plaintiff. The nature of the dispute arguably brought into question (what

94. L'usage d'eau par un riverain peut être très étendu, à condition qu'il n'entrave pas l'exercice du même droit reconnu aux autres riverains. . . . Enfin, le juge est habilité, en cas de litige, à trancher, en établissant l'usage de l'eau entre les parties en conflits. C'est ce que l'on appelle un règlement d'eau, par lequel le juge est investi de la mission d'élaborer un *modus vivendi* entre les parties quant à l'usage de l'eau.

2 Christian Larroumet, *Droit Civil* 363 (2d ed. 1988).

95. The riparian can use the water, "mais de manière à ne pas empêcher l'exercice du même droit par ceux à qui il appartient." *Les Codes Civils* art. 503 (Crepeau ed. 1981).

96. All or almost all American states appear now to follow the reasonable use rule, as opposed to the natural flow rule, most of the time. See *supra* note 39.

97. 137 La. 861, 69 So. 281 (1915).

98. *Id.* at 862, 69 So. at 282. (The trial judge had rendered judgment for the plaintiff in the amount of \$200.).

99. *Id.*, 69 So. at 282. The citation was to the 30 *American & English Encyclopedia of Law* 383 (2d ed. 1896).

100. 2 La. App. 53 (2d Cir. 1925).

are now) Louisiana Civil Code articles 657 and 658 and riparian rights. The court decided in the defendant's favor on the grounds that plaintiff was not entitled to injunctive relief unless *actual* or *threatened* damage was shown. It did not mention the term "riparian rights" or any articles of the Civil Code. However, the court added in dicta that the "plaintiff's right to renew the action, should necessity for it arise, should be reserved."¹⁰¹ The court seems to have assumed that the plaintiff had something that could be identified as a riparian right to prevent withdrawals from the stream by a non-riparian *if* these were shown to interfere with the riparian's *actual uses* of the water.

No reported Louisiana case has dealt with the question of how much water could be drawn before the person taking it exhausted the riparian right, or activated the riparian right of another to prevent withdrawals. It was not necessary under the circumstances of a case such as *Jackson v. Walton*¹⁰² to decide this issue. However, it is implicit in the scheme of the riparian doctrine that the courts would have had to do so if there had been mutually irreconcilable water uses. This raises the question of whether any court should have to resolve how much water a person can draw. An investor can have more security with a *quantified* right to a specific amount of water, as in a prior appropriation system or some variation thereof, or another type of administrative permit system, such as that of Florida.¹⁰³ In addition to the problem of quantification of water rights, the *Jackson* case raises the question, discussed in the preceding section, as to whether the existing practices of many non-riparians who are withdrawing and using water (sometimes with specific legislative authorization) might be in jeopardy in places where water shortages develop.

D. Riparianism and Navigability: What Difference Does It Make Whether Water is Navigable?

In France, according to Larroumet, waters in the public domain are those which are *navigable* or *flottable* (where *navigable* means able to carry vessels in commerce, and *flottable* means able to accommodate low-draft rafts).¹⁰⁴ Riparians whose estates border public waters "have no kind of right over these waters. Not only would they have no right to take the waters, because the waters

101. *Id.* at 56.

102. 2 La. App. 53 (2d Cir. 1925).

103. See *infra* notes 172-174 and accompanying text.

104. Larroumet defines *navigable* as "susceptible de porter des bateaux se livrant a de veritables operations de transport," and *flottable* as "susceptible de porter des radeaux ou des trains de bois." 2 Larroumet, *supra* note 94, at 354. See also 3 Marcel F. Planiol & Georges Ripert, *Traite Pratique de Droit Civil Francais* 133 (Picard ed. 1926): "Les fleuves et rivieres navigables ou flottables sont dans le domaine public. Un cours d'eau est *navigable* lorsqu'il est capable de servir a une navigation continue. Il est *flottable*, lorsqu'il peut porter des radeaux ou trains de bois": Navigable or floatable streams and rivers are in the public domain. A watercourse is navigable when it can serve as a regular course of navigation. It is floatable when it can carry barrels or timber rafts (footnote omitted).

are in the public domain, but they would also be unable to exercise any right of use without authorization [by a government agency]."¹⁰⁵ Hence, riparians have no automatic right to take from even non-navigable watercourses, if the course has enough water to float rafts. According to Aubry and Rau, the purpose of designating a thing as within the public domain is "to assure that the property will remain in public use or service."¹⁰⁶

Scholars of Louisiana law, however, have debated whether the Louisiana Civil Code imported the same restriction. A 1960 pamphlet by two LSU researchers assumed—based on the wording of the comparable article from the French Civil Code—that the Louisiana riparian servitude articles did not apply to navigable streams.¹⁰⁷ Hence, riparian rights to use water would extend, as in France and Quebec, only over non-navigable waterways. On the other hand, the late Professor Frank Trelease, one of the nation's most respected experts on water law, argued that it would be logical to assume that the redactors of the Louisiana Civil Code intended to include navigable waters in the meaning of Articles 657 and 658. He says this because there is a specific exemption of navigable waters in the French Code articles on riparian rights while there is no corresponding exempting language in the relevant Louisiana articles. Also, Trelease points out, common-law riparian rights extend to navigable waters.¹⁰⁸ Professor Yiannopoulos' treatment of riparian rights to use of water does not distinguish between navigable and non-navigable streams, but is consistent with the view that Articles 657 and 658 apply to both.¹⁰⁹ Thus, on this important point, Louisiana follows the "common-law" riparian doctrine rather than the French Civil Code. Indeed, it would undoubtedly come as quite a shock to owners of land along Louisiana's many navigable streams to learn that they did not have the same riparian rights as their counterparts in other states of the Union.

As a matter of water policy, the Louisiana/common-law approach is superior to the France/Quebec approach. Navigable streams generally carry a greater volume of water than non-navigable streams. Thus, a farmer's withdrawal of irrigation water from the Mississippi River, for example, is unlikely to have an adverse effect on downstream owners. Water disputes are more likely to arise over low-flow streams. In fact, an argument can be made that it is precisely these low-

105. Les propriétaires des fonds bordant les eaux du domaine public n'ont aucune espece de droit sur ces eaux; non seulement ils ne sauraient se les approprier puisqu'il s'agit d'elements du domaine public, mais encore ils ne sauraient exercer sur elles un quelconque droit d'utilisation sans autorisation de l'administration (irrigation, peche, deversement de matieres, etc. . . .).

2 Larroumet, *supra* note 94, at 354.

106. 2 Aubry & Rau, *supra* note 93, at 50.

107. Borton & Ellis, *supra* note 28, at 38.

108. Compare Borton & Ellis, *supra* note 28, at 38, with Handbook (Yiannopoulos ed.), *supra* note 28, at 14 n.24.

109. Yiannopoulos, *supra* note 58, § 22.

flow streams where greater control must be exercised over riparian withdrawals in order to protect the interests of fellow riparians.¹¹⁰

1. The Public's Right to Use Water: Public Rights to Instream Use and Consumptive Use Compared

Legislation protects the riparians' right, as well as the right of other specific entities such as utilities, to use water. The non-riparian public also has a codified water right: a right of enjoyment. But while this right lessens riparians' control over water resources, it does so only to a limited extent because the Louisiana Civil Code does not specifically grant to the public any right of consumptive *use*, or any right to withdraw water at all.¹¹¹

Among the public's rights to enjoy navigable waters are the rights to sail upon them and fish in them. These are set out in Louisiana Civil Code articles 450 and 452:

110. On the other hand, the protection of navigation requires greater *public* regulation specifically concerned with navigability issues. Aggregate withdrawals from a navigable stream could lower the water level enough to detrimentally affect navigation, in which case the riparian rights to draw water would have to yield to the federal navigation servitude. Jurisdiction over activity that would affect navigation is given to the U.S. Army Corps of Engineers in the Rivers and Harbors Appropriation Act of 1899 ("RHA"), ch. 425, 30 Stat. 1121 (codified as amended in scattered sections of 33 U.S.C.A. §§ 401-418 (West 1986 & Supp. 1987)). Section 10 of the RHA gives authority to regulate the altering or modifying of the "course, location, *condition*, or *capacity*" of navigable waterways. 33 U.S.C.A. § 403 (West 1986 & Supp. 1987) (emphasis added).

Moreover, other rights in the "bundle" of riparian rights, particularly the right to wharf out into the water, are also subject to federal and state interests in maintaining and promoting navigation. Under § 10 of the RHA, the Corps regulates potential obstructions to navigation in the form of structures, excavations, fills, or other modifications or alterations in traditionally navigable waters. *Id.* Section 9 gives the Corps permit authority, subject to congressional consent, over dams and dikes in these waters. 33 U.S.C.A. § 401 (West 1986 & Supp. 1987).

Louisiana Civil Code article 665 defines "legal public servitudes" which "relate to the space which is to be left for the public use by the adjacent proprietors on the shores of navigable rivers, and for the making and repairing of levees, roads and other public or common works." For a description of the overlapping system of state and federal regulation over *batture* use, see Millan, *supra* note 28.

111. But it must be noted that no law restricts the right of anyone to use diffused surface waters (runoff, *e.g.*, and other waters that do not flow in a regular, defined watercourse). Most, if not all, states give a landowner the right to capture and use the diffused surface waters for the landowner's purposes. This is also the *civilian doctrine*. Yiannopoulos, *supra* note 58, at 74. In the absence of specified legislation or court decisions to the contrary, we could probably assume that Louisiana follows this approach.

In Louisiana, the right to capture would include the right to build an impoundment or a dam. As long as the water has been impounded before it reaches a watercourse, the lower landowners will have no "water right." However, the dam structure itself may be subject to regulation by the chief engineer of the Louisiana Department of Transportation and Development pursuant to the Louisiana Dam Safety Act. La. R.S. 38:21-28 (1989). The import of this right of capture is that it may be possible for a landowner to capture enough diffused surface water to engage in aquaculture or agriculture irrigation without having to worry about whether owners of lower-lying lands, where diffused waters would otherwise drain, have a right to that water.

Public things are owned by the state or its political subdivisions in their capacity as public persons. Public things that belong to the state are such as running waters, the waters and bottoms of natural navigable water bodies, the territorial sea, and the seashore. . . .¹¹²

Public things and common things are subject to public use in accordance with applicable laws and regulations. Everyone has the right to fish in the rivers, ports, roadsteads, and harbors, and the right to land on the seashore, to fish, to shelter himself, to moor ships, to dry nets, and the like, provided that he does not cause injury to the property of adjoining owners.¹¹³

Thus, running waters, regardless of navigability, are subject to some public uses. Navigable waters are subject to *more* public uses than non-navigable waters. Also, navigable waters as state-owned public things are subject to public use even if they do not flow. Conversely, only non-running, non-navigable waters may not be public things, and are susceptible to private ownership.

A statute in the Louisiana Civil Code ancillaries, however, further restricts the right to "own" water, which might otherwise be permissible according to the Louisiana Civil Code.¹¹⁴ This statute provides that even those waters and beds

112. La. Civ. Code art. 450.

113. La. Civ. Code art. 452.

114. La. R.S. 9:1101 (1989) provides:

The waters of and in all bayous, rivers, streams, lagoons, lakes and bays, and the beds thereof, not under the direct ownership of any person on August 12, 1910, are declared to be the property of the state. There shall never be any charge assessed against any person for the use of the waters of the state for municipal, industrial, agricultural or domestic purposes.

While acknowledging the absolute supremacy of the United States of America over the navigation on the navigable waters within the borders of the state, it is hereby declared that the ownership of the water itself and the beds thereof in the said navigable waters is vested in the state and that the state has the right to enter into possession of these waters when not interfering with the control of navigation exercised thereon by the United States of America. This Section shall not affect the acquisition of property by alluvion or accretion.

All transfers and conveyances or purported transfers and conveyances made by the state of Louisiana to any levee district of the state of any navigable waters and the beds and bottoms thereof are hereby rescinded, revoked and canceled.

This Section is not intended to interfere with the acquisition in good faith of any waters or the beds thereof transferred by the state or its agencies prior to August 12, 1910.

The provision forbidding charges "assessed against any person for the use of the waters of the state for municipal, industrial, agricultural or domestic purposes," might appear puzzling and potentially troublesome at first glance. This could be read as prohibiting any municipality from charging its residents for water supplied to them through a municipal waterworks system. It could even be read as prohibiting irrigation districts or even private irrigation companies from charging customers for water. However, that probably was not the original legislative intent and is inconsistent with universally recognized practice in Louisiana and elsewhere. Several subsequent legislative enactments expressly or impliedly authorize such charges. One answer to the apparent contradiction is that the subsequent enactments supercede the statute to the extent that they are inconsistent. Since the vast majority of state residents receive their drinking water through municipal or other public

that could possibly be subject to private ownership under the provisions of the Civil Code will not be privately owned unless they were privately owned on August 12, 1910. Professor Yiannopoulos explains that the statute did not encroach upon any existing private rights, but merely vested title in the state to waters and beds not owned by any person. Before 1910, there were apparently bodies of non-navigable waters not owned directly either by the state or by private persons. The most significant change wrought by the act was in regard to claims by riparian landowners to alluvion additions and derelictions based on bank or shore ownership. After 1910, when title was vested in the state, riparians' claims to accretions became claims against the state rather than claims against unclaimed land.¹¹⁵

Does the Louisiana Civil Code pose a conflict between the rights of riparians and the rights of the public to use water? A narrow reconciliation of the non-riparian public's rights under Louisiana Civil Code articles 450 and 452 with riparians' rights under Louisiana Civil Code articles 657 and 658 would extend to the public the right to enjoy only instream uses (such as navigation, swimming, and fishing) of public-domain water, but not the right to withdraw this water for non-riparian uses. Such a rule would be required by a strict application of the common-law "natural flow" doctrine. But even under the classical formulation of the "reasonable use" rule, diversions could only be applied to riparian lands.¹¹⁶ This interpretation of the law of riparian rights in Louisiana, however, while arguably consistent with the language of the Louisiana Civil Code, would ignore existing practices, such as withdrawal and use by municipalities, which have long been legislatively authorized. The legislation is at least not inconsistent with the Code.

Article 450 does distinguish between navigable water bodies and non-navigable streams ("running water") in that both the "waters and bottoms" of

agencies, it would seem that the exceptions have engulfed the rule. This would also explain how the legislature could, in 1974, authorize the Capitol Area Groundwater Conservation Commission to impose a charge on large-scale pumpers of groundwater based on the water they pumped by their own effort. See *infra* notes 237-242 and accompanying text.

However, probably a better answer as to how to interpret this statute is that the legislature in 1910 was not thinking of the public supply situation at all. It is not likely that the legislature intended by this statute to prohibit then-existing charges for publicly supplied water. Since the same statute declared all waters to be the property of the state, the legislature may have wanted to assure riparians (or others with legitimate access to the water without the intermediation of a public supply agency) that they could continue to withdraw or divert water *by their own efforts* without being charged for use of a "state owned" resource. If this was the intent of the 1910 statute, it would not be inconsistent with this intent to permit a charge for the use of water when the water is being provided to the user through the efforts of an intermediary, whether that intermediary be the state, one of its political subdivisions, or a private entity.

115. See A.N. Yiannopoulos, *Common, Public, and Private Things in Louisiana: Civilian Tradition and Modern Practice*, 21 La. L. Rev. 697, 728 (1961). This article contains an extended discussion of the distinction between navigable and non-navigable waters, between sovereignty ("imperium") and ownership ("dominium"), and between rights to use the waters and rights to exploit minerals. *Id.* at 713-29.

116. See *supra* notes 37-39.

navigable streams are declared to be public things. This distinction is significant for purposes such as mineral rights and control over oyster beds, but does not seem to differentiate between navigable and non-navigable streams in regard to the right to withdraw water. As stated in the previous section, Louisiana has not followed the French approach in restricting the ability of riparians to take water from a navigable stream. A possible corollary of this rejection is that non-riparian members of the general public have no more *legal* rights to withdraw water from a navigable than from a non-navigable stream. However, as a *practical* matter, a withdrawal from a navigable stream such as the Mississippi River is less likely to injure another riparian because the total volume of flowing water is much greater than in a typical non-navigable stream, and any diminution would be *de minimis*.

Louisiana courts may have failed to adopt the strict limitations on non-riparian and non-watershed usage of water only because the issues have not been effectively raised. A rule that would give effect to state and public rights to withdraw water, but still give maximum protection to riparians, would be that non-riparians are entitled to use only *surplus* waters, i.e., those not needed at any given time for traditional riparian purposes ("watering his estate or for other purposes"¹¹⁷). This would mean that the rights of non-riparians to withdraw water may diminish if increased riparian usage significantly reduces the total amount of water in the stream. This interpretation would be consistent with the "reasonable use" branch of the common-law riparian doctrine. It would also be consistent with the dicta in *Jackson v. Walton*.¹¹⁸

However, the sweeping language of Louisiana Civil Code articles 450 and 452 might well be interpreted as going further than this, i.e., as justifying (1) general police power regulation of water rights and water uses (which might well have the effect of curtailing some riparian uses); and (2) appropriation of water by non-riparian members of the public. Professor Trelease noted that western states have found such justification in statutory language similar to that used by Louisiana.¹¹⁹ Furthermore, eastern riparian states have used such language in the preambles or "declarations of policy" in adopting comprehensive water use acts which introduce for the first time modified appropriation or permit systems.¹²⁰

117. La. Civ. Code art. 657.

118. 2 La. App. 53 (2d Cir. 1925).

119. Handbook, *supra* note 28, at A-3. See also Frank J. Trelease, *Government Ownership and Trusteeship of Water*, 45 Cal. L. Rev. 638 (1957).

120. Cf. Miss. Code Ann. § 51-3-1 (1990):

All water, whether occurring on the surface of the ground or underneath the surface of the ground, is hereby declared to be among the basic resources of this state [Mississippi] to therefore belong to the people of this state and is hereby subject to regulation in accordance with the provisions of this chapter.

