1985

Allocating Consumptive Water Rights in a Riparian Jurisdiction: Defining the Relationship Between Public and Private Interests

Lynda L. Butler
William & Mary Law School, llbutl@wm.edu

ALLOCATING CONSUMPTIVE WATER RIGHTS IN A RIPARIAN JURISDICTION: DEFINING THE RELATIONSHIP BETWEEN PUBLIC AND PRIVATE INTERESTS†

*Lynda L. Butler**

Historically, water consumption in the eastern United States has been governed by the common-law riparian doctrine. Fashioned to protect the domestic uses of private individuals in a largely agrarian society, the doctrine is not well suited to today's environment in which the demands of public users have grown enormously. Even in the East, where water has long been abundant, the effects of increased consumption, pollution, and periodic drought have brought the continued viability of the doctrine into question. Professor Butler examines the legal standards which have developed under the riparian doctrine and identifies three principal areas in which the doctrine must be modified in order to satisfy present and future needs of private and public users in the eastern states: (1) traditional restrictions on the land which may be benefitted by particular riparian rights, (2) the defining of "reasonable use" in terms of low-density domestic consumption, and (3) narrow restrictions on the transferability of riparian rights. The Article recommends that reforms be instituted, particularly in recognition of the essential role that public users now play in meeting consumptive needs. While changes are necessary, Professor Butler acknowledges that so long as the eastern states continue to enjoy relatively abundant water supplies legislatures will balk at instituting potentially costly overhauls of the common-law doctrine. Until the legislatures are willing to adopt comprehensive reforms, the judiciary must assume responsibility for striking a more realistic balance between the riparian rights of private individuals and the growing needs of public users. Reform will require the courts to be willing to interpret the riparian doctrine with more flexibility, to modify "reasonable use" to encompass expanding public use, and to permit freer transferability of consumptive rights. At the same time, courts must remain cognizant of the need to protect private users from unrestrained diversions by public entities. While this task may seem both arduous and thankless for the courts, the issue of water distribution is of such basic importance that the challenge ought not to be refused.

Table of Contents

---

* Associate Professor of Law, Marshall-Wythe School of Law, College of William and Mary. B.S. 1973, College of William and Mary; J.D. 1978, University of Virginia.

The author wishes to thank Glenn Coven, Margit Livingston, Doug Rendleman, Fred Schauer, and especially Charles Koch for their comments on earlier drafts of this Article. The author also wishes to thank Lee Roberts for his research assistance and gratefully acknowledges the research assistance and dedication of Anne Bugg.

I. INTRODUCTION

In the water-rich East,[1] persistent water supply problems are a relatively recent phenomenon.[2] Until the 1970's, serious water supply

1. Because states in the eastern United States traditionally use a different system for allocating consumptive water rights than states in the western United States, this Article primarily will discuss states in the eastern portion of the country—that is, states lying in the humid region east of a line cutting through an area between the 95th and 100th meridians, or through the Dakotas, Nebraska, Kansas, Oklahoma, and Texas. *See* 1 R. CLARK, WATERS AND WATER RIGHTS § 4.1, at 30 (1967). Occasionally, however, courts in western states interpret and apply legal principles from the allocation system that developed in the East and some of these decisions also will be discussed. *See infra* note 13.

2. In contrast, the arid West has faced many persistent water supply problems. One poten-

problems rarely arose in the eastern United States unless a drought occurred,[3] and once the drought conditions subsided the problems

---

tially serious problem involves populous southern California. Because withdrawal from the Colorado River is expected to equal supply by 1985, the United States Supreme Court has ordered the waters of the River apportioned among Arizona, Nevada, and California. Arizona v. California, 376 U.S. 340, 342 (1963). Southern California thus will have to search elsewhere for a water supply large enough to meet the needs of its rapidly increasing population. For a discussion of southern California's water supply problems, see U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, NATIONAL WATER SUMMARY 1983-HYDROLOGIC EVENTS AND ISSUES 92 (Water-Supply Paper 2250, 1984).

The United States is not the only country facing serious water shortages. Conditions in other parts of the world are so serious that the United Nations declared the 1980's to be the "water decade." In a special meeting on November 10, 1980, the United Nations General Assembly designated 1981-1990 as the "International Drinking Water Supply and Sanitation Decade" and called upon member states to commit themselves to the improvement of "standards and levels of service in drinking water supply and sanitation." G.A. Res. 35/18, 35 U.N. GAOR Supp. (No. 48) at 101 (1980). According to some estimates, three out of five people in developing countries do not have access to safe drinking water, while three out of four have inadequate sanitation. *See* 18 U.N. CHRON. NO. 1, at 29 (1981).

3. Since the mid-1970's, significant portions of the eastern United States have experienced several severe droughts. *See generally Effects of the Drought on Small Business and Agriculture: Hearings Before the Select Committee on Small Business*, 95th Cong., 1st Sess. (1977); *Water Resources Problems Affecting the Northeast; The Drought, and Present and Future Water Supply Problems: Hearings Before the Subcomm. on Water Resources of the Comm. on Public Works and Transportation*, 97th Cong., 1st Sess. (1981); U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, NATIONAL WATER SUMMARY 1983-HYDROLOGIC EVENTS AND ISSUES (Water-Supply Paper 2250, 1984). Perhaps the most serious of the droughts occurred in 1983, when dry conditions persisted for months in northeastern, mid-atlantic, southern, and mid-western states. Described by many as the worst drought in fifty years, the 1983 water shortage caused an estimated seven billion dollars in damages to the nation's crops. VA. WATER RESOURCES RESEARCH CENTER, 14 WATER NEWS, No. 10, at 1 (Oct. 1983) [hereinafter cited as WATER NEWS]; The Washington Post, Sept. 5, 1983, at A1, col. 4. In the mid-west, for instance, corn production fell by 42% in Illinois, 42% in Indiana, and 49% in Ohio as a result of the drought. STATISTICAL REPORTING SERVICE, CROP REPORTING BD., U.S. DEPT. OF AGRICULTURE, CROP PRODUCTION: 1983 SUMMARY, at B-16 (1984) [hereinafter cited as STATISTICAL REPORTING SERVICE].

Similar losses occurred in the southern and mid-atlantic regions. In Virginia, for example, the 1983 drought affected 82 out of the state's 95 counties, causing an estimated $200 million in damages to the state's crops. 14 WATER NEWS, *supra*, No. 10, at 1 (Oct. 1983). According to U.S.D.A. figures for Virginia's agricultural industry, corn production decreased by 73%, soybean production by 44%, and tobacco production by 22%. STATISTICAL REPORTING SERVICE, *supra*, at B-16, -17, -27, -36. These decreases resulted in an estimated $13 million loss in sales to the state's potato and commercial vegetable farmers, $30 million in corn sales, $25 million in soybean sales, and $20 million in tobacco sales. 14 WATER NEWS, *supra*, No. 9, at 1 (Sept. 1983). By the end of the 1983 harvest season, the federal government had declared most of the affected counties disaster loan areas. Declaration of Disaster Loan Area No. 3026, Amendment 1, 48 Fed. Reg. 55,796 (1983); Declaration of Disaster Loan Area No. 3026, Amendments 2-4, 49 Fed. Reg. 2,041-42 (1984); Declaration of Disaster Loan Area No. 3026, Amendment 5, 49 Fed. Reg. 7,179 (1984).

Other southern and mid-atlantic states suffered similar agricultural losses. Tennessee officials, for example, predicted that farmers of the state's major crops sustained $416 million in losses, while in Arkansas losses were expected to exceed $500 million. *Effects of the 1983 Drought on American Agriculture: Hearings Before the Subcomm. on Agricultural Production, Marketing, and Stabilization*

also disappeared.[4] Except for the occasional dry spell, most users could find sufficient water from nearby streams, lakes, or underground waters to satisfy their needs. Although droughts still are a major cause of water supply problems in the East,[5] other factors, such as rapid population growth, extensive commercial development, and pollution of available water supplies, are beginning to cause water supply problems to arise even when drought conditions do not exist.[6]

---

of Prices of the Senate Comm. on Agriculture, Nutrition, and Forestry, 98th Cong., 1st Sess. 63, 105 (1983) (statements of William H. Walker and Sen. Dale Bumpers).

The 1983 drought also had an adverse impact on farm-related industries. For instance, sales of farm equipment decreased almost 50% in some areas of Virginia, while the state's livestock industries reported up to 12% decreases in productivity. 14 WATER NEWS, *supra*, No. 10, at 2 (Oct. 1983) (10% decrease in milk production by dairy cows, 2 to 12% decrease in eggs laid by chickens, and a 2-month lag in the growth of steers). Because of the water shortage, experts predicted that the costs of raising livestock could increase from 4 to 13%. *Id.* (poultry by 11-13%, hogs by 10-12%, dairy cattle by 10-12%, and beef cattle by 4-7%).

Agricultural users were not the only ones detrimentally affected by the droughts. Many localities found themselves searching desperately for alternative sources of water after facing weeks of dangerously low water supplies. In Virginia, for instance, a 1980 water shortage decreased groundwater tables by as much as four feet in some areas and caused water reservoir levels to fall significantly. M. HREZO, NORFOLK V. SUFFOLK: PROPOSED AGREEMENT LEAVES IMPORTANT ISSUES UNSETTLED 1 (Virginia Water Resources Research Center, Special Report No. 14, Nov. 1981). *Compare* U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, WATER-DATA REPORT VA-81-1, WATER RESOURCES DATA: VIRGINIA WATER YEAR 1981 (1982) (discussing effects of 1980 drought in Virginia) *with* 93 NAT'L CLIMATIC DATA CENTER, U.S. DEPT. OF COMMERCE, CLIMATOLOGICAL DATA: VIRGINIA, Nos. 7 to 9 (July-Sept. 1983) (discussing effects of 1983 drought, when most areas of Virginia received less than half their normal rainfall). Drought conditions in southeastern Virginia became so serious that the state's governor proclaimed a water resource emergency for the area. Gov. of Va., Emergency Exec. Order No. 45(80) (Oct. 22, 1980). As late as mid-November of 1980, the city of Norfolk only had a 100-day water supply. STATE WATER STUDY COMM'N, REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA, S. DOC. NO. 15, at 5 (1981). Due to the serious conditions, mandatory water use restrictions became the norm for several months in southeastern localities. *See, e.g.*, Chesapeake, Va., Ordinance No. 80-0-0188 (Aug. 19, 1980); Portsmouth, Va., Ordinance No. 1980-67 (Aug. 12, 1980). The area's two largest municipalities even adopted water rationing plans. Norfolk, Va., Ordinance No. 30,737 (Jul. 29, 1980); Virginia Beach, Va., An Ordinance to Amend Section 37-11(b) of the Code of the City of Virginia Beach, Virginia (Oct. 13, 1980).

4. The recent droughts in the eastern United States have rekindled an interest in evaluating the effectiveness of the common law allocation system, especially its effectiveness in providing for the consumptive needs of the public. *See, e.g.*, STATE WATER STUDY COMM'N, REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY OF VIRGINIA, S. DOC. NO. 15 (1981); J. JONES, V. SIKORA, & J. WOODWARD, STUDY OF TENNESSEE WATER RESOURCES LAW: LEGAL CONSIDERATIONS FOR EFFECTIVE WATER MANAGEMENT UNDER CONDITIONS OF SHORTAGE (Tennessee Water Resources Research Center, Research Report No. 97, Nov. 1983).

5. *See supra* note 3.

6. In Virginia, for example, the city of Virginia Beach has experienced a 52% increase in population within the last ten years and now has about 5% of the state's population, U.S. BUREAU OF THE CENSUS, DEPT. OF COMMERCE, 1980 CENSUS OF POPULATION, CHARACTERISTICS OF THE POPULATION—NUMBER OF INHABITANTS, U.S. SUMMARY 1-43, -177 (1982), yet the city does not

As these factors increase the demand on the East's available water resources, more and more eastern localities are experiencing difficulty meeting the consumptive needs of their inhabitants. Though it would be easy to attribute the localities' problems to the decreased water supply, the common-law allocation system followed in many eastern states is at least as responsible for the localities' ineffectiveness in responding to water shortages. Because the common-law system developed in an agrarian society, many of the legal principles governing allocation and use of water resources tend to protect low-density uses by private individuals and to impede commercial, industrial, and municipal development. Thus, when a locality attempts to resolve its water supply problems, its efforts typically encounter strong resistance among private users and those remaining "public users" still fairly rich in water resources,[7] who argue that the common law restricts redistribution of water resources for public use.[8]

States have responded in several ways to the ineffectiveness of the common law allocation system in meeting the consumptive needs of the public. One approach taken by some states is to adopt comprehensive reforms that totally replace the common-law rules with a permit system covering all types of water resources.[9] Despite the

---

have a substantial source of fresh surface water within its boundaries. Similar increases in population, and thus in demand on surface waters, are occurring in other areas of the eastern United States. *See generally* 1 U.S. WATER RESOURCES COUNCIL, THE NATION'S WATER RESOURCES, 1975-2000 (1978). By the year 2000 experts predict that water use nationwide will increase 27% over the 1975 level. *Id.* at 29. For a discussion of the effects of pollution and commercial development on the East's available water resources see U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, NATIONAL WATER SUMMARY 1983-HYDROLOGIC EVENTS AND ISSUES 80 (Water-Supply Paper 2250, 1984).

7. The phrase "public user" shall refer to a municipality, county, or any other local political unit or agent of any of the above who is conducting, or planning to conduct, a use of a watercourse that is, or will be, primarily for the benefit of the public. The phrase "private user" shall refer to a party who is not a political unit or an agent of such a unit and who is conducting, or is planning to conduct, a use that is not, or will not be, primarily for the benefit of the public.

8. A conflict involving a Virginia municipality, the Army Corps of Engineers, and several private parties demonstrates the hostility that can exist. In the record of that case, litigants accused each other of using "Pearl Harbor" tactics. Memorandum of James B. Hunt, Jr., Governor of North Carolina, in Support of Motion to Dismiss Complaint at 6-9, City of Virginia Beach v. Roanoke River Basin Ass'n, Civil Action No. 84-11-N (E.D. Va. Feb. 2, 1984). That case, and two other suits, involve a dispute over Virginia Beach's plan to build a pipeline from Lake Gaston to the municipality in order to meet the increased demand for water brought about by its population growth. For further discussion of the litigation see W. WALKER & P. BRIDGEMAN, ANATOMY OF A WATER PROBLEM: VIRGINIA BEACH'S EXPERIENCE SUGGESTS TIME FOR A CHANGE (Virginia Water Resources Research Center, Special Report No. 18, Aug. 1985).

9. Most comprehensive proposals are derived from the Model Water Code, drafted in 1972. *See* F. MALONEY, R. AUSNESS, & J. MORRIS, MODEL WATER CODE (1972). Florida has adopted a

persuasive arguments in favor of this approach,[10] most states in the eastern United States have not followed it, preferring instead to retain the common law system and to modify it with less comprehensive reforms.[11] The high cost of implementing the comprehensive reforms appears to be one of the main reasons why the reforms have not been

---

comprehensive permit system based on that Code. *See* FLA. STAT. ANN. §§ 373.011 to .619 (West 1974 & Supp. 1984). Together with Iowa, it shares the distinction of having the only really comprehensive water allocation systems. *See* IOWA CODE ANN. §§ 455B.261 to .280 (Supp. 1984). The Model Water Use Act was approved in 1958, but it has been adopted by only one state, Hawaii, and even there in modified form. *See* HAWAII REV. STAT. §§ 177-1 to -35 (1976). A third comprehensive system was proposed by the National Water Commission in 1973. *See* NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 280-94 (1973). *See generally* Maloney & Ausness, *A Modern Proposal for State Regulation of Consumptive Uses of Water*, 22 HASTINGS L.J. 523 (1971) (discussing reform proposals).

10. Besides criticizing the common-law allocation system for its ineffectiveness in providing for public consumptive needs, proponents of reform also point out that the common-law system improperly distinguishes between the different classifications of waters. This approach no longer can be justified, reformists argue, because scientists now agree that all waters are part of one interrelated hydrologic system. *See infra* note 20. *See generally* Trelease, *New Water Legislation: Drafting for Development, Efficient Allocation and Environmental Protection*, 12 LAND & WATER L. REV. 385 (1977) (discussing arguments for reform). Because commentators have debated the desirability of reform for years, this Article does not focus on that issue.

11. *See, e.g.*, N.C. GEN. STAT. §§ 143-215.11 to -215.22 (1983). Some of the states preferring the partial reform approach have retained the common-law system without significant amendments. The primary source of law governing water use in Virginia, for example, is the common law. Although some statutory changes have been made, most of the changes tend only to supplement the common law and do not alter it in any significant respect. *But see* Ground Water Act, VA. CODE §§ 62.1-44.83 to -44.107 (1982). Enacted on an ad hoc basis without any serious attempt to integrate them with one another, these amendments are scattered throughout the Virginia Code and delegate various types of duties and responsibilities to eleven different state agencies. For a discussion of these agencies see W. WALKER & W. COX, BULLETIN 9: WATER RESOURCES LAWS IN VIRGINIA 141-45 (Virginia Water Resources Research Center, 1968). Because the agencies tend to focus only on a particular aspect of a water resource problem and generally have separate jurisdictional powers, little coordination occurs between the various agencies. When this situation is combined with the independent power that local political units have over the resources within their boundaries, a confusing and uncertain system for managing Virginia's water resources results.

In recent years some efforts have been made to coordinate control and governance of Virginia's waters. The General Assembly, for instance, established the Virginia Water Resources Research Center to collect and evaluate data about the state's water resources. VA. CODE §§ 23-135.7:8 to -135.7:13 (1980). Also, in the past few years the General Assembly has passed important statutory provisions dealing with the formulation of state water policy and the establishment of a planning process. *See, e.g.*, VA. CODE §§ 62.1-11, -44.36 (1982). For a discussion of states which also retain the common law without significant amendments, *see, e.g.*, Aycock, *Introduction to Water Use Law in North Carolina*, 46 N.C.L. REV. 1 (1967); Cohen, *Water Law in Alabama—A Comparative Survey*, 24 ALA. L. REV. 453 (1972); Cribbett, *Water as a Species of Private Property: The Illinois View*, 47 ILL. B.J. 449 (1959); Lauer, *Water Law in Michigan*, in WATER RESOURCES AND THE LAW 423 (1958); Weston & Gray, *Legal Control of Consumptive Water Use in Pennsylvania Power Plants*, 80 DICK. L. REV. 353 (1976); Note, *The Riparian Rights Doctrine in South Carolina*, 21 S.C.L. REV. 757 (1969); Note, *Ohio Surface Water Rights*, 38 U. CIN. L. REV. 525 (1969); Note, *Riparian Water*

adopted in more eastern states.[12] Until the problems created by the common-law system outweigh the costs of implementing a new allocation system, most states having water-rich environments probably

Law—Lakeshore Developments, 1966 WIS. L. REV. 172, Comment, *Water Rights in Tennessee*, 27 TENN. L. REV. 557 (1960).

Other states preferring the partial reform approach have revised the common-law system substantially. But even in those states, important statutory exemptions usually continue application of the common law to many users. *See, e.g.*, KY. REV. STAT. ANN. § 151.140 (Bobbs-Merrill 1980) (exempting domestic and agricultural uses); N.J. STAT. ANN. § 58:1A-7 (West 1982) (exempting diversions under 100,000 gallons per day). For a discussion of water reforms in eastern states and of the problems caused by the exemptions see Ausness, *Water Rights Legislation in the East: A Program for Reform*, 24 WM. & MARY L. REV. 547 (1983).

12. Although it is easy to document the reluctance of many eastern states to adopt the comprehensive reforms, it is not as easy to explain their reluctance. Proponents of the reforms have advanced some persuasive arguments in support of their reforms. The unwillingness to adopt a comprehensive solution may be due, at least in part, to the fact that a long-term water crisis has not yet arisen in most eastern states. In its report WATER POLICIES FOR THE FUTURE, the National Water Commission acknowledges this point and even states that it "does not recommend the immediate adoption of permit statutes by all Eastern States." NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 280 (1973). As the Commission then explains, "[a]ny change in the law has some costs; a fully developed permit system with extensive recordkeeping and provisions for allocation of water would have high costs relative to the value of much of the water being regulated." *Id.*

Political factors also may have contributed to the comprehensive reformists' lack of success in many eastern states. In Virginia, for example, it would appear that a comprehensive water bill failed to secure passage in part because it would place all regulatory power at the state level. Although the bill would authorize the state regulatory agency to appoint local advisory boards, this power is discretionary. The Virginia Water Law, H.B. 1420, 1981 Va. Gen. Assem., Reg. Sess. § 62.1-211.11. *See generally* Butler, *Commentary on the Proceedings of the Water Rights Symposium*, 24 WM. & MARY L. REV. 767, 782-85 (1983) (discussing the role of the political process in allocation and management of Virginia's water resources). To the extent that political factors explain the failures of comprehensive proposals, those factors demonstrate that the proposals have not achieved a balance between the competing concerns that is acceptable in many riparian jurisdictions.

Regardless of the reason or reasons for a state legislature's reluctance to adopt comprehensive reforms, it is apparent that the policy formulation and planning processes for water resources tend to slow down whenever the drought conditions subside and water becomes plentiful again in most areas of a normally water-rich state. In Virginia, for example, the severity of the droughts in 1977 and 1980 precipitated an extensive state-wide evaluation process that culminated with the proposal of a comprehensive water allocation system, The Virginia Water Law, H.B. 1420, 1981 Va. Gen. Assem., Reg. Sess. *See* STATE WATER STUDY COMM'N, REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA, S. DOC. NO. 15, at 3-11 (1981) (describing the evaluation process). *See generally* W. COX, L. SHABMAN, S. BATIE, & J. LOONEY, VIRGINIA'S WATER RESOURCES: POLICY AND MANAGEMENT ISSUES (1981). Introduced in the state legislature after the drought conditions had disappeared, the bill failed to pass the legislature. The Virginia Water Law, H.B. 1420, 1981 Va. Gen. Assem., Reg. Sess. (introduced Jan. 19, 1981, died in committee). Some contend that this failure demonstrates the crisis-oriented approach of the evaluation process. *See, e.g.*, STATE WATER STUDY COMM'N, REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY OF VIRGINIA, S. DOC. NO. 24, at 8 (1982) (statement by Louis L. Guy, Jr., P.E., that "[t]he end of the drought in Tidewater may turn out to be a curse instead of a blessing if it allows us to stick our heads back in the sand"). In some areas, though, the need for water has become too great to wait for the next crisis. *See infra* notes 169 & 170. For a description of more recent efforts to reform Virginia's water law see 16 WATER NEWS, *supra* note 3, No. 7, at 5 (July 1985).

will continue to use the common-law system, with some relatively minor modifications. These states generally lack sufficient incentive, in the short run, to adopt a totally new system.

Given, then, that many states in the eastern portion of the country still adhere to common-law principles to a significant extent, it becomes important to determine whether those principles can be updated and modified to permit better resolution of public water supply problems. One of the critical aspects of the common law that needs to be addressed in making this determination concerns its approach to allocating consumptive rights in natural watercourses between public and private parties. Those common-law principles governing allocation of rights in natural watercourses collectively are known as the riparian doctrine.[13] Because the doctrine was developed in an era

13. The riparian doctrine primarily developed in states fairly rich in water resources—that is, in states in the eastern portion of the United States. *See supra* note 1 (giving a more accurate division). Two variations of the riparian doctrine have developed: the natural flow theory and the reasonable use theory. Under the former a riparian owner is "entitled to the natural flow of the water of the running stream through or along his land, in its accustomed channel, undiminished in quantity and unimpaired in quality." Dimmock v. City of New London, 157 Conn. 9, 245 A.2d 569, 572 (1968). This right is more limited than the right of a riparian under the "reasonable use" theory. In a "reasonable use" jurisdiction, every riparian generally can conduct reasonable uses even though they may affect the natural flow. 7 R. CLARK, *supra* note 1, § 611 (1976). *See generally* 4 RESTATEMENT (SECOND) OF TORTS 210-13 (1977); 2 H. FARNHAM, THE LAW OF WATERS AND WATER RIGHTS § 464 (1904). Since most riparian jurisdictions follow the "reasonable use" theory, the Article will focus on it.

Where water was scarce, the riparian doctrine proved inefficient and counterproductive. Because the riparian doctrine gives each riparian an equal right to make reasonable uses of a watercourse, *see infra* notes 26-27 and accompanying text, using such an approach in the arid West would mean that most users would not have sufficient water to make a productive use. *See* 1 R. CLARK, *supra* note 1, § 4.1, at 30. The drier parts of the country thus developed an allocation system based on the "first-in-time" principle. Known as the prior appropriation doctrine, this system basically awards a superior right to use water to the party who first appropriates or exercises dominion over the water for a beneficial use. The right continues as long as the beneficial use is exercised. *See* 2 H. FARNHAM, *supra*, § 649. "Beneficial use" generally refers to the "use of such water as may be necessary for some useful and beneficial purpose in connection with the land from which it is taken." State v. McLean, 62 N.M. 264, 308 P.2d 983, 988 (1957). States following the prior appropriation doctrine, either in its common law or statutory form, include Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. 1 R. CLARK, *supra* note 1, § 4.1, at 31. *See generally* 4 RESTATEMENT (SECOND) OF TORTS 213-15 (1977).

Some of the western states following the prior appropriation doctrine also apply the riparian doctrine in certain circumstances. Under the California version, for example, the law of prior appropriation applies to acquisitions on public lands, while the riparian doctrine applies to streams which flow through private land and which have not been previously diverted. 1 S. WIEL, WATER RIGHTS IN THE WESTERN STATES § 116, at 137 (3d ed. 1911). Other states following this approach include Kansas, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Washington. 1 R. CLARK, *supra* note 1, § 4.1, at 31.

when most users were private individuals, its principles traditionally make certain assumptions about users that limit their ability to accommodate the public's consumptive needs without judicial modification.

Perhaps the most serious limitation is that traditional riparian principles generally prohibit diversions. To operate a public water supply effectively, a local government often must divert water from a watercourse and store it for future use by its inhabitants. When an entire region is water-poor, the diversions may even require an interbasin transfer—that is, the diversion and transfer of water from a watercourse located in one basin to the basin of the water-poor locality. Under traditional riparian principles, diversions and other consumptive uses[14] conducted for the public generally are not recognized as legitimate consumptive uses.

In view of the common law's restrictive approach to defining public consumptive rights, it is not surprising that some local governments still subject to the riparian doctrine have attempted to circumvent its constraints through their eminent domain powers.[15] Although this alternative is an appealing way to solve public water problems, it has its weaknesses and limitations. Besides requiring substantial financial resources, it also raises questions about whether a locality should be forced to pay for consumptive use rights when a private party would not have to pay in a similar situation. On a more theoretical level, not all consumptive uses conducted by a locality may qualify as a public use under a state's eminent domain law.[16] Furthermore, even if acquiring public consumptive rights by eminent domain is legally and financially feasible, that course of action does not eliminate the need to reexamine traditional riparian principles. Before a court can determine what private property rights a local government must acquire, it must understand how riparian principles define private and public interests.

---

14. Consumptive use has been defined as including those "uses or diversions which contemplate substantial reduction of supply," while nonconsumptive use refers to those "which are beneficial but do not result in planned diminution." 1 R. CLARK, *supra* note 1, § 55.2. Uses in the first category would include irrigation, domestic uses, and the dumping of raw sewage, while the generation of electricity, navigation, and recreational uses would qualify as nonconsumptive. *Id. See also* N.J. STAT. ANN. §§ 58:1A-3b, -3e (West 1982) (giving statutory definition for permit provision). *See generally* J. HIRSHLEIFER, J. DEHAVEN, & J. MILLIMAN, WATER SUPPLY: ECONOMICS, TECHNOLOGY, AND POLICY 66 (1969) (discussing an economic view of consumptive and nonconsumptive uses).

15. For examples of localities currently contemplating such action *see infra* notes 169-70.

16. *See infra* notes 211-12 and accompanying text.

This Article will examine traditional riparian principles to determine whether a more balanced accommodation between private and public consumptive interests in watercourses[17] can be achieved by the courts of a riparian jurisdiction.[18] The Article will begin by discussing the conventional legal principles, rationales, and assumptions still used by courts in riparian jurisdictions to define private consumptive rights in watercourses. Three aspects of these principles that are crucial to determining whether the public has consumptive rights will be examined: limitations on the area that can benefit from a watercourse, limitations on the quantity of water that can be used, and limitations on the transferability of water rights.