N.C. Gen. Stat. Ann. § 143-211 (1990):

Recognizing that the water and air resources of the State [North Carolina] belong to the people, the General Assembly affirms the State's ultimate responsibility for the preservation and development of these resources in the best interest of all its citizens and declares the prudent utilization of these resources to be essential to the general welfare.

In summary, general problems surround non-riparian withdrawals. It appears that the legislature has, by both general and specific provisions, authorized withdrawal of water for non-riparian purposes. Louisiana Civil Code articles 450 and 452 can be harmonized with Articles 657 and 658 by limiting the public uses (including, in particular, water withdrawals) to those which do not interfere with the riparian rights granted by the latter pair of articles. However, the legislature has not addressed the question of whether various statutory enactments, passed *after* the effective date of the predecessor articles to present Articles 657 and 658, *intended* to interfere with *existing* riparian uses. Given Louisiana's historic status as a water-rich state, it may be that such an eventuality did not occur to the legislature, but the issue may arise in the future. Subsequent portions of this article address the question of and the constitutionality of modifying these vested rights.¹²¹

2. *The Public's Right to Fish in or Otherwise Use the Surface of Non-Navigable Waters*

The right to use the surface of the water for fishing or boating may, but does not necessarily, follow from the ownership of the waterbottoms. The answer varies from one state to another.¹²² One issue is whether members of the general public may use the waters of a stream or lake whose *bottoms* are privately owned.¹²³ Another issue is whether one who owns all of the land underlying a body of water may exclude the owner of property up to the water's edge from using the surface.¹²⁴ Yet another question is whether a property owner who has title to *most* of the land underlying a body of water can fence off the area he or she owns, excluding from these waters those who have title to smaller portions of the waterbottoms.¹²⁵

According to the Louisiana Civil Code, there are two relevant questions concerning the right of the public to make instream uses of waters. First, are the

Both Mississippi and North Carolina have comprehensive water-use statutes.

121. See *infra* Part I, Section F and Part VI.

122. E.g., in New Jersey a bottom owner's use of a waterbody may be limited to an extent corresponding with the extent of his or her title to the bottom. *Baker v. Normanoch Ass'n, Inc.*, 136 A.2d 645, 652 (N.J. 1957). In Florida, ownership of the land on which a non-navigable waterbody sits entitles the landowner to exclude the public from recreational activities there, including fishing. *Osceola County v. Triple E Dev. Co.*, 90 So. 2d 600, 602 (Fla. 1956) (en banc). Colorado holds similarly. *People v. Emmert*, 597 P.2d 1025, 1027 (Colo. 1979) (en banc). Wyoming, in contrast, gives broader rights to the public. *Day v. Armstrong*, 362 P.2d 137, 145 (Wyo. 1961) (state constitution "declares the waters of all natural streams, springs, lakes, or other collections of still water . . . [to be] the property of the State"). Thus, the public is entitled to the use of even "non-navigable" waters.

123. See, e.g., *Baker*, 136 A.2d at 650 ("general public have [sic] no rights to the recreational use of a private lake").

124. *Id.* at 651 (rule of construing titles is that sale of land bordering natural pond conveys only up to the edge absent express intention to convey more).

125. See, e.g., *id.* at 652.

waters navigable or non-navigable?¹²⁶ Second, are the waters running or non-running?¹²⁷

It appears that Louisiana law gives the owner of the bottom the right to exclude others from using the surface of the water if it is both non-running and non-navigable. But this right to exclude might not apply if the water is tidally influenced.

The question is by no means settled. A 1988 United States Supreme Court decision has prompted action by the Louisiana State Law Institute and then the legislature. A growing dispute between landowners and commercial crawfishers also has been heating up the issue.¹²⁸

In *Phillips Petroleum v. Mississippi*,¹²⁹ the Court held that non-navigable waters subject to tidal influence were part of the public trust held by the State of Mississippi as trustee.¹³⁰ Subsequent to that decision, the Louisiana State Law Institute formed a committee to investigate the following questions:¹³¹

- 1) What was the law of Louisiana prior to the decision in *Phillips Petroleum v. Mississippi*, regarding ownership of non-navigable waterbottoms subject to the ebb and flow of the tide?
- 2) What changes, if any, in Louisiana law were effected by the decision in *Phillips Petroleum v. Mississippi*?¹³²

126. "Public things that belong to the state are such as running waters, the waters and bottoms of natural navigable water bodies, the territorial sea and the seashore . . ." La. Civ. Code art. 450. "Public things and common things are subject to public use in accordance with applicable laws and regulations." La. Civ. Code art. 452.

The meaning of "natural" navigable waterways was recently emphasized in *Dadar v. LaFourche Realty Co.*, 985 F.2d 824 (5th Cir. 1993). These commercial fishermen, with the support of intervenor State of Louisiana, sued, seeking to use a system of navigable waters controlled by Lafourche Realty Co. through an arrangement of fences, gates, and levees. The Fifth Circuit upheld the district court's finding that no natural navigable water bodies existed on the property in the year of Louisiana's statehood in 1812, that the land was not then subject to the ebb and flow of the tide, and that the land was validly alienated by the state.

To the extent that navigable waters *now* exist on land, the Fifth Circuit, citing *Kaiser Aetna v. United States*, 444 U.S. 164, 100 S. Ct. 383 (1979), distinguished those waters made navigable through privately financed activity (i.e. dredging) and waters that had become navigable by a process of erosion. The former would *not* be subject to the federal navigation servitude and public use, while the latter would be.

127. "Running water," in the context of whether riparian rights apply, was given a strict interpretation: as not including a slough, the current of which did not have a definite direction. *Hall v. Board of Comm'rs of Bossier Parish Levee Dist.*, 111 La. 913, 35 So. 976 (1904). See also *Verzwyvelt v. Armstrong-Ratterree, Inc.*, 463 So. 2d 979 (La. App. 3d Cir. 1985), discussed *supra* note 63 and accompanying text.

128. See, e.g., David Snyder, *Bayou Battle Brews Over Water Rights*, *The Times-Picayune* (New Orleans), May 10, 1992, at A1.

129. 484 U.S. 469, 108 S. Ct. 791 (1988).

130. *Id.* at 481.

131. Pursuant to H.R. Con. Res. 145 (1991).

132. *Id.*

The committee concluded that Louisiana has long defined the public trust to extend only to navigable waters, not to non-navigable waters (regardless of whether the water is subject to tidal influence).¹³³ Hence, in answer to the second question, the committee wrote that Louisiana had exercised its *Phillips* prerogative of holding less than the maximum in public trust.¹³⁴ However, the committee originally recommended amending Louisiana Civil Code article 451 to define "seashore" (a public thing¹³⁵) as that space over which the winter high tide "directly" spreads.¹³⁶ The amendment was intended to clarify Louisiana's position that its public trust does not extend to the full measure of *Phillips* (all waters subject to tidal influence) and therefore that the bottoms of non-navigable waters subject to indirect tidal influence (e.g., marshes, coastal lakes, and bayous) can be privately owned.¹³⁷

Five members of the Committee, who dissented from the majority opinion and the recommended legislation, filed a minority report.¹³⁸ This report challenged the majority report's conclusion that the legislature had alienated non-navigable tidelands, finding instead that it had demonstrated an intent to include these within the public trust.¹³⁹ The focus of these two opinions was mainly on ownership of the bottoms of these lands. Yet a third report, by the "Coalition to Restore Coastal Louisiana," was presented to the Louisiana State Law Institute urging a distinction between waterbottom ownership (important because of the mineral rights) and "ownership of the water, fish and nursery habitat in areas influenced by the tide."¹⁴⁰ After two lengthy meetings, the Louisiana State Law Institute adopted the Legal Opinion of the majority, but deleted the recommendation for a "clarifying" amendment to Article 451 drafted by Professor Yiannopoulos.¹⁴¹

However, a bill was then introduced and passed in the legislature to accomplish much the same purpose as the proposed Louisiana Civil Code amendment, i.e., to negate any implications that *Phillips Petroleum* is to be construed to extend the public domain and to remove any cloud which that decision *may* have placed on private titles. However, the statute seems to respond to the objections of the dissenters on the Louisiana State Law Institute Committee in two respects. First, the Act states that it is not intended to "create, enlarge, restrict, terminate, or affect in any way . . . public access and use . . ." such as "navigation, crawfishing,

133. Legal Opinion Pursuant to the Legislative Mandate of H.C.R. 145 of 1991 35, 36 (Louisiana State Law Institute Study Committee, 1991) [hereinafter *Legal Opinion*].

134. *Id.* at 44-45.

135. La. Civ. Code art. 450.

136. H.B. 539, 117th Leg., Reg. Sess., 1991.

137. Legal Opinion, *supra* note 133, at 46-47.

138. Subcommittee Report in Response to the Legal Opinion of the Reporter Pursuant to the Legislative Mandate of H.R. Con. Res. 145 of 1991 35, 36 (Louisiana State Law Institute Study Committee, 1991) [hereinafter *Legal Opinion*].

139. *Id.* at 12-16.

140. Interim Report to Louisiana State Law Institute Committee on Non-Navigable Water Bottoms 3 (Coalition to Restore Coastal Louisiana, 1991).

141. Meeting of the Louisiana State Law Institute, Jan. 17, 1992.

shellfishing, and other fishing" Second, the Act specifically states that it is not to be construed as conveying title to any lands not previously conveyed or transferred.¹⁴²

In the meantime, some waterbottom owners, perhaps encouraged by the actions of the Louisiana State Law Institute and the legislature, have closed off access to their "non-navigable" waterbottoms by closing off access to the waters above them (even though fishing boats may at one time have floated in these waters and might still but for the landowners' postings).¹⁴³ "Non-navigable" is used here not in the

142. La. R.S. 9:1115.1-3 (Supp. 1993). The complete text of the statute is as follows:

PART I-A. OWNERSHIP OF BEDS OF NON-NAVIGABLE WATERS

§ 1115.1. Declaration of Purpose

A. The purpose of this Part is to distinguish the law of Louisiana from the state law upon which the United States Supreme Court based its decision in *Phillips Petroleum Co. v. Mississippi*, 108 S. Ct. 791 (1988), and thereby quiet titles to lands which have long been owned by private persons but which titles may have been clouded as a result of that decision.

B. Consistent with the Louisiana State Law Institute Advisory Legal Opinion Relative to Non-navigable Water Bottoms to the Louisiana Legislature on or about January 31, 1992, the legislature hereby finds that as to lands not covered by navigable waters including the sea and its shore, which are subject to being covered by water from the influence of the tide and which have been alienated under laws existing at the time of such alienation, the Phillips decision neither reinvests the state, or a political subdivision thereof, with any ownership of such lands nor does the state, or a political subdivision thereof, acquire any new ownership of such property.

C. It is the intent of the legislature by the enactment of this Part to codify and confirm the law of Louisiana as heretofore interpreted by the courts thereof without change and without divesting the state, its agencies, or its political subdivisions of the ownership or rights as to any immovable property and without affecting the provisions of the state Oyster Statutes passed by the legislature since 1886. Furthermore, it is the intent of the legislature by the enactment of this Part that no provision herein shall be interpreted to create, enlarge, restrict, terminate, or affect in any way any right or claim to public access and use of such lands, including but not limited to navigation, crawfishing, shellfishing, and other fishing, regardless of whether such claim is based on existing law, custom and usage, or jurisprudence.

§ 1115.2. Ownership of inland non-navigable water bottoms

A. Inland non-navigable water bodies are those which are not navigable in fact and are not sea, arms of the sea, or seashore.

B. Inland non-navigable water beds or bottoms are private things and may be owned by private persons or by the state and its political subdivisions in their capacity as private persons.

§ 1115.3. Interpretation of transfers

Any act by which the state has transferred or hereafter transfers ownership of immovable property which, at the time of the transfer, encompasses inland non-navigable water beds or bottoms within the boundaries of the property transferred, is presumed to convey to the transferee the ownership of the inland non-navigable water bottoms, unless title thereto has been expressly reserved by the state of Louisiana in the act. Nothing contained in this Part shall be construed as conveying to any person title to any lands that have not previously been conveyed or transferred by the state.

Approved July 10, 1992.

143. Snyder, *supra* note 128, at A1.

“federal” sense for determining title to the waterbottoms,¹⁴⁴ but in the “state” sense for determining the public’s right to use water.¹⁴⁵ A waterway can, for example, be non-navigable under the federal title test and therefore its *bottom* is at least susceptible of private ownership. But it may also be “navigable” under state law and hence the overlying water would be available for public use, if the state so chooses.¹⁴⁶ When the federal and the state standards are the same, as they are in Louisiana,¹⁴⁷ then a single determination suffices for both for non-running water, but not for running water.¹⁴⁸

Other jurisdictions have upheld the right of a bottom owner to exclude the public from using non-navigable water, even for uses—such as fishing—that do not involve the privately-owned bottom.¹⁴⁹ States which adopt a contrary rule often

144. The seminal case is *United States v. Holt State Bank*, 270 U.S. 49, 46 S. Ct. 197 (1926). The Court held that for a waterway’s title to pass to a state, at the time of the state’s gaining statehood, the waterway in its natural condition must have been either used or been susceptible of being used as a highway of commerce in a manner customary for water travel. *Id.* at 55-56, 46 S. Ct. at 199.

Federal law also tests navigability for two other purposes not relevant here: for admiralty jurisdiction and for commerce clause preemption. *Odom v. Deltona Corp.*, 341 So. 2d 977, 988 (Fla. 1976).

145. Though federal and state laws set the criteria to determine the issue of navigability for purposes of determining state title, individual states are relatively free to regulate the consumptive and nonconsumptive *use* of water within their borders. State regulatory concerns may depart from state ownership of the beds of navigable bodies of water as the primary criterion by which public need or access to water is secured. *State ex rel. Meek v. Hays*, 785 P.2d 1356, 1360-61 (Kan. 1990). “[T]he federal test of navigability . . . does not preclude a less restrictive state test of navigability.” *Id.* at 1361 (citing *Southern Idaho F. & G. Ass’n v. Picabo Livestock, Inc.*, 528 P.2d 1295 (Idaho 1974)).

New Jersey, however, adheres to the English common-law test: whether the water is subject to the ebb and flow of the tide. If so, then the water is public, regardless of its navigability. *Baker v. Normanoch Ass’n, Inc.*, 136 A.2d 645, 649 (N.J. 1957). If the water is private, the public has no right of use. *Id.* at 650.

146. See, e.g., *Elder v. Delcour*, 269 S.W.2d 17, 26 (Mo. 1954) (en banc) (“[T]he waters . . . are public waters . . . [but] appellant is the owner of the bed of the stream . . .”).

147. *Ramsey River Rd. Property Owners v. Reeves*, 396 So. 2d 873, 875-76 (La. 1981); *Delta Duck Club v. Barrios*, 135 La. 357, 65 So. 489, 490 (La. 1914); *State ex rel. Guste v. Two O’Clock Bayou Land Co.*, 365 So. 2d 1174, 1177-78 (La. App. 3d Cir. 1978), *writ denied*, 367 So. 2d 387 (1979).

See also *Odom*, 341 So. 2d at 988 (“We find that Florida’s test for navigability is similar, if not identical, to the federal title test.”) (footnote omitted).

148. Running waters, regardless of navigability, are considered public things. La. Civ. Code art. 450. Consequently, a waterway that is non-navigable in the state sense will still be subject to public ownership and therefore public use. La. Civ. Code art. 452. See *Op. Att’y Gen. No. 90-557* (Dec. 12, 1990) (“[N]on-navigable waterways . . . may not be posted as long as same contain running water which may be utilized by the public.”). But there appears to be a dearth of jurisprudence on the definition of “running.”

149. Colorado: *People v. Emmert*, 597 P.2d 1025, 1027 (Colo. 1979) (en banc). Florida: *Odom v. Deltona*, 341 So. 2d 977, 989 (Fla. 1976); *Osceola County v. Triple Development Co.*, 90 So. 2d 600, 602 (Fla. 1956). Kansas: *State ex rel. Meeks v. Hays*, 785 P.2d 1356, 1358 (Kan. 1990) (stream owner may put fence across stream to prevent trespassing). Virginia: *Boerner v.*

do so because of specific statutory language. For example, the Wyoming Supreme Court held that navigability is a meaningless concept under state law because a Wyoming statute claimed all natural waters for the state.¹⁵⁰ Therefore, members of the public had a right to float by boat, canoe, or raft even on non-navigable portions of streams whose bottoms and banks are privately owned. Included with this right of flotation, said the court, was "even a right to disembark and pull, push or carry over shoals, riffles and rapids . . . as a necessary incident to the full enjoyment of the public's easement."¹⁵¹

The issue in other states turns on how a state defines "navigable." (Non-navigability is necessarily the presumption of the Louisiana State Law Institute's Study Committee: "the waters and bottoms of natural navigable water bodies" are public things.¹⁵²) Definitions of navigability used by these states vary, but generally fall into two classes: a relatively high-threshold, commerce-based definition,¹⁵³ and a low-threshold definition based on the waterway's capacity to sustain recreational usage, such as floating a canoe.¹⁵⁴ Some states which now apply a recreational test originally used a commerce-based definition of sorts, but one with a much lower threshold than the "federal" standard, i.e., the "saw log" test.¹⁵⁵ Louisiana applies a commerce-based definition,¹⁵⁶ and the courts have

McCallister, 89 S.E.2d 23, 27 (Va. 1955). Washington: *In re Clinton Water Dist. of Island County*, 218 P.2d 309, 313 (Wash. 1950) (en banc) (Water District must use power of eminent domain to convert privately owned non-navigable lake into public reservoir, and must compensate the former owners).

150. *Day v. Armstrong*, 362 P.2d 137, 143 (Wyo. 1961) ("[T]he actual usability of the waters is alone the limit of the public's right to so employ them."). *But cf.* *People v. Emmert*, 597 P.2d 1025, 1028 (Colo. 1979) (en banc) (refusing to apply *Day* in Colorado because of the states' different constitutional provisions on water use).

151. *Day*, 362 P.2d at 146.

152. La. Civ. Code art. 450.

153. *State ex rel. Meek v. Hays*, 785 P.2d 1356, 1365 (Kan. 1990) ("The public has no right to the use of nonnavigable water overlying private lands for recreational purposes without the consent of the landowner."); *Bott v. Commission of Natural Resources*, 327 N.W.2d 838, 853 (Mich. 1982) (court deems that abandoning commerce test in favor of recreational-use test is legislative matter); *Odom v. Deltona Corp.*, 341 So. 2d 977, 989 (Fla. 1976) (rejecting a recreational standard); *Boerner v. McCallister*, 89 S.E.2d 23, 27 (Va. 1955) ("The test is whether the stream is used or is susceptible of being used in its natural and ordinary condition 'as a highway for commerce on which trade and travel are or may be conducted in the customary modes of trade and travel on water.'") (citations omitted).

154. *Ryals v. Pigott*, 580 So. 2d 1140, 1152 (Miss. 1990), *cert. denied*, 112 S. Ct. 377 (1991) ("Those waters are navigable in fact which are navigable by loggers, fishermen and pleasure boaters."); *Montana Coalition for Stream Access v. Curran*, 682 P.2d 163, 169 (Mont. 1984) ("[R]ecreational use and fishing make a stream navigable."); *State v. McIlroy*, 595 S.W.2d 659, 663, 665 (Ark.), *cert. denied*, 449 U.S. 843, 101 S. Ct. 124 (1980) (defining a waterway as navigable if commercially valuable; commercial value includes recreational value); *Muench v. Public Serv. Comm'n*, 53 N.W.2d 514, 519 (Wis.), *aff'd*, 55 N.W.2d 40 (1952) ("[A]ny stream is *navigable in fact* which is capable of floating any boat, skiff or canoe, of the shallowest draft used for recreational purposes.").

155. The difference between the "saw log" test favored by some midwestern states and the "saltwater" test favored by some of the Atlantic states can be dramatic, as the Wisconsin Supreme

held that the waterway's ability to float a pirogue is not by itself sufficient to establish commercial navigability (regardless, apparently, of whether the pirogue paddler is engaged in commercial or recreational fishing!).¹⁵⁷

Consequently, landowners who exclude people from fishing or crawfishing in their waters, if those waters are both non-navigable and non-running, appear to have the support of existing law, while those on the fishers' side are forced to attack Louisiana's traditional definition of navigability: "If you can get a pirogue through it, I would call those waters navigable in fact. I think that the people pushing for public access have a pretty good case."¹⁵⁸ Alternatively, the fishers could argue for a more expansive definition of "running" waters, one which would include bayous, sloughs, and similar bodies of water whose current does not have a definite direction but which are connected to waters with currents that do.¹⁵⁹ A Louisiana court has not yet called waters which are capable of floating small commercial fishing boats navigable because of this fact alone. But assuming that the Louisiana State Law Institute's Legal Opinion is correct on the validity of bottom owners' titles, an effort to expand either the state's definition of navigability or the definition of running waters may be the best means of guaranteeing public access.

However, much of the recent controversy has involved crawfishers.¹⁶⁰ The

Court pointed out in one case. "In North Carolina, for example, the Yadkin River which has a width of 175 yards is nonnavigable whereas in Wisconsin any stream capable of floating a saw log during one or two weeks of the spring or other freshets is navigable." *Muench v. Public Serv. Comm'n*, 53 N.W.2d 514, 516-17 (Wis. 1952).

156. "Navigable means when a stream is large enough to float a boat of some size, engaged in carrying trade. It implies a possibility of transporting men and things." *Burns v. Crescent Gun & Rod Club*, 116 La. 1038, 41 So. 249, 251 (1906). See also *Sinclair Oil & Gas Co. v. Delacroix Corp.*, 285 So. 2d 845, 852-53 (La. App. 4th Cir. 1973).

157. *Delta Duck Club v. Barrios*, 65 So. 489, 490 (La. 1914) (holding that legal definition of navigability does not encompass all waters "capable of floating a hunter's canoe"); *Sinclair Oil & Gas Co.*, 285 So. 2d at 852.

158. *Snyder*, *supra* note 128, at A1, A2 (quoting attorney Mark Davis, who did not represent either side in the dispute).

159. But see *Hall v. Board of Comm'rs of Bossier Parish Levee Dist.*, 111 La. 913, 35 So. 976 (1904), discussed *supra* at note 127, which strictly interpreted "running."

160. A recent Louisiana case involved a criminal trespass action filed against two commercial crawfishers who were harvesting in a privately owned area which was annually inundated by the waters of the Atchafalaya River. The defendants remained in their boat, tied their traps to trees, and lowered them to the bottom. The defendants relied in part on the language of Louisiana Civil Code article 456: "The banks of navigable rivers or streams are private things that are subject to public use." But in affirming the defendants' convictions, the Louisiana Supreme Court concluded that the crawfish bottoms do not qualify as navigable waters or banks, but rather are swamplands subject to overflow and thus private things not subject to public use. (Quoting 1 A.N. Yiannopoulos, *Property* § 69 in 2 Louisiana Civil Law Treatise (3d ed. 1991).) *State v. Barras*, 615 So. 2d 285, 288 (La. 1993).

See also *Op Att'y Gen. No. 87-661* (Oct. 2, 1987) (no right to take crawfish on riparian land temporarily flooded).

Courts in other states have ruled that even if navigability is established, the public may not gain the right to activities that are not incidental to navigation and that infringe on the property rights of the bottom owner. For example, a minor New York state court agreed that the bottom owner of a

rights of crawfishers might not be as extensive as that of other fishers because crawfish traps sit on the waterbottoms. Even if the water itself is subject to public use (either because the waters are regarded as running, because of an expanded "state" definition of navigability, or because of a limited public trust over "tidal" waters), the private bottom owner may have the right to prohibit any use which is not strictly instream. Or, would such incidental use of the bottoms as engaged in by crawfishers be regarded as *de minimis*?

A related question arises when two or more people own the bottom of a non-navigable waterway: Do they own the water in indivision, or can they fence off portions corresponding to their bottom title? The majority position of courts that have addressed the question is that bottom ownership includes a right to make reasonable use of the entire waterway.¹⁶¹ Presumably this right extends to anyone who uses the waterway with an owner's permission.¹⁶² Apparently no Louisiana court has resolved this question in a reported decision, but with some bottom owners now fencing off "their" waterways, the issue seems bound to surface in the near future.¹⁶³

E. Planning Problems Under Louisiana's Riparianism

The tie between the land and the water right, the imprecise extent of the water right, the uncertainty of its scope, and the conflicting water rights of the public are

navigable lake could prevent the public from raking clams from the lake bottom. "Since clamming appears no more related to the management of a boat than duck hunting, it follows that defendants' conduct cannot be justified as an exercise of the public right of navigation." *People v. Johnson*, 166 N.Y.2d 732, 735 (Police Court of Village of Lloyd Harbor, Suffolk County, 1957). The court then considered whether clamming is part of the public right of fishing and rejected the proposition: "[W]hatever rights the public may have to catch freely moving fish in the waters of Lloyd Point Basin, the public does not have the right to rake for shellfish in the private lands under those waters." *Id.* at 739. *Accord* *Bott v. Commission of Natural Resources*, 327 N.W.2d 838, 841 (Mich. 1982) ("The only recreational use heretofore recognized by this Court as an incident of the navigation servitude is fishing.") (footnote omitted).

161. *Hefferline v. Langkow*, 552 P.2d 1079, 1081 (Wash. Ct. App. 1976); *Johnson v. Seifert*, 100 N.W.2d 689, 697 (Minn. 1960); *Duval v. Thomas*, 107 So. 2d 148 (Fla. Dist. Ct. App. 1958); *Improved Realty Corp. v. Sowers*, 78 S.E.2d 588, 592 (Va. 1953). It appears that only New Jersey, of the states that have addressed the issue, takes the contrary position. *Baker v. Normanoch Ass'n, Inc.*, 136 A.2d 645, 652 (N.J. 1957) (holding that an owner of a substantial part of the bottom may restrict owners of a minimal portion to water corresponding to their bottom ownership).

162. *See, e.g., Improved Realty Corp.*, 78 S.E.2d at 592.

163. Bob Marshall, *Coastal Landowners Get Too Pushy*, *The Times-Picayune* (New Orleans), May 17, 1992, at C-16 (asking rhetorically, "Who wants to continue allowing landowners to erect posts and barricades blocking the public from access to public waters and public resources?"). Accompanying the article is a photograph showing a fence set in the water and apparently blocking access to a section of the water body.

But see *State v. Barras*, 615 So. 2d 285 (La. 1993), and *People v. Johnson*, 166 N.Y.2d 732 (1957): Even if a bottom co-owner, or someone he or she permits, can float over a portion owned by another, the right to float may not include the right to set down crawfish traps, since these rest on the bottom.

factors that make planning for future water use in Louisiana a difficult endeavor. They may also discourage some developments that are economically desirable, because an investor may be reluctant to commit money to a water-dependent project given the possibility that a court may literally cut off the water. It was just such a lack of predictability and stability that led the water-poor western states to adopt the prior appropriation regime.

Some of the problems inherent in riparianism are evident in the state's case law. The Code and the statutes do not provide explicit guidance on many of the features of riparianism developed in common-law jurisdictions.¹⁶⁴ Case law does not provide much help because few decisions address competing rights to use water. Most of them concern ownership or use of riverbanks and waterbottoms,¹⁶⁵ or water pollution. There is also litigation over landowners' rights to get rid of unwanted water.¹⁶⁶ Thus, the basic premise of riparianism—that riparian owners have mutually dependent rights to use the water that flows along or through their estates—has not often been tested in Louisiana courts.

But if the water usage of industry, recreation, agriculture, and aquaculture begins to significantly affect stream flows, legal problems now latent may appear, and those problems which have been sporadic may occur more frequently. These ongoing trends may be exacerbated by pollution of previously plentiful resources, by a need to reduce dependence on groundwater, or by a cataclysmic event such as the failure of the Old River Control Structure.

Legislation to define the rights of riparians and non-riparians ought to be considered. Such legislation might have several objectives: (1) to provide a more secure right to "deserving" (i.e., economically productive) non-riparians than they now have, (2) to determine priorities in time of shortages, or (3) simply to codify *what are thought* to be the existing rights of riparians and non-riparians in a way that will provide more certainty with a view to minimizing litigation. However, as the preceding discussion points out, any attempt by the legislature to merely codify *current* riparian rights may be an illusory undertaking because of the lack of precedent in Louisiana and the conflict between precedents among other supposedly riparian states which might be used as models. If codification is to provide any

164. Neither the Civil Code nor the Revised Statutes contain a comprehensive definition of riparian rights. See Jones, *supra* note 28, and Walther, *supra* note 28. Although the Civil Code refers only to water use, La. Civ. Code arts. 657-658, riparianism entails more than water use. Doiron v. O'Bryan, 218 La. 1069, 51 So. 2d 628 (1951), defined "riparian rights" as "the rights of owners of lands on the banks of water courses relating to the water, its use, ownership of soil under the stream, accretions, etc." *Id.* at 1082, 51 So. 2d at 632 (quoting Black's Law Dictionary at 1563 (3d ed. 1993)). This article, however, is mostly concerned with rights to use or withdraw the water itself rather than rights to the lands bordering water. For other riparian rights commonly recognized, see *supra* note 35 and accompanying text.

165. See, e.g., Ballard v. Mook, 550 So. 2d 1208 (La. App. 4th Cir. 1989), *writ denied*, 556 So. 2d 1283 (1990), and Pizanie v. Gauthreaux, 173 La. 737, 138 So. 650 (1931).

166. Poole v. Guste, 261 La. 1110, 262 So. 2d 339 (1972); Nicholson v. Holloway Planting Co., 255 La. 2, 229 So. 2d 679 (1969).

meaningful guidance, then choices among several alternative versions of the riparian doctrine will have to be made. The tendency has been for eastern states to adopt new procedures which include, for example, the issuing of administrative permits.¹⁶⁷ Thus, if legislative changes are to be made, the legislation should, at the very least, provide a mechanism for determining priorities during water shortages.

Legislative authorization would seem to be useful for specific water-dependent projects or groups of projects. Thus, for example, legislation might authorize a special irrigation district that would encourage new and more extensive uses of the water from the stream to promote economic development and diversity. Such legislative authorization would provide a measure of protection to those who invested their money in such new water-dependent developments.

It might be argued that a state not suffering a water shortage has no justification to codify water rights. This argument, however, ignores the possibility that even abundant water can be allocated inefficiently, and thus unnecessarily increase the cost of putting it to productive use.¹⁶⁸ (The authors of one study, for example, cite state and federal laws as important not only in "governing the procedures that market participants must follow to obtain approval of transfers . . ." but consequently "the transaction costs incurred in implementing transfers."¹⁶⁹) Secondly, there is a difference between water and clean, usable water.¹⁷⁰ And third, there is a

167. 5A Powell, *supra* note 46, ¶ 713[1] n.6 (listing eastern states with permit systems).

168. See, e.g., Richard A. Berk et al., *Water Shortage: Lessons in Conservation From the Great California Drought, 1976-77* 5 (1981): "California is not in immediate danger of running out of water nor of polluting existing supplies to the extent that de facto shortages would materialize. Rather, what California faces are the worsening consequences of long-standing economic inefficiencies [footnote omitted]." The authors contend that water in California costs less on the market than it costs to supply, *id.* at 6, and that in consequence, "too much water is consumed." *Id.* at 149. (For a study of water markets, see generally Bonnie C. Saliba & David B. Bush, *Water Markets in Theory and Practice: Market Transfers, Water Values, and Public Policy* (1987).)

And even where water is abundant, such inefficiencies can be identified and addressed without resort to full-scale water markets. See, e.g., Scarce Water, *supra* note 29, at 134-70. "There is no water supply crisis in Virginia [a non-market, riparian rights state]. Modest reforms of water resources institutions promise to reduce the currently high cost of conflict resolution and discourage the excessive investments now made to avoid such conflict." *Id.* at 169 (emphasis added).

169. Saliba & Bush, *supra* note 168, at 81-82. The study advocates a market-based approach.

Commentators on the other side of the issue argue that water resources are unavoidably the subject of government regulation that supercedes market-based allocations dependent on clear-cut property rights. The fugitive nature of the resource, externalities in the form of downstream consequences imposed by some types of upstream usages, and the public benefits of having water are reasons why "provision of such goods is traditionally considered a government responsibility." Scarce Water, *supra* note 29, at 10-11.

170. It has been suggested that although the Mississippi River delivers a great quantity of water to the New Orleans area, the quality is something less than might be desired. Studies have suggested the feasibility of taking surface water or groundwater from the parishes north of Lake Pontchartrain. See *supra* note 9. However, St. Tammany and Tangipahoa parishes have perceived this New Orleans interest in their water supplies as a threat to their own future prosperity and have responded by persuading the legislature to enact statutes which prohibit the transfer of water outside these parishes.

possibility of either short-term or long-term changes, both in the flow of rivers and rainfall, and in the use of water resources.¹⁷¹ Hence, it may be shortsighted to not spell out water rights.

If a decision is made to abandon or modify the riparian system, what should be adopted in its place? One model is an administrative permit system which would grant permits for a fixed number of years to use specific quantities of water. Permits are to be issued initially on the basis of existing uses, but thereafter on the basis of legislatively defined multiple factors, with these factors to be applied by an administrative agency. The prototype for this system of water permits is the Model Water Code.¹⁷² The other model is the prior appropriation system or some variation thereof. So far, of the eastern states, only Mississippi, from 1956 to 1985, adopted this approach but has since adopted a permit system which is more in line with the Model Water Code and the existing schemes of Florida and other eastern states.¹⁷³ Professor Trelease advises eastern states to consider the market-based efficiencies of the appropriation system rather than trusting decisions of vast economic consequences to discretion—even if it be the informed and “fair” discretion of an administrative agency.¹⁷⁴

While Louisiana has historically had more problems with floods than with droughts, water shortages have threatened farming in various parts of Louisiana over the past several years; even homes and businesses have faced the threat of

La. R.S. 14:224 (1986) (regarding St. Tammany Parish); La. R.S. 33:1236.9 (1988) (regarding Tangipahoa Parish).

171. See, e.g., Scarce Water, *supra* note 29, at 25-66, for a discussion of how interests have emerged to compete for the water of the Columbia River system. The system provides “abundant, high-quality water,” and the region is one of the most water-rich in the country, but “there is increasing stress and pressure for changes within the region’s water institutions.” *Id.* at 25.

172. Frank E. Maloney et al., A Model Water Code with Commentary (1972). The Code inspired permit-based systems in a number of eastern states, with Florida’s being the most comprehensive. See Frank E. Maloney et al., *Florida’s “Reasonable Beneficial” Water Use Standard: Have East and West Met?*, 31 U. Fla. L. Rev. 253 (1979).

173. Miss. Code Ann. §§ 51-3-1 to 51-3-55 (1990). When Mississippi abandoned the riparian system for prior appropriation, the new law explicitly protected riparian rights actually being exercised as of 1956 (the effective date of the state’s new water laws) or within three years prior to that date. Mississippi Laws, 1956, ch. 167, § 1. Less than thirty years later, the system of “permanent” appropriation rights was again changed to a system based on beneficial use permits to be issued for periods of not more than ten years. This system more resembles the permit systems adopted by other Eastern states, notably Florida, rather than the appropriation systems used in the West. Again, the legislation provided that persons who had acquired rights under the 1956-1985 prior appropriation system were entitled to continue such preexisting uses, provided that they filed a confirmatory “notice of claim” within three years of April 1, 1985. Miss. Code Ann. § 51-3-1 (1956), amended by § 51-3-5, -9 (1985). Since a riparian right arises as an incident of the ownership of land abutting a watercourse, presumably those riparian rights which existed at the time the act was adopted can be acquired by purchase of the riparian land.