After examining how these limitations define private consumptive rights, the Article will examine the nature of the public interest. It will begin by evaluating the extent to which the legal principles governing private rights also recognize public consumptive interests. Then it will consider whether the common-law principles permit the development of exceptions to accommodate the public interest. As in the private rights section, the discussion in the public rights section will focus on whether the judiciary can modernize the riparian doctrine to achieve a more effective balance between public and private consumptive interests.[19] From the discussion it should become appar-

17. Although this Article will focus on natural watercourses, groundwater also can be an important water source. *See generally infra* note 20 (defining various water classifications). Also, as traditionally defined, the phrase "watercourse" does not include lakes. But because the law governing use of lakes, known as the littoral rights doctrine, is very similar to the law governing use of watercourses, much of the legal and policy analysis of the Article should apply to lakes as well. *See generally* 6A AMERICAN LAW OF PROPERTY § 28.56 (A. Casner ed. 1954); 6 R. POWELL, THE LAW OF REAL PROPERTY § 709(2)(b)(iv) (1984).

18. Although many states in the eastern United States have modified the common law in some respects, the legal and policy analysis conducted in the Article still should apply to most of those states. Only a few states have adopted comprehensive reforms that totally displace the traditional common-law principles. *See supra* note 9 and accompanying text. For an application of some of the ideas expressed in this Article to Virginia see Butler, *Defining Public Consumptive Rights in Virginia's Rivers, Streams and Lakes: Is Legislative Reform Needed?*, 11 VA. B.A.J., No. 1, at 14 (Winter 1985).

Whenever the phrase "riparian jurisdiction" is used in this Article, it will refer to those jurisdictions that apply traditional riparian principles in some meaningful manner, whether it be as the primary source of law, as the source of law governing exempted users under a permit system, or as a theory subordinate to the prior appropriation doctrine.

19. The Article will not consider whether other common-law concepts, principally the public trust doctrine, provide independent bases for defining public consumptive rights. As a general matter, these other theories recognize that navigable waters are subject to certain rights and interests. Because the other theories are not related to the riparian doctrine, determining whether they recognize public consumptive rights would involve a discussion of principles and policies distinct from those of the riparian doctrine. *See infra* note 164.

ent that the judiciary could make several helpful changes in the riparian doctrine to provide greater recognition of public consumptive rights. But effective implementation will require an innovative judiciary willing to take an active role in developing a responsive water allocation system.

II. PRIVATE CONSUMPTIVE RIGHTS

Under the common law each water resource is classified according to its place in the "hydrologic," or water circulation, cycle and separate legal doctrines are developed for the major classifications.[20] Private consumptive rights in a natural watercourse, one of the main classifications, are governed by the riparian doctrine, the basic tenet of which is that a party owning land abutting a watercourse has the right to make reasonable uses of the water in that watercourse for the benefit of his riparian land.[21] Because these use rights arise as incidents to ownership of land abutting a watercourse, they generally are considered to be vested property rights.[22] As the holder of vested rights, a riparian proprietor can seek protection of his rights at law or in equity

20. The main classifications under the common law generally are natural watercourses, groundwater, and diffused surface water. Natural watercourses are defined as those waters "flowing in a definite channel with a bed and banks or sides," 1 R. CLARK, *supra* note 1, § 52.1(B), at 308; groundwater refers to "water found in the soil below the top of the zone of saturation, which may or may not coincide with the 'water table,' depending on nature of the soil or composition of the aquifer," *id.* § 50, at 284; and finally, the phrase diffused surface water denotes water "which is diffused over the surface of the ground, derived from the falling rains and melting snows, and continues to be such until it reaches some well-defined channel . . . and . . . flow[s] with other waters . . . ." 3 H. FARNHAM, *supra* note 13, § 878, at 2556 (citing Crawford v. Rambo, 44 Ohio St. 287, 7 N.E. 429 (1886)).

Scientists and legal commentators now agree that the law governing the main types of water resources should be integrated because each type is part of one hydrologic cycle. *See* NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 233 (1973); Hines, *A Decade of Experience Under the Iowa Water Permit System* (Part One), 7 NAT. RESOURCES J. 499, 520-21 (1967). Groundwater flow, for example, may add to the volume of a watercourse, while groundwater withdrawal may lower its water level. *See* Davis, *Wells & Streams: Relationship at Law*, 37 MO. L. REV. 189, 193-97 (1972). Dealing with each classification separately ignores this type of interrelationship and often leads to inconsistencies.

21. The Massachusetts Supreme Court described the doctrine in the following manner:

> . . . A proprietor may make any reasonable use of the water of the stream in connection with his riparian estate and for lawful purposes within the watershed, provided he leaves the current diminished by no more than is reasonable, having regard for the like right to enjoy the common property by other riparian owners.

Stratton v. Mt. Hermon Boys School, 216 Mass. 83, 103 N.E. 87, 89 (1913); *see also* Bouris v. Largent, 94 Ill. App. 2d 251, 236 N.E.2d 15, 17 (1968); St. Lawrence Shores v. State, 60 Misc. 2d 74, 302 N.Y.S.2d 606, 608, 613 (1969); Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 130 S.E. 408, 410 (1925). *See generally* 2 H. FARNHAM, *supra* note 13, § 466.

22. Dunlop v. Carolina Power & Light Co., 212 N.C. 814, 195 S.E. 43, 45-46 (1938); Hite v.

and cannot be deprived of them by the state without due process.[23] Nor do riparian rights have to be exercised to merit protection: a riparian does not forfeit his rights because of nonuse and conversely does not acquire a priority over other riparians just because he has exercised his rights for a longer period of time.[24]

The rights of a riparian owner are not absolute, for other riparian proprietors[25] along the same watercourse also have an "equal right" to make reasonable uses of the watercourse.[26] This "equal" right does not entitle a riparian to conduct uses identical to those exercised by another riparian.[27] But it does mean that a riparian must be con-

---

Town of Luray, 175 Va. 218, 8 S.E.2d 369, 372 (1940); Mumpower v. City of Bristol, 90 Va. 151, 17 S.E. 853, 854 (1893). For further discussion of the nature of riparian rights *see infra* note 26.

23. *See* Leitch v. Sanitary Dist., 369 Ill. 469, 17 N.E.2d 34, 36 (1938); Grinels v. Daniel, 110 Va. 874, 67 S.E. 534, 536 (1910).

24. Harris v. Southeast Portland Lumber Co., 123 Or. 549, 262 P. 243, 245 (1927); Leonard v. St. John, 101 Va. 752, 45 S.E. 474, 477 (1903). However, a riparian who does not exercise his rights may lose them if another party meets the requirements for a prescriptive use. *Harris*, 262 P. at 245; *see also* Fresno Canal & Irrigation Co. v. People's Ditch Co., 174 Cal. 441, 163 P. 497, 501 (1917).

25. The phrase "riparian proprietor" will be used in the same manner as in the RESTATEMENT (SECOND) OF TORTS, referring to "a person who is in possession of riparian land or who owns an estate in it." RESTATEMENT (SECOND) OF TORTS § 844 (1977).

26. Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459, 462 (1912); *see also* Elmore v. Ingalls, 245 Ala. 481, 17 So. 2d 674, 675 (1944); Gehlen v. Knorr, 101 Iowa 700, 70 N.W. 757, 758 (1897). The rights of a riparian proprietor usually include: (1) the right of access to the watercourse that flows through or by the riparian land, including a right of way to the line of navigability of a navigable watercourse, Town of Islip v. Powell, 78 Misc. 2d 1007, 358 N.Y.S.2d 985, 992 (1974); Thurston v. Portsmouth, 205 Va. 909, 140 S.E.2d 678, 680 (1965); Grinels v. Daniel, 110 Va. 874, 67 S.E. 534, 536 (1910); (2) the right to accretions, State v. Johnson, 278 N.C. 126, 179 S.E.2d 371, 384 (1971); Steelman v. Field, 142 Va. 383, 128 S.E. 558, 559 (1925); (3) the right to dredge deposits of sand or gravel that extend beyond low water mark, Bloom v. Water Resources Comm'n, 157 Conn. 528, 254 A.2d 884, 887 (1969); and (4) the right to construct a wharf, landing, or pier upon the bed, extending out to the line of navigability where one exists, provided the structure does not impede navigation, Causey v. Gray, 250 Md. 380, 243 A.2d 575, 581 (1968); Peek v. City of Hampton, 115 Va. 855, 80 S.E. 593 (1914). *See generally* 1 H. FARNHAM, *supra* note 13, § 62. Significantly, many of these rights only can be exercised on the bed of the watercourse. Although a riparian proprietor located on one bank of a nonnavigable watercourse usually owns to the middle of the stream bed, *see, e.g.*, Allot v. Wilmington Light & Power Co., 288 Ill. 541, 123 N.E. 731, 734 (1919), title to riparian land abutting a navigable watercourse generally does not extend beyond the low water mark, *see, e.g.*, Flanagan v. City of Philadelphia, 42 Pa. 219, 230 (1862). Riparian rights thus extend to the soil of the beds even though the riparian proprietor does not own the bed. *See generally* 1 H. FARNHAM, *supra* note 13, § 63.

Some riparian rights have been altered by statute. For example, under the common law the right to build wharves and piers apparently includes the right to erect such a structure for commercial use. *See* Grinels v. Daniel, 110 Va. 874, 67 S.E. 534, 535 (1910). The Virginia General Assembly has modified that right by limiting the construction of wharves or other similar structures to private wharves, piers, or landings used for noncommercial purposes. *See* VA. CODE § 62.1-164 (1982).

27. *See* RESTATEMENT (SECOND) OF TORTS § 850 comment d (1977). It perhaps would be

scious of the common right of other riparians located above and below his property and must not unduly interfere with their riparian rights in exercising his own.[28] As a general matter, then, each riparian is entitled to receive and use the flow of a watercourse after reasonable use by riparians upstream from him but may not prevent riparians downstream from him from exercising that same right.

Under the riparian doctrine, two key principles define and limit consumptive interests in watercourses. The first is that a riparian proprietor can exercise his rights only for the benefit of riparian land. The second is that a riparian's use must be reasonable. When these two principles developed, most riparian users were private agrarians. As a consequence, the principles reflect certain assumptions and legal standards that have restricted uses by local governments and private businesses. Perhaps the most restrictive aspects of the principles are their bias toward low-density uses and their disapproving view of unrestrained transfers of use rights.

Although preservation of agrarian values remains a valid objective in many areas, it should not be the primary objective of a water allocation system.[29] To be effective, a water allocation system should promote an efficient use of the allocated resource for a variety of purposes.[30] Granted, priorities of use must exist to help resolve conflicts, but the system still should retain sufficient flexibility to permit the

---

more accurate to describe riparians' rights as being equal in the sense that each riparian is entitled to "the same protection from interference with his use that the law gives to other riparian proprietors." *Id.*

28. *See* Bouris v. Largent, 94 Ill. App. 2d 251, 236 N.E.2d 15, 17 (1968); White v. Whitney Mfg., 60 S.C. 254, 38 S.E. 456, 460 (1901); Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459, 462 (1912). An upper riparian, for example, generally cannot divert the flow of a watercourse away from a lower riparian, 2 H. FARNHAM, *supra* note 13, § 496, and a lower riparian cannot obstruct a watercourse so as to cause flooding of riparian land located above it, *see id.* § 546.

29. As one commentator explained:

> A modern water law system must not only promote the welfare of water users, it must accomplish the state's social and economic objectives, coordinate private activities with state projects, protect the interests of the public in common uses and environmental values, and integrate the activities of individual and corporate users into comprehensive state plans for water development and management.

Trelease, *supra* note 10, at 388. Another commentator identified the primary objectives of a water allocation system as including the promotion of an "optimal use of the resource" and "fairness." Ausness, *supra* note 11, at 576.

30. For purposes of this Article, the term "efficiency" will be used in a nontechnical manner to describe an outcome or use that maximizes the benefits and minimizes the costs associated with the use or outcome. For a more extensive definition and discussion of efficiency see C. MEYERS & R. POSNER, MARKET TRANSFERS OF WATER RIGHTS: TOWARD AN IMPROVED MARKET IN WATER RESOURCES 2-4 (National Water Commission, Legal Study No. 4, 1971).

shifting of resources to new uses.[31] Furthermore, to be effective, a water allocation system should distribute resources in an equitable manner.[32] One way to promote an equitable distribution of water resources is to ensure that parties have the opportunity to become new users. Another way is to ratify current expectations about allocation and use of the allocated resource.

Parts II.A. and II.B. will consider whether it is possible to redefine the legal standards that have developed under the two key riparian principles in a manner that promotes these modern policy objectives and achieves a better accommodation of public consumptive needs, without seriously undermining the private interests at stake. Part II.C. then will consider the ability of the riparian doctrine to respond to water supply problems by examining the extent to which riparian rights can be redistributed.

A. The Riparian Land Limitation: Restricting the Area to be Benefitted

The riparian land limitation serves an important function under the common law: it restricts the area that can benefit from use of a watercourse and thus protects present users. If physical constraints were not imposed on the area that could be benefitted by use of a watercourse, a present user could not be reasonably assured that sufficient water would exist in the future. At least on a general level, then, the riparian land limitation serves some valid policy objectives. Besides protecting the reliance interests of present users by providing some security for their uses, the limitation also encourages certain types of investments and uses of water resources.

Closer scrutiny, however, will demonstrate that the limitation, as traditionally interpreted, fails to achieve many of the policy objectives of an effective allocation system. Because of the restrictive approach taken by the courts under the riparian doctrine, the standards and

---

31. *See infra* notes 95-112 and accompanying text.

32. As used in this Article, the terms "equity" and "equitable distribution" will refer to whether a use, outcome, or distribution is fair or acceptable to interested parties, as well as to society in general. Factors relevant to deciding whether an outcome is equitable would include the final distribution achieved by the outcome, the process used to choose the outcome, the extent to which the outcome gives equal access to water resources, and the extent to which the outcome ratifies reasonable expectations. *Cf.* Ausness, *supra* note 11, at 576 (describing fairness as meaning "equal access to the resource, freedom from arbitrary treatment, and assurances that reasonable expectations will not be frustrated by a regulatory agency"). For a more extensive discussion of the meaning of equitable distribution as applied to natural resources see J. HIRSHLEIFER, J. DEHAVEN, & J. MILLIMAN, *supra* note 14, at 76-77.

interpretations that have developed under the riparian land requirement often hinder development by many private users, rather than promote it, and pose major obstacles to public users poor in water resources. Four principal tests for identifying riparian land have been developed by the courts.[33] First, to be riparian land, a tract must have physical contact with a watercourse. Second, a tract must be located within the watershed of a watercourse to be considered riparian to that watercourse. Third, the riparian owner must have acquired title to the entire tract that he is claiming as riparian land in one transaction. Finally, the tract must be unitary in a physical sense. Each test will be examined now to determine whether a court could improve the test's effectiveness without seriously impairing the private interests at stake.

1. The Physical Contact Test

The most obvious test for identifying riparian land is that a tract must have physical contact with a watercourse to be riparian.[34] Without this initial standard for identifying riparian land, several theoretical and practical problems would arise. If a tract of land could qualify as riparian land without being in physical contact with a watercourse, then a key premise of the riparian doctrine would be violated: that riparian rights arise as incidences of ownership of land adjoining a watercourse. Although other rational standards for defining consumptive rights exist,[35] the physical contact standard appears to reflect the land settlement pattern of early Americans, who preferred to purchase waterfront property rather than land not abutting a watercourse.[36] By preserving use of a watercourse for parties with

33. Although there are some variations as to how these restrictions are interpreted, most riparian jurisdictions appear to have accepted the general concepts behind them.

34. *See* 2 H. FARNHAM, *supra* note 13, § 463a; *see also* Thompson v. Enz, 379 Mich. 667, 154 N.W.2d 473, 478 (1967).

35. In the arid West, for example, the prior appropriation doctrine generally provides a more effective way of defining consumptive interests. *See supra* note 13.

36. Admittedly it is difficult to determine which came first in America: the preference for waterfront property or the riparian doctrine. That the doctrine existed in seventeenth century England suggests that it affected, instead of reflected, the settlement patterns of colonists. Though this argument is appealing, it ignores the early settlers' preoccupation with survival, which on more than one occasion caused them to act first and seek legal ratification of their conduct later. *See, e.g.*, 10 W. HENING, VIRGINIA'S STATUTES AT LARGE, ch. 11, at 38 ("[W]hereas great numbers of people have settled in the country upon the western waters . . . for which they have been hitherto prevented from suing out patents or obtaining legal titles by the king . . ."); *see also id.* at 39 ("[W]hereas several families . . . have settled themselves in villages or townships, under some agreement between the inhabitants of laying off the same into town lots . . . [t]hat six hundred and forty

waterfront property, the standard protects the premium paid by those parties for the location of their land.[37]

Moreover, if the physical contact test were not used, the owner of land considered to be riparian to a watercourse, but not contiguous to it, would not have any access to the watercourse. The landowner thus could not use the watercourse to benefit his land unless he purchased access rights or unless the courts decided to recognize such rights as riparian rights. Because of this problem, owners of nonwaterfront property would not be reasonable in expecting to acquire use rights in a nearby watercourse as an incident to their ownership of the property. The physical contact standard thus ratifies general expectations about the extent of private ownership interests in waterfront and nonwaterfront property.

Interpreting the standard too literally, though, can lead to an unnecessarily restrictive approach to riparian rights. If, for example, the courts construe the riparian doctrine to allow the transfer of riparian

---

acres of land . . . shall be reserved for . . . [their] use . . . until a true representation of their case can be made to the general assembly . . . .").

The settlers, for example, would have preferred waterfront property because such property provided access to ships carrying supplies and to the abundant supply of food and water found in many American rivers and streams. *See* 1 P. BRUCE, ECONOMIC HISTORY OF VIRGINIA IN THE SEVENTEENTH CENTURY 104-16 (1907). Additionally, besides being easier to defend than many inland properties, waterfront land tended to be more fertile than soil farther away from a watercourse. Tobacco, for instance could be grown quite profitably on many lowlands in Virginia. *See id.* at 77-78. Early colonists contemplating settling inland property also would have been discouraged by the tedious and difficult process of clearing the land. *See id.* at 257-58.

37. The premium paid by settlers for waterfront property would not have been reflected in the actual value paid for the land. During the 1700's and 1800's, the purchase price of land generally was set at a constant rate for a specified number of acres. Under the land grant system of early colonial Virginia, for example, a party could acquire the right to claim 50 acres of waste and unappropriated land by immigrating to the colony at his own expense or paying for the transportation of another to the colony. Instructions to Sir George Yeardley (1618), *reprinted in* 2 VA. MAGAZINE OF HISTORY & BIOGRAPHY 154, 164-65 (1894-1895). By the early 1700's this land grant system was replaced by another system that permitted a party to purchase directly the right to a specified number of acres. Under the later system, a party who paid a set fee would receive a certificate, called a treasury warrant, entitling the party to take up and patent 50 acres of waste and unappropriated land. Before he could obtain a patent, though, the party would have to present his warrant to the surveyor of the particular county where he wanted to take up land, have the surveyor survey the appropriate land, and comply with a few other procedural requirements. 1 EXEC. J. OF THE COUNCIL OF COLONIAL VA. 457 (1699). For a discussion of both systems see F. HARRISON, VIRGINIA LAND GRANTS 42-51 (1925); VA. STATE ARCHIVES, VIRGINIA LAND OFFICE INVENTORY vii-xii (1981). Thus, to obtain a patent for waterfront land, a party would have to acquire a warrant before any other party and then successfully settle the land as required by the patenting process. The premium paid for waterfront property then would include the time and capital required to obtain a patent for the maximum amount of waterfront property that could be acquired as quickly as possible.

rights, as they generally do with property rights, then a literal application of the physical contact test can create serious conflicts with the transferability principle.[38] Whereas the transferability principle would permit alienation of riparian rights to the owner of land not contiguous to the watercourse, a literal interpretation of the physical contact standard would not allow the purchaser to exercise the rights for the benefit of his land. To avoid these problems, the contact standard, as well as the other tests for riparian land, should be interpreted in light of its key policies and functions. As will be shown, this more policy-oriented approach could help to minimize conflicts within the doctrine and to accommodate the public interest.[39]

2. *The Watershed Test*

A second test for riparian land, the watershed test, defines the maximum amount of land that can qualify as riparian land. Under this standard land must be within the watershed of a natural watercourse to be riparian to that watercourse.[40] If, for example, a landowner's tract of land abuts a watercourse, but extends beyond its watershed, that part of the tract outside of the watershed cannot qualify as riparian land, in spite of the physical contact.[41] As one court explained, the watershed limitation ensures that any water withdrawn, but not fully used, by one riparian will remain within the watershed and thus be able to return to the watercourse for use by other riparians in the watershed.[42]

From a scientific perspective, the watershed test seems an appropriate way to define the maximum area that can benefit from use of a watercourse. The rationale used to explain the limitation suggests that a watershed is the natural drainage area of a stream or river.

---

38. *See infra* Part II.C.

39. *See infra* Part II.C.2.

40. Stratton v. Mt. Hermon Boys School, 216 Mass. 83, 103 N.E. 87, 88 (1913); Sayles v. City of Mitchell, 60 S.D. 592, 245 N.W.390, 391 (1932). *See generally* 2 H. FARNHAM, *supra* note 13, § 463a. Without further restriction, the physical contact standard could include huge tracts of land within the category of riparian land. As long as the tract "touched" the watercourse at some point, the entire tract arguably could qualify as riparian land. Apparently recognizing this problem, the courts have added several other qualifications to the definition of riparian land.

41. Bathgate v. Irvine, 126 Cal. 135, 58 P. 442, 444-45 (1899); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 511 (1921).

42. Anaheim Union Water Co. v. Fuller, 150 Cal. 327, 88 P. 978, 980 (1907); *see also* 2 H. FARNHAM, *supra* note 13, § 463(a), at 1571. Although California is a prior appropriation jurisdiction, California courts apply riparian principles when dealing with streams which flow through private land and have not yet been diverted. *See supra* note 13.

Because this definition includes all that land that contributes to the replenishment of the watercourse, it generally appears to take into account the hydrologic cycle.[43] Furthermore, the definition seems to be consistent with the view currently held by many scientists and legal scholars that the legal system should resolve environmental problems arising in a watershed by considering the watershed as one complex, interrelated ecosystem.[44]

Fairness concerns also support the continued use of the watershed standard to define the maximum area that could be benefitted by a watercourse. At least in a water-rich environment, present users still seem to be reasonable in expecting the maximum area to be limited to the region replenishing the watercourse. As one court explained, the fact that land feeds a watercourse creates an expectation that if the land otherwise qualifies as riparian land it is "entitled, so to speak, to the use of its waters."[45] Where water is less plentiful, though, those expectations must be tempered by the needs of water-poor areas. Then fairness would seem to require some sharing of the available water resources. Working out such an arrangement, however, would not necessarily require rejecting the watershed test as a standard for determining who initially has riparian rights. Rather, it would require focusing on the flexibility of the riparian doctrine and evaluating the extent to which riparian rights are or should be transferable. As will be seen momentarily, the results of this evaluation will have a significant impact on a locality's ability to satisfy the consumptive needs of its inhabitants.

Whether the watershed test promotes an efficient use of water resources is a more troublesome question. To the extent that the test is interpreted as limiting the maximum area and thus the number of potential users, it protects the reliance interests of users and rewards present investments. Confusion arises, however, because the watershed test is a difficult standard to apply. Where a watercourse is a major river, the natural drainage area could encompass a vast amount

43. *See generally* K. GREGORY & D. WALLING, DRAINAGE BASIN FORM AND PROCESS: A GEOMORPHOLOGICAL APPROACH 96-105 (1973).

44. Perhaps the best examples of this view are the various reports and studies of the Chesapeake Bay conducted under the direction of the U.S. Environmental Protection Agency. *See, e.g.*, U.S. ENVTL. PROTECTION AGENCY, CHESAPEAKE BAY PROGRAM: FINDINGS AND RECOMMENDATIONS (1983) (recommending specific approaches for improving the Bay's water quality); U.S. ENVTL. PROTECTION AGENCY, CHESAPEAKE BAY: A FRAMEWORK FOR ACTION (1983) (presenting a framework for maintaining the Bay's ecological integrity). *See generally* NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 19-37 (1973).

45. Anaheim Union Water Co. v. Fuller, 150 Cal. 327, 88 P. 978, 980 (1907).

of land. The drainage basin of the Tennessee River, for example, includes about 40,000 square miles of land spanning seven different states.[46] Furthermore, determining the drainage area of a particular watercourse involves questions of fact better resolved by experts in geology and hydrology.

Some of the inefficiencies of the watershed test become very apparent when the test is applied to the situation where two streams merge. According to a leading California case involving that situation, *Anaheim Union Water Co. v. Fuller*,[47] the watersheds of the two streams must be dealt with separately. This means that land solely within the watershed of one stream would not be riparian to the other stream, even though the land may be part of a tract that otherwise falls within the watershed of the first stream.[48] In *Anaheim Union Water Co.*, plaintiffs sought to enjoin the proprietors of riparian land located above plaintiffs' land from diverting water from a river and conducting it to land located within the drainage area of a tributary of the river. Defendants had argued that the watershed of the river should be defined broadly to include the river's "[entire] valley from its sources to its mouth."[49] Under this approach, land within that general area would be riparian to the river even though it did not directly feed the river. In rejecting defendants' argument, the court explained that their broad interpretation of watershed was inconsistent with the purposes of the watershed test, which were to ensure that unused water would return to the particular watercourse being used and to restrict riparian rights to land "entitled" to use the watercourse.[50]

The implications of the California approach are significant, for it requires a riparian to place his land precisely within its appropriate watershed. Under this approach, land solely within the watershed of a tributary cannot be within the watershed of the main stream. Only that portion of the tract within the watershed of each stream can be considered riparian to that stream, and a riparian landowner must use the waters of each stream accordingly, even though such conduct may inconvenience the landowner. Where the riparian is a sprawling lo-

46. G. SCOTT, STUDIES OF THE POLLUTION OF THE TENNESSEE RIVER SYSTEM 1 (1970).

47. 150 Cal. 327, 88 P. 978 (1907).

48. *Id.* at 980. The few cases addressing this issue appear to have taken a similar approach. *See* Rancho Santa Margarita v. Vail, 11 Cal. 2d 501, 81 P.2d 533, 548 (1938); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 512 (1921).

49. *Anaheim*, 88 P. at 980.

50. *Id.*

cality, that inconvenience could include a significant duplication of financial, administrative, and physical resources.

Similar problems arise when the California approach is applied together with some of the other tests for riparian land. If, for instance, a tract of land borders the main stream and not the tributary, yet extends into the watershed of the tributary, that portion of the land within the tributary's watershed would not be riparian to the tributary and therefore could not be benefitted by it.[51] Few landowners possess the expertise necessary to make such a precise allocation of resources. And, at an even more fundamental level, few landowners would anticipate that such a precise and artificial division of resources would be required of them. More likely, they would expect to be able to use one, if not both, watercourses to benefit their entire tract.

Because a restrictive definition of watershed does not ratify the expectations of riparians and requires an expertise not possessed by many of them, it is not surprising that riparian landowners often are confused and uncertain about the nature and extent of their rights. The more uncertain they are about their rights, the less likely they will be to rely on those rights and productively use their resources.[52] A legal rule that fails to ratify reasonable expectations of property owners also tends to increase the costs of dealing with the property and under certain circumstances encourages noncompliance. In such a situation, a property owner either will realize the confusion surrounding his rights and investigate the situation or will fail to realize the discrepancy between the law and his expectations and proceed as he believes the situation should be. Whereas the first option is costly in terms of the owner's time and money, the second is costly in terms of his misused property rights.

A more productive result perhaps could be achieved by adopting the broader view of watershed advanced in *Anaheim Union Water Co.* or by defining the maximum area that could benefit from a watercourse with another standard. The first alternative would seem to eliminate some of the confusion and conflicts caused by the more restrictive approach without undermining the basic functions of the watershed test.[53] Implementing it, however, would require gathering

51. *See, e.g.*, Rancho Santa Margarita v. Vail, 11 Cal. 2d 501, 81 P.2d 533, 547-49 (1938).

52. *See* Trelease, *supra* note 10, at 404; *see also* DeVany, Eckert, Meyers, O'Hara, & Scott, *A Proper System for Market Allocation of the Electromagnetic Spectrum: A Legal-Economic-Engineering Study*, 21 STAN. L. REV. 1499, 1506 (1969).

53. A broader interpretation, however, would probably lead to some inconsistencies with the

data about various watercourses[54] and developing guidelines for distinguishing between major and minor drainage basins, tasks not well suited to the case-by-case approach of the common law.

If the second alternative were pursued and a narrower standard than the watershed test were adopted, the new standard would not maximize the area that could be benefitted by a watercourse as well as the watershed test. Fewer people would have the opportunity of initially using the watercourse and, to the extent that redistribution would not be possible, fewer people also would have the opportunity of eventually using the watercourse. Nor would a narrower standard define the maximum area in a manner that accurately reflected the hydrologic cycle. Because the standard would exclude land that was within the natural drainage area of a watercourse, it would prevent land that contributed to the replenishment of the watercourse from qualifying as riparian land.

If, on the other hand, the new standard were more expansive, permitting land outside the watershed of a watercourse to be riparian, it would better ratify the expectations of water-poor areas and definitely would increase the area of land that could be benefitted by use. The broader standard, however, would not necessarily promote other desired policies, such as protection of present users' reliance interests and preservation of the environment. As mentioned earlier, the watershed limitation apparently developed because the courts perceived a need to protect present users. Adopting a broader standard thus would require some fundamental changes in the philosophy of the riparian land restriction.

Furthermore, ecologists and marine scientists generally agree that diverting a watercourse to areas outside of its watershed would have detrimental consequences on the watershed's environment.[55]

---

other tests for riparian land. It, for example, would appear to permit land within the watershed area to be riparian even though it is not in physical contact with the watercourse.

54. This data-gathering process already has begun in most states, which have established water research centers as mandated by Congress. *See* 42 U.S.C. § 7811 (1983) (repealing 42 U.S.C. § 1961a (West 1974)). The centers are formed for the purpose of collecting information about the relevant state's water resources and problems. *See, e.g.*, VA. CODE §§ 23-135.7:8 to -135.7:13 (Supp. 1982).

55. Although all diversions have adverse environmental impacts, diversions to areas outside the watershed can have especially serious consequences. A large-scale diversion occurring in California illustrates some of these consequences. In Inyo County, California, a diversion from Mono Lake, one of the state's most beautiful lakes, has diminished the lake's surface area by one-third and has increased its salinity level significantly, causing serious damage to the lake's fisheries. The shrimp hatch in 1981, for example, was down by 95%. *See* National Audubon Soc'y v. Superior Ct.,

Admittedly, these consequences also would result from diversions within the watershed, though probably to a lesser degree.[56] Thus, if the primary policy objective of a water allocation system is environmental preservation, the courts should restrict use of a watercourse to a narrow area of land near the watercourse. Even in a water-rich environment, such an approach seems undesirable and unrealistic, for it would prohibit numerous parties from benefitting from the watercourse.

Assuming, then, that some adverse environmental impact will be tolerated, the watershed test would appear to be the preferable judicial standard for defining the maximum amount of land that can be riparian. Unlike an agency administering a water permit system, a court applying the riparian doctrine cannot actively supervise and manage the state's water resources.[57] But through the watershed test, a court can maintain some control over use of watercourses and thus can provide some protection for the reliance interests of present users.[58] Rather than adopting a broader standard and upsetting those reliance interests, the courts could accommodate at least some of the needs of water-poor areas by permitting appropriate transfers of use rights within a watershed.[59] Nor would a narrower standard seem as desirable since it would increase the number of areas poor in water resources.

If the watershed test were retained, some problems of application still would exist. Most private riparians, for instance, continue to lack the expertise required to apply the standard. Scientists and appropri-

---

33 Cal. 3d 419, 189 Cal. Rptr. 346, 348, 352, 658 P.2d 709, 711, 715, *cert. denied*, 104 S. Ct. 413 (1983). *See generally* Hagan & Roberts, *Ecological Impacts of Water Storage and Diversion Projects*, in 1 ENVIRONMENTAL QUALITY AND WATER DEVELOPMENT 543 (C. Goldman ed. 1971). For a general discussion of the environmental effects of water projects see NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 19-37 (1973).

56. At least with diversions within a watershed, it is more likely that a smaller ecological area will be affected by the diversions. For example, the number of miles of conduit pipes probably would be smaller. In its report WATER POLICIES FOR THE FUTURE, the National Water Commission generally agreed with this observation, stating: "There is no difference in kind between interbasin transfers and any other water development project, so far as social, environmental, or economic values are concerned. But there is a difference in degree where the interbasin transfer is a large-scale project . . . ." NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 319 (1973).

57. A court, however, may be able to impose planning responsibilities on the state government by invoking the public trust doctrine. *See* United Plainsmen Ass'n v. North Dakota State Water Conservation Comm'n, 247 N.W.2d 457 (N.D. 1976).

58. To the degree that redistribution of use rights is allowed, the protection given the reliance interests of present users diminishes.

59. For further discussion of the transferability issue *see infra* Part II.C.

ate government officials, however, have succeeded in developing more sophisticated tools and guidelines for determining the watershed of a stream or river. Through more precise topographical maps, they usually can determine the watershed of a watercourse with specificity.[60] Given this progress, then, the watershed limitation appears to be the preferable standard for courts in riparian jurisdictions. More than the other alternatives, it permits the courts to achieve a better balance between the expectations set by traditional riparian principles and more modern concerns like environmental preservation, equitable redistribution, and efficient use of today's resources. Absent a shift in the fundamental philosophies of the riparian doctrine, the watershed limitation should be retained.

3. *The Single Transaction Test*

A third qualification to the definition of riparian land, known as the single or same transaction test, provides that land not abutting the

---

60. Courts, legislatures, and commentators alike have been vague in their definition of watershed. *See* Maxwell Land-Grant Co. v. Dawson, 7 N.M. 133, 34 P. 191, 193 (1893) (a watershed is "that district of country that drains into a river or stream"), *rev'd on other grounds*, 151 U.S. 586 (1894); IND. CODE ANN. § 13-2-1-4(6) (Burns 1981) (A watershed is "an area from which water drains to a common point. The watershed of an entire watercourse shall be measured to its mouth and the watershed of any part of a watercourse shall be measured to the farthest downstream point in question."); KY. REV. STAT. ANN. § 151.100(8) (Bobbs-Merrill Supp. 1982) (a watershed includes "all of the area from which all drainage passes a given point downstream"); Farnham, *The Permissible Extent of Riparian Land*, 7 LAND & WATER L. REV. 31, 34 (1972) (the watershed of a lake or stream is "the drainage area contributing to the water found in a particular lake or stream"). Even the United States Environmental Protection Agency defines a watershed simply as "[t]he land area that drains into a stream." U.S. ENVTL. PROTECTION AGENCY, COMMON ENVIRONMENTAL TERMS 16 (1977).

The Soil Conservation Service has formulated a more precise definition of a watershed area to use under the Federal Watershed Protection and Flood Prevention Act, 16 U.S.C. § 1001-09 (1985). It provides in pertinent part:

> A watershed area comprises all land and water within the confines of a drainage divide or a land and water problem area. A watershed area may comprise the land and water of two or more minor drainageways that are separate tributaries to a stream, artificial waterway, lake, or other tidal area. Areas from which water is brought into it by diversion may be excluded from the watershed if these sources of water have no significant effect on the flood prevention and water management problems of the watershed area. The watershed area must necessarily include all direct tributary drainageways and lands from which, after project installation, water and sediment could adversely affect any proposed structural measure such as an irrigation or drainage canal, floodway, or floodwater-retarding structure included in the plan.

SOIL CONSERVATION SERVICE, U.S. DEPT. OF AGRICULTURE, NATIONAL WATERSHEDS MANUAL, tit. 390, ch. V, § 500.11(a) (1981).

For a more detailed discussion of the meanings of watershed and drainage basin see K. GREGORY & D. WALLING, *supra* note 43, at 96-105.

watercourse must have been acquired in the same transaction as the portion touching the watercourse to qualify as riparian.[61] The practical effect of this single transaction requirement is to limit riparian land to the smallest area held by a party under a chain of title including the land adjoining the watercourse.[62]

Restricting the definition of riparian land to land acquired in the same transaction means that some land within the watershed of a watercourse will not qualify as riparian and that therefore the area to which riparian rights attach will not be maximized. The courts in many riparian jurisdictions apparently preferred a less efficient alternative to one that would maximize the size of the area that could be benefitted—the watershed—because of certain equitable concerns. By restricting the definition of riparian land to land acquired in a single transaction, the courts prevented financially secure riparian landowners from enlarging their tracts of riparian land and expanding their rights by purchasing land contiguous to their original tract but not contiguous to the watercourse.[63] Thus, the courts have used the single transaction test to achieve a more equitable distribution of use rights.

In addition to discouraging riparians from monopolizing consumptive rights, the single transaction test also helps to preserve the priority status of riparians, which are set in part by physical location along a watercourse. If, for example, a riparian owns two noncontiguous tracts of waterfront property, the single transaction test would prevent the riparian from purchasing a thin strip of land to connect the two tracts and then claiming the right to use water taken from the watercourse on the upper tract for the benefit of the lower tract without regard for riparians between the two tracts. Since all the land had

---

61. *See* Crawford Co. v. Hathaway, 67 Neb. 325, 93 N.W. 781, 790-91 (1903); Watkins Land Co. v. Clements, 98 Tex. 578, 86 S.W. 733, 735 (1905). *See generally* 2 H. FARNHAM, *supra* note 13, § 463(a), at 1571-72. In some jurisdictions the courts apply a "unity of title" test, instead of the single transaction or "chain of title" test. Under the unity of title standard, land not abutting a watercourse may still qualify as riparian if it is held under common ownership with land contiguous to it and to the watercourse. For a discussion of both approaches see Levi & Schneeberger, *The Chain and Unity of Title Theories for Delineating Riparian Land: Economic Analysis as an Alternative to Case Precedent*, 21 BUFFALO L. REV. 439 (1972). Because the unity of title test closely resembles the unitary tract test, the policies and values furthered by the unity of title test will be analyzed in the discussion of the unitary tract test. *See infra* notes 70-79 and accompanying text.

62. *See, e.g.*, Rancho Santa Margarita v. Vail, 11 Cal. 2d 501, 81 P.2d 533, 547 (1938) (amount of land held in chain of title was 10,402 acres, which was only about half of the original grant).

63. *See* 2 H. FARNHAM, *supra* note 13, § 463(a), at 1572 & n.4. In contrast to the single transaction test, the unity of title standard would permit a riparian to enlarge his riparian tract by purchasing adjoining lots. *See* Levi & Schneeberger, *supra* note 61, at 442.

not been acquired in the same transaction, the riparian could not claim that his holdings formed one tract of riparian land entitling him to use the watercourse before other riparians located below the upper tract. In exercising his riparian rights for the lower tract, the riparian still would be subject to the reasonable use rights of riparians located above the lower tract.[64]

Although both functions should remain important objectives under the riparian doctrine, they could be furthered even if the single transaction test were abandoned or modified. The first objective, equitable distribution of use rights, still would require some limitations on the ability of a riparian to enlarge his riparian tract. That objective, however, could arguably be achieved in a less restrictive manner.[65] If, for example, a riparian were allowed to extend his riparian estate by subsequent purchase directly back to the outer boundary of the watershed, he still should not be able, in most situations, to increase his estate so substantially that he could monopolize riparian rights for the area. Furthermore, as will be demonstrated momentarily, a fourth, more sensible refinement to the definition of riparian land limits the extent to which a riparian can change the size of his riparian estate without having to account to other riparians.[66] The second objective, preservation of priorities based on physical location, also would require some limitations to ensure that a riparian could not improve his priority by purchasing tracts located upstream to his original tract. But, once again, a fourth test for riparian land provides appropriate limitations and effectively preserves priorities.

That the single transaction test duplicates functions served by another standard is not, by itself, sufficient reason to reject the test. When, however, the adverse policy implications of the single transaction standard are considered, the argument for abandonment becomes stronger. One adverse consequence of the single transaction test is that it refuses to recognize the reasonable growth needs of riparians. Where the riparian is a locality, this can have serious consequences.

---

64. Riparians generally have the right to receive the flow of a watercourse after reasonable use by upstream riparians. *See generally* 2 H. FARNHAM, *supra* note 13, § 461.

65. It is ironic that a rule designed in part to prevent monopolization of rights may result in an inefficient use of resources.

66. *See infra* notes 70-79 and accompanying text. Furthermore, other laws now prevent parties from monopolizing property rights in land and other resources. *See, e.g.*, Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 11-12 (1958) (finding practice of granting or leasing land with condition that products from that land be shipped on grantor's railroad illegal). *See generally* 2 P. AREEDA & D. TURNER, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION § 409f (1978) (finding monopolization of divisible resources to be a barrier to entry).

If, for example, a locality situated next to a watercourse has annexed adjoining areas, the single transaction test would prevent it from exercising its riparian rights for the benefit of annexed areas.[67]

Equally as significant, the single transaction test impedes the development of land. Even if there presently existed a riparian who owned a large tract of land extending from the watercourse to the end of the watershed, once that riparian decided to subdivide his tract and sell off parts of it, the single transaction test would prevent the tract from being considered a riparian tract.[68] Because the reasonableness of a riparian's use rights are measured in part by the size of his tract,[69] this consequence could be serious. Moreover, the chances that such a large tract of land would remain intact indefinitely are slim. The single transaction test thus has become a test of chance. As long as a riparian tract happened to extend to the end of the watershed, the owner could exercise his riparian rights for the benefit of the entire area. When, however, he decided to subdivide the tract, his riparian rights no longer could benefit the entire area.

The above analysis suggests that the single transaction standard no longer serves a useful purpose and should be abandoned. This course of action, however, should not occur without recognition of the need to protect the interests of small private users. These interests are especially strong when a neighboring riparian is a growing municipality or a developing industrial user. Without the single transaction test, the small private user legitimately could fear that such a neighbor would expand its riparian holdings at the small user's expense.

As the following discussion demonstrates, a fourth test for riparian land should allay some of these fears. It basically serves the same functions as the single transaction test without being as inflexible as the single transaction standard. But even the fourth test would not protect the small private user against the likelihood that a riparian locality would increase its population as well as its geographic limits. As will be explained, protecting the small private user from this possi-

67. The unity of title test for riparian land also would appear to prevent a riparian locality from exercising its rights for the benefit of the annexed areas. Because those areas usually consist of lots owned by private parties, the annexed areas would not be held under common ownership with the riparian tract. For a discussion of how the fourth test, the unitary tract standard, would deal with the annexed areas, *see infra* note 74.

68. The physical contact standard also would affect the riparian status of subdivided parts not contiguous to the watercourse.

69. *See generally infra* Part II.C.

bility can only occur through the reasonable use requirement, which imposes quantitative limits on use rights.

4. *The Unitary Tract Test*

A fourth qualification to the riparian land requirement, the unitary tract test, restricts riparian status to tracts that are unitary in a physical sense, as defined by reasonable community standards and location in the watershed.[70] Like the single transaction test, the unitary tract restriction helps to define the priority status of riparians. Under this restriction, for example, the riparian owning the two noncontiguous tracts of riparian land described above could not claim that the lower tract should receive the same priority as the upper tract, even though the two are connected by a thin strip, because his holdings would not form a physically continuous and uniform tract of land.[71]

---

70. *See* Wasserburger v. Coffee, 180 Neb. 149, 141 N.W.2d 738, 744 (1966); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921). The RESTATEMENT (SECOND) OF TORTS has adopted a similar requirement in its definition of riparian land. To qualify as riparian land, a tract of land must be "a continuous tract or plot of land in one possession, no part of which is separated from the rest by intervening land in another possession." RESTATEMENT (SECOND) OF TORTS § 843 comment c (1979); *see also* 2 H. FARNHAM, *supra* note 13, § 463(a) (defining riparian land as "all that parcel which is regarded as one tract").

71. Such a claim was advanced by a riparian in Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921). That case involved a conflict between the town of Gordonsville, which owned a one-acre lot abutting a nonnavigable stream, and an individual riparian landowner, who had separately purchased two tracts of land, located above and below the town's lot and connected by a strip of land. The land above the town's lot was approximately 25 feet in width and abutted the stream. The town sought an injunction to prevent the individual landowner from withdrawing water from the stream at a point located on her upper property and pumping it to her dwelling on the lower section.

In considering the status of the defendant's land, the court concluded that although the lower property was riparian to the stream, it could at best be regarded as lower riparian land in relation to the town lot. As explained by the court, the lower section was not within the watershed of the upper section and therefore could not be considered to be riparian to that part of the stream abutted by the upper property. *Zinn*, 106 S.E. at 512. Thus, the court focused on physical location within the watershed in defining riparian status.

Because the state supreme court in *Zinn* provided only a vague description of this fourth limitation, the court's language is susceptible to several interpretations. Under the strictest interpretation, the decision could be construed as limiting riparian status to land lying directly behind that area bordering the stream. This interpretation, however, could limit severely the amount of land considered to be riparian and seems to require that water return to a watercourse at a precise point behind the area of contact. It also ignores an important fact of *Zinn*: the two tracts of land owned by the defendant were not regarded in the community as a unitary tract of land. Thus, a broader interpretation of the *Zinn* limitation would be that riparian land includes only that portion of a riparian proprietor's land that is considered to be unitary under reasonable community standards, as reflected in local custom and understandings. Under certain circumstances, like those in *Zinn*, a unitary tract would encompass only that land lying directly behind the area abutting the stream because only that land would form a cohesive tract.

Similarly, when the owner of a waterfront lot subsequently purchases the lot directly above his, he may not be able to claim that the two lots form a unitary tract, for they may not meet community standards for a unitary tract of land.[72] As long as those standards focus solely on whether a tract is held under common ownership or possession, the party could treat the two lots as one riparian tract.[73] But if the community standards for a unitary tract require consideration of additional factors, such as the placement of lot boundary lines on a locality's plat, then the two lots would not form one riparian tract.

Unlike the single transaction test, the unitary tract standard has sufficient flexibility to permit changes in the results achieved by the standard. For instance, if in the last situation community perceptions about the two adjoining lots eventually changed and the lots later were recognized as one tract,[74] they then would meet the unitary tract standard. Under the rigid single transaction test, the two lots never could be considered as one tract of riparian land.

This notion of a unitary tract defined by community standards and physical cohesiveness is not foreign to property law. It appears in

---

72. Other riparians, however, may have difficulty establishing injury, which generally is required in riparian jurisdictions. *See infra* note 198. If, however, the cost of gaining access to the watercourse is prohibitive for one of the lots and the riparian decides to divert water from the other lot to the lot with the poor access, then the lower riparian may be able to convince a court that its rights are injured.

73. *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 843 comment c (1977). Under this approach the unitary tract test almost becomes synonymous with the unity of title test. *See supra* note 61.

74. The flexibility of the unitary tract test arguably could help a riparian locality that has annexed adjoining areas. If community perceptions about the boundaries of the locality's riparian tract change to include the annexed area, the tract then may meet the unitary tract test. But unless the test were changed for public users, the locality could not include lots held in fee by private parties within its unitary tract. A lot separately owned by a private party generally would be regarded as a unitary tract. Evidence of community perceptions about the boundaries of unitary tracts could be found in the appropriate locality's plat, tax map, or other documents setting forth the subdivision of lots in the locality. *See generally* 6 G. THOMPSON, COMMENTARIES ON THE MODERN LAW OF REAL PROPERTY §§ 3034-3036, 3040 (1962) (explaining how a landowner can change his boundaries).

Perhaps because the unitary tract test is based on the somewhat vague notion of community perceptions, some courts prefer instead to apply a unity of title or single ownership standard. Under this standard several tracts within a watershed could qualify as riparian if they are contiguous to each other, if at least one abuts the watercourse, and if all of them are held under common ownership. *See* Ausness, *Water Use Permits in a Riparian State: Problems and Proposals*, 66 KY. L.J. 191, 202 (1977). The single ownership test thus permits a riparian to enlarge his riparian tract by purchasing contiguous lots. *See generally* Levi & Schneeberger, *supra* note 61, at 442. Although the single ownership and unitary tract tests are very similar, some differences exist. For example, whereas the unitary tract test would involve inquiring into reasonable community perceptions, the single ownership test could be applied simply by examining the deeds of the appropriate party.

several different areas of real property where flexibility is needed to ensure fair results and to protect third party interests. The law of adverse possession, for instance, uses the concept to help define when an adverse possessor of a portion of a tract of land can acquire title to the entire tract of land.[75] By requiring that the entire tract qualify as a unitary tract under reasonable community standards before an adverse possessor can acquire title to it, the law of adverse possession is better able to respond to particular circumstances and thus produce just results. Additionally, this requirement ensures that third parties are not unreasonably burdened. If the unitary tract requirement were not imposed, a landowner would have to review the deeds of his neighbors periodically to ensure that a conveyance had not included his land within the boundaries of neighboring land.[76]

Despite its advantages, the unitary tract standard presents serious obstacles to localities attempting to satisfy their public's consumptive needs. Even where a locality abuts a watercourse, that locality would have difficulty arguing that it formed one large unitary tract that could be benefitted by the watercourse. A riparian challenging a use by the locality simply would respond that at the very least the unitary tract test requires common or single ownership. A locality generally could not meet this standard because it consists of numerous unitary tracts owned by private parties.[77] Furthermore, modifying the unitary tract test for the public user could pose a serious challenge to the interests of private riparians. If the locality's argument is accepted, it would appear to permit the public user to expand its riparian holdings, increase its quantitative use rights, and improve its priority status by annexing adjoining areas.

---

75. Under the concept of constructive adverse possession, a party in actual adverse possession of a part of a unitary tract of land can acquire title to the whole if he meets the requirement of adverse possession for the part and if he enters under color of title. *See, e.g.*, Murphy v. Doyle, 37 Minn. 113, 33 N.W. 220 (1887); Mullis v. Winchester, 237 S.C. 487, 118 S.E.2d 61 (1961). *See generally* 3 AMERICAN LAW OF PROPERTY § 15.11 (A. Casner ed. 1952); 5 G. THOMPSON, *supra* note 74, § 2545 (1979).

76. If the unitary tract standard did not exist, an adverse possessor conceivably could enter onto a part of one tract and acquire title to the entire tract, as well as a neighboring tract, through the concept of constructive adverse possession. To establish his claim to the neighboring tract, though, the adverse possessor generally would have to establish color of title to the neighboring tract by producing a written instrument, like a deed, that included that tract. *See* 3 AMERICAN LAW OF PROPERTY § 15.11 (A. Casner ed. 1952). Thus, if the unitary tract standard were not imposed, a landowner would need to review the deeds for neighboring land to discover and prevent possible constructive adverse possession claims.

77. *Cf.* RESTATEMENT (SECOND) OF TORTS § 843 comment c (1977) (riparian land only includes tract held "in one possession").

But if the meaning of the unitary tract test is not changed for the public user, then the test effectively precludes meaningful uses by a riparian locality. The only way to give the public riparian rights comparable to the private riparian's is to define the unitary tract of a riparian locality as including all land that adjoins the locality's waterfront property, that forms a physically cohesive area, and that is held under "common jurisdiction" with the waterfront parcel. Whether this approach would infringe impermissibly on the rights of private riparians depends on the meaning of the reasonable use requirement, for most of their concerns raise issues that are at the heart of that requirement. Protecting the reliance interests of private users thus could occur through the reasonable use requirement.

Like the physical contact and watershed tests, the unitary tract test still effectively serves several important functions.[78] But, to avoid unnecessarily restrictive results, all three tests must be interpreted in light of those functions to ensure that the tests can respond to modern water supply problems. If, for instance, a court is willing to permit transfers of riparian rights, then the court should not interpret the physical contact standard literally to require all benefitted land, even the land to which the rights are transferred, to be in physical contact with a watercourse.[79] A functional or policy-oriented approach to those tests also would ensure that the watershed test is the key stan-

78. In its report WATER POLICIES FOR THE FUTURE, the National Water Commission recommends that "[r]iparian restrictions on who may use water at what locations should be abolished." NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 281 (1973). Although this recommendation may be advisable when a state is willing to substitute the riparian doctrine with a comprehensive permit system, the three riparian land tests identified above should be retained, with the suggested modifications, where a state is not willing to do so. Indeed, if interpreted as suggested, the restrictions may even help to further another recommendation of the Commission: that states in the East at least "proceed on a basin-by-basin basis," *id.* at 280.

79. *See infra* Part II.C.2. Applying the watershed limitation and the physical contact standard together also demonstrates some of the problems that can arise if a literal approach is taken. Once the maximum area is defined by the watershed test, the physical contact standard becomes as much a test of happenstance as a test of reasonable expectations. If a landowner happened to own a tract of land stretching from the watercourse to the end of the watershed, the entire tract would qualify as riparian land. But, if the landowner later sold that part of his tract beginning one mile from the watercourse and extending to the end of the watershed, the conveyed land literally would not meet the physical contact test and thus would not seem to be riparian land. A literal interpretation of the physical contact standard would limit the utility of the watershed test. Once development occurred and a portion of the tract lost physical contact with the watercourse, that portion would cease to be riparian land, regardless of whether the watershed test was met. A more functional or policy-oriented approach would focus on whether the policies served by the physical contact test would be undermined by allowing the land to retain its riparian status.

dard and that artificial interpretations do not prevent the maximum possible area from being benefitted.

Unlike the other tests, the single transaction standard fails to serve an independent function that justifies its retention. Courts abandoning the standard, though, need to adopt some restrictions to protect present users. While the unitary tract test would provide protection against significant geographic development, the reasonable use test should be used to protect against unreasonable increases in quantitative use.

Abandoning the single transaction standard, however, will not reverse the adverse consequences it already has caused. Subdivided tracts of riparian land should not reacquire the riparian rights that once could be exercised for the entire tract. But if this suggestion is combined with a rule permitting transferability of riparian rights, then some of the consequences can be reversed through the marketplace. Before such a possibility can be discussed further, the standard used to define the quantitative use rights of riparians must be examined. That standard is the reasonable use requirement.

B. The Reasonable Use Requirement: Balancing Use Rights Through Quantitative Limits

The second key principle, that a use must be reasonable, also plays a major role under the riparian doctrine: it defines the quantitative use rights of each riparian and thus, provides a standard for resolving conflicts among users. Although the importance of this function cannot be denied, the reasonable use requirement has developed in two major ways that hinder resolution of modern water supply problems.

First, courts in riparian jurisdictions have taken a narrow perspective in defining quantitative use rights. This perspective apparently resulted because early in the development of the riparian doctrine courts began to assume that riparians were, and would continue to be, private agrarians who supplied all their consumptive needs. Though this assumption no longer is valid, many modern courts appear reluctant to reject it and broaden their scope of inquiry. As a result, private users involved in large-scale business operations and public users attempting to meet the demands of their public have had difficulty establishing their uses as reasonable.[80]

80. *See infra* notes 85-91 and accompanying text.

Second, the flexibility and uncertainty of the reasonable use standard create problems for public and large private users attempting to plan for future use. Like reasonableness standards adopted in other areas of the law, the reasonable use requirement is imprecise and varies according to the facts and circumstances of a particular situation. Because of this imprecision, and flexibility, users have had difficulty predicting whether a use will be protected in the future. Each of these problems will now be discussed to determine whether they can be partially or wholly resolved by modifying and updating the reasonable use requirement.

1. Changing the Judiciary's Perspective to the Reasonable Use Limitation

The courts have identified a range of factors to be considered in determining whether a use is reasonable. They include: the normal conditions of the stream (such as its nature and size), the purpose of the use, the compatibility of the use with other uses, the status of the user as an upper or lower riparian, rainfall and other weather conditions, the quantity of water used in relation to the size of the stream, and local custom.[81] Although the importance of a use is not determinative,[82] some uses tend to have a higher priority than others under the riparian doctrine. For example, domestic uses, such as using water for drinking, bathing, and cooking,[83] usually receive the highest priority when a conflict arises. Under certain circumstances this pri-

81. *See* Kyser v. N.Y. Cent. R.R. Co., 151 Misc. 226, 271 N.Y.S. 182, 186 (1934) (discussing extent of use, capacity of stream, downstream uses, effect of use on others); Davis v. Town of Harrisonburg, 116 Va. 864, 83 S.E. 401, 403 (1914) (focusing on purpose of use); Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459, 462-63 (1912) (discussing normal conditions and purity, but rejecting importance of use as a factor). *See generally* RESTATEMENT (SECOND) OF TORTS § 850A (1977); 2 H. FARNHAM, *supra* note 13, § 466.