174. Frank J. Trelease, *The Model Water Code, The Wise Administrator and the Goddam Bureaucrat*, 14 Nat. Resources J. 207 (1974).

water shortages in Louisiana.¹⁷⁵ In 1986, drought conditions prevailed over much of the southern United States. One newspaper reported that only some timely rainfall saved Louisiana crops from dying in the fields.¹⁷⁶ In 1988, drought conditions in areas that drain into the Mississippi River caused the river's level to plunge;¹⁷⁷ the river's relatively meager flow permitted saltwater from the Gulf of Mexico to invade the river's channel.¹⁷⁸ The governor declared a state of emergency in four south Louisiana parishes whose drinking water, drawn from the Mississippi River, was threatened by the saltwater intrusion.¹⁷⁹ Saltwater crept upriver at least as far as New Orleans.¹⁸⁰ The drought boosted the cost of farming by forcing farmers to spend money on irrigation;¹⁸¹ it also damaged the state's important timber industry,¹⁸² and it helped devalue farmland prices.¹⁸³

On the other hand, geologists have reportedly discovered an underground aquifer in St. John the Baptist Parish that could supply more than just that parish's needs.¹⁸⁴ Also, although St. Tammany and Tangipahoa parishes have surplus water supplies, statutes prohibit the exportation of surface or groundwater from those parishes except by bottle.¹⁸⁵ Even now potential disparities in water availability should prompt questions about the best way to allocate the state's water resources and who should make these decisions.

175. Mississippi was the first of the states east of the Mississippi River to adopt the prior appropriation system. "Its 1956 Water Code was apparently prompted by severe droughts in the early 1930's. Since that time, however, water seems to have been plentiful, and applications for water permits are rarely denied." Summary-Digest, *supra* note 76, at 423.

176. Ronnie Virgets, *Rain Came in Nick of Time for La. Farmers*, The Times-Picayune (New Orleans), Oct. 12, 1986, at D2.

177. *Downriver: Drought Drains Mississippi*, The Times-Picayune (New Orleans), June 13, 1988, at A1.

178. Chris Cooper, *Oyster Crop Could Dry Up in Drought*, The Times-Picayune (New Orleans), June 23, 1988, at A1.

179. John Pope & Ed Anderson, *Salt Wedge Leads to State of Emergency*, The Times-Picayune (New Orleans), July 7, 1988, at B1.

180. Chris Cooper & John Pope, *Wedge of Salt Water Has Reached N.O.*, The Times-Picayune (New Orleans), July 6, 1988, at A1. But only in southernmost Plaquemines Parish did government officials arrange for alternative sources of fresh water. Mary Judice & John Pope, *Salt Water Advances Toward N.O. Area*, The Times-Picayune (New Orleans), July 1, 1988, at A1.

181. John Fahey, *Drought Drying Up Profits for St. Tammany Farmers*, The Times-Picayune (New Orleans), June 29, 1988, at B4 (Metro Edition).

182. Theo Mullen, *Drought Hurts La. Timber Industry*, The Times-Picayune (New Orleans), July 2, 1988, at C1.

183. Theo Mullen, *Farm Crisis Burying Land Values*, The Times-Picayune (New Orleans), Aug. 20, 1988, at C1.

184. Bob Warren, *St. John Sees Liquid Profits in Wellwater*, The Times-Picayune (New Orleans), Nov. 13, 1990, at B1 (Metro Edition).

185. La. R.S. 14:224 (1986) (regarding St. Tammany Parish); La. R.S. 33:1236.9 (1988) (regarding Tangipahoa Parish).

F. Riparianism and Vested Rights

A few cases in states other than Louisiana,¹⁸⁶ and some legal commentators,¹⁸⁷ raise the possibility that even a legislatively authorized diversion of water might be grounds for a lawsuit if the diversion diminishes *vested* riparian rights. Vested rights, in this context, would be those rights on which a downstream landowner has come to rely. For example, assume that a downstream landowner has for many years had a small irrigation ditch leading from a stream to his land. If a drop in the water level caused by the upstream activities renders this ditch unusable, then he might have grounds to bring suit.

A riparian whose *existing or reasonably contemplated uses* were interfered with by non-riparian withdrawals *might* succeed in a suit to enjoin such uses on the ground that the legislature did not intend to interfere with rights of riparians as expressed in Articles 657 and 658. However, if a court determined that one or more statutes *did* specifically intend to displace the rights of riparians—or, if future legislation specifically expressed such an intention¹⁸⁸—then the riparian owner must fall back on the argument that the legislation is unconstitutional insofar as it interferes with vested property rights.¹⁸⁹ It seems that most states have successfully dealt with the problem by giving vested rights to those who have established their usage of a given quantity of water. Mississippi used this approach both of the times it made a major change in its regime of water rights.¹⁹⁰ The constitutionality of water rights legislation as applied to both surface and groundwater regimes is treated in Part V, *infra*.

186. *Cf. Omernick v. State*, 218 N.W.2d 734 (Wis. 1974) and *Omernick v. Dep't of Natural Resources*, 238 N.W.2d 114 (Wis. 1976), *cert. denied*, 425 U.S. 941, 96 S. Ct. 103 (1976), and *cert. denied*, 429 U.S. 836, 97 S. Ct. 103 (1976) (upholding permit requirement); and *In re Deadman Creek Drainage Basin*, 694 P.2d 1071 (Wash. 1985) (upholding the legislative abrogation of *non-exercised* riparian rights) with *Lux v. Haggin*, 10 P. 674 (Cal. 1886) (holding that the legislature cannot authorize appropriations of water or interfere with riparian rights unless riparian owners are compensated).

187. *See, e.g., Ausness, supra* note 39, at 240-43. Professor Ausness noted that as of the date of his article (1977), there had been no "direct challenges" to the constitutionality of statutes in the East that redefined water rights.

The primary reason for this remarkable lack of litigation is that, with the exception of Florida and Iowa, most state regulations are neither comprehensive nor severely restrictive.

Thus, the absence of litigation does not suggest that water users might not question the constitutionality of statutory permit systems in the future.

Id. at 240-41.

188. The court might find a legislative intent to abrogate riparian uses and thus raise the constitutional issue even if this intent was not spelled out in the statute, *e.g.*, if rights to withdraw water were given to non-riparians under factual circumstances where a probable result would be to interfere with some riparian uses.

189. Riparian rights are property, although sometimes an elusive species of property: "The courts are not always explicit about it; but impliedly, if not expressly, they recognize street access, riparian rights, easements and servitudes, restrictive covenants, and lateral support as forms of property." *State v. Chambers Inv. Co., Inc.* 595 So. 2d 598, 602 (La. 1992) (first emphasis added).

190. *See supra* note 173.

IV. GROUNDWATER RIGHTS

A. Introduction

Groundwater is but one phase of the hydrologic cycle; thus, supplies of groundwater are intimately connected to those of surface water.¹⁹¹ Yet the traditional rules governing the right to use groundwater have evolved separately and have generally not evinced an appreciation of the connection between surface water and groundwater. Much of the early American litigation over groundwater involved a battle of maxims, with *cujus est solum ejus est usque ad coelum et ad infernos* contending with *sic utere tuo et alienum non laedas*.¹⁹² However, the *ad coelum* concept, which worked well enough to describe the ownership of subsurface minerals such as coal, could not be applied so easily to fugacious materials such as water, oil and gas. So, the text writers and the judges had to also incorporate the *ferae naturae* analogy into their analysis.¹⁹³ These substances had to be captured before they were effectively owned. Under common-law terminology, the *ad coelum* or "ownership in place" rule could be accommodated by saying that the owner had a fee simple déterminable, which would be automatically terminated if a neighbor first pumps the water (or oil) away.¹⁹⁴

But whether a state adhered to an "ownership in place" or "non-ownership in place" theory, the practice was a rule of capture which unless moderated by conservation legislation or a judicially developed *sic utere* principle, tended toward waste of the resource.¹⁹⁵ Because of the relative economic values involved, this tendency was more pronounced in the case of petroleum than of water. Thus, state regulation of petroleum production is universal, while that of groundwater is less common, but a strong trend in that direction has developed as use increases, wells have to be dug deeper, and spot shortages occur.

Traditionally, groundwater has been divided into two legal categories: underground streams and percolating waters. The former have been generally subject to the same legal regime as surface waters, i.e., either riparian rights or prior appropriation. Underground streams are presumed to have the same characteristics as surface streams, i.e., a bed, banks, and a more or less defined channel of water. On the other hand, percolating waters are said to "ooze, seep or filter, through the

191. David A. Francko & Robert G. Wetzel, To Quench Our Thirst: The Present and Future Status of Freshwater Resources of the United States 8-9 (1983).

192. Cf., e.g., the balancing of these two maxims in *Wheatley v. Baugh*, 25 Pa. 528 (1855) with that in *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391 (Minn. 1907).

193. See, e.g., *Rives v. Gulf Refining Co.*, 133 La. 178, 183, 62 So. 623, 625 (1913) (quoting *Westmoreland & Cambria Natural Gas Co. v. DeWitt*, 18 A. 724, 725 (Pa. 1889)).

194. See, e.g., *Harvey v. Alexander*, 671 S.W.2d 727 (Tex. App. 1984); *Gulf Oil Corp. v. Reid*, 337 S.W.2d 267, 269 (Tex. 1960).

195. Jan G. Laitos, *Natural Resources Law: Cases and Materials* 756-58 (1985).

soil beneath the surface, without a defined channel. . . ."¹⁹⁶ But because of the difficulty of proving that a stream exists, underground waters are presumed to be percolating absent a showing that the water is flowing in an underground stream.¹⁹⁷ Because such showings seem to be rare, this article will deal only with percolating waters.

A number of western states now subject percolating waters to the same prior appropriation regime as surface waters and underground streams.¹⁹⁸ Other states regulate groundwater under codes that are not identical to, but are based on, their surface water regimes.¹⁹⁹ Some states that follow the prior appropriation doctrine have developed a judicial gloss on it called the "economic reach" rule.²⁰⁰

The states which have not adopted the prior appropriation doctrine follow one of four (or perhaps five) doctrines in regard to percolating waters: (1) the absolute ownership, or "English" doctrine, (2) the reasonable use, or "American" doctrine, (3) the "eastern correlative rights" doctrine, which appears to be essentially the same as, (4) the Restatement (Second) of Torts doctrine, and (5) the California correlative rights rule.

196. *Clinchfield Coal Corp. v. Compton*, 139 S.E. 308, 311 (Va. 1927).

197. Wells A. Hutchins, *Ground Water Legislation*, 30 Rocky Mtn. L. Rev. 416, 416-18 (1958). Indicative of the traditional judicial attitude toward percolating groundwater is this statement of the Ohio Supreme Court in 1861:

Because the existence, origin, movement and course of such waters, and the causes which govern and direct their movements, are so secret, occult and concealed . . . an attempt to administer any set of legal rules in respect to them would be involved in hopeless uncertainty and would be, therefore, practically impossible.

Frazier v. Brown, 12 Ohio St. 294, 311 (1861).

198. These states are Alaska (Alaska Stat. §§ 46.15.030, 46.15.165 and 46.15.166 (1991 & Supp. 1992)); Kansas (Kan. Stat. Ann. §§ 82a-707 (1989)), North Dakota (N.D. Cent. Code § 61-01-01 (Supp. 1991)), South Dakota (S.D. Codified Laws Ann. § 46-6-3 (1987 & Supp. 1989), and Utah (Utah Code Ann. § 73-1-1 (1989)).

199. Among these are Colorado (Col. Rev. Stat. Ann §§ 37-90-101 to 37-90-142 (West 1990)), Idaho (Idaho Code §§ 42-226 to 42-239 (1990)), Montana (Mont. Code Ann. §§ 85-2-501 to 85-2-520 (1991)), New Mexico (N.M. Stat. Ann. §§ 72:12-1 to 72:12-28 (Michie 1985 & Supp. 1992)), Oregon (Or. Rev. Stat. §§ 537.505-990 (1988 & Supp. 1992)), Washington (Wash. Rev. Code Ann. §§ 90.44.010-250 (1989) (current version at 90.44.010-90.44.901 (1992)), and Wyoming (Wyo. Stat. §§ 41-3-901 to 41-3-938 (1977 & Supp. 1992)).

200. The "economic reach" rule, like the rule embodied in Restatement of Torts § 858, attempts to balance the rights of both the junior and senior user. This rule is followed in some states which apply the prior appropriation doctrine. This approach is exemplified in a Colorado case in which a senior user sought to enjoin a junior user who interfered with his shallow well. The court used the law of surface streams and held that the senior well must be "reasonably adequate" in light of historic use. *Schodde v. Twin Falls Land & Water Co.*, 224 U.S. 107, 32 S. Ct. 470 (1912) and *City of Colorado Springs v. Bender*, 366 P.2d 552 (Colo. 1961). The implication is that a domestic well may not need to be as deep as the irrigation well. The court considered the wealth of the parties and their competing uses. The court noted that although seniors "cannot reasonably 'command the whole' source of supply merely to facilitate the taking by them of the fraction[,] . . . [they] cannot be required to improve their extraction facilities beyond their economic reach, upon a consideration of all the factors involved." *Id.* at 556.

According to the absolute ownership doctrine, a landowner may extract any quantity he wishes and use it for whatever purpose he desires without incurring any liability, even though he may cause injury to adjacent landowners by, for example, drawing water away from their wells. The only qualifications on this right of capture are that the owner of the overlying land must not waste the water or maliciously injure his neighbors.²⁰¹

The "American" or "reasonable use" rule (at least in its traditional form) does not, as its name might suggest, employ a comparative reasonableness test for competing uses as does the rule by the same name pertaining to surface watercourses. This rule permits a landowner to use percolating groundwater despite adverse effect on nearby landowners so long as the use of the water is reasonably related to the "natural" use of *his overlying land*.²⁰² So long as the use fits this criterion, the owner can draw an unlimited amount of water.²⁰³ Generally speaking, the use of

201. *Acton v. Blundell*, 152 Eng. Rep. 1223 (Ex. 1843), discussed in Robert G. Dunbar, *Forging New Rights in Western Waters* 153-55 (1983); *Roath v. Driscoll*, 20 Conn. 533 (1850); *Gagnon v. French Lick Springs Hotel Co.*, 72 N.E. 849 (Ind. 1904); *Greenleaf v. Francis*, 35 Mass. (18 Pick.) 117 (1836); *Wheatley v. Baugh*, 25 Pa. 528 (1855); *Rose v. Socony-Vacuum Corp.*, 173 A. 627 (R.I. 1934).

202. *Sloss-Sheffield Steel & Iron Co. v. Wilkes*, 165 So. 764 (Ala. 1936), overruled by *Henderson v. Wade Sand and Gravel Co., Inc.*, 388 So. 2d 900 (Ala. 1980); *DeBok v. Doak*, 176 N.W. 631 (Iowa 1920); *Associated Contractors Stone Co. v. Pewee Valley Sanitarium & Hosp.*, 376 S.W.2d 316 (Ky. 1963); *Finley v. Teeter Stone, Inc.*, 248 A.2d 106 (Md. 1968); *Davison v. City of Ann Arbor*, 212 N.W. 81 (Mich. 1927); *Meeker v. City of East Orange*, 74 A. 379 (N.J. 1909); *Dunbar v. Sweeney*, 130 N.E. 913 (N.Y. 1921); *Rouse v. City of Kinston*, 123 S.E. 482 (N.C. 1924); *Logan Gas Co. v. Glasgo*, 170 N.E. 874 (Ohio 1930); *Rothrauff v. Sinking Spring Water Co.* 14 A.2d 87 (Pa. 1940); *Drummond v. White Oak Fuel Co.*, 140 S.E. 57 (W. Va. 1927). Some caution is needed in "pigeonholing" states in one category as opposed to another. Mississippi has been categorized as an absolute ownership state on the basis of one leading case decided in 1902. That case, while using the language of the absolute ownership doctrine and apparently explicitly adopting that rule, indicates that if faced with an appropriate case, Mississippi would instead apply the "reasonable use" rule. *Board of Supervisors v. Mississippi Lumber Co.*, 31 So. 905 (Miss. 1902). Specifically, the *Mississippi Lumber* court cited with approval, as an "exception" to the normal rule, *Forbell v. City of New York*, 58 N.E. 644 (N.Y. 1900), on the grounds that in that case the defendant was selling water for use on non-overlying land. Thus, the New York decision approved as an "exception" by the Mississippi court was applying what is usually termed the reasonable use rule.

On the other hand, Florida is sometimes classified as a reasonable use state, but the leading case in that state is probably more consistent with the correlative rights doctrine, not only because of the frequent use of that term in the opinion but also because the court emphasized that where the plaintiff had suffered an injury, the key factor was the reasonableness of the use of the defendant's land without any reference to whether the defendant used water on non-overlying land. *Cason v. Florida Power Co.*, 76 So. 535, 538 (Fla. 1917).

203. See *Bassett v. Salisbury Mfg. Co.*, 43 N.H. 569 (1862). Again, caution should be used in accepting at face value neat categorizations. The *Bassett* case, the leading case in New Hampshire and indeed in the United States on the reasonable use rule, actually involved the liability of one landowner for causing groundwater to back up and saturate the land of a neighbor. It used the term "correlative" rights in announcing its new reasonable use rule. *Id.* at 577. Similarly, Minnesota is generally classified as a "correlative rights" state, in part on the basis of *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391 (Minn. 1907). But, while that court did use the words "correlative rights," it also used language compatible with the reasonable use doctrine in

water on overlying land for agricultural, domestic, mining, or manufacturing purposes is deemed to be natural and reasonable.²⁰⁴ As with the absolute ownership doctrine, a malicious or wasteful use may be enjoined. But in contrast to the absolute ownership doctrine, the sale or use of water on distant lands, even if such use is economically productive, may be enjoined if such use impairs the groundwater supply of neighboring landowners.²⁰⁵ Thus, there are similarities between this rule and the riparian rights doctrine for surface waters in regard to the way in which that doctrine treats the use of water on non-riparian land.

A number of states have adopted a rule that sometimes goes by the name of "reasonable use" but which in fact is quite different in concept from the reasonable use rule described in the previous paragraph. One author has identified this rule as the "eastern correlative rights" rule to distinguish it both from the traditional reasonable use rule and the California (or western) correlative rights rule.²⁰⁶

Under the "eastern correlative rights" doctrine, the overlying landowner may be subject to liability if he lowers the water table to the injury of his neighbor, even though the water is being used for a beneficial purpose on overlying land. The reasonableness of the overlying landowner's use, and thus his liability, depends on the circumstances of each case. This doctrine is very similar to the reasonable use rule commonly applied to surface waters in riparian jurisdictions, and incorporates the flexibility, but also the uncertainty, of that rule. However, to the extent that the riparian doctrine is regarded as workable, this approach has the merit of rejecting the often artificial distinction between ground and surface water and applying a more or less consistent set of legal rules to both within the same jurisdiction. The eastern states that have adopted this regime thus mirrored the movement in the

emphasizing that the defendant was using the water for a public waterworks system—by definition a non-overlying use—which is the touchstone of the reasonable use doctrine. Further, the court cited several cases in New York (classified as a reasonable use state) as being in "entire accord" with the newly announced rule in Minnesota. *Id.* at 394.

See also *Forbell v. City of New York*, 58 N.E. 644 (N.Y. 1900); *Getches, supra* note 50, at 238-39, and *Tarlock, supra* note 30, §4.05.

204. *Drummond v. White Oak Fuel Co.*, 140 S.E. 57 (W. Va. 1927); *Pence v. Carney*, 52 S.E. 702 (W. Va. 1905).

205. *Schenk v. City of Ann Arbor*, 163 N.W. 109 (Mich. 1917); *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391 (Minn. 1907); *Rouse v. City of Kinston*, 123 S.E. 482 (N.C. 1924); *Canada v. City of Shawnee*, 64 P.2d 694, 697 (Okla. 1937).

206. *Jones v. Oz-Ark-Val Poultry Co.*, 306 S.W.2d 111 (Ark. 1957) (using the terms "reasonable use" and "correlative rights" interchangeably, but the facts of the case fit better under the correlative rights doctrine because the defendant's use of 5,000 gallons a day for a chicken processing plant, which was held unreasonable because it injured the plaintiff's domestic uses, was nevertheless on the defendant's own overlying land); *MacArtor v. Graylyn Crest III Swim Club, Inc.*, 187 A.2d 417 (Del. Ch. 1963); *Cason v. Florida Power Co.*, 76 So. 535 (Fla. 1917); *Erickson v. Crookston Waterworks, Power & Light Co.*, 111 N.W. 391 (Minn. 1907); *Higday v. Nickolaus*, 469 S.W.2d 859 (Mo. App. 1971); *Bassett v. Salisbury Mfg. Co.*, 43 N.H. 569 (1862); *Nashville, C & St. L. Ry. v. Rickert*, 89 S.W.2d 889 (Tenn. App. 1935). See Peter N. Davis & James Cunningham, *Missouri State Laws Pertaining to Water and Land Related Resources* 33 (3d ed. 1977); Peter N. Davis, *Eastern Water Diversion Permit Statutes: Precedents for Missouri?*, 47 Mo. L. Rev. 429, 441 (1982).

western states to subject both surface water and groundwater to the prior appropriation doctrine.

Under the correlative rights doctrine, also called the California correlative rights doctrine, the central goal is to give each user a pro-rata portion of the total supply. Owners of all lands that overlie a common source of percolating water have co-equal rights of reasonable use on their overlying lands. Any surplus may be used on non-overlying lands. When the water supply is not sufficient to meet the needs of all owners, non-overlying uses must be suspended, and the water that remains must be pro-rated among overlying landowners. The proportionate share of each landowner, at least where irrigation is involved, is determined by comparing his surface area with the whole area overlying the water supply.²⁰⁷ The "eastern correlative rights" and Restatement rules differ from the California correlative rights rule by requiring (1) more of an individualized assessment of the reasonableness of each competing use and (2) a hierarchical ranking of various beneficial uses rather than prorating strictly in proportion to the amount of overlying land.

The Restatement (Second) of Torts Section 858 provides that an overlying owner who withdraws groundwater for a beneficial purpose is not liable unless the withdrawal of groundwater:

- (a) Unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,
- (b) Exceeds the proprietor's reasonable share of the annual supply or total store of groundwater, or
- (c) Has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of its water.²⁰⁸

The use of "reasonable" in the Restatement differs from the "reasonable use" discussed earlier because of the inquiry into the nature of the use and the burdens caused by that use. The Restatement differs also from the California correlative rights doctrine because usage rights are not always connected to surface ownership.²⁰⁹ In this respect, the approach of the Restatement is most similar to the "eastern correlative rights" doctrine. The Comments to the Restatement observe that "the salient factor is not the place of the use but the withdrawal of water in unprecedented quantities for purposes not common to the locality. . . ."²¹⁰ The test given by the Restatement first examines the unreasonable harm. Several factors may then be considered by the court, such as the wealth of the parties, the ability to obtain financing, and the value of the uses.

207. *Katz v. Walkinshaw*, 70 P. 663 (Cal. 1902), *as amended*, 74 P. 766 (Cal. 1903). See Dunbar, *supra* note 201, at 156-58.

208. Restatement (Second) of Torts § 858 (1979); Tarlock, *supra* note 30, § 4.06[5].

209. *Katz*, 74 P. at 772. See also Getches, *supra* note 50, at 240-41.

210. Restatement (Second) of Torts § 858 cmt. e (1979).

In *Prather v. Eisenmann*,²¹¹ a Nebraska case following the Restatement approach, an irrigation user was held liable for lowering the pressure on a domestic artesian well. The court held that this depressurization caused by the heavy irrigation was "unreasonable." In making this decision, the court noted that if the parties were both domestic well owners, there would be no liability for a similar harm. This case typifies the economic balancing approach of the Restatement.

The last part of the Restatement's Section 858 considers the effect of groundwater use on surface waters. Users of each would be required to adjust to one another's vested rights. The management of the conjunctive use would take into consideration the beneficial uses of all involved.²¹²

Another proposed rule which combines elements of correlative rights and Section 858 is called the "comparative cause" rule. It would hold each groundwater user liable only in proportion to use during a period of damage.²¹³ One study of Louisiana's groundwater law has recommended this rule—apparently not yet explicitly adopted in any state—as being particularly appropriate for a state such as Louisiana which normally has sufficient water, but is subject to temporary shortages.²¹⁴ But perhaps the reason no state has adopted the comparative cause rule is because outcomes, particularly in multi-party litigation, would probably be even less certain than under the Restatement or the correlative rights doctrine.²¹⁵

B. Louisiana's Groundwater Law

1. Louisiana: An "Absolute Ownership" State?

There are several articles of Louisiana's Civil Code which might relate to property rights in groundwater. Article 490 provides:

Unless otherwise provided by law, the ownership of a tract of land carries with it the ownership of everything that is directly above or under it.

The owner may make works on, above, or below the land as he pleases, and draw all the advantages that accrue from them, unless he is restrained by law or by rights of others.²¹⁶

Article 490 reflects the maxim *cujus est solum ejus est usque ad coelum* which is consistent with the absolute ownership rule. On the other hand, the two "unless" clauses suggest that there may be limits on this property right. One apparent limit is imposed by Louisiana's incorporation of the *sic utere* principle in Article 667:

211. 261 N.W.2d 766 (Neb. 1978).

212. Getches, *supra* note 50, at 244.

213. John S. Lowe et al., *Beyond Section 858: A Proposed Ground-water Liability and Management System for the Eastern United States*, 8 Ecology L.Q. 131 (1979).

214. Levine, *supra* note 28, at 1146.

215. *Id.*

216. La. Civ. Code art. 490.

"Although a proprietor may do with his estate whatever he pleases, still he can not make any work on it, which may deprive his neighbor of the liberty of enjoying his own, or which may be the cause of any damage to him."²¹⁷

Only one appellate court case in Louisiana has directly involved groundwater rights.²¹⁸ In that case, *Adams v. Grigsby*,²¹⁹ the second circuit declined to place meaningful restrictions on the use of groundwater by one landowner, even though significant injury was apparently being done to neighboring landowners. The court effectively adopted the English absolute ownership rule and specifically rejected the application of the "American rule" or any of the variations of the correlative rights doctrine even though admitting that the American rule was perhaps the "more modern and popular rule,"²²⁰ and even though the Louisiana Civil Code might well have been interpreted to reject the absolute ownership concept.²²¹

In *Adams*, plaintiff landowners sought an injunction against an oil operator who was using 2,000 to 2,800 barrels of water a day in secondary recovery of oil and casinghead gas from a unitized formation in Caddo Parish. It appears from the court's opinion that the land on which the water was used did not directly overlie the source of the water.²²² Plaintiffs complained that defendant's withdrawal of

217. La. Civ. Code art. 667.

218. There are cases that indirectly deal with predial servitudes entitling a landowner to use groundwater from a well on property which once belonged to a common ancestor in title. See *Bertrand v. Halley*, 460 So. 2d 705 (La. App. 3d Cir. 1984) and *Vincent v. Meaux*, 325 So. 2d 346 (La. App. 3d Cir. 1975).

219. 152 So. 2d 619 (La. App. 2d Cir.), writ refused, 153 So. 2d 880 (1963).

220. *Id.* at 622-23.

221. It is often difficult to predict whether an action on one's own property otherwise lawful will be held to be actionable if this action causes harm to a neighbor. This is true whether the remedy sought is damages or an injunction. It seems to depend on whether the owner's action can be characterized as an "abuse of right" of ownership or an exceptional use of property. A.N. Yiannopoulos, *Violations of the Obligations of Vicinage: Remedies Under Article 667 and 669*, 34 La. L. Rev. 475, 478-88, 504, 510 (1974). Given the facts of *Adams* and the known physical characteristics of groundwater, the court could have found either abuse of right or exceptional use of property.

Adams did not fit the typical abuse of rights pattern in that the drilling done by the defendants was for their own benefit, not for the purpose of harming the plaintiffs. However, Louisiana courts have found some "excessive" acts to be abusive, and Article 667 is worded broadly enough to cover either abusive, in the classic sense, or excessive, acts. See generally Julio Cueto-Rua, *Abuse of Rights*, 35 La. L. Rev. 965, 977-78, 1012-13 (1975).

222. This can be inferred from the court's description of the land on which the defendants were using the water. *Adams*, 152 So. 2d at 620. However, whether all or any part of the land on which the water was used overlaid the source of the water is unclear. Though the parties apparently did not argue the point, it is relevant to the question of how Louisiana's groundwater regime should be classified. If the land in question was overlying, and assuming that defendant's use could not be considered wasteful, *Adams* seems consistent with the "reasonable use" doctrine, even though the opinion purports to reject that doctrine. The court's opinion, which cites only two references to legal encyclopedias but no cases from other jurisdictions, exhibits some doctrinal confusion. In purporting to describe the "American rule," which he rejects, the *Adams* judge uses the words "correlative" and "reasonable use" in the same sentence. *Id.* at 623. In this confusion, the *Adams* court has company in several other states. See *supra* note 206 and accompanying text.

such amount of water from the Wilcox sand—the only available source of fresh water in the area—caused damage to plaintiffs by requiring them to add pipe, clean wells, replace wells, etc., and by generally decreasing the value of plaintiffs' property. It was further alleged that defendant's use of available fresh water was unnecessary because there were available, at deeper levels, saltwater sands sufficient for defendant's purposes.

The court first rejected plaintiffs' claims that Louisiana Civil Code articles 660 and 661 pertaining to riparian rights (now Articles 655 and 658) were applicable, holding that these articles applied only to surface waters. The court also rejected an argument based on Article 667 and Article 2315 (the general tort provision of Louisiana Civil Code). In denying relief to the plaintiffs, the court expressed fears that to grant such relief "would inevitably involve our courts in a long, unauthorized and complicated series of judicial regulations."²²³ The court further indicated that the control of water supply and use was a problem more properly addressed to the legislature, citing the fact that the regulation of oil and gas withdrawals was not done by the courts but by the legislature through statutory conservation measures.²²⁴

It might be questioned whether the doctrine of dominion over groundwater as announced in *Adams* is based more on common-law precedent than on the Louisiana Civil Code. Curiously, Article 490, the Civil Code article that best supports the holding, was not cited in the *Adams* opinion. Instead, the court cited those articles that might have dictated a different result (655, 658, 667, and 2315) and explained why they should not apply.²²⁵

223. *Id.* at 624.

224. It appears that the rule in *Adams* is in accord with the law applied to oil and natural gas before the enactment of the conservation statutes, *McCoy v. Arkansas Natural Gas Co.*, 175 La. 487, 143 So. 383, *cert. denied*, 287 U.S. 661, 53 S. Ct. 220 (1932); *Higgins Oil & Fuel Co. v. Guaranty Oil Co.*, 145 La. 233, 247-48, 82 So. 206, 211-12 (1919), as well as after such statutes were enacted in situations where they were not applicable. *Breaux v. Pan Am. Petroleum Corp.*, 163 So. 2d 406 (La. App. 3d Cir.), *writ denied*, 165 So. 2d 481 (1964). In the latter case, the third circuit, with Judge Tate dissenting, cited *Adams* with approval. *Breaux*, 163 So. 2d at 412. As the discussion in text at *infra*, § 2, points out, the enactment of the Louisiana Mineral Code in 1975 probably made no change in Louisiana's groundwater law with regard to the issues litigated in *Adams*.

225. The *ad coelum* doctrine embodied in Article 490 is frequently cited in common-law jurisprudence to support the absolute ownership doctrine, which effectively translates into a rule of capture. However, the *ad coelum* doctrine could conceivably be—but has not been—used to support a legal regime prohibiting or at least limiting the right of one landowner to draw fugitive minerals from beneath the lands of a neighbor. Given the superficiality of the analysis and dearth of citations in *Adams*, whether the court thought things through this far seems doubtful.

Louisiana follows the civil law in insisting on non-ownership in place for groundwater, oil, and gas, but the set of legal rules governing capture is much the same as in common-law jurisdictions that do, to some extent, recognize ownership in place. Dellapenna, *Riparianism*, *supra* note 30, §§ 21.02-03 (comparing the common- and civil-law approaches and asking rhetorically, "what is the difference in result?") (quoting Frank J. Trelease, *Water Law: Cases and Materials* 448 (3d ed. 1979)).

The result in *Adams* can be criticized on economic efficiency grounds, if plaintiff's allegations were well founded. The result was an inefficient use of resources. Should not the defendant have been compelled to use the deeper saltwater sands for his secondary operations so that plaintiffs could have continued to have a reliable supply of fresh water for household purposes? This approach would have imposed additional drilling costs on defendants, but the incremental cost per unit of oil and gas produced probably would have been slight in relation to the incremental costs of producing fresh water imposed on all of the plaintiffs.

Even the judge who wrote the opinion in *Adams* indicated qualms concerning the outcome and practically invited legislative intervention.²²⁶ Such intervention could take several forms. One solution, perhaps the simplest, would be a legislative overruling of *Adams* in the form of appropriate codal or statutory language adopting some sort of a reasonable use or correlative rights standard for the use of groundwater. (Application of the correlative rights rule would probably have afforded relief to the *Adams* plaintiffs, whereas the reasonable use rule would afford relief only if the defendants had used the water on non-overlying land.) A possible model is provided by Section 858 of the Restatement (Second) of Torts, discussed above.

A disadvantage of these approaches is that they do not provide clear guidelines regarding the point at which a withdrawal of groundwater becomes "unreasonable" and thus actionable. It might be argued that the effect of such a statute would be to thrust the courts into the task of developing "a complicated series of judicial regulations" that the *Adams* court thought inappropriate—though the task imposed on the courts would not be significantly different than tasks which courts are expected to perform every day in the areas of tort and property law.

The rule of *Adams* makes for a practical insecurity of water rights for the owners of small pumps who have the misfortune to be located over the same groundwater formation as someone with a large pump. Adopting a generalized reasonable use or correlative rights approach could alleviate some of this insecurity, but might replace it with a different kind of insecurity—one affecting the legal rights of the owner of a large pump who is making substantial, but nevertheless beneficial, uses of groundwater.

This legal uncertainty, similar to that presently faced by surface-water users under the riparian regime, may be enough to discourage investment in aquaculture, manufacturing, mining, or other activities which would require substantial amounts of groundwater. If the primary concern of policymakers is lack of certainty, then the best solution would be to adopt a western-style prior appropriation system. (Prior appropriation would have protected the *Adams* plaintiffs because they were using the water before defendants.) However, those eastern states which have

226. We are not unaware of the growing value and importance of water as a natural resource and are cognizant of the fact that, in some instances, it is more valuable and necessary than oil or gas. However, the problem of the regulation of and control of water supply and use addresses itself to the legislative branch of the government.

Adams, 152 So. 2d at 624.

embarked on statutory reform of their groundwater law have chosen to protect other values in addition to certainty and stability of expectations. Presumably, Louisiana lawmakers would want to do the same. To take the *Adams* situation, should those plaintiffs, domestic users, be given some protection even if they were not prior users?

It may be possible to give some protection to small-scale groundwater users (such as the plaintiff in *Adams*) while still providing a reasonable degree of security to large-scale users and at the same time to conserve this resource for the benefit of all.²²⁷ While this could be done by a more detailed legislative ordering of priorities, subject to judicial interpretation to fill in the gaps, no state seems to have adopted this approach. Legislatures prefer to delegate this sort of detail to an administrative agency.

2. *Applicability of the Mineral Code*

It is uncertain whether the rule announced in *Adams* was affected by the adoption of the Louisiana Mineral Code in 1975. The Mineral Code applies to "subterranean water," among other substances.²²⁸ Article 8 states a rule that seems consistent with the absolute ownership concept:

A landowner may use and enjoy his property in the most unlimited manner for the purpose of discovering and producing minerals, provided it is not prohibited by law. He may reduce to possession and ownership all of the minerals occurring naturally in a liquid or gaseous state that can be obtained by operations on or beneath his land even though his operations may cause their migration from beneath the land of another.