82. *See, e.g.*, Strobel v. Kerr Salt Co., 164 N.Y. 303, 58 N.E. 142, 147-48 (1900); Wheatley v. Chrisman, 24 Pa. 298, 302 (1855); Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459, 463 (1912).

83. At common law, domestic uses typically include using a watercourse for drinking, bathing, cooking, and watering livestock. *See, e.g.*, Cowell v. Armstrong, 210 Cal. App. 218, 290 P. 1036, 1038 (1930) (domestic uses were those made to fulfill the "necessities of life on riparian land such as household use, drinking, watering domestic animals"); Filbert v. Deckert, 22 Pa. Super. 362, 368 (1903) (domestic uses are not restricted to family enjoyment, but rather include all uses by a riparian to satisfy natural wants such as drinking, washing, cooking and helping to preserve life and health). Comprehensive permit systems generally have defined domestic uses in a similar manner. *See, e.g.*, FLA. STAT. ANN. § 373.019(6) (West 1974) (domestic uses include any "use of water for the individual personal household purposes of drinking, bathing, cooking, or sanitation"); KY. REV. STAT. § 151.100(9) (Supp. 1982) (domestic uses include any "use of water for ordinary household purposes, and drinking water for poultry, livestock, and domestic animals").

ority even may permit an upstream riparian to exhaust the water in a watercourse, without leaving any water for downstream riparians.[84]

The judicial preference for domestic uses suggests that a riparian locality meeting the domestic needs of its inhabitants would have priority over most other uses. In applying the reasonable use standard, however, the courts have taken a narrow perspective, defining the standard primarily in the context of an individual private agrarian.[85] The cases establishing the priorities between different types of uses demonstrate the courts' tendency to assume that a riparian is a private agrarian.[86] Traditionally the courts have distinguished between "natural" and "artificial" uses, giving a preference to those uses falling within the first category.[87] Natural uses, the preferred category, are those uses that satisfy the "natural" wants of a riparian and include watering livestock and supplying the domestic needs of the riparian and his family.[88] Artificial uses, on the other hand, are uses that are not needed to sustain life and generally include uses by business

84. *See* Evans v. Merriweather, 4 Ill. (3 Scam.) 492, 496 (1842); Spence v. McDonough, 77 Iowa 460, 42 N.W. 371, 371 (1889); Norfolk & W. Ry. Co. v. Graham Land & Improvement Co., 10 Va. L. Reg. 983, 984 (Cir. Ct. 1904). *See generally* RESTATEMENT (SECOND) OF TORTS § 850A comment c (1977) (explaining effect of preference under natural flow and reasonable use theories). Statutory planning and policy provisions enacted in many states generally reaffirm the common law preference for domestic uses, especially human consumptive uses. *See, e.g.*, IND. CODE ANN. § 13-2-1-3(1) (Burns 1981) ("use of water for domestic purposes shall have priority and be superior to any and all other uses"); KY. REV. STAT. ANN. § 151.140 (Bobbs-Merrill 1980) ("nothing herein shall interfere with the use of water for agricultural and domestic purposes"); VA. CODE § 62.1-44.36(2) (1982) ("preference shall be given to human consumption purposes over all other uses"). In many of these states, though, the preferences only affect the rights of permittees and do not bind courts applying riparian principles to exempted users. *See, e.g.*, MD. NAT. RES. CODE ANN. § 8-802(b) (1983).

85. *See, e.g.*, Pernell v. City of Henderson, 220 N.C. 79, 16 S.E.2d 449, 451 (1941) (concluding that supplying "the inhabitants of a municipality with water for domestic purposes is not a riparian right" and that municipality therefore could not divert for domestic uses). *But see* City of Canton v. Shock, 66 Ohio St. 19, 63 N.E. 600, 603 (1902) (concluding that "if the upper proprietors have grown so large or become so numerous as to consume most or all of the water, the lower proprietors have no cause of complaint, because it is only what they should have reasonably expected in the growth and development of the country").

86. Further evidence of the judiciary's narrow perspective is provided by the cases addressing the lawfulness of diversions by local governments, which will be discussed later. *See infra* notes 173-83 and accompanying text. *See generally* Ziegler, *Acquisition and Protection of Water Supplies by Municipalities*, 57 MICH. L. REV. 349 (1959).

87. *See, e.g.*, Evans v. Merriweather, 4 Ill. (3 Scam.) 492, 495 (1842). *See generally* RESTATEMENT (SECOND) OF TORTS § 850A comment c (1977); 7 R. CLARK, *supra* note 1, § 614.2, at 77 (1976).

88. Evans v. Merriweather, 4 Ill. (3 Scam.) 492, 495 (1842). Today courts generally refer to these uses as domestic uses. *See, e.g.*, Cowell v. Armstrong, 210 Cal. App. 218, 290 P. 1036, 1038 (1930).

and industrial riparians.[89] Because municipalities are corporate bodies, the courts traditionally have reasoned that they cannot have any natural wants and that they therefore should not be entitled to the preference given to natural users.[90]

The courts' traditional approach to evaluating the reasonableness of public uses is archaic. Although the courts' narrow perspective may have been responsive to the needs of riparians in the 1800's when many of them were private individuals, it does not accurately reflect modern water use patterns. The courts' approach to public domestic uses, for instance, ignores the fact that today local governments conduct most significant domestic uses.[91] Despite this change in roles, many courts continue to evaluate the reasonableness of these uses from their traditionally narrow perspective. To modernize their approach to the reasonable use standard, the courts either should redefine the standard to protect public, as well as private, domestic users or should distinguish between the two types of users and develop separate standards and priorities for each.[92] Because of important differ-

89. Evans v. Merriweather, 4 Ill. (3 Scam.) 492, 495 (1842).

90. *See, e.g.*, Stein v. Burden, 24 Ala. 130, 146 (1854). *See also* 7 R. CLARK, *supra* note 1, § 614.2, at 80-81 (1976) (discussing the traditional belief that corporations do not have "natural" bodies and therefore cannot have natural wants). Many courts use a similar type of reasoning to evaluate the reasonableness of business uses. As corporate entities, business users are not conducting uses that are needed to sustain life and therefore are not entitled to a preference for their uses. *See, e.g.*, Strobel v. Kerr Salt Co., 164 N.Y. 303, 58 N.E. 142, 147-48 (1900); Weiss v. Oregon Iron & Steel, 13 Or. 496, 11 P. 255, 257 (1886) (rejecting argument that use should be found reasonable because business was a "laudable enterprise"). Some courts also point out that any approach giving a private business use a preference because of its importance to the public or to the economy would constitute a taking for public use without just compensation of the rights of other private riparians injured by the use. Drake v. Lady Ensley Coal, Iron & R.R. Co., 102 Ala. 501, 14 So. 749, 751 (1894); Arminius Chemical Co. v. Landrum, 113 Va. 7, 73 S.E. 459, 463 (1912); Day v. Louisville Coal & Coke Co., 60 W. Va. 27, 53 S.E. 776, 777 (1906). The few courts that take a more liberal approach to defining what constitutes a reasonable business or industrial use usually emphasize the productiveness of the use or its importance to the public in upholding the use as reasonable. Pugh v. Wheeler, 19 N.C. 50, 54 (1836); Pennsylvania Coal Co. v. Sanderson, 113 Pa. 126, 6 A. 453, 456-57 (1886).

Whatever the reason for denying a preference to business users, the consequence in most traditional riparian jurisdictions is that business users must exercise their rights so as not to destroy or materially diminish the flow for lower riparians and cannot, under any circumstances, consume all the water in a stream to the exclusion of lower riparians. *See* Evans v. Merriweather, 4 Ill. (3 Scam.) 492, 495-96 (1842); *see also* 2 J. MINOR, INSTITUTES OF COMMON AND STATUTE LAW 28 (4th ed. 1892).

91. According to an assessment done by the U.S. Water Resources Council, public water supply systems met the needs of 179 million people in 1975 (83% of the population), while the other 37 million either used their own domestic systems or did not have a piped water supply system. *See* 1 U.S. WATER RESOURCES COUNCIL, THE NATION'S WATER RESOURCES: 1975-2000, at 32 (1978).

92. Furthermore, although the common law preference for domestic uses over business uses

ences between the two, the second alternative is preferable.[93]

Regardless of the specific action taken to modernize the reasonable use requirement, it is clear that a court willing to broaden its perspective of the reasonable use requirement, once again, should recognize the need to adopt limitations to protect the private interests at stake. For instance, although a change in perspective is needed to protect public domestic uses, local governments admittedly conduct domestic uses on a much larger scale than individual riparians. Because of this fact, it is highly likely that a substantial change in perspective would cause serious infringement of private interests. The severity and unreasonableness of the infringement would depend, to an extent, on the particular situation. Where public users are conducting domestic uses for the benefit of numerous private riparians, the infringement may not be as serious as it would first appear. Because the locality is supplying riparian inhabitants, the public uses should not duplicate significantly the uses conducted by private riparians. At least in these situations, it would seem inaccurate to evaluate the reasonableness of the locality's domestic uses from the perspective of a single private riparian. That standard of comparison fails to recognize the change in water use patterns. Rather, what the courts should be comparing is the domestic use of the locality with the domestic use of the appropriate number of private riparians who would have had to conduct the use if the locality had not done so.

The problem of infringement is more difficult to resolve where a locality or private business is a nonriparian attempting to purchase use rights from a riparian proprietor or where the locality or private business is a riparian planning to exercise its riparian rights for the

---

still seems justifiable, the courts need to develop a more meaningful standard for evaluating business uses. One possible standard, already used in a few jurisdictions, is to evaluate the reasonableness of a business use by comparing it to other "like" uses. As one court using this approach explained, "the use by any particular person must be the same as the neighboring proprietor in like circumstances." Dunlap v. Carolina Power & Light Co., 212 N.C. 814, 195 S.E. 43, 45 (1938). As the court further elaborated, "[t]he use of one farmer shall be judged by the use of another farmer, one manufacturer by the customs and use of another manufacturer." *Id.* Adoption of a "like use" standard for private uses would allow courts to develop more consistent standards of comparison and to protect profitable business uses without having to rely on their economic importance to the public. Even under a like use standard, though, some comparison of different uses would be necessary, and if the competing use is domestic the business use generally should be subordinate to the domestic use. *See infra* notes 95-112 and accompanying text for further discussion of priorities of use. Whether riparian rights are transferable becomes an important issue when a riparian wants to pursue a productive business use without worrying about diminishing the flow. For a discussion of this issue *see infra* Part II.C.

93. For further discussion of these differences *see infra* Part III.A.

benefit of nonriparian land. What is clear is that a populous locality or large business should not be able to purchase use rights for a small tract of riparian land and then exercise those rights for the benefit of all its inhabitants or corporate property. Permitting such a redistribution of resources in a riparian jurisdiction would raise serious fairness concerns. Any further treatment of the issue must wait until the concepts of transferability and diversion have been discussed.[94]

2. *Clarifying Quantitative Rights*

Besides limiting the consumptive rights of public domestic and private business users, the reasonable use requirement also hinders long-range planning efforts. Because the reasonableness of a use varies according to surrounding facts and circumstances, users generally cannot predict whether a use will be protected in the future. Changed conditions may cause a once permissible use to become unreasonable. Furthermore, under common law principles, a riparian who has been exercising a riparian right for a long time does not obtain any priority over rights subsequently exercised. Riparian rights in undeveloped riparian lands are not extinguished by nonuse and, once exercised, generally are entitled to the same legal protection as established uses.[95]

While the supply of water remains abundant, the flexibility of the reasonable use limitation should not pose serious problems for riparians. Because most users would have sufficient water, few conflicts would arise. Aware of the abundance of water, users would be more willing to accept the risk of proceeding with a use even though its continued permissibility might be difficult to predict. As water becomes less plentiful, though, the flexibility of the reasonable use limi-

---

94. *See infra* Parts II.C. and III.A.

95. Leonard v. St. John, 101 Va. 752, 45 S.E. 474, 477 (1903). *But see* RESTATEMENT (SECOND) OF TORTS § 850A(h) (1977) (listing priority of use as one factor to consider in determining reasonableness of use). In the few cases where a limited supply has made it impossible for an old and a new user to co-exist, most courts have protected the prior user. *See, e.g.*, Rowland v. Ramelli, 25 Cal. 3d 339, 158 Cal. Rptr. 350, 362, 599 P.2d 656, 668-69 (1979) (when there is an interest in promoting clarity and certainty of rights, unexercised rights may lose their priority); Harp v. Iowa Falls Elec. Co., 196 Iowa 317, 191 N.W. 520, 525 (1923) (power company enjoined from interfering with use of prior riparian user).

In contrast to the riparian doctrine, the prior appropriation doctrine uses an "all or nothing" approach to dispute resolution. Junior appropriators know that their rights always will be subservient to those of a senior appropriator, regardless of the circumstances. 1 S. WIEL, *supra* note 13, § 1014. Although this approach is clearer, it is not always more efficient. *See infra* note 96.

tation could produce serious inefficiencies.[96] The more uncertain a water allocation system is, the more it discourages reliance on property rights and investment in productive activities. Also, because of the system's flexibility, riparian users often would have to resort to the courts to clarify their rights.[97]

Some flexibility admittedly is needed and desired.[98] Physical conditions affecting use of watercourses can vary at any time, often without sufficient warning to permit planning. Flexibility at least is needed to allow the legal rules to respond to changes in physical conditions. Indeed, a rule defining and taking into account such changes probably would be unworkable, if not impossible to formulate. The flexibility of the reasonable use requirement thus permits the courts to respond to factual variations in a manner that they consider fair.[99]

Nevertheless, several steps should be taken by the courts to clarify the quantitative rights of riparians. Perhaps the most significant

---

96. According to one commentator, the flexibility of the riparian doctrine forces "[i]nvestors in multimillion dollar enterprises and international agencies underwriting large projects now [to] seek from the law the security once supplied by a seemingly inexhaustible stock of water." Trelease, *supra* note 10, at 386; *accord* RESTATEMENT (SECOND) OF TORTS § 850A comment k (1977). This approach to defining rights and resolving conflicts, however, has some advantages. By reviewing uses as cases arise, the courts are not forced to define rights based on circumstances existing years ago, but rather can respond to changed circumstances. Also, the courts can protect new uses that are reasonable and efficient. In contrast, the prior appropriation doctrine requires courts to fix rights in time, regardless of changed circumstances. Senior appropriators have little incentive to develop more efficient uses because they rarely are threatened by a denial of water. Furthermore, because nonuse eventually may lead to forfeiture of their rights, *see* 1 S. WIEL, *supra* note 13, at 609, senior appropriators will continue to use the same amount of water they always have used even if they do not need that amount. Thus, although the prior appropriation doctrine instills security among senior users, it can lead to inefficient results in the long run. *See generally* Trelease, *Alternatives to Appropriation Law*, 6 DEN. J. INT'L L. & POLICY 282 (1976).

97. As one commentator explained, "where riparian owners share in the use of water based on the relative social value of their particular use, allocations are made on a case-by-case, ad hoc basis which ignores the need for certainty, an essential prerequisite for major capital investment." White, *Legal Restraints and Responses to the Allocation and Distribution of Water*, 6 DEN. J. INT'L L. & POLICY 341, 350 (1976).

Because the reasonable use standard requires established uses to adjust to often unpredictable changes in circumstances, many commentators, legislators, and public interest groups have advocated adoption of a more certain system for defining use rights and resolving conflicts. *See supra* notes 9-12 and accompanying text.

98. *See supra* note 96.

99. Such flexibility exists in other areas of property law as well. Under the law of easements, for example, the owner of the dominant estate is permitted to increase his use of the servient estate so long as the increase is "reasonable." Zubli v. Community Mainstreaming Associates, 423 N.Y.S.2d 982, 102 Misc. 2d 320, 330 (1979); Waskey v. Lewis, 224 Va. 206, 294 S.E.2d 879, 881 (1982); Rippetoe v. O'Dell, 276 S.E.2d 793, 796 (W. Va. 1981). Whether an increase is reasonable depends on whether a development of the dominant tenement could reasonably be expected. *See generally* 2 AMERICAN LAW OF PROPERTY § 8.66 (A. Casner ed. 1952).

step that could be taken would be to clarify the system of priorities or preferences used in evaluating the reasonableness of conflicting uses. As explained earlier, the outdated assumptions and general preferences of that system no longer provide an adequate basis for resolving conflicts between users. A clearer, more specific set of priorities would contribute to a more effective water allocation system by reducing the number of variables that a user would have to consider in weighing his options. Under a clearer system, users facing a water shortage would be better able to predict where they stood in relation to other users and thus could take appropriate action.[100]

To improve the common law's priority system, the courts must clearly identify the factors that are important to resolving conflicts among users. To encourage and protect productive uses, these factors should include the duration of a use, its priority in time, and the amount of a user's investment.[101] Courts in riparian jurisdictions

100. In contrast, most water shortage provisions presently applicable in riparian and permit jurisdictions fail to provide a clear set of priorities and usually only apply when governing bodies determine that an emergency exists. *See, e.g.*, VA. CODE § 15.1-37.3:4 (1981). Furthermore, the provisions define water shortage in vague terms, typically providing that a shortage exists when it is necessary to protect the public health or safety or to protect the public interest in lands or waters. *See, e.g.*, GA. CODE ANN. § 12-5-31(1) (1985). For a commentator's definition of water shortage *see* Trelease, *supra* note 10, at 408-09. Users frequently are not given any indication of how their needs may be curtailed. Only general legislative guidelines exist for determining priorities of users during a water shortage. *See, e.g.*, VA. CODE § 62.1-44.36(2) (1982).

In developing a clearer, more detailed priority system, though, a court should avoid adopting a rigid, inflexible list of priorities. As Professor Trelease admonished, these types of lists "too often reflect the economic and social thought of the moment . . . and are soon outmoded by time and change." Trelease, *supra* note 10, at 400. Furthermore, they "prevent the intelligent weighing of alternative and relative values." *Id.*

101. To minimize the degree to which clarifications made in the priority system would infringe on private interests, the courts might want to develop a more detailed priority system that would apply to private users only when the water in a watercourse falls below a predetermined level. As long as the water supply of the watercourse remained above the specified minimum level, normal riparian principles could apply. Under this suggested approach, the courts would be able to retain, in modified form, the main advantage of the reasonable use requirement: its ability to respond to variations in physical conditions. Now, however, the flexibility of that requirement would be limited to situations where it would not seriously handicap parties attempting to respond to water shortages.

The significance of this suggestion depends in part on the standing requirements adopted by a court under the riparian doctrine. If a court requires a riparian to establish actual harm before recovering for an unlawful use, then the suggestion is not that significant. When water is plentiful, most riparians should not be injured. If, however, the court permits a riparian to establish potential injury to recover, then the suggestion could have important ramifications. Even though sufficient water may exist to meet present needs, a riparian still may be able to establish injury to future uses. For further discussion of the actual injury requirement see *infra* note 198.

Although the courts could implement the suggestion fairly easily by using the minimum flow level of a stream as one factor affecting the reasonableness of a use and as triggering the use of the more specific priorities, the legislative branch probably could develop this alternative more effec-

presently are reluctant to consider these factors. They need to recognize that giving the factors some weight encourages the user to rely on his property rights and thus, increases his incentive to develop his property interests. Protection of reliance interests is especially important to public users, who generally expend a significant amount of capital to operate a public water supply system. A priority rule, however, should not be based solely on length of use or first-in-time status, for these factors tend to ratify the status quo and produce inefficient results. Prior users would not have any incentive to change or improve their uses because they generally would be protected over new uses, even if the new uses were more efficient.[102] Furthermore, although a rule based on the amount of investment might encourage a user to increase his investment to maintain his priority, it would not encourage him to consider whether the new investment would lead to a more efficient use.

If riparian rights are freely transferable, then the efficiency problems caused by a rule based on duration of use, first-in-time status, or the amount of an investment could be partially resolved through the marketplace. A party who believed he could make a more productive use of riparian rights could purchase them from the present user. This solution, however, would not help that party after he purchased the riparian rights of a less efficient user, at least not where he was subject to a first-in-time or duration of use rule. Even though his use may be the most productive in the area, it still would be subsequent in time to and, under a first-in-time or duration rule, therefore subordinate to many neighboring uses. Furthermore, the ability of a jurisdiction to encourage more efficient uses depends on the transferability of use rights, a characteristic not fully recognized in all riparian jurisdictions.[103]

Because of these problems, a riparian jurisdiction should not give first-in-time status or duration of use controlling, or even substantial, weight, but rather should consider them as part of a list of factors

---

tively. Unlike the courts, it would not have to wait for a controversy to arise before it could define scarcity in a particular watercourse or set priorities. Most comprehensive reforms require minimum flows to be set by the appropriate regulatory body and set forth priorities in case of shortage. *See, e.g.*, F. MALONEY, R. AUSNESS, & J. MORRIS, MODEL WATER CODE §§ 1.07(4), 2.09 (1972).

102. *See supra* note 13. Since riparian jurisdictions tend to be water-rich, the impact of this built-in inefficiency would not be as severe as in the arid West. Most users in riparian jurisdictions normally would be able to get sufficient water, so conflicts between prior and subsequent users would not arise as often.

103. For a discussion of this issue *see infra* Part II.C.

affecting priority.[104] Only when accompanied by other significant factors, like the domestic nature of a use, should those factors favorably affect the priority status of the user.[105] Although the amount of investment also should not be controlling, courts concerned about the high costs of developing public water supplies might want to give a preference to public users because of their high capital outlays. Given the judicial preference for domestic uses, these objectives also could be accomplished by recognizing that most public uses sustain the natural wants of a locality's inhabitants and therefore, are domestic uses.

Besides recognizing the above factors, the courts also should consider the water distribution patterns and needs of a particular area. Because most states have an uneven distribution of water resources and population, the priority rules should vary somewhat according to the hydrologic and demographic facts of particular regions.[106] Such regional variation would allow courts to respond to differences in needs and types of uses without having to choose between a system favoring developed urban areas and one favoring rural, sparsely populated areas.[107]

At the very least, though, riparian law should protect the prior user indirectly through its burden of proof, much as the United States Supreme Court did in a 1982 decision involving allocation of consumptive rights among states. In *Colorado v. New Mexico*,[108] the

104. According to the RESTATEMENT (SECOND) OF TORTS, only a few courts in riparian jurisdictions have specifically mentioned priority in time as a factor affecting the reasonableness of a use. But when a situation arises where a new use threatens a prior use, the courts tend to protect the prior use. RESTATEMENT (SECOND) OF TORTS § 850A comment k (1977). Because of this tendency, the Restatement concludes that priority in time is "an important factor" in determining the reasonableness of a use. *Id.*

105. Alternatively, a court could develop a preference for being first in time that would apply only to a defined category of uses, like those benefitting the public health and welfare or requiring high capital outlay.

106. For example, although Virginia possesses an abundance of water, it is unevenly distributed throughout the state. Areas of the state experiencing the greatest growth in population and economic development physically lack sufficient water resources to meet the increased demand. Tidewater Virginia, for instance, has 60% of the state's population, but only 29% of the state's land. C. COX, VIRGINIA'S MOST IMPORTANT WATER-RELATED PROBLEMS 8 (Virginia Water Resources Research Center, Special Report No. 13, Aug. 1981). *See generally* W. COX, L. SHABMAN, S. BATIE, & J. LOONEY, *supra* note 12 (discussing Virginia's current water supply problems).

107. Most comprehensive reforms proposed in eastern states reject a regional approach to regulating water use rights and instead use a centralized administrative system. *See, e.g.*, The Virginia Water Law, H.B. 1420, 1981 Va. Gen. Assem., Reg. Sess.

108. 459 U.S. 176 (1982), *dismissed on reh'g*, 104 S. Ct. 2433 (1984). In *Colorado v. New Mexico*, Colorado sought an equitable apportionment of the Vermejo River, which begins in Colorado and flows into New Mexico. Before the request only farm and industrial users in New Mexico had been using the river's waters. A Special Master, appointed by the Supreme Court, initially

Court required a state seeking an apportionment of interstate waters to establish by clear and convincing evidence that the benefits of its proposed use of the waters substantially outweighed the harm that might result.[109] Recognizing that this burden was higher than the preponderance standard ordinarily used in a civil case, the Court explained that the higher burden reflected its view that the party proposing a use should bear the risks of an erroneous decision. In the words of the Court, "[t]he harm that may result from disrupting established uses is typically certain and immediate, whereas the potential benefits from a proposed diversion may be speculative and remote."[110] Further, as the Court explained on remand, the clear and convincing standard "accommodates society's competing interests in

---

recommended that Colorado be permitted to divert a specified quantity of water. After considering New Mexico's exceptions to the Master's findings, the Supreme Court concluded, in its first decision in the controversy, that the Master did not properly consider all relevant factors and that additional findings needed to be made to reach an equitable apportionment of the river's waters. 459 U.S. at 189-90. On remand the Master made some additional findings, but reaffirmed his original recommendation. In considering New Mexico's second set of exceptions, the Court held that Colorado did not establish by clear and convincing evidence that its proposed diversion should be allowed. Colorado v. New Mexico, 104 S. Ct. 2433 (1984).

One of the issues considered by the Court concerned the significance of the fact that approximately three-fourths of the river's flow originated in Colorado. In rejecting the argument that this fact automatically entitled Colorado to a portion of the river's waters, the Court explained that rights under the prior appropriation doctrine are based on appropriation and actual use, and not on land ownership as under the riparian doctrine. 459 U.S. at 179 n.4. In a prior appropriation state, then, equitable apportionment of water rights should depend on the benefits and harms of competing uses, or, in the words of the Court, on "whether the benefits to the state seeking the diversion substantially outweigh the harm to existing uses in another state." *Id.* at 190. This conclusion provides a strong disincentive to riparian jurisdictions thinking of switching to prior appropriation principles. By doing so, they may be jeopardizing their chance for equitable apportionment of interstate waters. In distinguishing between the prior appropriation and riparian doctrines, the Court suggests that the fact that a portion of a river lies in one state could be significant in apportioning waters among riparian jurisdictions. *Id.* at 190.

The doctrine of equitable apportionment was first applied by the Supreme Court in a controversy over the Arkansas River. *See* Kansas v. Colorado, 206 U.S. 46 (1906). In that dispute the Court announced that it

> must consider the effect of what has been done upon the conditions in the respective states and so adjust the dispute upon the basis of equality of rights as to secure as far as possible to Colorado the benefits of irrigation without depriving Kansas of the like beneficial effects of a flowing stream.

Id. at 100. This weighing of the potential benefits and harms has continued through the recent dispute over the Vermejo River. Colorado v. New Mexico, 459 U.S. 176 (1982), *dismissed on reh'g*, 104 S. Ct. 2433 (1984). For a discussion of the doctrine of equitable apportionment see Trelease, *Arizona v. California: Allocation of Water Resources to People, States, and Nation*, 1963 SUP. CT. REV. 158, 169-72 (1963).

109. 459 U.S. at 187-88.

110. *Id.* at 187.

increasing the stability of property rights and in putting resources to their most efficient uses."[111]

Similar reasoning could be used to allocate the burden of proof among users of intrastate waters. As with new uses of interstate waters, a party pursuing a new use of waters within one state should bear the burden of establishing the reasonableness of its use. Because the benefits of established uses are known, while the benefits of the proposed use are speculative, a new user should not be able to upset established users without clearly demonstrating the reasonableness of the proposed use.[112]

---

111. Colorado v. New Mexico, 104 S. Ct. 2433, 2438 (1984).

112. Establishing an unlawful diversion does not entitle a complaining riparian to relief, for other requirements exist as well. *See* Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 515 (1921). To be entitled to relief for unlawful diversion, a plaintiff must establish, by a preponderance of evidence, that defendant's actions prevented the watercourse from flowing in a natural course upon plaintiff's land, Heninger v. McGinnis, 131 Va. 70, 108 S.E. 671, 676 (1921), and that plaintiff suffered injury because of defendant's conduct, *see infra* note 198.

The type of cause of action brought when a riparian is unlawfully diverting a watercourse depends to an extent on the context in which the issue arises. *Compare* Norfolk & W. Ry. Co. v. Graham Land & Improvement Co., 10 Va. L. Reg. 983 (Cir. Ct. 1904) (issue arose as part of condemnation proceedings brought by a railroad pursuant to its statutory authority) *with* Latta v. Catawba Elec. Co., 146 N.C. 285, 59 S.E. 1028 (1907) (suit brought to construe a deed and determine who had riparian rights). Normally, the appropriate cause of action would be a private nuisance. *See, e.g.*, Cook v. Town of Mebane, 191 N.C. 1, 131 S.E. 407 (1926); *see also* 2 H. FARNHAM, *supra* note 13, § 474, at 1606-07 (suggesting that a bill to quiet enjoyment of a watercourse may be filed) and § 505, at 1662 (stating that in some jurisdictions the proper cause of action would be trespass on the case).

As defined by one jurisdiction, a nuisance involves interference "with some right incident to the ownership or possession of real property" and may be established by substantial impairment of the owner's "comfort, convenience and enjoyment of the property, causing a material disturbance or annoyance in use of the realty." National Energy Corp. v. O'Quinn, 223 Va. 83, 286 S.E.2d 181, 182 (1982); *see also* RESTATEMENT (SECOND) OF TORTS § 821B (1977) (private nuisance "is a nontrespassory invasion of another's interest in the private use and enjoyment of land"). Because a nuisance action involves injury to property rights, a plaintiff bringing a diversion suit must have riparian rights that are being injured by the diversion to maintain the action. In a riparian jurisdiction this generally means that the plaintiff must own riparian land downstream from the point of diversion. Jurisdiction over watercourses, especially nonnavigable ones, does not provide a locality with a sufficient basis for bringing a nuisance suit for unlawful diversion. Although jurisdiction may give the locality the power to regulate the watercourse and resolve disputes concerning it, jurisdiction does not give the locality riparian rights in the watercourse.

Determining when a cause of action accrues is not an easy task. The running of the statute of limitations for unlawful diversion depends on how a jurisdiction defines injury. For a discussion of the injury requirement see *infra* note 198. The running of the statute also may be affected by whether the diversion constitutes a continuing nuisance. According to one jurisdiction, a nuisance is permanent and not continuous "when the original act . . . is at once productive of all the damage which can ever result from it, and at once destroys the estate for all practical purposes." Norfolk & W. Ry. Co. v. Allen, 118 Va. 428, 87 S.E. 558, 560 (1915). If defendant's diversion activities constitute a continuing nuisance, an aggrieved riparian can bring a cause of action for injury even though

If such an approach to the burden of proof is adopted, it will increase the stability of prior users. It will not, however, guarantee that water resources are shifted to more efficient uses. Whether that occurs depends primarily on the degree to which riparian rights are transferable. The issue of transferability will be discussed now.

C. *The Severability Rule: Defining a Redistribution Principle for Consumptive Rights*

As with other areas of property law, an effective water allocation system must permit transferability of water rights. Without the power to transfer, the holder of a water right would not be able to sell out to a more efficient user.[113] Allowing unrestrained transfers of riparian rights to any party and for the benefit of land located anywhere, though, would create some serious problems.[114] Unlike the allocation of interests in other types of resources, the allocation of consumptive rights in water resources raises certain interests and policy concerns that either cannot be adequately protected in the marketplace or are better resolved by the judicial or legislative branches of the government.[115]

The dependency of the public health and welfare on water re-

---

more than the time prescribed in the statute of limitations may have passed since the wrongful conduct originally occurred.

Defenses typically raised in suits for unlawful diversion include laches, *see* Town of Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700 (1942), acquiescence, *see* Risien v. Brown, 73 Tex. 135, 10 S.W. 661 (1889), and acquisition of the right to divert by prescription, *see infra* notes 206-07 and accompanying text. For a discussion of situations where diversions may be permitted as exceptions to the normal rules see *infra* Part III.B.

113. As Richard Posner explains, "[i]n order to facilitate the reallocation of resources from less to more valuable uses, property rights should, in principle, be freely transferable." R. POSNER, ECONOMIC ANALYSIS OF LAW § 3.11, at 56 (2d ed. 1977). Where resources are freely transferable, "we can be reasonably confident that the shift involves a net increase in efficiency. The transaction would not have occurred if both parties had not expected it to make them better off." *Id.* § 1.2, at 11; *see also* C. MEYERS & R. POSNER, *supra* note 30, at 15-17.

114. Some of the problems can be attributed to the fact that riparian rights, as presently defined, do not include the value of the return flow generated by a particular use. Because of this omission, not all transfers of riparian rights would lead to a more efficient outcome. *See infra* notes 157-60 and accompanying text.

115. Professor Trelease described the need for regulation of marketplace transfers of water rights in slightly different terms. According to Trelease, "the market cannot be relied upon to always produce optimum results" in part because of "the physical properties of water, its transient nature, and the interdependence of its use in common by a number of users" and in part because of "acknowledged imperfections in the market for water and water rights." Trelease, *Policies for Water Law: Property Rights, Economic Forces, and Public Regulation*, 5 NAT. RESOURCES J. 1, 39 (1965) (footnotes omitted). When the market cannot be relied on, Trelease advocates public intervention and regulation. For further discussion of situations where he perceives a need for regulation of the

sources, for instance, requires adoption of transferability rules that facilitate and protect uses by local governments, sometimes to the detriment of productive private users. If unrestrained transfers of riparian rights were permitted, the marketplace would not adequately accommodate the public's consumptive needs. In contrast with private riparians, political factors affect the ability of public users to acquire use rights. Limitations on a local government's ability to raise revenues, for instance, impose external restraints on its financial resources.[116] Also, the condemnation and purchasing powers of localities may vary, depending on size and other factors.[117] Thus, whereas a highly developed urban locality may have sufficient financial resources and political powers to acquire use rights, an undeveloped rural locality may lack the necessary resources or powers. Because the marketplace does not adequately consider these political restraints, and because redistribution raises difficult policy choices, judicial or legislative intervention is needed to protect the public interest. Restraints on transferability would help to ensure that one policy or interest group is not favored to the detriment of other important concerns and thus that an equitable distribution is achieved.[118]

To date, most courts addressing the question of transferability of riparian rights have considered it primarily in the context of nonconsumptive uses, such as constructing a pier or filling in lowland. The majority agrees that riparian rights may be severed from riparian land and separately conveyed.[119] Although the language used by some of

---

market see *id.* at 38-42. Also, for a discussion of some of the policy concerns better resolved by the legislature or judiciary see *infra* notes 163, 185.

116. In Virginia, for example, the power to raise revenues is limited to taxation. VA. CODE § 15.1-841 (1981).

117. *Compare, e.g.*, VA. CODE § 15.1-335 (1981) (allowing cities and counties of a certain size to acquire waterworks systems) *with id.* §§ 15.1-504 to -581 (1981 & Supp. 1985) (describing general powers and duties of counties) *and id.* §§ 15.1-837 to -915.1 (1981 & Supp. 1985) (describing general powers of cities and towns) *and id.* §§ 15.1-916 to -945 (1981) (describing other forms of government for municipalities of less than 50,000). For a discussion of other political factors affecting management and use of water resources see Butler, *supra* note 12, at 782-85. Although it may be more efficient to allow the locality with the lower transaction costs to acquire what water rights it can, such an approach would not necessarily lead to an equitable distribution of water rights among political subdivisions.

118. *But cf.* RESTATEMENT (SECOND) OF TORTS § 856 comment b (1977) (generally arguing that riparian rights should be freely transferable).

119. Mianus Realty v. Greenway, 151 Conn. 128, 193 A.2d 713, 715 (1963); Harbor Island v. Bd. of County Comm'rs, 286 Md. 303, 407 A.2d 738, 746-47 (1979). *See generally* 1 R. CLARK, *supra* note 1, § 53.4; 3 H. FARNHAM, *supra* note 13, §§ 724, 725; 1A G. THOMPSON, *supra* note 74, § 262 (1980). The courts, however, do not agree on what, if any, limitations should be imposed on the severability principle. *Compare, e.g.*, Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535, 537 (1913)

the courts in announcing this "severability rule" suggests that they would take a similar approach to consumptive rights,[120] their analysis provides an inadequate basis for extending the severability principle to consumptive rights. In considering whether nonconsumptive rights should be severable and transferable, the courts almost uniformly focus on the nature of riparian rights to determine whether a transfer would be consistent with the type of property right involved. While this approach may be adequate for nonconsumptive uses, it precludes, or at least discourages, consideration of policy concerns important to the consumptive use situation. The following examination of one court's treatment of the transferability issue in the context of a nonconsumptive use illustrates the court's theoretical perspective and introduces some of the problems that the approach causes for consumptive interests.[121]

1. The Severability Rule and Nonconsumptive Interests

In *Thurston v. City of Portsmouth*, the Virginia Supreme Court unequivocally declared that "riparian rights may be severed from the land to which they were once appurtenant" and separately conveyed.[122] The case involved a dispute between the owner of a parcel

---

(riparian rights may not be severed for use beyond the riparian land to which they are incident) *with* Pyle v. Gilbert, 245 Ga. 403, 265 S.E.2d 584, 589 (1980) (right to make reasonable use of water on nonriparian land could be acquired by grant from riparian owner).

120. *See, e.g.*, Harbor Island Marina v. Bd. of County Comm'rs, 286 Md. 303, 407 A.2d 738, 746-47 (1979); Thurston v. City of Portsmouth, 205 Va. 909, 140 S.E.2d 678, 680-81 (1965).

121. Because the public user raises different policy concerns than the private user, the discussion in Part II.C. will focus primarily on the private user.

122. 205 Va. 909, 140 S.E.2d 678, 680 (1965). The court in *Thurston* also clarified that the principle of severability applied regardless of whether the watercourse was tidal or nontidal. *Thurston*, 140 S.E.2d at 681.

A 1973 decision by the Virginia Supreme Court suggests that the severability principle announced in *Thurston* is not absolute. That decision, Marine Resources Comm'n v. Forbes, 214 Va. 109, 197 S.E.2d 195 (1973), involved a dispute between the state and several parties, who, the state argued, were filling in state-owned subaqueous beds without authorization or a superior claim of right. In response, those parties argued that section 62.1-3 of the Virginia Code, VA. CODE § 62.1-3 (1968) (present version at VA. CODE § 62.1-3 (1982)), created a right to fill subaqueous beds in "riparian owners" and that this right had been severed by the owner of the highland, as permitted by Virginia law, and transferred to them. In rejecting the parties' arguments, the court observed that "Virginia law recognized two types of riparian owners," those with rights appurtenant to the highland and those with rights severed from the highland. *Marine Resources*, 197 S.E.2d at 199. In the instant situation, the relevant law, VA. CODE § 62.1-3 (1968), "conferred the new right to fill only upon the owner of highland with riparian rights appurtenant thereto" and thus did not permit severance of the statutory right. *Marine Resources*, 197 S.E.2d at 199. As the court explained, this conclusion followed from statutory language authorizing "the doing of such acts as are necessary for . . . fills by riparian owners opposite their property . . . ." VA. CODE § 62.1-3 (1968), *quoted and*

of riverfront property and a city which claimed ownership of all the riparian rights once appurtenant to that parcel. The deed conveyed to the landowner's predecessor-in-title had "expressly reserve[d] and except[ed] from this conveyance all the riparian rights appurtaining or in anywise belonging to the said property."[123] After the city acquired these reserved rights, it began to fill in along the shore for the purpose of constructing a highway. Suing to enjoin the fill-in operation, plaintiff argued that the riparian rights were easements appurtenant to the riverfront land that only could be enjoyed by the owner of that land and that therefore could not be severed from the dominant estate.[124]

In rejecting plaintiff's argument, the court observed that prior law had recognized that a riparian right is not just " 'a mere easement to pass over the water or a privilege to use the surface, but [is] prop-

---

construed in Marine Resources, 197 S.E.2d at 198. If the legislature had intended to confer the right to fill upon all riparian owners, then, the court reasoned, it would not have used the phrase "opposite their property."

Because *Marine Resources* involved a statutorily created riparian right which was defined in a manner indicating that severance was not permissible, the decision arguably should have limited precedential effect on *Thurston*. Even assuming that this is the correct interpretation of *Marine Resources*, that decision, nevertheless, indicates that under certain circumstances riparian rights are not severable, but rather must be held by the owner of the highland. The court in *Marine Resources*, however, does not define what those circumstances or rights are, beyond stating that the statutory right under review is one example.

One commentator has concluded that *Marine Resources Comm'n v. Forbes* is "inconsistent" with *Thurston* and "substantially reduces the value of severed riparian rights." M. Livingston, Current Law Governing Rights and Interests in Land Abutting Virginia Waters 44 (Aug. 15, 1982) (unpublished manuscript available at DePaul University College of Law, to be included in a forthcoming book by M. Livingston and L. Butler). She explains:

> Under the *Forbes* rationale, for example, it is questionable whether the owner of severed riparian rights still may build a wharf on submerged lands. Although the common law recognized the right to wharf, the statute cited in *Forbes* also lists 'the placement of private piers for noncommercial purposes' as one of the statutorily permitted uses of subaqueous beds. It apparently limits the right to build a noncommercial pier to owners of riparian lands and to structures placed 'in the waters opposite such riparian lands.' Using the *Forbes* reasoning, a court might well find that the General Assembly intended to restrict the common law right of wharfage to only highland owners of riparian rights.

Id. at 44-45 (footnotes omitted). The commentator also concluded that the no-severability rule of *Marine Resources Comm'n v. Forbes* probably should not violate the due process or takings clauses. In her view as long as the rule "does not reduce the aggregate value of the property below an acceptable level, it is irrelevant that one segment of the bundle of rights is virtually destroyed." *Id.* at 47-48.

123. *Thurston*, 140 S.E.2d at 679-80. Courts will presume that a grant of riparian land includes riparian rights, unless a contrary intent is clear from the face of the deed. *See, e.g.*, Mayor of Paterson v. E. Jersey Water Co., 74 N.J. Eq. 49, 70 A. 472, 479 (1905); Interstate Motels Inc. v. Biers, 213 Va. 498, 193 S.E.2d 658, 662 (1973). *See generally* 3 H. FARNHAM, *supra* note 13, § 723.

124. *Thurston*, 140 S.E.2d at 680.

erty in the soil under the water.' "[125] As a valuable property interest in the soil, a riparian right could be the subject of a suit for damages or an injunction and could be condemned for public use.[126] Similarly, the right could be severed from the land to which it attaches and conveyed apart from that land.

With the exception of these few principles, the court in *Thurston v. City of Portsmouth* did not attempt to explain the nature of riparian rights. Most courts have been equally as vague, perhaps because of the problems that would arise if traditional property concepts were used.[127] Although riparian rights resemble several different types of property interests, none of the traditional classifications fit them precisely. Classifying riparian rights as easements appurtenant, for instance, would mean that the rights only could benefit the dominant estate, or the tract of riparian land, and generally could not be severed.[128] Also, even if the court concluded that riparian rights were easements appurtenant until severed from the dominant estate, at which point they became easements in gross, other problems then arise. As easements in gross, they would be subject to the same limits on transferability as other easements in gross. Although the law governing alienation of easements in gross is not clearly developed, they are, as a general matter, not freely transferable.[129] By concluding that

125. *Id.* (quoting Peek v. City of Hampton, 115 Va. 855, 80 S.E. 593, 594 (1914)); *see also Thurston*, 140 S.E.2d at 680 (quoting prior law as recognizing that riparian rights, " 'are in no sense easements, but are qualified property rights incident to the ownership' " of riparian land).

126. *Thurston*, 140 S.E.2d at 680.

127. *See, e.g.*, Harbor Island Marina v. Bd. of County Comm'rs, 286 Md. 303, 407 A.2d 738, 746-47 (1979); Cole v. Pittsburgh & L.E.R. Co., 106 Pa. Super. 436, 162 A. 712, 714 (1932).

128. *See generally* 2 AMERICAN LAW OF PROPERTY § 8.73 (A. Casner ed. 1952); R. MINOR & J. WURTS, THE LAW OF REAL PROPERTY § 87 (1910).

129. Although there is no clear majority position, most courts do not permit transfers of easements in gross unless they are commercial in nature or purpose. *See generally* 2 AMERICAN LAW OF PROPERTY §§ 8.75-8.80 (A. Casner ed. 1952); 2 G. THOMPSON, *supra* note 74, § 325, at 89-92 (1980). This distinction between commercial and personal easements in gross may provide a basis for distinguishing between public and private users and for permitting severability for public users when it would not be permitted for private users.

An easement in gross technically is a right to use another's land for purposes personal to the holder of the right and arises independently of his ownership of land. *See generally* 2 AMERICAN LAW OF PROPERTY § 8.9 (A. Casner ed. 1952); R. MINOR & J. WURTS, *supra* note 128, § 86. The concept of easements in gross therefore is inconsistent with the basic nature of riparian rights, which initially arise as incidents of ownership of riparian land.

Similar theoretical problems also would arise if riparian rights were classified as profits. A profit à prendre generally involves taking a product from the land of another. *See generally* R. MINOR & J. WURTS, *supra* note 128, § 66; 1 G. THOMPSON, *supra* note 74, § 139 (1980). Although

riparian rights are not "mere easements," the Virginia Supreme Court avoided these problems.

The task of defining the nature of riparian rights is important,[130] for the characteristics of a property right can affect the way a controversy involving that right is resolved. The courts, however, appear to have focused on that task almost to the exclusion of the policies at stake and have used their conclusions about the nature of riparian rights to make some broad statements about the transferability of riparian rights. In *Thurston v. City of Portsmouth*, for example, the court used unequivocal language to announce the severability principle, suggesting that it would apply the principle to all types of riparian rights, regardless of whether they involve consumptive or nonconsumptive uses.[131] Those two categories of uses, however, raise different practical and policy considerations. For instance, the holder of a nonconsumptive right, like the right to fill-in involved in *Thurston* or the right to build a wharf or pier, must, by definition, exercise the right in the same general area of the riparian tract as his transferor. Because the principal change is in the identity of the user, a transfer of this right does not involve a high risk that the use will be expanded or altered. With a consumptive right, though, the potential for divergence from the present use and for interference with other uses is much greater. A transferee of the right to use water from a watercourse may change the type of use made, increase the amount of water consumed, or use the water to benefit land in a different location.[132] Because of these differences between consumptive and nonconsumptive uses, resolution of the transferability issue should focus, to an extent, on the type of use involved and on the policies and interests that would be benefitted or infringed by the transfer. A discus-

---

a few riparian rights conceivably could fall within this category, most riparian rights do not involve removing products from the land.

Classifying riparian rights as licenses also would not solve the theoretical problems since licenses technically are not interests in land. *See generally* R. MINOR & J. WURTS, *supra* note 128, § 122. *But see* 2 AMERICAN LAW OF PROPERTY § 8.110 (A. Casner ed. 1952) (A license is an interest in land which includes the privilege of use of the land in which it is an interest.). Furthermore, they generally are not assignable. R. MINOR & J. WURTS, *supra* note 128, § 125. *See also* 2 AMERICAN LAW OF PROPERTY § 8.122 (A. Casner ed. 1952).

130. Because of the problems in classifying riparian rights as one of the traditional property interests, some commentators have suggested that riparian rights really are *sui generis*. *See, e.g.*, 1A G. THOMPSON, *supra* note 74, § 264 (1980).

131. Thurston v. City of Portsmouth, 205 Va. 909, 140 S.E.2d 678, 680-82 (1965).

132. *Accord* M. Livingston, *supra* note 122, at n.121.

sion of the policy implications of transferring consumptive rights follows.

2. *Transferring Consumptive Rights*

The policies and interests affected by the transfer of consumptive rights vary according to the specific circumstances and can be identified by considering four key situations. They include: (a) a *Thurston*-type situation, where consumptive rights are transferred to a nonriparian for use in conjunction with the transferor's riparian land; (b) a riparian tract subdivision situation, where lots formed by subdividing a tract of riparian land are sold to third parties who would like to exercise the consumptive rights that had attached to the tract for the benefit of their lots; (c) an intrabasin transfer situation, involving the transfer of consumptive rights to parties planning to exercise the rights for the benefit of land never part of the transferor's riparian land, but within the same watershed or basin;[133] and (d) an interbasin transfer situation, involving the transfer of consumptive rights to parties planning to exercise the rights for the benefit of land outside the watershed or basin of the watercourse to be used. Each situation raises different economic, equitable, and environmental concerns.

a. *The* Thurston-*Type Situation*

The first situation, which is perhaps the easiest to deal with under the severability principle, involves a riparian who wants to sell a consumptive right to a nonriparian to be exercised in conjunction with the seller's riparian land. Such a situation may arise, for instance, when the owner of the riparian land lacks the resources or the skills needed to exercise the riparian rights properly and productively. Or the riparian landowner may have decided to develop a recreational or boating facility next to the water to be used by those who are willing to purchase a membership interest that includes the appropriate consumptive and nonconsumptive rights.[134]

---

133. As defined, the intrabasin transfer example should include situations where a riparian locality annexes adjoining areas.

134. Such uses might include the right to use the water for recreational uses, the right of access to the watercourse, and the right to use a pier, wharf, or dock. Although commentators generally agree that recreational uses can be consumptive or nonconsumptive, most classify recreational uses as nonconsumptive. *See, e.g.*, 1 R. CLARK, *supra* note 1, § 55.2, at 381. For a discussion of Virginia's approach to partial severance of riparian rights, see M. Livingston, *supra* note 122, at 37-41.

A riparian landowner attempting to develop a recreational or boating facility may face other legal problems besides those raised by the riparian doctrine. A developer planning to build "dock-

Applying the transferability rule to this type of situation does not seem troublesome, as long as the class of users is not unreasonably increased, since the riparian rights still will be exercised in conjunction with the original riparian land. Although some increase in the amount of water consumed probably will occur, other riparians should have reasonably foreseen that the entire tract eventually would be benefitted by the exercise of riparian rights and the identity of the developer should not matter. Riparians do not acquire superior rights of use just because another riparian fails to exercise his rights.[135] Furthermore, if the increase in the class of users or "beneficiaries" really is unreasonable, then the courts should be able to protect the other riparians through the reasonable use requirement.[136] Normally, though, the benefits derived from permitting the transfer and making an efficient use of the tract of land should outweigh the harm to other riparians caused by the change in identity of those directly benefitted.[137]

b. The Riparian Tract Subdivision Situation

A more difficult question, however, is posed where a riparian

---

ominiums" in Norfolk, Virginia, for example, discovered that his plans could be interfering with public rights in the watercourse and submerged bed. Because he planned to sell boatslips to private parties and because the boat slips would rest upon the publicly owned river bed, any interest sold would be subject to the state's right to use the river bottom. The developer, thus, could not guarantee that those buying an interest in the "dockominium" would be acquiring a valuable, exclusive property right. Newport News-Hampton Daily Press, July 4, 1983, at 1, col. 1.

A riparian landowner attempting to develop waterfront property also must comply with federal requirements governing navigable waters. For example, construction of wharves, piers, and other similar structures must not impede navigation, and any project which will modify harbor lines or the affected watercourse must be recommended by the Army Corps of Engineers and approved by the Secretary of the Army. Rivers and Harbors Appropriation Act of 1899, § 10, 33 U.S.C. § 403 (1982).

135. *See supra* note 24 and accompanying text.

136. Some courts already have demonstrated a willingness to use the reasonable use requirement to control development. In Pierce v. Riley, 35 Mich. App. 122, 192 N.W.2d 366 (1971), *aff'd*, 51 Mich. App. 504, 215 N.W.2d 759 (1974), *aff'd*, 81 Mich. App. 39, 264 N.W.2d 110 (1978) (per curiam), for example, the Michigan Court of Appeals concluded that a proposed use was unreasonable because it would have increased the number of persons having access to a small lake by 66%. In that case several owners of lakefront property sought to prevent other owners of lakefront property from granting rights of way for access to the lake to nonriparians. *See Pierce*, 192 N.W.2d at 367. As relief the court ordered the defendants to fill a channel which they had built to provide access to the lake. Pierce v. Riley, 51 Mich. App. 504, 215 N.W.2d 759 (1974), *aff'd*, 81 Mich. App. 39, 264 N.W.2d 110 (1978) (per curiam).

Like owners of land abutting a watercourse, owners of lakefront property are governed by the reasonable use requirement. *See supra* note 17.

137. *Cf.* RESTATEMENT (SECOND) OF TORTS § 856 comment b (1977) (justifying grants of riparian rights, even to nonriparians).

landowner subdivides his tract of riparian land and sells lots to third parties. When a party purchases a lot not contiguous to the watercourse, the question arises whether the purchaser also acquires riparian rights for the benefit of the lot. If riparian rights generally can be severed from riparian land and transferred, then the policy of property law favoring alienation[138] suggests that any restriction on transferability should be construed narrowly and thus that land within the watershed of a river or stream should retain its riparian status even though severed from the original tract of riparian land.

The few cases addressing the issue appear to have disagreed with this analysis. In perhaps the leading case on the matter, *Anaheim Union Water Co. v. Fuller*,[139] the California Supreme Court held that:

> [i]f the owner of a tract abutting on a stream conveys to another a part of the land not contiguous to the stream, he thereby cuts off the part so conveyed from all participation in the use of the stream and from riparian rights therein, unless the conveyance declares the contrary.[140]

Then, to emphasize the permanency of the loss of status, the court added: "[l]and thus conveyed and severed from the stream can never regain the riparian right," not even if it later is "reconveyed to the person who owns the part abutting on the stream, so that the two tracts are again held in one ownership."[141]

It is unclear why the court qualified its holding with the phrase "unless the conveyance declares the contrary." One possibility is that the court added the phrase because it viewed the severability issue

---

138. *See* 6 AMERICAN LAW OF PROPERTY § 26.1 (A. Casner ed. 1952); *supra* note 113.

139. 150 Cal. 327, 88 P. 978 (1907).

140. *Anaheim*, 88 P. at 980. Although the California court did not explain its approach, it did cite several other sources which provide some insights into the court's reasoning. One cite is to a section of a water rights treatise dealing with riparian land. *Id.* (citing 2 H. FARNHAM, *supra* note 13, § 463a). In the treatise section, the author suggests that nonriparian tracts of land cannot attain riparian status merely by being purchased by the owner of contiguous, riparian land. 2 H. FARNHAM, *supra* note 13, § 463a, at 1572. As the author explains, this position seems to have been prompted by a fear that land corporations would purchase tracts of land stretching miles away from the stream. *Id.* The treatise section thus supports taking a restrictive approach to riparian status in the subdivision situation.

Another source cited by the court in *Anaheim* is an earlier California decision, Boehmer v. Big Rock Creek Irrigation Dist., 117 Cal. 19, 48 P. 908 (1897). *See Anaheim*, 88 P. at 980. Like the treatise author, the court in that case concludes that land severed and separately conveyed from the part contiguous to the water never can regain riparian status, not even if it later is held by the owner of the waterfront part. It feared that if a contrary position were adopted riparian rights held because of ownership of a tract abutting a stream "would extend to all lands [the owner] . . . might subsequently acquire, no matter . . . how distant from the stream, provided he owned all the land between the stream and the land so purchased." *Boehmer*, 48 P. at 910.

141. *Anaheim*, 88 P. at 980.

posed by the subdivision situation more as a question of conveyancing and intent than as a matter of transferability. Support for this view can be found in the court's subsequent description of the noncontiguous subdivided part as land "obtained . . . by a conveyance which severed" it from the riparian tract.[142] If the court intended this interpretation, then *Anaheim* would not impose a restraint on alienation, except to the extent that it dealt with alienation of riparian rights in a manner inconsistent with the normal preference for transferability of property rights.

Another possibility is that the court failed to realize the full impact of its qualifying language and that it generally intended to restrict alienation of riparian rights. The court's subsequent statement about the permanency of the loss of status, as well as its continued use of phrases like "not contiguous to" or "not abutting" to describe the subdivided part, supports this second interpretation.[143] Also, on several occasions, the court restated its conclusion about the status of noncontiguous parts without adding the qualifying language.[144]

Accepting the first interpretation and construing *Anaheim* as permitting severability[145] would cause a conflict to develop within the

142. *Id.* at 981.