The comment to this Article says that it "preserves established law governing the landowner's right to operate and his liability for damages." The comment mentions the *sic utere* doctrine and Louisiana Civil Code article 667, but also cites *Adams* without disapproval.

Articles 9 and 10 place limits on the right set forth in Article 8, but these limits would not seem to place restrictions on "excessive" pumping, so long as it is motivated by a legitimate economic motivation. At first glance, Article 9, which

227. A study prepared for the California Legislature noted that groundwater management was a particularly fit subject for state regulation because of the "potentially large divergence between private costs recognized by each individual pumper and the full costs to society involved with additional groundwater extraction." Because of this divergence, the study recommended basin-wide management systems for all groundwater using regions of the state. Charles E. Phelps et al., *Efficient Water Use in California: Executive Summary* 31 (1978). Another study focusing on California, but written by a Louisiana State University economist, advocates instead granting firmly-based but freely transferable water rights, using subsidies or charges as appropriate to simulate a perfect market. Falk, *supra* note 74, at 69-71.

228. La. R.S. 31:4 (1975).

speaks of "correlative rights,"²²⁹ might arguably enact the groundwater law doctrine of that name in effect in other states. Article 9 is to be read in conjunction with Article 10, which states that a person with rights in a common reservoir may not "make works, operate, or otherwise use his rights so as to deprive another intentionally or negligently of the liberty of enjoying his rights, or that may intentionally or negligently cause damage to him," but then goes on to say that this article and Article 9 "shall not affect the right of a landowner to extract liquid or gaseous materials in accordance with the principles of Article 8."

How is Article 8 to be balanced with Article 10? The comments indicate that Article 10 refers to intentional or negligent conduct involving *waste*. In this respect, the scope of Mineral Code article 10 is narrower than that of Louisiana Civil Code article 667, though Article 10 is perhaps broader in that it not only proscribes making of "any work" but also says that the landowner may not "operate, or otherwise use his rights so as to deprive another . . ." ²³⁰ The intent of this language was that the article will "govern the entire range of exploratory and extractive activities . . ." ²³¹

229. La. R.S. 31:9 reads:

Landowners and others with rights in a common reservoir or deposit of minerals have correlative rights and duties with respect to one another in the development and production of the common source of minerals.

If the drafters of the Mineral Code had thought about the problem of groundwater in connection with this Article, the comment might have mentioned the correlative rights doctrine as developed in California or the somewhat different version of it that has evolved in a number of Eastern states. However, there was no mention of these nor of water.

The comment to La. R.S. 31:9 did cite portions of the Conservation Code, La. R.S. 30:9(D) and 11(B) (1950). The Conservation Code, however, unlike the Mineral Code, applies only to oil and gas and not to water.

The comment to La. R.S. 31:10 notes that a higher standard may be imposed by an administrative agency than by the Mineral Code itself:

It should be noted that if by exercise of the policy power the correlative rights of the parties are regulated or fixed by an administrative agency, the rule of private property in Article 10, limiting liability to intentionally or negligently caused damage would not excuse the party for violation of the regulatory order.

This language would apply equally to the Commissioner of Conservation or an agency given power over groundwater such as the Capitol Area Groundwater Conservation Commission, see *infra* notes 237-242 and accompanying text.

230. The comment to La. R.S. 31:10 cites a number of Anglo-American oil and gas cases involving "waste" of the common resource, including a case where "an attempt was made to disguise waste beneath the cover of a sham, low magnitude economic utilization of resources." *Louisville Gas Co. v. Kentucky Heating Co.*, 77 S.W. 368 (Ky. 1903). The comment to La. R.S. 31:10 cites several oil and gas cases, none of which really fits the paradigmatic groundwater case where both parties are making economic use of the water, but one party's use may have a higher claim. For example, in *Adams*, the defendant's use, in relation to plaintiff's use, may have had a low economic magnitude if we can credit plaintiff's claims that satisfactory water was available at lower depths for defendant's use. But it could not be called a "sham," nor waste. Defendant was simply making use of the cheapest water available for its purposes.

231. La. R.S. 31:10 cmt. (1975).

In retrospect, it may have been a mistake for the drafters of the Mineral Code to have included groundwater within the ambit of a document that was so heavily oriented toward the petroleum industry. Superficially, water is a fugitive substance much like oil, but there are important differences in the way it moves in geological formation and the fact that supplies of surface-water and groundwater are closely connected.²³² In contrast to oil, water in an aquifer can usually be replaced (recharged) within a reasonable timeframe, and "safe yield" or "sustained yield" are usually desired management objectives; "mining" is normally frowned upon.²³³ Moreover, important differences in the uses to which water is put, particularly its uses on the overlying land and by those who live there, might dictate a different legal regime for water than for oil.

Nevertheless, in view of the dearth of references to groundwater in the Mineral Code, it can be ventured that while the Mineral Code didn't advance groundwater law in Louisiana, neither did it represent a retrogression. It seems not to have changed the law, nor was there any expressed attempt to do so.

3. Alternate Approaches to Groundwater

In view of a strict civilian approach and in view of the fact that it is only a decision of an intermediate appellate court, it may be argued that *Adams* is not "the" definitive law of Louisiana.²³⁴ Also, as noted already,²³⁵ there is some question as to whether the judge who wrote the *Adams* opinion might, in view of the facts, have been able to justify the result under the "reasonable use" as well as

232. Water is like a living thing. Essentially all of it that is usable is in motion—a part of the vast circulatory system known as the hydrologic cycle. In this cycle water evaporates wherever it is exposed to the air, but especially from the oceans; rises into the atmosphere; travels as a part of vast air masses over ocean and land; is condensed when an air mass rises to pass over another or over a mountain range; and falls as rain or snow

[Water] may be surface water one moment and ground water the next, and vice versa. But it is all water, and it must be considered as a whole—each phase in relation to the others and to the entire hydrologic cycle.

C.L. McGuinness, *The Water Situation in the United States with Special Reference to Ground Water*, in U.S. Dept. of the Interior Geological Survey 114, June 1951, at 3, 6. See also *supra* note 191 and accompanying text.

233. Tarlock, *supra* note 30, at 4-5; Powell, *supra* note 46, ¶ 708 [1] [b].

234. The civilian does not regard the judicial interpretation of a statute as becoming part of the statute, so that the statute *as interpreted* is the law. He regards the statute alone as being the law, and prior decisions do not "insulate" him . . . from going directly to the statute for its meaning. In ideal theory, the civilian judge decides cases primarily "not by reference to other decisions, but by reference to legislative texts and within the limits of such judicial discretion as the legislative texts grant."

Albert Tate, Jr., *Techniques of Judicial Interpretation in Louisiana*, 22 La. L. Rev. 727, 744 (1962).

235. See *supra* note 222.

the "absolute ownership" doctrine. Despite these qualifications, writers generally place Louisiana among the "absolute ownership" states.²³⁶

If we assume that *Adams* does still represent the present law in the state, Louisiana is in a distinct minority in applying such an "absolute ownership" rule regarding the use of the groundwater. Most of the states now use a variation of "reasonable use" or "correlative rights" doctrines which impose upon the landowner some degree of obligation to use underground water in a way that it will not unreasonably damage a neighbor.

If the present rule is unsatisfactory, it can be modified by the legislature. In fact, the rule has been effectively changed in five parishes of Louisiana. The one agency in Louisiana that currently has significant, although to an extent inchoate, powers over the use of groundwater is the Capital Area Groundwater Conservation Commission.²³⁷ It has jurisdiction over a five-parish area (East Baton Rouge, East Feliciana, Pointe Coupee, West Baton Rouge, and West Feliciana) and has the power to expand into neighboring parishes.²³⁸ The commission has power to control the spacing of wells²³⁹ and the volume of pumping in certain situations.²⁴⁰ It has the power to set groundwater use priorities.²⁴¹ In fact, in the parishes within the boundaries of the commission, the applicable legal regime is no longer "absolute ownership" but rather "correlative rights," albeit correlative rights as determined by an administrative agency.²⁴² This agency might serve as a model for a statewide agency or as a model for other regional commissions.

Certain uses of groundwater in the Capital Area District are exempt from the regulatory provisions of the statute: wells with a total depth of less than four hundred feet, wells in the Mississippi River alluvial aquifer, wells used "exclusively for bona fide agricultural or horticultural purposes or for domestic use of persons

236. See, e.g., Tarlock, *supra* note 30, § 4.04; Dellapenna, *Riparianism*, *supra* note 30, § 21.03; David Getches, however, classifies Louisiana as *sui generis* both as to groundwater and surface water, more because of the existence of the Civil Code as a source of governing law than because he can identify any relevant functional differences. Getches, *supra* note 50, at 3-7, 216-18, 233.

237. La. R.S. 38:3071-3084 (1989).

238. La. R.S. 38:3076(A)(22). Expansion of the district requires the consent of the governing body of the parish involved.

239. La. R.S. 38:3076(A)(6).

240. La. R.S. 38:3073(5), 3076(A)(2), (19).

241. La. R.S. 38:3076(A)(12).

242. One treatise writer has made this comment about the District:

Smacking as it does of the correlative rights doctrine, this legislation quite sharply limits the reach of the absolute ownership rule in the Capital Area Groundwater Conservation District. Furthermore, what the legislature can do for one locality can be extended to the whole state legislatively and administratively.

... the requirement that "groundwater use priorities" be taken into consideration in determining a well-owner's "just and equitable share" truly reduces the role of the absolute dominion rule to nearly nothing in this area for well owners pumping over the jurisdictional threshold of 50,000 gallons "for any day during any calendar year."

Robert F. Murphy, *Quantitative Groundwater Law*, in 3 *Waters and Water Rights* 125, §21.03 (Robert E. Beck ed., 1991).

resident upon the same premises and capable of producing not more than fifty thousand gallons per day"²⁴³ These exemptions are consistent with what many, if not most, other eastern states did when they undertook regulation of groundwater. Although the cumulative effect of numerous small wells may be significant, there are high transaction costs in regulating them. Moreover, and perhaps more significantly, regulating such small and numerous users would probably generate an unacceptable level of political opposition. Perhaps more significant than the 50,000-gallon threshold is the fact that the exemption for "bona fide agricultural or horticultural purposes" applies *without regard to the volume pumped*.

While the commission has been given rather extensive powers by statute, it has not found it necessary to exercise any of the more drastic of these powers, such as limiting pumping rates and establishing use priorities. In a 1982 interview, A. N. Turcan, the former director of the commission, advised that the commission had so far been able to achieve its objectives by a combination of educational efforts and "jawboning" and that, in fact, pumping of groundwater within the district had declined between the date the district was established and the date of the interview.²⁴⁴ More recently, since 1986, there has been a slight increase in pumping, but the overall volume of pumping remains at a satisfactory level, according to George T. Cardwell, present director of the commission.²⁴⁵ This level is partly due to the fact that some of the large-scale users of water had switched from groundwater to surface water.²⁴⁶ It nevertheless may be that the success achieved with voluntary compliance efforts is partly due to the reserve regulatory powers of the commission.

Another innovation in this statute is a provision which imposes charges on large-scale groundwater pumpers, measured by the amount of water pumped, to cover the costs of the district.²⁴⁷ This provision has been described as "a charge scheme rare anywhere in the world whatever the legal theory relative to groundwater as to what cannot be invaded by government."²⁴⁸ But, the explanation as to why this unique feature was not only politically acceptable but also noncontroversial is that it basically applied only to municipal and industrial users. All "bona fide agricultural" users, as well as any user who does not pump more than 50,000 gallons on any day, are exempt from this and some of the other potentially more onerous requirements.

Thus the Capital Area Groundwater Conservation Commission may be a viable model for other portions of the state that have similar problems—or even for the entire state. There certainly is potential for conflicts over groundwater in other

243. La. R.S. 38:3076(D) (1989).

244. Telephone interviews with A.N. Turcan (Jan. 26 & July 30, 1982).

245. Telephone interview with George T. Cardwell, Director of the Capital Area Groundwater Conservation District (July, 1990).

246. Turcan interviews, *supra* note 244.

247. La. R.S. 38:3076(A)(14) and 38:3079 (1989).

248. Murphy, *supra* note 242, at 124.

parts of the state.²⁴⁹ More frequent conflicts could develop if there are significant increases in groundwater use for agricultural irrigation, aquaculture, or industrial uses. The fact that large areas of the state are affected by groundwater overdrafts seems to indicate that conflicts will develop.²⁵⁰

A possible weakness in using the Capital Area legislation "as is" as a model for use in another area of the state or statewide is the exemption from the regulatory provisions for "bona fide agricultural or horticultural purposes," which applies even to large-scale (i.e., over 50,000 gallons a day) *pumpers*. This exemption has not stood in the way of the effectiveness of the Capital Area Commission, however, only because agricultural users were not primarily causing the problems that led to the legislation.²⁵¹ These circumstances may not exist in other areas of the state such as the southwestern rice-farming areas that have either existing or potential groundwater problems. In order to achieve a credible standby regulatory authority, at least large-scale agricultural users would have to be covered if agricultural uses are creating the problem. Given the past history of attempts at groundwater legislation in Louisiana²⁵² and elsewhere, this package may be a difficult "sell" to the farmers who would be affected. Perhaps a "sale" will only occur when enough groundwater problems have manifested themselves to bring about a consensus that there is a need to protect "the commons."²⁵³

VI. CONSTITUTIONALITY OF WATER RIGHTS LEGISLATION

There has been much written about the constitutionality of imposing a scheme of regulation which would curtail, or potentially curtail, riparian rights.²⁵⁴ While

249. For example, during the summer of 1990 a dispute arose in Caddo Parish between the Southern Trace Country Club and nearby homeowners when the club began pumping water to fill a lake on the course. So far, this dispute has been resolved without litigation. Telephone interview with Sharon Balfour, DOTD Division of Flood Control and Water Management (Oct. 10, 1990).

250. See *supra* note 3.

251. Turcan interviews, *supra* note 244.

252. A comprehensive groundwater law was introduced in the Louisiana House of Representatives in 1972 that would have given the Office of Public Works the authority to require permits for the drilling of wells, to restrict pumping during periods of excessive withdrawal or when the quality of the water supply is otherwise endangered, and to establish water use priorities. However, this bill was criticized as creating a "water czar" in the Office of Public Works and did not get out of committee.

Mr. Daniel V. Cresap, then chief engineer for the Department of Public Works, recalled that much of the opposition to the bill came from rice farmers in southwestern Louisiana who did not want limitations on the amount of groundwater that could be pumped for irrigation purposes. Interview with Daniel V. Cresap, Chief Engineer of the Office of Public Works (Baton Rouge, Oct. 26, 1982).

Another employee of the Department of Public Works at that time, Ernest J. Taylor, recalled that some reservations were expressed by Leon Cook of Pittsburgh Plate Glass in Lake Charles. He noted that PPG and other industries in the Lake Charles area were getting most of their water supply from the Sabine River diversion and thus would not oppose a groundwater bill. Interview with Ernest J. Taylor, Office of Public Works (Baton Rouge, Oct. 26, 1982).

253. See Garrett Hardin, *The Tragedy of the Commons*, 162 *Science* 1243 (1968).

254. Ausness, *supra* note 39, at 240-52; N. William Hines, *A Decade of Experience Under the*

less has been written specifically about groundwater rights, these also are a species of property rights and thus subject to much of the same analysis. The Fifth Amendment to the U.S. Constitution guarantees that no person shall be deprived of "property" without due process of law, and prohibits any taking of *private property for public use* without *just compensation*. The Fourteenth Amendment places the same limitations on the states. Many state constitutions, including Louisiana's,²⁵⁵ have similar provisions.

The problem is whether a law which puts restrictions on riparian owners or otherwise deprives them of rights previously recognized (e.g., by changing to a system of prior appropriation or by requiring the landowner to obtain a permit which may be denied for "public interest" reasons) constitutes a "taking" of their "property" rights.²⁵⁶ While the riparian does not "own" the water itself,²⁵⁷ he does have a usufructuary interest, as provided in Louisiana Civil Code articles 657 and 658. If the net effect of legislation (or administrative implementation thereof) is to prevent the owner from making uses of water he could have exercised previously, has there not been a taking of this usufructuary interest? Or, on the contrary, would such a law be constitutionally permissible, somewhat analogous to zoning laws, as a reasonable exercise of the state's "police power" to protect the health, safety, and welfare of its citizens?²⁵⁸

Such questions cannot confidently be answered in the abstract. It is necessary to look at the specific type of statutory provision and the precise impact it would have on a given landowner. However, there seems to have been no recent successful constitutional challenge in any of the traditionally riparian states which have modified their water rights law by instituting a permit system.²⁵⁹

Iowa Water Permit System—Part Two, 8 Nat. Resources J. 23, 43-52 (1968); Dominic B. King, *Regulation of Water Rights Under the Police Power*, in *Water Resources and the Law* 271 (1958); Theodore E. Lauer, *Reflections on Riparianism*, 35 Mo. L. Rev. 1 (1970); Theodore E. Lauer, *The Riparian Right as Property*, in *Water Resources and the Law* 133 (1958); Maloney et. al., *supra* note 48, at 268-83; Jeffrey O'Connell, *Iowa's New Water Statute—The Constitutionality of Regulating Existing Uses of Water*, 47 Iowa L. Rev. 549 (1962); Joseph L. Sax, *Takings, Private Property and Public Rights*, 81 Yale L. J. 149 (1971); James D. Ellis, *Modification of the Riparian Theory and Due Process in Missouri*, 34 Mo. L. Rev. 562 (1969); Jon Mattson, Note, *Water Rights and the Constitutionality of the 1955 South Dakota Water Act*, 11 S.D. L. Rev. 374 (1966); *see generally* Peter N. Davis et al., *Missouri Instream Flow Requirements: A Physical and Legal Assessment* (1980).

255. La. Const. art. I, § 4.

256. Although this is probably the most frequently encountered constitutional issue, there are others. One is whether the taking is for a public purpose. Another issue—even assuming that compensation is not required as a precondition for imposing particular restrictions on riparian rights—is whether the procedure for imposing that restriction comports with due process of law. *See, e.g.*, Hines, *supra* note 254, at 43-52.

257. La. Civ. Code art. 450; Samuel C. Wiel, *Running Water*, 22 Harv. L. Rev. 190 (1909).

258. *See, e.g.*, *Queenside Hills Realty Co. v. Sax*, 328 U.S. 80, 66 S. Ct. 850 (1946); *Sinclair Refining Co. v. City of Chicago*, 178 F.2d 214 (7th Cir. 1949); *Consol. Gas Util. Corp. v. Thompson*, 14 F. Supp. 318, 326 (W.D. Texas 1936), *aff'd*, 300 U.S. 55, 57 S. Ct. 364 (1937).

259. *Omernik v. State*, 218 N.W.2d 734, 743 (Wis. 1974), and *Omernick v. Dep't of Natural Resources*, 238 N.W.2d 114 (Wis.), *cert. denied*, 425 U.S. 941, 96 S. Ct. 1679, and *cert. denied*, 429

For purposes of constitutional analysis, a distinction must be made between actual uses and inchoate rights. A commonly used provision in water-use legislation in other states is the "grandfathering" of *existing riparian uses*.²⁶⁰ What is *not* protected by such legislation is previously existing but hitherto unexercised (or at least currently unexercised) and unquantified "*rights*" to the use of water.²⁶¹ Even guarantees to existing uses under these statutory regimes are not absolute in that a riparian's right to use a given quantity of water may be restricted in case of drought in order to assure an adequate quantity of water for purposes deemed by the legislature to be more important, i.e., public drinking supply or minimum streamflow for the purpose of maintaining water quality.²⁶² Indeed, much of the protection that the laws of other states have given to existing riparian users may have been given not because it was thought to be constitutionally required, but because of notions of "fairness," good public policy, or because such provisions were politically necessary to secure passage of the legislation.

Recent United States Supreme Court decisions on the question of takings have shown more sensitivity to the rights of private landowners.²⁶³ The touchstone of those decisions has been the landowner's legitimate "investment-backed expectations."²⁶⁴ Since the typical water-rights reform legislation, both in the East²⁶⁵ and in the West, has "grandfathered" presently existing uses, investment-backed expectations should be protected. However, these expectations could be defeated where the owner had purchased a piece of land with the expectation that he would

U.S. 836, 97 S. Ct. 103 (1976), implicitly upheld the constitutionality of the Wisconsin permit statute. Restrictions on use of water were upheld by analogy to zoning. Otherwise, there has been a remarkable absence of constitutional challenges to water use laws in eastern states. See, e.g., Maloney, *supra* note 48, at 267-71; Ausness, *supra* note 39, at 240-43. In those western jurisdictions which have, in varying degrees, replaced riparian rights by prior appropriation, some old cases hold that the legislature cannot authorize appropriations that interfere with riparian rights unless the riparian owners are compensated. See, e.g., *Lux v. Haggin*, 10 P. 674 (Cal. 1886). However, the uniform consensus of more recent decisions is that the legislature cannot only limit riparian rights in the interests of conservation and other economic and social goals, but also extinguish riparian rights which are not being exercised. *Deadman Creek Drainage Basin in Spokane County v. Abbott*, 694 P.2d 1071 (Wash. 1985). See also Ausness, *supra* note 39, at 243-52.

260. See, e.g., Cal. Water Code § 1202 (Deering 1971); Miss. Code Ann. §§ 51-3-3(2) and 51-3-7(1) (1990); Tex. Water Code Ann. § 11.001 (Vernon 1988) (but no grandfathering on lands title to which passed out of the state after 1895, Tex. Water Code Ann. § 11.001(b) (Vernon 1988)).

261. Statutes commonly provide that not only newly established appropriative rights but even long-established "vested" riparian rights can be lost by a certain period of nonuse. See, e.g., Miss. Code Ann. §§ 51-3-3(g)(2) and 51-3-11 (1990); Tex. Water Code Ann. § 11.029 (Vernon 1988).

262. See Iowa Code Ann. § 455B.266(1) and (2) (West 1990); N.C. Gen. Stat. § 143-215.13 (Michie 1990); Fla. Stat. Ann. § 373.246 (West 1988).

263. The most recent has been *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886 (1992). Other noteworthy decisions finding a "taking" have been *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles*, 482 U.S. 304, 107 S. Ct. 2378 (1987) and *Nollan v. California Coastal Comm'n*, 483 U.S. 825, 107 S. Ct. 3141 (1987).

264. *Lucas*, 112 S. Ct. at 2895 n.8. See also *Keystone Bituminous Coal Ass'n v. De Benedictis*, 480 U.S. 470, 493-500, 107 S. Ct. 1232, 1246-50 (1987).

265. See, e.g., Miss. Code Ann. §§ 51-3-3(2) and 51-3-7(1) (1990).

be able to irrigate it extensively, and this expectation was reflected in his purchase price. Still, it is not likely that water-rights legislation would entail the sort of drastic devaluation of expectancy interests that exist in cases involving wetlands protection or beachfront building restrictions which have been the focus of much of the recent "takings" controversies.

While the courts of other states seem to have shown a great deal of deference to water-rights legislation, it is *theoretically* possible that Louisiana courts could come to a different conclusion. There are at least two reasons why this might be true. First, the Louisiana courts could find that the Louisiana Civil Code²⁶⁶ gives to the riparian owner a more "substantive" property right than is given by the common law of other states. If the Louisiana courts did "discover" such property rights as a matter of state law, these state-defined rights would be controlling even if a challenge was based on the U.S. Constitution.²⁶⁷ Second, it is possible that Louisiana courts would interpret Louisiana Constitution article 1, section 4 in a manner more generous to the riparian owner than the federal courts have, in analogous situations, interpreted the Property Clause of the Fifth and Fourteenth Amendments of the U.S. Constitution, and more generously than other states have interpreted parallel clauses of their own constitutions.

However, either of these possibilities is unlikely. There is no reason based on the language of the Code itself, academic commentary, or precedent to believe that Louisiana courts would go farther in finding vested property rights to water in situations where courts of other states have declined to do so. Nor is there any indication that Louisiana courts are inclined to give a particularly expansive interpretation to Article 1, section 4 of the state constitution. If anything, the relevant Civil Code articles, statutes, and jurisprudence concerning water rights represent probably less of an "absolutist" or "vested rights" approach to interests in water than there is in a number of other states.²⁶⁸ The late Professor Frank

266. La. Civ. Code arts. 657-658.

267. While the U.S. Constitution protects against arbitrary "takings" of property, it is, for the most part, state law that defines "property." For example, in *Phillips Petroleum v. Mississippi*, 484 U.S. 469, 108 S. Ct. 791 (1988), the Court upheld the State of Mississippi's assertion of a broad public trust doctrine which encompassed all non-navigable tidal waters—at the expense of private holders of record title to those lands. But the Court also emphasized that other states had the authority to define the public trust less broadly than had Mississippi, thus giving more extensive property rights to private citizens who claimed such non-navigable tidelands. There has been considerable controversy as to how Louisiana has in fact defined the scope of the public trust vis-à-vis privately owned land. See *Legal Opinion Pursuant to the Legislative Mandate of H.C.R. 145 of 1991* (Louisiana State Law Institute Study Committee on Non-Navigable Waterbottoms, 1991) and *Subcommittee Report in Response to the Legal Opinion of the Reporter Pursuant to the Legislative Mandate of H.C.R. 145 of 1991* (Louisiana State Law Institute Study Committee on Non-Navigable Waterbottoms, 1991) (dissenting report). See also *United States v. Northern Colorado Water Conservancy Dist.*, 449 F.2d 1, 3-4 (10th Cir. 1971) (holding that Colorado law "vouchsafes" vested right in overflow of Colorado River for natural irrigation, thus requiring just compensation for public taking by federal government).

268. *E.g.*, riparian rights are limited by the Louisiana Constitution of 1974, which states in Article I, § 4, that the requirement of "just compensation . . . shall not apply to appropriation of

Trelease found support for this proposition as regards groundwater in that the landowner in Louisiana is not considered to "own" the water, unlike some other states.²⁶⁹

Thus, while constitutional questions potentially lurk in the background, if the legislature decides to modify existing rights of riparians, these questions should not be a major stumbling block in the way of any reasonable legislation which follows patterns that have been adopted by other states.²⁷⁰ Even where a downstream owner can show some kind of compensable injury, provided that the upstream diversion has been duly authorized by the legislature, it seems that the remedy for the injured downstream riparian would be monetary compensation rather than an injunction which would have the effect of closing down the new upstream activity.²⁷¹

If new and more economically beneficial agricultural and aquacultural uses are deemed by the legislature to be in the public interest, then an appropriately constituted irrigation or other type of special purpose district can be given the authority to condemn lower-value uses represented by existing riparian users. Such

property necessary for levee and levee drainage purposes." La. Const. art. I, § 4. Louisiana Civil Code article 665 retains a legal public servitude along the shores of navigable rivers for levee purposes, which negates the requirement of just compensation for the public taking of such a servitude. La. Civ. Code art. 665; *Taylor v. Board of Levee Comm'rs*, 332 So. 2d 495, 497 (La. App. 3rd Cir. 1976).

In an expropriation suit, it was held that a property owner did not have a right to compensation because of the diversion of the Tickfaw River's main channel away from his land for a highway project, even though this destroyed the value of his land for use as camp sites and thus reduced the overall value of the land. *State v. Smith*, 353 So. 2d 322, 325 (La. App. 1st Cir. 1977).

In fact, it has been suggested, to no avail, that Louisiana is not protective enough of these kinds of property rights. See generally Richard P. Wolfe, *The Appropriation of Property for Levees: A Louisiana Study in Taking Without Just Compensation*, 40 Tul. L. Rev. 233 (1966).

269. Handbook, *supra* note 28, at 8.

270. A similar action was taken in Texas. See *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*, 642 S.W. 2d 438 (Tex. 1982). Washington's highest court has also held that the forfeiture of formerly recognized riparian rights for nonuse does not effect an unconstitutional taking of private property. *In re Deadman Creek Drainage Basin*, 694 P.2d 1071 (Wash. 1985).

271. See, e.g., *Jeannette Lumber & Shingle Co. v. Board of Comm'rs*, 187 So. 2d 715 (La. 1966), involving an unsuccessful attempt by the levee board to take land without compensation pursuant to the servitude provided for in Louisiana Civil Code article 665, regarding land adjacent to a navigable river. The land "taken" by the levee board in this case was held not to be "adjacent" within the meaning of the code article. The plaintiff, however, did not get the injunction he requested. Because this was property that could be legally expropriated for compensation, this was found by the court to be the appropriate remedy. See also *Goins v. Beauregard Elec. Coop.* 44 So. 2d 715 (La. App. 1st Cir. 1950), where an electric utility cooperative strung power lines across plaintiff's land without proper authority. Again, because the cooperative had the power to expropriate, the plaintiff was left with an action for damages instead of an injunction to get the lines removed.

The reasoning of these two cases suggests that any agency, created by the legislature to regulate water usage, should have the authority to proceed by condemnation even if it is contemplated that this power would probably not have to be used.

legislation must be carefully drafted so that the district qualifies as a "public," as opposed to a private, use, although recent decisions by the U.S. Supreme Court and other courts have been quite deferential to legislative choices in this regard.²⁷² "Standby" eminent domain authority might be desirable as a part of comprehensive water-rights reform legislation "just in case," even though it may not appear to be presently needed, based on the existing levels of water usage and contemplated restrictions on existing users.

VII. LOUISIANA'S ABILITY TO PREVENT THE DIVERSION OF "ITS" WATER TO OTHER STATES

From time to time, proposals have been put forth to divert water from the Mississippi River or its tributaries, either from points within Louisiana or in upstream states, to provide water for the arid regions of Texas and New Mexico.²⁷³ Water users there have been pumping from the Ogallala Aquifer at a rate faster than the recharge rate—a phenomenon often referred to as the "mining" of groundwater. Diversion proposals have been justified on the supposition that the waters to be diverted were "surplus" to the needs of Louisiana and other states in the Mississippi River watershed. However, preliminary studies have shown that

272. There is authority for the proposition that land may be expropriated by a public authority, then turned over to private parties, and still qualify as a public use. See *Hawaii Housing Authority v. Midkiff*, 467 U.S. 229, 104 S. Ct. 2321 (1984) (holding that the state could expropriate private property from a small group of hereditary landowners and sell it to former tenants as part of comprehensive land reform legislation); *Berman v. Parker*, 348 U.S. 26, 75 S. Ct. 98 (1954) (public purpose for redevelopment); *Poletown Neighborhood Council v. City of Detroit*, 304 N.W. 2d 455 (Mich. 1981) (public purpose for land for General Motors Corp. facility); *Courtesy Sandwich Shop, Inc. v. Port of New York Auth.*, 190 N.E. 2d 402 (N.Y. 1963) (public purpose for building World Trade Center in New York City). The "public purpose" which should be set out in the preamble of the legislation can be found to exist on the basis of the legislature's findings that the economic activity generated by the private beneficiary of the condemnation procedure will be generally beneficial to the entire community.

273. For the most recent and comprehensive of these, see *High Plains Associates et al., Six-State High Plains Ogallala Aquifer Regional Resources Study* (1982) [hereinafter *High Plains Study*].

This study does not recommend any diversions within Louisiana itself, but suggests a number of alternatives for diversions from tributaries of the Mississippi or from the Sabine and its tributaries. Points of possible diversion are (a) from the Missouri River near Ft. Randall, S. Dakota; (b) from the Missouri near St. Joseph, Mo.; (c) from the Arkansas River at either Van Buren, Ark., or Pine Bluff, Ark.; (d) from the White River at Clarendon, Ark.; (e) from the Ouatchita River at Camden, Ark.; (f) from the Red River at Fulton, Ark.; (g) from the Sulphur River at Darden, Tex.; and (h) from the Sabine River at Tatum, Tex. *Id.* at 71.

There was a 1973 proposal, the "West Texas and Eastern New Mexico Import Project," which contemplated a diversion directly from the Mississippi. Pursuant to this project, water was to be diverted through the Old River Structure from the Mississippi to the Atchafalaya. Water was then to be pumped through a series of canals which would begin at Wax Lake near Morgan City. Executive Summary, *West Texas and Eastern New Mexico Import Project 4* (U.S. Department of the Interior, Bureau of Reclamation, 1973) [hereinafter 1973 Import Project]. This study concluded that the proposed diversion would have considerable environmental impact and "cannot be economically or financially justified using present procedures." *Id.* at 8.

such diversions could have a severely adverse effect on Louisiana's ecology—even if the proposed diversions would not threaten the state's supply for more traditionally recognized water uses such as domestic, industrial, and agricultural consumption.²⁷⁴ The impacts of such upstream diversion would be felt mainly in the Atchafalaya Basin and the Louisiana coastal region.

Does Louisiana have a legal right to prevent surface water or groundwater diversions from within the state or above it? The unequivocal conclusion is that Louisiana has *no* such legal right in the face of a decision by the United States Congress to authorize a diversion. The United States Supreme Court long ago recognized that congressional power to regulate interstate commerce includes power over navigation,²⁷⁵ but more recently that navigability is not the sole basis

274. *High Plains Study*, *supra* note 273, made environmental assessments with regard to the impact at the point of diversion and along the conveyance routes. The report noted, however, that [n]o assessments have been made of the impacts downstream of the points of diversion considered by the Corps for interbasin transfers. Some possible impacts can be identified, however. Reductions in downstream discharges could result in changes in stream channel morphology, and could have an adverse impact on aquatic species and productivity, on riparian wildlife habitat, on water quality, on sediment transport, on minimum flows needed for salinity repulsion in the Mississippi River delta, and on freshwater inflows needed for the coastal fisheries in Louisiana.

Id. at 25.

Notwithstanding the above statement that "no assessments have been made," there was a report prepared by the U.S. Fish and Wildlife Service in connection with *High Plains Study* which expressed concern that the proposed transfers would reduce freshwater inflows into the marshes and open waters of the Louisiana Coastal Region and the contiguous Atchafalaya Basin, both areas of great importance to fish and wildlife.

The Fish and Wildlife Service report contended that it was necessary to maintain and improve the management of existing flows for the following purposes:

- 1) to reduce saltwater intrusion and associated deterioration of fresh and intermediate marshes and oyster-growing areas,
- 2) to introduce river-borne sediment to adjacent marshes to offset marsh losses associated with subsidence and erosion,
- 3) to maximize marsh development in the active deltas of the Mississippi and Atchafalaya Rivers and at selected sites along the lower Mississippi River below New Orleans, and
- 4) to preserve patterns of overbank flooding of the forested wetlands of the Atchafalaya Basin.

Planning Aid Report on the High Plains Ogallala Aquifer Regional Study for the States of Texas and Oklahoma and Portions of Arkansas and Louisiana 90-91 (1981).

The report has much statistical information. It quotes a 1970 report prepared by the Corps of Engineers, New Orleans District, to the effect that the total freshwater requirement for Louisiana's estuarine zone is equal to the total annual flow of the lower Mississippi River. *Id.* at 94. Thus, according to this report, notwithstanding the damage done by spring floods, there is no "surplus" water insofar as Louisiana is concerned.

275. *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 190 (1824) (holding that power arises under U.S. Const. art. I, § 8, cl. 3).

of commerce clause analysis.²⁷⁶ *Oklahoma ex rel. Phillips v. Guy F. Atkinson Co.*²⁷⁷ illustrates how extensively that power can be used, and how it can be used with little regard for the states involved. Oklahoma had sought to enjoin construction by federal agencies of a dam on the Red River for a flood control and hydroelectric project. The project would inundate 100,000 acres of Oklahoma land (3,800 of which were owned by the state), displace 8,000 persons, destroy productive farmland, stop the oil production in the inundated areas, and injure state and local taxing units by causing the loss of taxable land and going concerns. While Oklahoma had to bear heavy burdens, it reaped few benefits: most of the hydroelectric power would be marketed in Texas, and most of the flood control and navigation benefits would occur far downstream in Arkansas and below the mouth of the Red River in the lower Mississippi basin. The Court did not dwell on the congressional function of balancing interests within the entire region. It simply concentrated on the federal power to undertake the project.²⁷⁸

Arizona v. California,²⁷⁹ which involved the intersection of states' rights and the federal right to allocate water from the Colorado River, resulted similarly. The Court held that Congress' allocations supercede state law and even the inconsistent provisions of interstate compacts (which, of course, Congress had approved). The Court grounded the validity of the allocation act not only in the "congressional power to control navigable water for purposes of flood control, navigation, [and]

276. *United States v. Appalachian Electric Power Co.*, 311 U.S. 377, 61 S. Ct. 291 (1940).