143. *Id.* at 980-81.

144. *Id.*

145. Only a few courts have considered the severability issue in the context of the subdivided riparian tract situation. They apparently have agreed with *Anaheim* and prohibited severability. *See, e.g.*, Yearsley v. Carter, 149 Wash. 285, 270 P. 804, 805 (1928). In a few other decisions, though, the courts have permitted riparian rights to attach to land purchased by a riparian when that land is contiguous to his riparian land. *See, e.g.*, Jones v. Conn, 39 Or. 30, 64 P. 855, 858 (1901). Although these cases involve slightly different situations, they suggest that the courts deciding them would permit severability in the subdivision situation. *Accord* RESTATEMENT (SECOND) OF TORTS § 843 comment c (1977) (riparian tract of land defined as a continuous tract held by one possessor, without regard to area or size of tract, or manner of acquisition).

The approach taken by some jurisdictions on this issue is confusing and contradictory. One decision in Virginia, for example, appears to approve of the California rule, quoting and discussing the *Anaheim* decision. *See* Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 512-13 (1921). Several other authorities, however, suggest that Virginia has rejected, implicitly at least, the position taken by the California court. In Marine Resources Comm'n v. Forbes, 214 Va. 109, 197 S.E.2d 195 (1973), for example, the Supreme Court of Virginia stated that "when a property interest severed by an antecedent owner from the fee is acquired by a subsequent owner of the limited fee, the two property interests merge to revive the fee simple absolute." *Marine Resources*, 197 S.E.2d at 199. Although *Marine Resources Comm'n* involved a dispute over the transfer of a statutorily created riparian right, its application of the revival or merger doctrine suggests that it is rejecting at least part of the California rule. Furthermore, those Virginia cases that have recognized the severability and transferability of riparian rights have tended to state the principle broadly and without qualification. In Thurston v. City of Portsmouth, 205 Va. 909, 140 S.E.2d 678, 680 (1965), for instance, the Virginia Supreme Court declared that "[i]t has long been assumed . . . that riparian rights may be severed . . .," *Thurston*, 140 S.E.2d at 680, while in an earlier case, Hite v. Town of Luray, 175 Va.

riparian doctrine. Whereas the single transaction restriction adopted as part of the definition of riparian land suggests that riparian rights can benefit land not contiguous to a watercourse only where that land was acquired in the same transaction as land abutting the watercourse, the severability principle suggests that riparian rights should be freely transferable. Similarly, while the physical contact and unitary tract standards indicate that only those unitary lots contiguous to the watercourse can retain their status as riparian land after being subdivided, the severability principle supports allowing noncontiguous lots to be benefitted by the watercourse where appropriate riparian rights are transferred along with the lots.

Accepting the above interpretation and resolving the conflicts in favor of the riparian land tests would mean that the riparian doctrine would pose a significant obstacle to development. Although the riparian doctrine initially may have served as a method for preserving and protecting low-density uses, other more appropriate methods for controlling development now exist. Instead of promoting certain types of uses, the riparian doctrine should be concerned with allocating water rights as efficiently and equitably as possible.[146] As a general matter, an efficient and equitable distribution system would require transferability of riparian rights.[147]

Furthermore, at least where a transfer would not result in new uses substantially different from the old, either in type or degree, upholding the transfer would not appear to create a serious conflict with the riparian land tests.[148] As in the first situation, the land to be

---

218, 8 S.E.2d 369 (1940), the court described the principle as "a well settled doctrine" applying to water rights in general, *Hite*, 8 S.E.2d at 371. Finally, at least one Virginia statute suggests that riparian rights can be exercised for the benefit of nonriparian land where that land once was part of an individual tract of riparian land. That statutory provision defines riparian land as including "real property under common ownership and which is not separated from riparian land by land of any other ownership . . . not withstanding that such real property is divided into tracts and parcels which may not bound upon the watercourse." VA. CODE § 62.1-104(5) (1982). Although the effect of this provision is limited by its own language, which specifically refers to subdivided land still held under common ownership, and by the fact that it is contained in an act dealing only with impoundment of surface waters, it appears to be one of the few statutory provisions in the Virginia Code addressing the effect of subdividing land on the land's riparian status. *See generally* 2A STATUTES AND STATUTORY CONSTRUCTION § 47.07 (C. Sands ed. 1973) (a term defined in one statute is not generally extended to other code sections).

146. For a discussion of the goals of a water allocation system and of the proper role of public regulation see Trelease, *supra* note 115, at 1-6, 37-47.

147. *See supra* notes 113-18 and accompanying text. For further discussion of how to minimize the conflict between the riparian land tests and the severability principle see *infra* notes 161, 184-95 and accompanying text.

148. If the courts permit the transfer of riparian rights to subdivided parts not contiguous to

benefitted in the second hypothetical situation is the original tract of land. Thus, to the extent that expectations are set by the boundaries of the tract and by the nature of the old use, the transfers should not undermine the policies of the riparian land tests.

But where a significant change in use would result from severance in the subdivision situation, as would normally occur when the transferee is a locality, then other riparians would appear to have a legitimate interest in preventing the transfers. Their expectations about use of the watercourse would have been set by the fact that the riparian owner's land initially was not subdivided. Furthermore, a significant increase in use would reduce severely the return flow available to lower riparians and thus could create a situation where injuries to third parties outweighed the benefits received by those involved in the transaction. If such a situation arose, permitting the severance and transfer of riparian rights would create an inefficient result: although the new use might be worth more to the parties to the transfer than the old one, the aggregate benefit to society of the new use would be less than that of the old use.[149]

Some degree of transferability, though, is needed to avoid locking the riparian owner into his present use. If the holder of a property right cannot transfer the right, he may not be able to shift his resource

---

the watercourse, then the question arises whether the purchaser of the noncontiguous part has a right of access to the watercourse. Where a conveyance does not expressly provide for access rights, a court may choose to imply a right of way. But even if a court decides such a right cannot arise by implication, the problem can be resolved through the marketplace. In this type of jurisdiction, a potential purchaser would know that the market price did not reflect the value of access rights and thus could bargain for the rights as part of the conveyance.

149. In his work ECONOMIC ANALYSIS OF LAW, Posner describes such a situation by hypothesizing that *A*, *B*, and *D* are farmers along a watercourse and that *A*, who is upstream to the others, is contemplating transferring his use right to *X*, a municipality. He assumes further that *A*'s right is worth $100 to him, that *X* is willing to pay $125 for it and plans to use the water to supply its inhabitants, and that the value of return flow is not considered to be a property right. Although *A* probably would sell his right to *X* under these facts, the transfer would not necessarily produce a more efficient result. Because municipalities consume a much larger percentage of the diverted water than individual users and return the excess to a different point on the stream or to a different stream, downstream users, like *B* and *D*, probably would be adversely affected by the transfer. They, for example, would suffer if *X* returned excess water downstream from *B*, where only *D* could use it, and if *A*'s return flow was worth $50 to *B*, while *X*'s return flow was only worth $10 to *D*. Under these circumstances, it would be inefficient to allow *A* to sell his right to *X*: the value of A's and B's current uses ($150) would be greater than that of *X*'s and *D*'s proposed uses ($135). To encourage the efficient result, Posner suggests that the value of return flow generated by a use be part of the property rights of the user. Then each right holder would consider the value of return flow generated by its use in deciding whether to shift the resources to a new use. R. POSNER, *supra* note 113, § 3.11, at 56-57.

to more productive uses.[150] An absolute ban on severability in the subdivision example admittedly would not lock in the riparian owner completely since he still would have the option of selling his riparian land. The ban, however, would deprive him of options available to other riparians. For instance, another riparian who was planning to sever and transfer only his riparian rights to be used for a portion of his riparian land would appear to be able to do so under the California rule, even though the portion to be benefitted was not contiguous to the watercourse. By limiting the transfer to riparian rights and choosing not to sell his ownership interest in the noncontiguous portion of land, the riparian should be able to circumvent the ruling in *Anaheim Union Water Co. v. Fuller*.

One possible way to allow development of riparian land without unfairly burdening other riparians would be to permit riparian rights to attach to subdivided parts of the original tract only where the subdivision was considered to be a reasonable development of the land.[151] Granted, evaluating the reasonableness of development plans might be difficult, especially where the "developer" is a local government or the new user is a large private business.[152] At some point in time, protection of the reasonable expectations of present users would require denying the right to sever and transfer riparian rights to the purchasers of subdivided parts. Where the riparian developer is a locality, this denial can have serious consequences since the locality otherwise may have been able to justify using the watercourse for the benefit of residents purchasing the subdivided lots.[153]

---

150. Property rights must be transferable if they are to be put to their most efficient uses. As Posner explains, if a farm is being managed by a bad farmer *(A)* whose future earnings from the land have a present value of $1,000 and if a better farmer *(B)* anticipated that his earnings on that parcel would have a present value of $1,500, it would be efficient for *B* to purchase *A*'s interests for $250 more than *A*'s expected present value. Then *A* would receive $250 more than *A*'s expected value and *B* still would make a $250 profit. Value maximization, in Posner's words, thus "requires a mechanism by which the farmer [*A*] can be induced to transfer rights in the property to someone who can work it more productively; a transferable property right is such a mechanism." *Id.* § 3.1, at 28-29. *See generally id.* §§ 3.1, 3.11.

151. An unreasonable development may exist, for example, where a use drastically reduces the flow for lower riparians or where the increase in use for the lot being developed is high in proportion to the actual size of the lot.

152. It would be unusual for a new user in the subdivision tract situation to be a local government. If a locality was attempting to acquire use rights, it probably would buy land contiguous to the watercourse and not a noncontiguous subdivided part. The only circumstances under which a locality may, as a practical matter, be purchasing a subdivided part would be where the locality owned the part of the subdivided tract still in physical contact with the watercourse and was trying to reacquire some of the parts that were subdivided.

153. Part III will discuss other options available to the locality.

At least where a development is reasonable, severance and transfer of riparian rights to the subdivided parts should be allowed. Once again, other areas of property law provide protection for the interests of private riparians by helping to control development and ensure that compatible uses are conducted in the same general area. Furthermore, this type of approach to balancing the interests in development with the interests in preserving the status quo appears throughout property law. Under the law of easements, for instance, the benefit of an easement appurtenant generally can attach, upon subdivision of the dominant estate, to each subdivided part.[154] As the *Restatement of Property* explains, the subdivision of dominant estates is a "common" occurrence which the parties are presumed to have contemplated, absent an intent to the contrary.[155] As will be demonstrated in more detail later, adopting a similar standard for subdivision of riparian land could be accomplished easily through the reasonable use requirement.[156]

This solution, however, still does not eliminate the inefficient outcome that can occur when a reasonable development produces a significant increase in use and reduces the return flow available to other riparians. Because the value of the return flow generated by a particular use is not considered part of the property rights of the user, he will not consider that value in evaluating his use options.[157] In discussing this problem in a slightly different context, Posner recommends that the transferee be deemed "the owner of any new return flow that the transfer creates."[158] Posner offered this suggestion while examining transfers of appropriation rights, which are another type of water right defined under the common law of many western states. Appropriation rights admittedly differ from riparian rights in several material respects. Besides having more precise quantitative limits, appropriation rights also are subject to a clearer priority system based on the first-in-time rule. As a general matter, a party who appropriates water to his use before another prevails in a dispute.[159] Because

154. *See, e.g.*, Hewitt v. Perry, 309 Mass. 100, 34 N.E.2d 489, 491 (1941); Bang v. Forman, 244 Mich. 571, 222 N.W. 96, 97 (1928); *see also* RESTATEMENT OF PROPERTY § 488 comments b, c (1944). Where an excessive use results because of changes in the dominant estate, the remedy usually is an injunction and not forfeiture of the easement, unless the unauthorized use cannot be severed and effectively prohibited. Crimmins v. Gould, 149 Cal. App. 2d 383, 308 P.2d 786, 791 (1957).

155. RESTATEMENT OF PROPERTY § 488 comment b (1944).

156. *See infra* notes 184-95 and accompanying text.

157. R. POSNER, *supra* note 113, § 3.11, at 57; *see supra* note 149.

158. R. POSNER, *supra* note 113, § 3.11, at 57.

159. For a discussion of the prior appropriation doctrine see *supra* note 13.

the concept of appropriation rights developed in areas poor in water resources, it is not surprising that these rights are clearer and more inflexible than riparian rights. If clearer standards for defining use rights and for resolving conflicts among users had not developed, the already serious consequences that water shortages have in those arid areas would have achieved even greater magnitude.[160]

Despite the differences between appropriation and riparian rights, Posner's suggestion should be extended to riparian rights. The concern being addressed by his recommendation is not the need for precise standards or clear priorities, but rather the need for efficient use of a resource, generally, and for recognizing the full impact of a use, more specifically. As with appropriation rights, the exercise of riparian rights generates a return flow which can be measured. Although the uncertainty of riparian rights may make this task more difficult, interested parties have, in the past, been able to make projections about the impact of present and future uses and thus should be able to estimate return flow. Also, although the uncertainty may cause the value of the return flow to depreciate or appreciate over time, this type of fluctuation is a risk which owners of property rights generally assume. As with appropriation uses, recognizing the value of the return flow generated by a riparian use will not guarantee that the flow will remain steady or last forever. But failing to take such action could result in the same inefficient outcome that Posner describes in the context of appropriation rights.

c. The Intrabasin Transfer Situation

A third situation presents a more serious conflict under the riparian doctrine. It arises when a party who already owns a tract of land within the watershed of a watercourse decides to purchase riparian rights from the owner of riparian land located in another part of the watershed. If the purchaser plans to exercise the rights for the benefit of the land that he owns and that land is waterfront property, then the transfer would conflict with the single transaction test. Where the purchaser's land is not waterfront property, a conflict with the physical contact standard also would arise. The problem in the first variation is not that significant, given the shortcomings of the single transaction standard. The conflict arising under the second variation, however, poses a more serious obstacle to the severability principle.

160. *See generally supra* notes 2 & 13.

In contrast to the first two hypothetical situations, the land to be benefitted in the intrabasin transfer situation is not part of the tract owned by the riparian-transferor and, indeed, would not even qualify as riparian land where the purchaser did not own waterfront property. The party seeking the transfer therefore could not argue, as was advanced in the first two hypothetical situations, that the transfer would not contravene the reasonable expectations of other riparians. Neighboring riparians could not anticipate that the transferor's riparian rights would be exercised for land located elsewhere in the watershed.

Despite this seemingly insurmountable difference, a consistent interpretation of both the riparian land requirement and the severability principle still can be achieved in the intrabasin transfer situation. The key to accomplishing this is recognizing that the two serve different functions under the riparian doctrine. The riparian land requirement helps the courts to identify those parties who have riparian rights to exercise or possibly sell. Once the parties holding those rights are identified, the severability principle then defines how and to what extent the rights can be severed and transferred. As in other areas of property law, the legal principles governing alienation of riparian rights should be construed broadly. By permitting riparian rights to be transferred for the benefit of land throughout the watershed, the courts would be encouraging riparian landowners to sell their use rights to benefit other land in the watershed.

Taking a functional approach to interpreting the riparian land tests and the severability principle will not resolve the matter entirely, for the reasonable use standard still needs to be redefined somewhat to reflect the new uses. Because the third situation involves two tracts of land, it is unclear which tract should be used to set priorities between users and define the quantitative limits of the transferee's uses. To protect the expectations and equities of other riparians, courts permitting a transfer in the third situation should observe two related principles.

The first principle is that no purchaser of riparian rights should acquire any greater interest than his transferor. If, for example, the transferee's lot is a ten-acre farm, while the transferor's is only a one-acre farm, a court should not permit the transferee to exercise the purchased rights to satisfy all the needs of his ten-acre tract. The court should limit the amount that the transferee can use to the amount that his transferor would have been able to use. To permit

otherwise in a traditional riparian jurisdiction would seriously undermine the reasonable use requirement.

Although applying this first principle may prove to be difficult, the courts should not, as a practical matter, have to apply it that often. Once parties learn about the principle, they should adjust to it voluntarily through the marketplace. For example, in the above situation an informed purchaser only would be willing to pay for rights that could be used for the one-acre tract, instead of his ten-acre tract. Reversing the size of the lots provides an even better illustration of how the parties would adjust to the first principle through the marketplace. If the transferee's lot consisted only of one acre, while the transferor's lot had ten acres, then the transferee would not want to purchase all of the transferor's use rights. Because the transferee only would need sufficient use rights to meet the needs of his one-acre tract, paying for anything more would be an unwise business decision.

The second principle is that the reasonableness of a transferee's use generally should be measured in light of the expectations of riparians owning land near the parties to the transfer. For example, if the transferee owns nonwaterfront property located above, but not adjacent to, the transferor's riparian land, the transferee should not be able to purchase the transferor's riparian rights and then claim that he is upstream to, and therefore has certain priorities of use over those neighboring riparians located between the two tracts. Allowing this claim would undermine the reasonable expectations of the intervening riparians. They generally could not have anticipated that the owner of nonriparian land located above them in the watershed one day would acquire riparian rights.[161] Although this result also could be achieved under the first limitation, the second principle would function more as an equitable safety valve than as an incentive to properly value the purchased rights.

If courts use these two principles to define the rights of transferees in the third situation, then intrabasin transfers may not be as appealing an alternative for public users and large private users as they would first appear. Depending on the nature and extent of the available transferors' rights, a locality may have to buy up the rights of numerous riparians to be able to supply its public's consumptive needs. At least to the small private user, this prospect should not

161. If, on the other hand, the transferee owns nonwaterfront property below the transferor's waterfront property, then the expectations of riparians in the area between the two tracts would be to receive the flow of the watercourse after reasonable use by the transferor.

seem that troubling; what the two principles really are forcing public users to do is to pay for the use rights that they need. But to the public user, that prospect may be unacceptable, at least when compared to several other options available under the common law. As will be shown, these other options may not require the public user to give value for public consumptive rights.

d. The Interbasin Transfer Situation

Perhaps the most troublesome situation arises where a private riparian severs and transfers his riparian rights to a party who intends to use the rights for the benefit of nonriparian land located outside the watershed. Unlike the first three situations, this hypothetical situation introduces a new factor, an interbasin transfer, which supports completely banning the transfer of severed riparian rights.[162] Admittedly, the same functional approach used with the intrabasin transfer could be applied to this last situation. That is, those favoring the transfer could argue that permitting transfers to nonwatershed land would not undermine the watershed requirement because that requirement still would be used to determine who had riparian rights to transfer. This argument ignores the other functions served by the watershed test, especially the important balancing function served by it. As explained earlier, the watershed standard represents a compromise between often conflicting equitable, environmental, and efficiency concerns. If the standard were not used, then some of those important concerns would be seriously undermined.

Abandoning the watershed test would have an especially severe impact on the expectancy interests of users in the transferor's watershed. Because the benefitted land is not in the same watershed as the watercourse, the unused portion could not return to the watercourse for use by other riparians without construction of an elaborate return system. Assuming return flow is recognized as a property right, as suggested above, the transferee would be willing to construct such a return system only where the value of the return flow in the transferor's watershed exceeded the construction costs. That such a situation would arise is highly unlikely, given the high costs of building water supply structures. In most interbasin transfers, then, the trans-

162. Though their reasons often are unclear, many courts agree that severability and transfer should not be allowed when land outside the watershed would be benefitted. *See, e.g.*, Harvey Realty Co. v. Borough of Wallingford, 111 Conn. 352, 150 A. 60, 63 (1930); Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535, 537 (1913).

fer would decrease the amount of the return flow to other users in the transferor's watershed. Although this result would be more efficient when the value of the water in its new uses is greater than the value of the old uses, it would seriously infringe on the interests of other riparians along the diverted watercourse, not only in their exercise of present uses, but also in their development of new uses. Until water resources in the eastern United States become scarce, the riparian doctrine can afford to strike a better balance between efficiency and equity. The watershed test provides such a balance.

In conclusion, although case law establishes the general proposition that riparian rights are severable and transferable, the various policies at stake suggest that this proposition should not be uniformly applied to all transfers of riparian rights. The different policy concerns raised by consumptive and nonconsumptive uses, for example, indicate that a distinction should be made between those two categories of rights. Nonconsumptive uses generally are exercised in conjunction with the riparian land even after severance. Because the nature of the expected use does not change significantly in most cases, few restrictions on the transfer of nonconsumptive uses are necessary.

Consumptive uses, however, are not as closely tied to the land, and the likelihood of a significant change in use is greater. Therefore, whether riparian principles should permit severance and transferability of consumptive rights should depend on the circumstances surrounding the change in use. Where, for instance, a private riparian wants to transfer a consumptive right to a nonriparian to be used for the benefit of the seller's land, it seems both efficient and equitable to permit the transfer, so long as the change in use is one that the riparian transferor could have made. Although allowing transferability in the subdivision example also is desirable under certain circumstances, equitable and efficiency concerns necessitate imposing restrictions on such transfers. A requirement that the subdivision be a reasonably foreseeable development, for instance, might be necessary to avoid imposing an unfair burden on other riparians. Also, to prevent an inefficient outcome, the property rights of a user should be redefined to include return flow.

The last two situations pose the most serious conflicts under the riparian doctrine. Unlike the first two situations, which involve land that once could qualify as riparian land, the third and fourth may involve land that never could be riparian. Although this distinction suggests that transfers should be banned in the last two situations to

avoid a conflict with the riparian land restriction, focusing on the separate functions of the riparian land restriction and the severability principle helps to minimize the conflict between them. If intrabasin transfers are permitted, equitable and efficiency concerns once again would require imposing some restrictions. Besides limiting the transferee's reasonable use rights to those held by the transferor, a court also should evaluate the reasonableness of the transferee's uses by considering the expectations of riparians in the vicinity. Although these limitations also could be imposed on interbasin transfers to minimize some of the concerns held by riparians, they would not remove the economic and environmental concerns raised by the fact that the transfers would be to land outside the watershed. The courts, at least, might have difficulty reaching a more acceptable compromise between the competing concerns.[163]

The above conclusions reflect legal and policy considerations that generally should apply regardless of whether the user is a private party or a public entity. Because some of the considerations, though, change sufficiently when a public user is involved, further analysis of the public use situation is needed. Part III will focus on the nature of public consumptive rights in natural watercourses, examining the extent to which the riparian doctrine recognizes such rights, either directly or indirectly.

III. PUBLIC CONSUMPTIVE RIGHTS

As explained in Part II, many of the common-law riparian principles are based on an assumption that the user is a private agrarian. Although this assumption may have been based in fact when the riparian doctrine first developed, it no longer reflects water use patterns and seriously limits the water options of localities attempting to sat-

163. If a basin in a riparian jurisdiction becomes water-poor, some sort of legal action would be needed to provide for that area's public consumptive needs. Because of the importance of the policy concerns at stake and because of the need for a carefully developed management plan, the state legislature probably would be a more appropriate problem-solver than the courts. *See* Butler, *supra* note 12, at 777-80. It, more so than the courts, could enact a comprehensive regulatory system that promoted efficient and equitable transfers of water use rights to private parties for use outside the watershed. Under a comprehensive system, a regulatory body not only could review proposed transfers to evaluate their economic and equitable implications for users in the watershed, but also could assess their environmental impact. Regulatory oversight thus could minimize some of the problems that would result if the transfers were allowed under the common law. At least in the area of interstate waters, though, the judiciary has demonstrated, through its application of the equitable apportionment doctrine, that it can take an active role in managing use of water resources. *See supra* note 108.

isfy their inhabitants' needs. Unlike many private users, local governments usually must divert water from a watercourse to fulfill their public's needs. Effective operation of a public sewage system, for instance, requires using large quantities of water for waste treatment, while the public's drinking needs generally cannot be met responsibly without storing water for future use.

Whether a local government can divert or otherwise use a watercourse to satisfy the public's consumptive needs depends, to an extent, on a court's willingness to modify traditional riparian principles and their underlying assumptions.[164] Because the policy considerations raised by public consumptive uses differ, sometimes significantly, from those relating to private consumptive uses, courts in riparian jurisdictions may be reluctant to alter riparian principles to accommodate the public interest, through direct or indirect means.[165] Part III.A. will examine the nature of public consumptive rights under the riparian doctrine to determine whether the doctrine can provide greater recognition of public rights without seriously impairing existing interests. Part III.B. will consider the extent to which the doc-

164. It also may depend on the navigability of the watercourse. *See generally* 1A G. THOMPSON, *supra* note 74, § 258 (1980) (discussing meaning of navigability). If a watercouse is nonnavigable, then the public interest in the watercourse is governed primarily by the riparian doctrine. But if the watercourse is navigable, then other common-law doctrines provide possible bases for defining and interpreting the public interest in the watercourse. Significantly, because these theories do not depend on riparian ownership, they could apply in nonriparian jurisdictions as well. Perhaps the most important of these other common law concepts is the public trust doctrine, which is founded on the principle that certain natural resources are held by the state or its delegates in trust for its people. For a discussion of the doctrine by a leading authority see Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970). Although other theories also exist, they are not as developed nor as accepted as the public trust doctrine. *See, e.g.*, Old Dominion Iron & Nail Co. v. Chesapeake & Ohio Ry. Co., 116 Va. 166, 81 S.E. 108 (1914), *appeal dismissed for lack of jurisdiction*, 242 U.S. 623 (1916) (where state court appears to be developing a "public waters" theory and recognizing certain public interests in those waters).

165. If altering the legal principles would seriously undermine key aspects of the riparian doctrine, then courts normally should avoid acting on "personal policy preferences," as the Supreme Court recently admonished, and instead follow established legal principles. *See* Chevron U.S.A. v. Natural Resources Defense Council, Inc., 104 S. Ct. 2778, 2793 (1984). Because the controversy in *Chevron* involved interpretation of the Clean Air Act, § 172(b)(6), 42 U.S.C. § 7502(b)(6) (1983), *See* 104 S.Ct. at 2785, the Court's admonishment would not apply directly to a court examining riparian principles. But that court still should be careful not to change riparian principles radically because of personal policy preferences. Otherwise holders of riparian property rights affected by the change might challenge the judicial action as a violation of the takings or due process clauses of federal and state constitutions. *See, e.g.*, U.S. CONST. amends. V, XIV; VA. CONST. art. I, §§ 6, 11. If property is taken for public purposes without just compensation, contrary to the constitution, then a final judgment of a court upholding the taking would be a violation of due process. Chicago, Burlington & Quincy R.R. Co. v. Chicago, 166 U.S. 226, 235 (1897); *see* Missouri Pac. Ry. Co. v. Nebraska, 164 U.S. 403, 417 (1896). *See generally* Ausness, *supra* note 74, at 240-56.

trine permits public users to justify diversions and other consumptive uses through exceptions to traditional doctrine.

A. Recognizing Public Consumptive Rights Under the Riparian Doctrine

Although the efficiency and environmental concerns raised by public uses differ in some respects from those raised by private uses, the most significant policy differences between the two types of uses appear to involve equitable concerns.[166] Because public uses often occur on a much larger scale than private uses, public uses tend to cause more intense conflicts between users and to provoke stronger feelings of injustice. Water-rich localities, many of which are low-density rural areas, understandably fear that water-poor areas will rob them of important development opportunities by attempting to divert some of their abundant water resources. The anger and sense of injustice felt by the water-rich jurisdictions is intensified by a belief held by many of them that they own the waters within their boundaries, or at least have a right to use those resources for the benefit of their inhabitants.[167] Although this belief is not legally justified,[168] it does seem to

166. Although public users tend to operate on a larger scale than private users, both types of users face similar efficiency concerns. Like the private user, for example, the public user can cause inefficient uses because of the common law's failure to recognize return flow as a property interest. *See supra* notes 149, 157-58 and accompanying text.

Public and private users also face similar environmental concerns, though the magnitude of the concern often is greater for the public user. For instance, regardless of the identity of the user, it is clear that the prospect of interbasin transfer raises serious environmental concerns. Because a large quantity of water would be transferred to an area deficient in water resources, an impoundment structure probably would need to be built to hold and store the diverted water. Besides changing the ecology of the area where construction occurs, the impoundment plans would necessitate flooding land near the destination site and thus would alter or destroy wildlife habitats. Serious environmental concerns also would arise in the area of origin. Substantial withdrawals, for instance, could affect the salinity of remaining water resources, as well as the types of wildlife that frequent the area. *See generally* NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 19-37 (1973); Hagan & Roberts, *supra* note 55; Robie, *Some Reflections on Environmental Considerations in Water Rights Administration*, 2 ECOLOGY L.Q. 695, 710-21 (1972).

Assuming water-poor users do not resort to self-help plans, prohibiting interbasin transfers for both public and private users would eliminate or minimize many of these concerns. To the extent that public users seek interbasin transfers more frequently than private users, though, the differences between the environmental concerns associated with each type of use become more significant.

167. *See* 13 WATER NEWS, *supra* note 3, No. 11, at 8 (Nov. 1982). A party who actually uses water from a watercourse develops a similar, and perhaps more justified belief, that the water in the watercourse generally becomes "his water." *See* Trelease, *supra* note 10, at 414.

168. Although the question of ownership of flowing water has been debated for years, most property law scholars today agree that no one owns flowing water while it is in its natural state. *See, e.g.*, 6A AMERICAN LAW OF PROPERTY § 28.55 (A. Casner ed. 1954). This position does not mean,

reflect a legitimate concern: a fair distribution of resources would seem to require giving a water-rich jurisdiction some priority over other jurisdictions in using resources within its boundaries.

Water-poor localities, on the other hand, face the problem of supplying the sometimes urgent water needs of their populace. If the common law is interpreted as prohibiting diversions of watercourses for public use, it will limit seriously the options of water-poor localities. When such a prohibition exists in a state generally rich in water resources, it understandably leads to frustration and resentment. Water-poor jurisdictions are forced to bargain with those parties willing to sell surplus water, often on unfavorable terms, or attempt to solve their water supply problems on their own. Because these self-help schemes typically involve the diversion and transfer of water, challenges from private riparians and water-rich localities affected by the plan are likely to result.[169] As will be explained, unless a court is willing to alter riparian principles for the public user, the challenges probably will succeed.[170]

Finally, the prospect of a change in the common law rules governing consumptive use by public users raises an important fairness

---

though, that no one has an interest in those waters. A riparian proprietor, for instance, has the right to use the waters and to control use by other riparians and third parties. The state also has an interest as sovereign that justifies its regulation of the waters. *See id.* § 28.59.

169. An example of such a situation exists in southeastern Virginia, where two of the state's largest municipalities are faced with impending water shortages. The city of Newport News has consulted with experts as to its alternatives, and the most recent plan proposed the drilling of additional wells to help delay the inevitable need for long-term expansion. Newport News-Hampton Daily Press, Aug. 19, 1984, at B1, col. 1. Additionally, an Army Corps of Engineers study released in May, 1984, suggested that the city construct a 49 mile pipeline to a spot above Richmond on the James River, at an estimated cost of $81 million, and divert water to meet its needs. *See* U.S. ARMY CORPS OF ENGINEERS, WATER SUPPLY STUDY: HAMPTON ROADS, VIRGINIA 273-75 (1984). The city of Richmond, however, has already declared that, in the absence of any clear state water plan, it will contest the diversion plan in court to protect its rights to the James River. Newport News-Hampton Daily Press, Aug. 23, 1984, at 13, col. 4. For a discussion of the city of Virginia Beach's attempts to resolve its water supply problems, see *infra* note 170.

170. A diversion plan may escape challenge, though, if it includes acquisition of all appropriate rights and interests by sale or condemnation. *See infra* notes 208-12 and accompanying text. In Virginia, for example, the city of Virginia Beach has proposed a plan to divert water from a lake located almost ninety miles from the city. Since 1923, Virginia Beach has been supplied with water by the city of Norfolk, but because the contract with Norfolk only requires that Virginia Beach be supplied with water after the needs of Norfolk residents are met Virginia Beach decided to look for more stable long-term sources. Under the proposal the City plans to contract with the Corps of Engineers for permanent use of storage space at Buggs Island Reservoir and to reimburse Vepco for the value of power generation lost on account of the diversion. Amended Complaint for Declaratory Judgment at 4-5, 10-16, City of Virginia Beach v. Roanoke River Basin Ass'n, Civil Action No. 84-11-N (E.D. Va. Jan. 31, 1984). The plan also calls for the acquisition, by purchase or condemnation, of rights of way from property owners along the 90 mile diversion route.

concern among private users. A significant departure from prior law would, at the very least, impair their expectancy interests and may even deprive them of valuable property rights without due process or just compensation. Putting aside these potential due process and takings problems,[171] it is nevertheless evident that a legal system allowing serious deprivations would have difficulty being accepted. Those private riparians deprived of their rights and interests naturally would resent and oppose the change. Furthermore, other property owners would have reason to fear that the judicial action would be extended to other types of resources. A court that is willing to redefine riparian rights more restrictively to accommodate public uses may be just as willing to take similar actions with respect to other valuable resources.[172]

Whether traditional riparian principles can be modified so as to accommodate the public interest and achieve an acceptable balance between these competing policy concerns depends in part on the principles and rationales at stake and in part on the type of diversion situation under review. Under traditional principles a riparian generally cannot divert the flow of a watercourse, sometimes not even to his own riparian land.[173] This "no-diversion" rule applies equally to public and private users. A city or town does not acquire greater rights just because of its status as a governmental entity.[174] Nor does it acquire consumptive rights because of the location of water resources within its boundaries. Although jurisdiction over water resources may provide sufficient justification for regulating those resources, it does not confer riparian rights upon a locality.

---

171. For a discussion of the takings and due process issues raised by a comprehensive revision of a state's water allocation system see NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 281-83 (1973); Ausness, *supra* note 74, at 240-56. *See also supra* note 163.

172. Nor would such a system be efficient. Without assurances that their rights would be protected, property owners would be reluctant to invest in long-range activities requiring high capital outlays, even though the activities otherwise would be efficient. *See supra* notes 96-97 and accompanying text.

173. A riparian cannot divert water from a watercourse for use on his land if the diversion materially diminishes the watercourse. But where the riparian diverts a reasonable quantity of water for use on his riparian land and returns the watercourse to its original channel before it leaves his land, then the diversion should be allowed. *See* Stein v. Burden, 29 Ala. 127, 133 (1856); Cook v. Seaboard Air Line Ry., 107 Va. 32, 57 S.E. 564, 565 (1907). Diversions beyond riparian land generally are prohibited. *See, e.g.*, Carpenter v. Gold, 88 Va. 551, 14 S.E. 329 (1892). *See generally* 2 H. FARNHAM, *supra* note 13, §§ 496, 497.

174. *See* Pernell v. City of Henderson, 220 N.C. 79, 16 S.E.2d 449, 451 (1941); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 515 (1921). *See generally* 7 R. CLARK, *supra* note 1, § 620.1 (1976).

To a public user the no-diversion rule means that the public user cannot use a watercourse to satisfy public consumptive needs without fear of legal repercussions by neighboring riparians. Although the uncertainty of this situation may seem inefficient and unfair, not all public diverters deserve the same degree of protection from the courts. If, for example, the public user is justifying the diversion on the basis of its own use rights, then the courts' approach should depend on the nature of those rights. A diverter that has attempted to purchase sufficient use rights to justify the diversion should be treated differently than one that has not paid sufficient value. At least with respect to the nonpaying diverter, the countervailing concerns of water-rich localities and private users may justify a result unfavorable to the diverter. If, however, the diverter is supporting its diversion by attacking the rights of the complaining riparian, then the approach of the courts should vary according to the nature of the complaining riparian's interests. A diverter that is injuring neighboring riparians should be treated differently than one that is not causing harm.

Part III.A.1. will examine the various approaches taken by the courts to the no-diversion rule to determine whether those approaches permit consideration of relevant policy concerns. Part III.A.2. will consider specific diversion situations to determine whether recognizing public consumptive rights in those situations would seriously impair existing interests.

1. The No-Diversion Rule and Public Consumptive Rights

Three principal approaches have been used by the courts to define the no-diversion rule. The first, referred to as the per se unreasonable approach, is alluded to by several courts when they describe diversions to nonriparian land as "extraordinary" and "unreasonable."[175] Because these descriptions are worded broadly and appear in the same discussion as the courts' conclusion that diversions to nonriparian land are unlawful, the courts could be interpreted as declaring all such diversions to be per se unreasonable.[176] This approach thus

175. *See* Harvey Realty Co. v. Borough of Wallingford, 111 Conn. 352, 150 A. 60, 63 (1930); Town of Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700, 703 (1942); Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535, 536-57 (1913). *But see* Pyle v. Gilbert, 245 Ga. 403, 265 S.E.2d 584 (1980) (striking down per se approach and permitting reasonable uses on nonriparian land); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921) (failing to use language suggesting the per se approach as *Potts* did). Because diversions to nonriparian land are the principal type of diversion that public users conduct, the discussion will focus on them.

176. Another possible interpretation of some of the language suggesting the per se approach is

treats the no-diversion rule as a procedural rule of law, at least where the diversions are to nonriparian land. Any diversion to nonriparian land automatically is considered to be unreasonable and therefore injurious to the rights of some downstream riparian.[177]

Most courts are reluctant to follow the first approach, apparently because it requires them to declare diversions to nonriparian land to be unreasonable without looking at the surrounding facts and circumstances.[178] Under the per se approach, a court would have to declare a diversion to nonriparian land to be unreasonable, regardless of its actual consequences. The diversion, for example, would be unreasonable even though it represented the diverter's reasonable share of a watercourse and even though it did not infringe on the reasonable use rights of neighboring riparians. The first approach, therefore, does not permit a court to consider the efficiencies or equities of a particular diversion situation. Nor does it permit a court to determine whether key principles and policies of the riparian doctrine would be undermined if the diversion were allowed to continue.

A second approach treats diversions by local governments for the purpose of creating a public water supply as unreasonable uses.[179]

---

that the courts merely are restating the requirement that a riparian must establish actual injury to recover. *See* Abrams, *Interbasin Transfer in a Riparian Jurisdiction*, 24 WM. & MARY L. REV. 591, 601 (1983). For a discussion of the injury requirement *see infra* note 198.

177. The effect of this approach appears to be to shift the burden of proof between the parties. As a general matter, to be entitled to relief for unlawful diversion, a plaintiff must establish, by a preponderance of evidence, that defendant's actions prevented the watercourse from flowing in a natural course upon plaintiff's land, *see supra* note 112, and that plaintiff suffered injury because of defendant's conduct, *see infra* note 198. In addition, as the proponent of the evidence, the plaintiff has the duty of producing sufficient evidence to send the issue to the jury. 9 J. WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW § 2487(a) (J. Chadbourn ed. 1981). But in certain situations, if the proponent produces evidence that, when coupled with a rule of law, will persuade a jury of reasonable men to rule in his favor, the burden will shift to the opponent to produce evidence sufficient to counter that offered by the proponent, or risk losing by default.

Under the per se approach then, a party seeking relief for an unlawful diversion only has to prove the unlawfulness of the diversion—by establishing that it is to nonriparian land—in order to prevail in the suit. As one court adopting the per se approach explained, even if the plaintiff could not establish actual damage, he still could recover nominal damages at law for an unlawful diversion or receive injunctive relief in equity. *See* Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535, 536 (1913). Therefore, the per se approach has the effect of relieving the plaintiff of the usual need to show some injury.

178. *See, e.g.*, Gillis v. Chase, 67 N.H. 161, 31 A. 18, 19 (1892). As the Supreme Court of New Hampshire explained, a cause of action should not exist unless there is an unauthorized and unreasonable diversion.

179. *See, e.g.*, Lonsdale Co. v. City of Woonsocket, 25 R.I. 428, 56 A. 448, 451 (1903); Town of Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700, 703 (1942). According to the Virginia Supreme Court in *Town of Purcellville v. Potts*, the fact that the wrongdoer was a municipality, "clothed under the Constitution and statutes of the State with the power of acquiring the plaintiffs' riparian rights by

The courts using this rationale apparently assume that diversions by local governments are unanticipated by most riparians, who acquired their land with the expectation that they could exercise their rights in low-density areas.[180] Besides having many of the same problems as the per se approach, this rationale also seems indefensible on broader policy grounds. Although the courts' reasoning may have reflected the expectations of riparians in the 1800's, most riparians today could not reasonably expect land near watercourses to remain unsettled and undeveloped. Furthermore, the assumption of low-density conflicts with the pro-development stance taken in other areas of property law. For example, in evaluating whether the grantee of an express easement increased his use impermissibly, the courts generally presume that the parties to the conveyance anticipated reasonable development of the benefitted estate.[181] Although a different approach to public uses may be justifiable on the grounds that development in these other areas tends to involve private parties and thus tends to occur on a much smaller scale, the second rationale still has one major weakness: it fails to account for public consumptive rights in water resources in any significant respect. If the riparian doctrine is to remain the primary source of law governing consumptive use of watercourses in many jurisdictions, then it should recognize and attempt to accommodate the public interest.

The third approach, followed in the majority of jurisdictions, views diversions to nonriparian land solely as a function of the riparian land requirement; that is, the fact that a party is diverting to nonriparian land only establishes a violation of the riparian land restriction and nothing more.[182] Under the third approach, then, a riparian complaining about a diversion still would have to establish the other elements of his burden of proof, principally that he has sustained injury, to recover.[183]

---

eminent domain," made the wrongdoer's conduct "all the more inexcusable." *Purcellville*, 19 S.E.2d at 703.

180. *See* Pernell v. City of Henderson, 220 N.C. 79, 16 S.E.2d 449, 451 (1941); Salem Flouring Mills Co. v. Lord, 42 Or. 82, 69 P. 1033, 1039 (1902). As several courts have pointed out in response, though, the cities merely are drawing water for their domestic needs, which is a preferred use. *See, e.g.*, City of Canton v. Shock, 66 Ohio St. 19, 63 N.E. 600, 603 (1902).

181. The law of easements, for instance, allows the holder of the dominant estate to increase his use of the servient estate so long as the increase is reasonable and does not overly burden the servient estate. *See supra* note 99.

182. *See* Williams v. Wadsworth, 51 Conn. 277, 304-05 (1883); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921); Roberts v. Martin, 72 W. Va. 92, 77 S.E. 535, 537 (1913).

183. *See supra* note 112; *see also infra* note 198.

Despite its more restrictive definition of the no-diversion rule, the third approach also could present serious obstacles to localities attempting to create public water supplies, especially if it is interpreted literally. Most diversions for public use would require the transfer of water to nonriparian land, often to areas in another part of the watershed and sometimes to areas outside of it. Courts examining the validity of these transfers understandably may wonder how they could uphold the diversions under the riparian doctrine and still be doctrinally consistent. As long as the riparian land restriction remains an essential part of the doctrine, the courts must prohibit substantial violations of the restriction. Permitting public use diversions to nonriparian land certainly would seem to violate that restriction.

Although this reasoning is appealing, it fails to consider the argument advanced in the severability section that the riparian land restriction should be interpreted from a functional perspective to achieve greater consistency with other aspects of the riparian doctrine. Under a functional interpretation, the riparian land tests would serve primarily to identify the parties who have riparian rights to exercise or sell, while the concepts of severability, alienation, and diversion then would govern redistribution of those rights. Additionally, the above reasoning ignores the main distinction between the first two approaches and the third explanation of the no-diversion rule. Whereas the first two approaches force a court to conclude automatically that all public use diversions to nonriparian land are unreasonable, regardless of their actual impact on other users or on other aspects of the riparian doctrine, the third approach permits consideration of these types of factors. Under the third approach, a court could evaluate the policy implications of particular diversion situations and, where appropriate, permit diversions to nonriparian land. Such an evaluation will be conducted now.

2. *The Policy Implications of Specific Public Uses*

As observed in the severability section, the policy implications of a public consumptive use will vary according to the situation. If, for example, a public user is diverting water to land outside the watershed, then a court should use the riparian land rationale to ban the diversion. Just as in the severability situation involving transfers of riparian rights to a party intending to use the rights for land outside the watershed, permitting the diversion would seriously undermine the policies furthered by the watershed test. Besides leading to envi-

ronmental problems, allowing the diversion also would raise significant equitable concerns among water-rich localities and private users.[184] Until water supply conditions in a watercourse's basin approach the point where demand is equal to supply and thus where pressing public needs require a rebalancing of policy concerns, the watershed test should continue to define the maximum area that can benefit from a watercourse.[185]

Where, however, the diversion for public use is occurring within the same watershed, then the permissibility of the diversion should depend to an extent on the location of the benefitted land. If the diverted water is benefitting land that is not contiguous to the watercourse but once was part of the locality's tract of riparian land, then, as discussed earlier, many policy arguments favor allowing the diversion as long as it meets the reasonable use requirement. At least where the increase in use is reasonable, the diversion should not unfairly impair the interests of other riparians along the watercourse. As with a private riparian proprietor, other riparians should have foreseen reasonable growth of the riparian locality. Any other approach would restrict development to private users. To be an efficient use, though, the value of the return flow must be considered part of the property rights of the public user.[186]

In many public use diversion situations, the increase in use may not seem reasonable to other riparians. Unlike situations involving an individual riparian landowner, a riparian locality probably has devel-

184. *See supra* notes 162-63 and accompanying text. The issue of severability and diversion are closely related and much of the analysis in the section on severability can be applied to the diversion question.

185. Furthermore, even when that point is reached, it probably should be the legislature, and not the courts, which decides how to meet the needs of the water-poor region and which redefines the balance between the competing policy concerns. Granted, the courts have some devices which they could use in reordering policy concerns and achieving a new balance. Some interpretations of the public trust doctrine, for example, would permit a court to incorporate the goal of environmental preservation in a solution authorizing interbasin transfers. As interpreted by some courts, the public trust doctrine imposes an obligation on parties making allocation decisions involving navigable waters to consider and protect the public interest in the environment. *See, e.g.*, National Audubon Soc'y v. Superior Ct., 33 Cal. 3d 419, 189 Cal. Rptr. 346, 658 P.2d 709, *cert. denied*, 104 S. Ct. 413 (1983). For further discussion of the public trust doctrine, see Sax, *supra* note 164. As a general matter, though, the courts would be less effective at developing a comprehensive solution for the water supply problems of the water-poor region. Unlike the legislature, for example, the courts could not impose adequate limitations on diversions, except as permitted by the particular controversy before them. The courts also would have difficulty fashioning a solution that contained the political compromises needed to ensure that it would be acceptable to most, if not all, political subdivisions and citizens within a state. *See generally* Butler, *supra* note 12, at 777-80.

186. *See supra* notes 149, 157, 158 and accompanying text.

oped significantly since it first acquired its riparian tract. Expecting other riparians to anticipate the development that occurred may be unreasonable. As a practical matter, then, permitting diversions in the second situation may not benefit public users significantly. Depending on the size of the locality's riparian holdings and the number of inhabitants, a court may choose to define reasonable growth at a level far below the actual number of inhabitants on subdivided parts.

Whether the riparian land rationale and the severability principle should be interpreted to prevent a diversion to land that is within the watershed of the diverted watercourse but not part of the tract of land encompassing the diversion site is a more difficult question. Assuming, once again, that the law is modified to account for return flow, then permitting the diversion would not seem to raise serious efficiency problems. Because the benefitted land is within the watershed, the unused water could return to the watercourse. Also, allowing the diversion would encourage users to maximize the area of the watershed being benefitted by the watercourse.[187]

The primary problems would appear to involve the important, but competing, equities discussed earlier. On the one hand, permitting the diversion would seem to violate the riparian land restriction and elevate the public user above other riparians that normally would have priority of use. Riparians located above the benefitted land but below the site of diversion would have less water available to them than otherwise. On the other hand, prohibiting the diversion would limit the options of water-poor localities and force them to buy water on more unfavorable terms. By increasing the number of people benefitting on competitive terms, the diversion arguably would result in a more equitable, as well as efficient, distribution of water resources. As the number of satisfied parties rose, the number of parties characterizing the allocation system as fair also would increase. Furthermore, a court could deal with the concern that the public user's status would be elevated above other riparians by evaluating the reasonableness of the diversion as suggested earlier.[188]

---

187. But, to the extent that permitting diversions reduces the certainty of the rights of nondiverting riparians, the diversions would be inefficient. *See supra* notes 96-97 and accompanying text.

188. *See supra* Part II.B. Furthermore, it could be argued that preferring a locality which is diverting for public domestic use merely would be recognizing that local governments now conduct most of the domestic uses traditionally preferred under the riparian doctrine.

Allowing courts to evaluate the lawfulness of public use diversions on a case-by-case basis would cause some planning problems for localities. As the courts developed a rational diversion

To achieve a proper balance between these concerns, the courts need to recognize that public diversions fall within one of two categories. The first category includes those situations where the diverter has attempted to acquire, by purchase or condemnation, sufficient riparian land or rights to justify the diversion. The second category includes those situations where the diverter has not attempted to give adequate value[189] for the consumptive rights actually being exercised. Although the diverter may own a tract of riparian land or may have acquired the riparian rights for the tract of land encompassing the diversion site, the land to which the use rights attach usually is small in comparison to the area being served by the diversion.

Permitting those diversions falling in the first category does not seem too troubling because of the value paid for the use rights. Courts and legislatures have been willing to protect the interests of bona fide purchasers for value in a variety of situations.[190] Allowing the second type of diversion, however, raises the fairness concerns discussed earlier. These concerns seem serious enough, at first glance, to justify a judicial ban on all diversions in the second category. Closer scrutiny, however, reveals that the fairness concerns may relate more to the value paid in relation to the quantity of water being diverted than to the actual occurrence of the diversion.

If this is indeed the main point of contention with the second type of public use diversion, then the courts could deal with the problem of the nonpaying diverter through careful application of the rea-

---

standard, though, more planning could occur. Also, a declaratory judgment procedure could help, in appropriate circumstances, to alleviate the problem.

189. In most jurisdictions paying value requires parting with money, goods, or services that represent a substantial portion of the purchased property's market worth. *See, e.g.*, Worthy v. Caddell, 76 N.C. 82, 86 (1877). *See generally* 4 AMERICAN LAW OF PROPERTY § 17.10 (A. Casner ed. 1952). Under this approach, then, giving a promise to pay would not constitute value even though it would be sufficient to support a contract. *Compare* Bell v. Pierschbacher, 245 Iowa 436, 62 N.W.2d 784 (1954) (following this approach) *with* U.C.C. § 1-201(44)(d) (defining value as being given when a party parts with "any consideration sufficient to support a simple contract").

190. *See generally* 4 AMERICAN LAW OF PROPERTY § 17.10 (A. Casner ed. 1952). Bona fide purchasers for value, for example, can prevail over a prior claimant when the purchasers take an interest in realty not recorded by the claimant as required under the relevant state's recording statute. *See, e.g.*, N.Y. REAL PROP. LAW § 291 (McKinney 1968); VA. CODE § 55-96 (Supp. 1983). Additionally, they may prevail in many states when they purchase a voidable title, *see* Phelps v. McQuade, 220 N.Y. 232, 115 N.E. 441 (1917), or purchase from a party clothed with indicia of ownership by the prior owner, *see* O'Connor's Administratrix v. Clark, 170 Pa. 318, 32 A. 1029 (1895). *See also* U.C.C. § 2-403 (1972) (adopting, with some modifications, the voidable title exception, as well as a new exception known as the merchant entrustment exception). *See generally* Dolan, *The U.C.C. Framework: Conveyancing Principles and Property Interests*, 59 B.U.L. REV. 811 (1979).

sonable use requirement. That is, where the diverter is attempting to justify the diversion on the basis of its own use rights, the courts could apply the modified reasonable use requirement suggested earlier to define the diverter's rights. Under the modified requirement, a public user generally could divert as much water as would be reasonable for the tract of land encompassing the diversion site.[191] When doubt exists about the reasonableness of a diversion, the party proposing it should bear the risk of nonpersuasion. A party pursuing a new use like a diversion should not be able to upset established uses and rights without clearly demonstrating the reasonableness of the new use. If the public user fails to meet this burden, then it can try to acquire the rights of the parties who would be injured by the diversion.[192]

This suggested approach to public use diversions makes several key assumptions. First, the proposal assumes that the law will recognize the value of return flow as a property interest and thus reduce the inefficiencies that otherwise could result from a diversion. Second, the proposal assumes that the courts will recognize the need to adopt safeguards to minimize conflicts with other aspects of the riparian doctrine and to protect the reliance interests of neighboring riparians.[193] Although the arguments favoring modernization of the riparian doctrine are compelling, judicial modifications should, to the

191. *See supra* note 161 and accompanying text. In determining whether a use is reasonable, a court should consider the status of the user, the status of the benefitted land as upper or lower riparian land, the size of the diversion-site tract, the distance between the diversion-site tract and the benefitted tract, and other factors traditionally considered.

192. *See infra* notes 208-12 and accompanying text. The uncertainty of the reasonable use standard thus could operate as an equitable safety valve for the benefit of users opposing the diversion.

193. The need to adopt safeguards to protect the policies of the riparian land requirement becomes more apparent when the severability and diversion concepts are involved in the same situation. Suppose, for example, that a private riparian transfers use rights to a locality located downstream to the private riparian and that the locality plans to divert water from the transferor's upper tract to the locality's lower tract for public use. The proposed diversion raises several interesting questions concerning the priority and reasonableness of the public use. If the diversion is allowed, priority of use still should be defined by the benefitted land's position in the watershed. The public user generally should not be able to acquire a higher priority because of the upper riparian status of its transferor.

Perhaps the more interesting question raised by the proposed diversion concerns whether the reasonableness of the public use should be measured by the upper or lower tract of land. The fairest approach would appear to be to focus on the expectations of the complaining riparian. If that riparian is located below the upper and lower tracts of riparian land, then he would have expected to receive the watercourse's flow after reasonable use by the owners of both tracts. The diverter thus should be able to take the reasonable share for both tracts without undermining these expectations.

If the complaining riparian is between the two tracts, however, he would have expected to receive the stream flow after reasonable use by the upper tract only. He would not have measured

extent possible, protect legitimate expectations. Possible safeguards include continuing to focus on position in the watershed to define general priorities of use and measuring the reasonableness of a diverter's use in terms of the diversion site and not the benefitted tract. Third, the proposal assumes that the courts will be willing to change some of the outdated assumptions used in determining the reasonableness of a use. The courts, for example, would need to change their assumption that riparians are individuals who expect their lands to remain relatively undeveloped.

With these modifications, the suggested approach should permit public use diversions only when serious impairment to existing interests would not occur. By carefully using the reasonable use requirement to measure the rights of diverters, the courts should be able to distinguish between the two types of public use diverters. Those public users who have purchased sufficient use rights to justify the diversions generally should be permitted to conduct the diversions.[194] Artificial interpretations of the riparian land and reasonable use restrictions should not prevent or limit their public consumptive uses. Nor should such interpretations result in narrow rulings on the sufficiency of a public user's rights. Where, however, the diverter has not paid value for all the use rights that it is exercising, the diverter should not be able to claim the right to continue the diversion on the strength of its riparian rights. Although this approach often may force the nonpaying public user to go to the marketplace to satisfy its public's consumptive needs,[195] the approach seems to be the fairest

---

his rights in terms of the lower tract. In this situation then, it would only seem fair to permit a diversion of a reasonable share for the upper tract. *See supra* note 161 and accompanying text.

194. Furthermore, efficiency and equity concerns support adopting legal rules enabling a public user to predict with some degree of certainty whether a diversion plan involving acquisition of use rights would be upheld. At the present time the lawfulness of such plans is unclear in many traditional riparian jurisdictions. *See, e.g., supra* notes 169-70 (describing uncertainty surrounding public use diversion plans in Virginia).

195. A locality may have to purchase a significant amount of riparian rights to enable it to divert, depending on the status of the transferor. If, for example, the transferor is a private agrarian, then under the suggested approach the reasonableness of transferee's diversion initially would be defined by the transferor's rights and by what a reasonable development of his land would permit. So where the agrarian owns a small farm, his rights generally would not permit a large-scale diversion.

Adopting a legal rule that permitted intrabasin diversions where the diverter acquired sufficient use rights to justify the diversion admittedly would impose hardships on localities financially unable to purchase the necessary rights. The legislatures in some riparian states presently are considering ways to alleviate the financial burdens associated with water and other public works projects. In Virginia, for example, the General Assembly called for a reexamination of the financial relationship between state and local governments. H.J. Res. 12, 1983 Gen. Assem., Reg. Sess., 1983 VA. ACTS

way for the courts to balance the competing public and private interests under the riparian doctrine. Also, at least under this approach, a locality would know that it could conduct a diversion if it purchased sufficient use rights. Whether the nonpaying diverter could justify its diversions on other grounds, by, for example, attacking the rights of the complaining riparian, will be discussed in the remaining section of Part III.