[I]t cannot properly be said that the constitutional power of the United States over its waters is limited to control for navigation. . . . In truth the authority of the United States is the regulation of commerce on its waters. Navigability . . . is but a part of this whole. Flood protection, watershed development, recovery of the cost of improvements through utilization of power are likewise parts of commerce control. . . . [The] authority is as broad as the needs of commerce. . . . The point is that navigable waters are subject to national planning and control in the broad regulation of commerce granted the Federal Government. . . . It is no objection to the terms and to the exertion of the power that "its exercise is attended by the same incidents which attend the exercise of the police power of the states." The Congressional authority under the commerce clause is complete unless limited by the Fifth Amendment.

Id. at 426-27, 61 S. Ct. at 308 (footnote omitted). *Cf.* *Kaiser Aetna v. United States*, 444 U.S. 164, 173, 100 S. Ct. 383, 389 (1979) (stating that navigability "adds little if anything to the breadth of Congress' regulatory power over interstate commerce"). The Court reasoned that economic activities that "affect" interstate commerce "are susceptible [to] congressional regulation under the Commerce clause irrespective of whether navigation, or, indeed, water, is involved." *Id.* at 174, 100 S. Ct. at 390 (citing *Wickard v. Filburn*, 317 U.S. 111, 63 S. Ct. 82 (1942); *United States v. Darby*, 312 U.S. 100, 61 S. Ct. 451 (1941); and *NLRB v. Jones and Laughlin*, 301 U.S. 1, 57 S. Ct. 615 (1937)).

277. 313 U.S. 508, 61 S. Ct. 1050 (1941).

278. Since the construction of this dam and reservoir is a valid exercise by Congress of its commerce power, there is no interference with the sovereignty of the state. . . . And the suggestion that this project interferes with the state's own program for water development and conservation is likewise of no avail. That program must bow before the "superior power" of Congress.

Id. at 534-35, 61 S. Ct. at 1063-64.

279. 373 U.S. 546, 83 S. Ct. 1468 (1963).

power generation," but also in the "power of Congress to promote the general welfare through projects for reclamation, irrigation, or other internal improvements."²⁸⁰ All that remains is a property owner's right to compensation.²⁸¹

Thus, the dormant Commerce Clause acts to preempt most state efforts to regulate trade in water, in order to protect the state's interest, regardless of whether the water is navigable or flows on the surface. *Sporhase v. Nebraska ex rel. Douglas*,²⁸² for example, taught that Congress has power over groundwater nearly as much as it does over surface water.²⁸³

Sporhase was a turning point. Earlier, in *Hudson County Water Co. v. McCarter*,²⁸⁴ the Supreme Court upheld a New Jersey statute proscribing interstate diversion of any of the state's surface waters. The state's power to do so, the Court held, flowed from its sovereign ownership of all the natural resources within its borders.²⁸⁵ However, the Court began chipping at *Hudson* in two cases holding that natural gas—like groundwater, an in-the-ground resource—is a commodity for purposes of the Commerce Clause.²⁸⁶ *City of Altus v. Carr*²⁸⁷ applied the two natural gas cases to groundwater. Altus, near the southern border of Oklahoma, had contractually secured water rights from Texas landowners. The Texas Legislature subsequently enacted a requirement for its approval to "withdraw water from any underground source in this state for use in any other state."²⁸⁸ Altus sued on Commerce Clause grounds.²⁸⁹ Texas asserted its interest in conservation of water resources. Citing the natural gas cases,²⁹⁰ the district court rejected this argument. Texas also argued that groundwater could not be an article of commerce because it could not be the "subject of absolute ownership."²⁹¹ But by construing Texas law, the district court found that groundwater could be an

280. *Id.* at 587, 83 S. Ct. at 1491.

281. *Cf. Dugan v. Rank*, 372 U.S. 609, 83 S. Ct. 999 (1963); *A-B Cattle Co. v. United States*, 621 F.2d 1099 (Ct. Cl. 1980). State law fixes the existence, nature, and value of the right. *United States v. Northern Colorado Water Conservancy Dist.*, 449 F.2d 1 (10th Cir. 1971); *see also Frank J. Trelease, Federal-State Relations in Water Law 70-74* (1971).

282. 458 U.S. 941, 102 S. Ct. 3456 (1982).

283. *Sporhase* held that Nebraska could not constitutionally limit exporting of its groundwater to states that permitted export of their groundwater to Nebraska. *Id.* at 960, 102 S. Ct. at 3466.

284. 209 U.S. 349, 28 S. Ct. 529 (1908).

285. *Id.* at 356-57, 28 S. Ct. at 531 (citing *Geer v. Connecticut*, 161 U.S. 519, 16 S. Ct. at 600 (1896) (holding that the state ban on the interstate shipment of game birds captured in that state was not invalidated by the commerce clause)).

286. *West v. Kansas Natural Gas Co.*, 221 U.S. 229, 31 S. Ct. 564 (1911) (holding that state statutes prohibiting the sale for distribution of natural gas are an unjustifiable exercise of a state's police power to conserve natural resources); *Pennsylvania v. West Virginia*, 262 U.S. 553, 43 S. Ct. 658 (1923) (holding that a state cannot prefer its own citizens as buyers of natural gas produced there).

287. 255 F. Supp. 828 (W.D. Texas), *aff'd per curiam*, 385 U.S. 35, 87 S. Ct. 240 (1966).

288. Tex. Rev. Civ. Stat. Ann. art. 7477b § 2 (Vernon Supp. 1965) (repealed 1971).

289. *Altus*, 255 F. Supp. at 830.

290. *West v. Kansas Natural Gas Co.*, 221 U.S. 229, 31 S. Ct. 564 (1911), and *Pennsylvania v. West Virginia*, 262 U.S. 553, 43 S. Ct. 658 (1923).

291. *Altus*, 255 F. Supp. at 838.

article of commerce because the right to appropriate or sell groundwater was a landowner's privilege. Thus, the court could distinguish previous cases and declare that the statute impermissibly burdened interstate commerce.

Sporhase finally posed the issue solely as a matter of federal law. Nebraska had attempted to limit groundwater exports to amounts deemed "reasonable," "not contrary to the conservation and use of groundwater," and "not otherwise detrimental to the public welfare," with the further provision that the destination state permit similar groundwater diversion to Nebraska.²⁹² Under that statute, Nebraska sought to enjoin landowners of contiguous tracts straddling the Nebraska-Colorado border from irrigating the Colorado tract with water pumped out of Nebraska. Despite the limited ownership interest in groundwater that Nebraska law gives, the Court held that state regulation of water exports were not free from federal scrutiny under the Commerce Clause. The Court further pointed out that the national—and worldwide—market for agricultural products grown with water withdrawn from the Ogallala Aquifer (which extends from Colorado and Nebraska to parts of Texas, New Mexico, Oklahoma, and Kansas) underscores the federal interest in water conservation and equitable distribution.

Although *Sporhase* on its facts is limited to groundwater, it reiterates previous Supreme Court decisions emphasizing the broad-ranging power of Congress to control the allocation of water and the very limited power of states to prevent export or diversion of water even for small-scale private use.²⁹³ If Louisiana tried to prevent diversion of its Mississippi River flow, similar to Nebraska's attempt to prevent export of its groundwater to Colorado, presumably Louisiana would have the same burden as Nebraska: it would be required to demonstrate the constitutionality of such measures under well-settled principles of dormant Commerce Clause analysis. Thus, such laws could not be solely protectionist or impinge too much on interstate commerce and must specifically further legitimate state goals such as environmental and recreational values.²⁹⁴

But as a practical and perhaps legal matter, any effort to divert river water to a distant state would necessarily be a large-scale undertaking involving both congressional authorization and funding. It seems clear that the Supreme Court would uphold such *congressional* action. Hence, protection against diversions deemed inimical to Louisiana's interests in this regard will most likely be found in the political arena of Congress, not in the courts. In pursuing this approach, the state would do well to thoroughly document its case for the need for waters that others might regard as "surplus." Some studies have already been done in this

292. Neb. Rev. Stat. § 46-613.01 (Supp. 1969) (amended 1984).

293. See generally Trelease, *supra* note 281, at 65-70 (1971); Stephen D. Harrison, Note, *Interstate Transfer of Water: The Western Challenge to the Commerce Clause*, 59 Tex. L. Rev. 1249 (1981).

294. See Steven E. Clyde, *State Prohibitions on the Interstate Exportation of Scarce Water Resources*, 53 U. Colo. L. Rev. 529 (1982). For a discussion raising similar issues in the context of eastern riparian states' efforts to limit "export" of water, see Julia R. Wilder, Note, *The Great Lakes as a Water Resource: Questions of Ownership and Control*, 59 Ind. L.J. 463 (1984).

regard, but it may be helpful to undertake others and to compile and summarize those presently available. Also, state legislative declarations of interest and concern in those uses of water—essentially “instream” uses—that would be threatened by diversions may be helpful. While such acts of the Louisiana Legislature are not binding on the U.S. Congress, they may well be helpful in bolstering the state’s political position. However, it appears that for the foreseeable future this is more of a theoretical than a practical problem. The economics of such a large-scale diversion project and a generally prevailing hostility to large-scale water projects would prevent it from being seriously considered by Congress.²⁹⁵

VIII. CONCLUSION

In terms of surface-water rights doctrine, Louisiana is not unique: despite the fact that its riparianism is code-based, it is difficult to find any features which distinguish it from the typical American common-law jurisdiction.²⁹⁶ As a whole, the riparian doctrine seems to be well suited to the generally plentiful water supply in the state. The very dearth of litigation seems to admonish in favor of retaining riparianism. Arguments can be made, in the name of economic efficiency and encouraging water-intensive investments, in favor of changing over to the prior appropriation regime used in the West.²⁹⁷ But, the experience of neighboring Mississippi counsels against such drastic novelty.²⁹⁸ Even a less sweeping change, such as one based on Florida’s “reasonable-beneficial” use statute,²⁹⁹ or legislation in other eastern states that have enacted comprehensive permit statutes³⁰⁰ would probably be a case of “fixing what ain’t broke.”

In Louisiana, as in other states, there have been incursions on the “pure” version of the riparian doctrine. Statutory authorizations for irrigation districts and

295. “The ‘pork barrel’ [in water projects] is no longer as enticing as it once was, due in good measure to the enactment of environmental protection requirements.” Goldfarb, *supra* note 30, at 102.

296. See *supra* text at notes 50-72.

297. See *supra* text at notes 49, 164-185.

298. Prompted by several years of drought during the early 1950s, Mississippi adopted prior appropriation in 1956. The system went essentially unused and unneeded as normal rainfall patterns returned, and prior appropriation was jettisoned in 1985. See *supra* notes 173 and 175. Ten years after the statute was enacted, one author concluded:

[T]he supply of surface water has apparently been sufficient for all competing users because no case involving this act has reached the Mississippi Supreme Court, nor have any requests for water allocations been rejected due to insufficiency of supply. Thus, there has been no judicial determination of the meaning of any portion of this law.

William M. Champion, *Prior Appropriation in Mississippi—A Statutory Analysis*, 39 Miss L. J. 1, 1-2 (1967) (footnote omitted).

299. See *supra* notes 27 and 172.

300. See *supra* note 27. A recent critique of Eastern permit systems concludes that such schemes overregulate. “The system is hyperactive—even users who are not part of the allocation problem are forced to participate in government regulation.” Robert H. Abrams, *Replacing Riparianism in the Twenty First Century*, 36 Wayne L. Rev. 93, 98 (1989).

levee districts permit those bodies to do things with water that are not permissible according to the strict riparian regime; i.e., these statutes implicitly permit the use of water on non-riparian land and even in other watersheds.³⁰¹ That there has never been a legal challenge to any of these statutes or agencies probably reflects the fact that no one was measurably harmed. Indeed, one of the most significant water law developments has been a change in focus from water rights (property-based) to water wrongs (tort-based),³⁰² which makes it more difficult to mount a successful challenge to water legislation based on the police power or the promotion of the general welfare.

Such limited incursions as have been made already on riparianism suggest further steps Louisiana might take to respond to discrete, identifiable problem areas. "Critical-area" legislation could provide a mechanism for resolving spot shortages by means of a rational set of priorities.³⁰³ The legislature could target specific water-intensive industries (e.g., aquaculture) and/or specific regions of the state where the indeterminacy and vagueness of riparian rights presently act as an impediment to investment. The issue of public access to non-navigable waters is one that has already been placed prominently in the spotlight and deserves legislative consideration.³⁰⁴

The extant literature³⁰⁵ indicates that improved groundwater planning and management may be more necessary than surface-water management. Supplies of groundwater, once depleted or polluted, cannot be as quickly replaced or rehabilitated as can supplies of surface water.

Moreover, Louisiana would seem to be farther out of the mainstream in regard to its groundwater legal regime than in regard to its surface-water regime. Despite the fact that the Civil Code³⁰⁶ and the Mineral Code³⁰⁷ are capable of being read otherwise, the *Adams v. Grigsby* "absolute ownership" rule seems to have held

301. See *supra* notes 82-86.

302. This trend from a "water rights" to a "water wrongs" approach is set forth along with the author's misgivings in Eric T. Freyfogle, *Water Justice*, 1986 U. of Ill. Law Review 481 (1986). "The legal shift from water rights to water wrongs has occurred in true common-law fashion: step-by-step, with little concern for theoretical models and little sense of ultimate goal. This lack of foresight is troubling, for the water wrongs model of water allocation has important disadvantages as well as advantages." *Id.* at 484.

The author sees the now nearly universal move from the "natural flow" doctrine to the "reasonable use" rule as the clearest example of the shift from water rights to water wrongs. *Id.* at 499.

The trade-off for this shift is described thus: "Property rights are better protected and more reliable; liability rules are more fluid and socially responsive." *Id.* at 502.

303. Several factors could be taken into account in setting priorities. There has been something of a trend in states that have adopted permit systems to recognize temporal priority as a very important factor, though not the only factor, in setting priorities. George W. Sherk, *Eastern Water Law: Trends in State Legislation*, 9 Va. Envtl. L.J. 287, 304-08 (1990).

304. See *supra* text at notes 143-160.

305. See *supra* notes 3-26.

306. See La. Civ. Code art. 490 and discussion in *supra* text at notes 216-225.

307. See *supra* text at notes 228-233.

sway by default³⁰⁸ since it is the only appellate case in the state to directly confront the issue of how competing rights to groundwater should be resolved.

If *Adams* can indeed be considered the governing law, it represents a simple approach to resolving private rights, but may be criticized both on grounds of "fairness" and economic efficiency. Moreover, the *Adams* regime does not protect public and intergenerational values in that it does nothing to discourage "mining" of groundwater. A fundamental criticism of *Adams* and the "absolute ownership" approach is that it treats as an almost completely private resource something which is realistically a common resource.³⁰⁹

There are other groundwater models to choose from: Prior appropriation may have some theoretical appeal as being the most likely to encourage investment by giving more secure rights. But there is no evidence that the benefits would justify such sweeping change. The "reasonable use" doctrine would not represent much change, if any, from what exists now.³¹⁰ Of those regimes in widespread use in other states, the "correlative rights"³¹¹ or the Restatement of Torts³¹² have been tested in states with generally similar groundwater conditions. A unique approach that has been suggested for Louisiana is the "comparative cause" rule.³¹³ This may be well adapted for a state which generally only has sporadic shortages, but it has the disadvantage of having no track record elsewhere.

If Louisiana is generally out of step in regard to groundwater law, the five parishes which are members of the Capital Area Groundwater Conservation Commission occupy a vanguard position.³¹⁴ The commission has many of the kinds of powers, albeit held in reserve, that many groundwater professionals see as necessary for effective management.³¹⁵ Since the commission has won general political acceptance and taken root in "local soil," the concept of regional authorities might be extended statewide. However, the exemption given to all agricultural uses in the Capital Area legislation may not be appropriate to the groundwater conditions in other areas of the state. At the same time, not granting such an exemption may make political acceptance more problematical.

Despite occasional use conflicts and shortages, Louisiana remains a water-rich state. Many other states envy our water resources. Herein lies another set of problems. Can these other states divert "Louisiana water" without its consent and to its possible detriment? Though the possibility of truly massive "takeaway"

308. See *supra* text at notes 219-227.

309. The oft-repeated scenario drawn by Garrett Hardin in the *Tragedy of the Commons*, 162 *Science* 1243 (1968) is as applicable to groundwater as any other socially shared resource. Hardin explained why "absolute ownership" of common property can be sustained only when the supply of the resource greatly outstrips the demand.

310. See *supra* text at notes 202-205.

311. See *supra* text at notes 206-207.

312. See *supra* text at notes 208-212.

313. See *supra* note 214.

314. See *supra* text at notes 237-248.

315. Dellapenna, *Riparianism*, *supra* note 30, at §21.03.

projects, such as the one proposed in the *High Plains Study*,³¹⁶ now seem remote, smaller-scale threats remain. The United States Supreme Court has made it clear that no state has a veto power over use of its water resources.³¹⁷ There are indications, however, that by engaging in well-considered water planning which takes into account instream uses, Louisiana would be in a better position to argue against, or at least to mitigate, any diversions of "its" water.³¹⁸

316. See *supra* note 273.

317. See *supra* text at notes 275-294.

318. One recent article on the future of riparian system reaches this conclusion: "States that move more rapidly to establish and implement comprehensive allocation systems may find that they gain an advantage in interstate water allocation litigation." Abrams, *supra* note 300, at 123.