In conclusion, the various approaches used to explain the no-diversion rule offer a range of alternatives for dealing with the public's consumptive needs. The second approach, which focuses on the status of a user, seems the least acceptable of the three, given the development patterns near watercourses and the importance of the relevant public policy concerns. Although less objectionable, the per se rationale also has some troubling consequences. Because all diversions to nonriparian land would be per se unreasonable, a court could not examine the actual effects of such a diversion on the reasonable use rights of neighboring riparians. The per se approach thus limits the extent to which courts could permit diversions by upholding marketplace transfers of use rights or by creating exceptions to the no-diversion rule.

If properly interpreted, the riparian land approach could give the courts the greatest flexibility in dealing with diversions. A proper interpretation would involve recognizing that the riparian land restriction defines which parties have riparian rights to exercise or transfer, as well as modifying the riparian land and the reasonable use standards as suggested. Whether this interpretation would lead to greater recognition of public consumptive interests then would depend on a jurisdiction's approach to the severability principle. If a jurisdiction interprets the severability principle broadly and follows a modified

---

1247; H.J. Res. 105, 1982 Gen. Assem., Reg. Sess., 1982 VA. ACTS 1646. In 1984 it received a detailed report studying the matter and recommending, among other things, that a more equitable and stable funding program be established. JOINT LEGISLATIVE AUDIT AND REVIEW COMM'N, REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA ON STATE MANDATES ON LOCAL GOVERNMENTS AND LOCAL FINANCIAL RESOURCES, H. DOC. NO. 15 (1984). In that same year the Virginia General Assembly also received a report from the State Water Study Commission recommending the establishment of a Water and Sewer Assistance Authority to help local governments finance needed water supply and wastewater treatment projects. *See* STATE WATER STUDY COMM'N, REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA, H. DOC. NO. 32, at 4-6, app. D (1984). Intended to alleviate the "critical need" for funding of such projects, the Authority would be empowered to receive public and private funds to be used for borrowing in the bond market and making loans and grants to local governments for construction of appropriate infrastructure projects. *Id.* at app. D, §§ 62.1-198, -203 to -218.

view of the riparian land restriction, a nonriparian locality in an adequately sized watershed should be able to buy up enough riparian rights to entitle it to divert for use by its inhabitants. But, even if a jurisdiction follows a narrow approach to severability, diversions by public users still may be possible. Unlike the other two approaches to the no-diversion rule, the riparian land approach permits the development of exceptions to the no-diversion rule. Part III.B. discusses those exceptions.

B. Permitting Public Consumptive Uses Through Exceptions to the No-Diversion Rule

Even under a traditional interpretation of the riparian doctrine, some exceptions to the no-diversion rule exist. Two related exceptions could, under certain circumstances, enable localities to divert significant quantities of water. The first exception, known as the surplus water doctrine, focuses on whether a diversion involves excess or surplus water.[196] A riparian generally is entitled to receive only the flow of a watercourse after reasonable use by upstream riparians.[197] Thus, if a locality is diverting water in excess of the natural flow of a watercourse, the locality could argue that the water being diverted is surplus water and that its conduct therefore is not interfering with the rights of riparians along the watercourse.

---

196. The courts have had great difficulty defining surplus water. For instance, although they generally agree that flood waters would be surplus water, they have disagreed about whether flood waters would lose that status if the flooding was an annual occurrence. *Compare* Motl v. Boyd, 116 Tex. 82, 286 S.W. 458, 463 (1926) (surplus exists when water is above line of highest ordinary flow "uninfluenced by recent rainfall or surface runoff") *with* Herminghaus v. Southern Cal. Edison Co., 200 Cal. 81, 252 P. 607, 610 (1926) (annual flooding constitutes "usual and ordinary" flow of the river). For a discussion of the courts' approach to defining flood waters and to diversions of such waters see Teass, *Water and Water Courses—Riparian Rights—Diversion of Storm or Flood Waters for Use on Nonriparian Land*, 18 VA. L. REV. 223 (1932).

197. This definition of a riparian's rights is known as the "reasonable use theory." Another approach also developed under early common law and still is used in some riparian jurisdictions today. Referred to as the English or "natural flow theory," it provides that a riparian only has the right to receive the natural flow of a stream, undiminished, except nominally, by other riparians' uses. Under this approach a use that was reasonable under the first theory would not be permitted if it substantially diminished the flow. Although most riparian jurisdictions have adopted the reasonable use theory, a few still appear to follow the natural flow theory. *See supra* note 13. *See generally Introductory Note on the Nature of Riparian Rights and Legal Theories for Determination of the Rights* in RESTATEMENT (SECOND) OF TORTS ch. 41, at 209-13 (1977). Some courts have given inconsistent signals and have failed to distinguish clearly between the two. *Compare, e.g.*, Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 514 (1921) (using natural flow language) *with* Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 130 S.E. 408, 410 (1925) (using reasonable use language).

The second exception arises because riparian jurisdictions generally require a riparian to establish injury before he can obtain relief for an unlawful use.[198] The extent to which this exception overlaps with

198. *See, e.g.*, Elliot v. Fitchburg R.R. Co., 64 Mass. (10 Cush.) 191, 197 (1852). *See generally* 1A G. THOMPSON, *supra* note 74, § 272 (1980). One of the underlying reasons for the injury requirement is the principle *de minimis non curat lex*—that is, that the law does not concern itself with trivial matters. Where a use does not have an adverse effect on others, it should not be enjoined. Stratton v. Mt. Hermon Boys' School, 216 Mass. 83, 103 N.E. 87, 88 (1913). Courts have had difficulty defining injury. They generally require some perceptible damage to the rights of another riparian. *Compare* People v. Hulbert, 131 Mich. 156, 91 N.W. 211, 213 (1902) (injury exists if use destroys, renders useless, or materially diminishes flow) *with* Lawrie v. Silsby, 76 Vt. 240, 56 A. 1106, 1109 (1904) (injury must be palpable or perceptible).

Under the early approach to the injury requirement, courts required the plaintiff to show injury to some present use, which meant that if plaintiff riparian was not making any use of the watercourse he could not establish injury to his rights. *See* 2 H. FARNHAM, *supra* note 13, § 499, at 1651 & n.2. Yet, if a court denied recovery on this ground, it was jeopardizing plaintiff's future exercise of his riparian rights. By the time plaintiff actually used the watercourse, he may have lost the ability to sue, either because his waiting would be interpreted as acquiescence or because defendant acquired the right to divert by prescription. Because of this dilemma, many jurisdictions adopted the position that sufficient injury existed and relief therefore was justified where defendant could acquire a prescriptive right by continuing his use. *See, e.g.*, Parker v. Griswold, 17 Conn. 288, 303 (1845); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 514 (1921); *see also* 2 H. FARNHAM, *supra* note 13, § 499, at 1651-52. Although some cases indicate that courts following this approach presume injury to a lower riparian whenever an unlawful diversion to nonriparian land occurs, *see, e.g.*, Town of Purcellville v. Potts, 179 Va. 514, 19 S.E.2d 700, 704 (1942), others appear to recognize that such a diversion may not necessarily cause injury to riparian rights *(e.g.*, where surplus water is diverted), *see, e.g.*, Harris v. Norfolk & W. Ry. Co., 153 N.C. 542, 69 S.E. 623, 624 (1910); Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508, 515 (1921).

Many riparian jurisdictions allow a riparian to protect his future as well as his present needs. In Virginia Hot Springs Co. v. Hoover, 143 Va. 460, 130 S.E. 408 (1925), for example, several riparian owners sought to enjoin a nonriparian from diverting water from a spring to a nonriparian resort hotel. Defendant claimed it was entitled to divert the water because it had been assigned the rights of a riparian proprietor of the spring. The court granted plaintiffs' request for a permanent injunction, reasoning that defendant's diversion for nonriparian use would injure plaintiffs' land in times of drought. *Hoover*, 130 S.E. at 410. The court reached this conclusion in spite of evidence showing that the stream only had been dry twice in thirty years, noting that future reasonable uses may be considered but must be based on more than mere speculation. *Id.* Where, for instance, lower riparians argued that manufacturing was a possible future use, but failed to show such use was reasonable in light of the character of the land, the power of the watercourse, or even future construction plans, the court limited its inquiry to domestic uses. Norfolk & W. Ry. Co. v. Graham Land & Improvement Co., 10 Va. L. Reg. 983, 989 (Cir. Ct. 1904). *See generally* 2 H. FARNHAM, *supra* note 13, § 468.

Whether a lower riparian establishes injury to present uses, however, may affect the type of relief to which he is entitled. If the plaintiff fails to establish actual injury, then the most he could recover at law is nominal damages. Diversion alone, without evidence of actual damages, will not warrant substantial recovery at law. Elliot v. Fitchburg R.R. Co., 64 Mass. (10 Cush.) 191, 197 (1852); *see also* Virginia Hot Springs Co. v. Hoover, 143 Va. 467, 130 S.E. 408, 410 (1925) (suggesting that not even nominal damages may be recovered). Equity, however, may grant an injunction even though a lower riparian has not sustained any actual injury. Where an unlawful diversion is an infringement of his property rights, equity generally will allow the lower riparian to vindicate his rights and prevent their loss by adverse use. *See Purcellville*, 19 S.E.2d at 704. As long as

the surplus water doctrine depends on how the courts define injury. Where actual injury or harm is required, the injury exception would be more expansive than the surplus water doctrine. The injury exception, for instance, could be used to protect a party who was diverting part of another riparian's reasonable share, or nonsurplus water. If that other riparian was not conducting any uses and otherwise not exercising his rights, he could not establish actual harm. But where the courts define injury broadly to include any potential or threatened harm, then the conflict could be resolved similarly under either theory. Because the water being diverted in the example represents a portion of another riparian's reasonable share, it could not qualify for protection as surplus water. Nor could the diversion fall within the injury exception, for at least one riparian should be able to establish potential harm to the future exercise of his reasonable use rights.

Courts in riparian jurisdictions have differed in their approaches to the surplus water and injury exceptions. Some have accepted both doctrines as welcome limitations to the no-diversion rule.[199] Others have been hesitant to accept or reject the exceptions.[200] One factor

---

plaintiff's legal right is "clear, and its violation palpable" and as long as plaintiff has not slept on his rights, "equity ordinarily will interfere, although the right has not been established at law." Carpenter v. Gold, 88 Va. 551, 14 S.E. 329, 330 (1892); *accord* RESTATEMENT (SECOND) OF TORTS § 850A comment m (1977).

Where damages are sought, the measure of damages usually is the difference between the market value of the entire tract before and after the injury, and not the amount of loss to the injured right. *See* Rider v. York Haven Water & Power Co., 251 Pa. 18, 95 A. 803, 804 (1915); Norfolk & W. Ry. Co. v. Allen & Sons, 122 Va. 603, 95 S.E. 406, 409 (1918). Sometimes, however, courts allow evidence of the reduced value of the damaged portion. *See, e.g.*, Baltimore & P. R.R. Co. v. Fifth Baptist Church, 108 U.S. 317, 335 (1883); Southern Ry. Co. v. Watts, 134 Va. 503, 114 S.E. 736 (1922). The courts generally do not award punitive damages, in the absence of malice, wantonness, or fraud. *See* Rider v. York Haven Water & Power Co., 95 A. at 804. For a discussion of the remedies available to riparians see RESTATEMENT (SECOND) OF TORTS § 850A comment m (1977).

199. *See, e.g.*, Texas Co. v. Burkett, 117 Tex. 16, 296 S.W. 273, 276 (1927) (diversion allowed if water supply abundant); Lawrie v. Silsby, 76 Vt. 240, 56 A. 1106, 1109 (1904) (diversion allowed if no actual injury).

200. Virginia authorities, for instance, have given conflicting signals about their approach to the surplus water doctrine. In Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921), the Virginia Supreme Court suggests that under proper circumstances it would recognize the surplus water argument as a valid justification for a diversion. The suggestion arose while the court was discussing whether injury could be established in a situation where other riparians would not suffer actual damages and would not have the prescriptive period running against them. Although the court acknowledges that the case before it did not involve such a situation, the court states that under those circumstances "the court below might properly have declined to decide the issue of right raised between the parties to the suit and might have properly refused to award the injunction." *Zinn*, 106 S.E. at 515.

More recent Virginia cases recognizing the common law right of a municipality to sell surplus water appear to provide further support for the exception. In one decision, City of Martinsville v.

apparently affecting how a court reacts to the exceptions is the rationale that it uses to explain the no-diversion rule.

Depending on the courts' interpretation, the second approach, which declares public use diversions by localities to be unreasonable, could seriously restrict the effectiveness of the two exceptions in permitting public consumptive uses. Because the second approach is not fully developed, it could be interpreted as focusing on the status of the diverter as a local government, the public nature of the use, the size of the locality conducting the diversion, or any combination of the above. If a court considers the status of the diverter as a local government[201] or the public nature of the use to be the focus of the second rationale, then the no-diversion rule would appear to reject both ex-

---

Board of Supervisors, 222 Va. 505, 281 S.E.2d 883 (1981), the state supreme court summarily states that "[a] city has the power, without the aid of statute, to sell its surplus water rather than permitting it to be wasted," even to "customers beyond the corporate limits." *Martinsville*, 281 S.E.2d at 884-85. Although this statement suggests that the surplus water argument is valid, the court in *Martinsville* did not actually address the question of whether the local government's surplus water was obtained lawfully and indeed seems to assume that it was. An examination of Mount Jackson v. Nelson, 151 Va. 396, 145 S.E. 355 (1928), cited by the *Martinsville* court in support of its summary statement, *Martinsville*, 281 S.E.2d at 885, more clearly demonstrates this point. In *Mount Jackson v. Nelson*, the court concludes that "a city in possession of surplus water, *lawfully acquired*," may sell the surplus to persons beyond the corporate limits. *Mount Jackson*, 145 S.E. at 357 (emphasis added). The court explains its conclusion by describing it as a matter of "[c]ommon sense," *id.*, and by noting that such action would be needed to avoid waste, *id.* In yet another decision, the court provides additional justification for the common law right to sell surplus water, observing that "[m]en of wisdom look towards future needs," that planning for those "future needs" sometimes can result in surplus energy and that it would be "unreasonable" and uneconomical to "hold that the surplus energy thereby created should be denied others in the community, separated only from the city by an invisible geographical or political line." Light v. City of Danville, 168 Va. 181, 190 S.E. 276, 285 (1937). Thus, although the cases recognizing the common law right to sell surplus water may not support the surplus water doctrine directly, the policies reflected in this common law right appear to justify the doctrine.

Other Virginia authorities, however, indicate that diversion of surplus water is impermissible. A state Attorney General opinion written more than fifty years after *Town of Gordonsville v. Zinn*, for instance, summarily dismisses the argument as "questionable unless authorized by statute." 1971-1972 OP. OF THE ATT'Y GEN. OF VA. 80 (1972). Similar discrepancies appear in other Virginia authorities. *Compare, e.g.*, 1967-1968 OP. OF THE ATT'Y GEN. OF VA. 297-98 (1967) (diversion of "excess water" is lawful as long as lower riparians are not adversely affected) *with* STATE WATER STUDY COMM'N, INTERIM REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA, S. DOC. NO. 21, app. I (1979) (rejecting surplus water doctrine).

Legal authorities in other jurisdictions appear to be just as confused as Virginia about the doctrine. This confusion stems in part from the problems the courts have experienced in trying to define surplus water. *See supra* note 196.

201. If the key factor is the status of the diverter as a local government, then a no-diversion rule explained in those terms arguably may not cover diversions by private parties, perhaps not even where those parties are supplying water to the locality's inhabitants. Furthermore, even if the courts also ban diversions by private parties, the use of this factor as the rationale suggests that a court may be adopting a per se rule for public diverters but not private diverters.

ceptions. Any diversion conducted by a locality or for a public purpose would be unreasonable, even where the diversion involved surplus water or did not cause injury. If, however, the size or density of the municipal diverter is the crucial factor, then a no-diversion rule explained in those terms conceivably could be interpreted as permitting diversions by sparsely populated localities where the diversions involved surplus water or did not injure other riparians.

Using the per se rationale also limits the effectiveness of both exceptions. Under the per se approach, a court automatically would have to declare diversions to nonriparian land to be unreasonable and therefore injurious to riparians below the diversion site, regardless of whether injury actually occurred. Similar reasoning should prevent a court from using the surplus water doctrine to protect diversions by public users. Because the court would be forced to find all diversions to nonriparian land to be unreasonable, it could not consider a diversion's actual impact on the flow rights of neighboring riparians.[202]

These limitations would not exist if a court used the riparian land rationale to explain the no-diversion rule and if it were willing to interpret the riparian land requirement as suggested. Using such an approach would permit a court to evaluate the reasonableness of a diversion according to the facts and circumstances of the particular situation and to consider the actual consequences of the challenged use. As long as a public use diversion involved a reasonable quantity of water and did not interfere with the flow and reasonable use rights of neighboring riparians, a court could permit the diversion even though it was to nonriparian land.[203] But if the riparian land restriction were interpreted strictly, then this third explanation of the no-diversion rule would appear to prevent, or at least limit, application of the exceptions like the other two approaches.[204]

Regardless of the exact nature of the relationship between the two exceptions and the various approaches to the no-diversion rule, both exceptions can be justified by economic and equitable considera-

---

202. *See supra* note 198.

203. So if the diversion were based on a stream's natural flow before reasonable use by upper riparians, a diverter would not rely on this argument to justify the diversion.

204. It could be argued that a strict interpretation of the riparian land restriction primarily would limit use of the surplus water exception and would make the actual injury exception the key exception. Such an interpretation would prohibit all diversions of surplus water to nonriparian land, except where the diversion did not cause injury to other riparians. Under this interpretation, then, the fact that surplus water was being diverted would be one factor to be considered in determining whether other riparians were injured.

tions. Allowing diversions within a watershed when surplus water is used or when neighboring riparians would not be injured should promote more efficient uses of the watercourse. The diversions not only would increase the area in the watershed being benefitted by the watercourse, but also would reduce the percentage of water in the watercourse not being used. Furthermore, because other riparians would be receiving their reasonable share, they should not have reason to complain about the harsh or unfair effects of the diversion on their rights.[205]

Neighboring riparians, however, may be justified in questioning the fairness of permitting the diversions on a more general level. Although their rights may not actually be injured by the diversions, many of them would have acquired their riparian rights through legitimate marketplace transactions. In contrast, the locality seeking to protect its diversion under the surplus water or injury exceptions often has not attempted to purchase sufficient use rights to support the diversion. Despite this more general "injustice," it seems preferable to favor the approach that promotes an efficient use of a watercourse, at least until other riparians establish injury.

Furthermore, even neighboring riparians may not find their last argument so compelling once they realize that the surplus water and injury exceptions do not provide permanent solutions to the water supply problems of water-poor localities. By definition, diversions based on those exceptions can continue without legal repercussions only so long as surplus water exists or injury does not occur. Additionally, a locality conducting diversions under either exception probably could not seek judicial protection of its use against unlawful conduct by others. Both theories permit diversions because neighboring riparians cannot sue, and not because the diverter has acquired a legally protected riparian right.

A public user that desires a more permanent solution can pursue several other exceptions to the no-diversion rule. It, for instance, can attempt to acquire the necessary rights and interests entitling it to divert by prescription.[206] This exception, however, requires long, con-

205. To the extent, though, that lower riparians come to expect and rely on flooding that occurs regularly, they may have reason to complain. *See* Thompson v. New Haven Water Co., 86 Conn. 597, 86 A. 585 (1913); Hyatt v. Albro, 121 Mich. 638, 80 N.W. 641 (1899).

206. *See, e.g.*, Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921). An interesting issue raised by the suggestion that riparian rights can be acquired by prescription concerns whether the prescriptive right could include interbasin transfers and other uses not generally considered to be within the rights of most riparians. To resolve this issue, the court must recognize that what ripari-

tinuous, wrongful use and thus would not be as effective as the first two exceptions.[207] It also would not permit much foresight and planning. To ensure greater planning, a locality instead can try to negotiate with riparians below a proposed diversion site to obtain a release and prevent them from subsequently complaining about the diversions. Courts generally will uphold a contract that restricts or alters riparian rights and even may allow specific performance if damages would not adequately compensate the aggrieved party.[208] If numerous riparians are involved, though, the release approach may not be feasible. Those riparians who negotiated with the locality near the end of the process probably would hold out for consideration greater than the normal market value of their rights.[209]

Where voluntary negotiations are not feasible, eminent domain proceedings can prove effective, providing that the locality has sufficient eminent domain powers and financial resources to acquire the necessary interests. As the preceding discussion demonstrates, the

---

ans would be losing is their right to complain about the unlawful use. Although riparians may not be permitted to conduct the uses themselves, they still could be injured by the prescriptive use. Thus, the more accurate approach to defining the prescriptive right would appear to be to describe the prescriptive user as acquiring the right to continue a use that harms other riparians, and not as acquiring the right to conduct the use from an unwilling riparian. But even then courts probably would strictly interpret the scope of the prescriptive use right to limit it to the use actually acquired by prescription. *See* Harnsberger, *Prescriptive Water Rights in Wisconsin*, 1961 WIS. L. REV. 47 (1961) (discussing the courts' approach to defining prescriptive rights in Wisconsin).

207. The length of the prescriptive period varies from jurisdiction to jurisdiction. In Virginia, for example, the period would be 20 years. Although VA. CODE § 8.01-236 (1984) sets forth a 15-year period for recovery of land, the statutory period apparently only applies to adverse possession. *See* Leake v. Richardson, 199 Va. 967, 103 S.E.2d 227 (1958). The common law period of 20 years thus still governs prescriptive use in Virginia. *See* Cornett v. Rhudy, 80 Va. 710 (1885).

Where a locality fails to acquire a use right by prescription, it still could acquire the right, after the fact, by condemnation. Under appropriate circumstances courts have stayed proceedings brought by an injured riparian against a locality to permit the locality to condemn the interests of the injured party. *See, e.g.*, Town of Gordonsville v. Zinn, 129 Va. 542, 106 S.E. 508 (1921). For a discussion of the eminent domain alternative see *infra* notes 210-12 and accompanying text.

208. *See, e.g.*, Colmenero Canal Co. v. Babers, 80 Ariz. 339, 297 P.2d 927 (1956); Daniels v. Bethlehem Mines Corp., 391 Pa. 195, 137 A.2d 304 (1958); Brisco Home Trustees v. Ohio River R. Co., 78 W. Va. 502, 89 S.E. 727 (1916). *See generally* 2 H. FARNHAM, *supra* note 13, § 470, at 1587-88. Although the release approach may have the same practical effect as a conveyance of riparian rights, a release is not an "effective substitute for a true grant of a riparian right." RESTATEMENT (SECOND) OF TORTS § 856 comment b (1977). As the RESTATEMENT (SECOND) OF TORTS explains, a release generally "operates only between the parties" and is viewed as a covenant not to sue, not a property right. *Id. But see* Whittenton Mfg. Co. v. Staples, 164 Mass. 319, 41 N.E. 441 (1895) (agreement involving flowage may be binding in equity against subsequent grantee). Thus, in many jurisdictions the remedies available for breach of a release should differ from those available for infringement of a riparian right.

209. *See* R. POSNER, *supra* note 113, § 3.5, at 40.

"necessary interests" theoretically would include the reasonable use rights of all riparians located below the point of diversion who would be affected by the diversion, as well as easements to lay conduit pipes across riparian and nonriparian land located between the diversion site and the destination area. If the watercourse is a major river, as would probably be the case where a public water supply project is involved, these acquisitions can be very costly.[210] Furthermore, even if a locality has sufficient financial resources, its condemnation of appropriate interests may not be legally possible. A local government can only exercise its eminent domain powers to acquire private interests when the condemnation is for a public use. When the private interests are water rights, this principle has been interpreted to mean that the condemnation cannot produce a significant private benefit.[211] Thus, if only a few of a locality's inhabitants would benefit from the condemned rights, or if the primary purpose of the condemnation is to meet the business needs of a few private users, the condemnation may not be possible.[212]

The limited effectiveness of the exceptions to the no-diversion rule demonstrates the inadequacy of traditional riparian principles in providing for the consumptive needs of the public. Expanding the two principal common-law exceptions, the surplus water doctrine and the injury exception, would provide relief for the public user, but

---

210. The city of Virginia Beach, Virginia, for example, has estimated that its plan to divert water from Lake Gaston and transfer it almost ninety miles will cost $190 million for the initial capital investment and $18 million annually for maintenance. For a discussion of the plan see *supra* note 170. Thus, unless a jurisdiction is financially sound, the eminent domain alternative may be impractical. *But cf. supra* note 195 (mentioning financial assistance bills for local governments).

The viability of the condemnation and purchase alternatives also depends on a jurisdiction's approach to the severability principle. If riparian rights are severable, then a local government can condemn just the appropriate riparian rights, which would be less costly than acquiring the riparian land as well. Apparently aware of the difference in costs, many courts allow condemnation of the riparian rights without condemnation of the respective riparian land or submerged bed. *See, e.g.*, Clear Creek Water Co. v. Gladeville Improvement Co., 107 Va. 278, 58 S.E. 586, 588 (1907); State v. Superior Court, 48 Wash. 277, 93 P. 423, 425 (1908). *See generally* J. LEWIS, A TREATISE ON THE LAW OF EMINENT DOMAIN IN THE UNITED STATES § 56 (1888) (recognizing that rights incident to land may be separately condemned). However, where a statute specifies what may be condemned, a lesser interest may not be taken. Charlottesville v. Maury, 96 Va. 383, 31 S.E. 520, 521 (1898). The value of the condemned riparian rights usually is measured by diminution in value. *See* J. LEWIS, *supra*, § 464.

211. *See, e.g.*, Burger v. City of Beatrice, 181 Neb. 213, 147 N.W.2d 784 (1967). Thus, to be permissible, the primary benefit of the condemnation should be to supply the domestic needs of the locality's public. *See generally* Harnsberger, *Eminent Domain in Water Law*, 48 NEB. L. REV. 325, 366-69 (1969).

212. *See, e.g.*, Burger v. City of Beatrice, 181 Neb. 213, 147 N.W.2d 784 (1967). For further discussion of this issue see Harnsberger, *supra* note 211.

probably would not be appropriate. Although the temporary nature of the exceptions may impose an unfair burden on the locality conducting the diversion, greater unfairness would result if the two exceptions were broadened to permit a locality to conduct the diversion on a regular basis when the locality did not own sufficient use rights to justify the diversion. Unless a locality can point to an independent basis for recognizing its public consumptive use,[213] the locality generally should have to acquire riparian rights in the same manner as a private user, either through ownership of riparian land or acquisition of severed rights. But, to permit the locality to acquire riparian rights or land effectively, courts in riparian jurisdictions must be willing to develop a broader and more realistic definition of riparian rights—one that recognizes and permits public consumptive uses.

IV. Some Concluding Remarks: Balancing Public and Private Consumptive Interests

As traditionally interpreted by the courts in many eastern states, the riparian doctrine does not provide an adequate accommodation of the public interest. Because that doctrine was developed in a water-rich, agrarian environment, many of its principles are designed to preserve domestic uses by private individuals. The narrow approach taken by the judiciary in developing the riparian doctrine imposes serious limitations on the ability of local governments to meet public consumptive needs. Perhaps the most significant limitation is the rule that prohibits most diversions of water from a watercourse. Because of the rule, localities often find operation of a public water supply system to be a very costly and impracticable proposition.

Although other areas of property law also developed in the context of an agrarian economy, the courts have not been as hesitant in those areas to change their perspective and accommodate the public interest. Since the 1920's, for example, the courts have been sympathetic to attempts by local government to control private development of land through zoning ordinances.[214] Like the attempts to recognize

213. *See supra* note 164.

214. The courts also have been sympathetic to legislative attempts to protect the public interest in tidal lands. A recent opinion by the Virginia Supreme Court, for instance, interprets two statutes protecting the public interest in certain lands lying on tidal waters more broadly than necessary. *See* Bradford v. Nature Conservancy, 224 Va. 181, 294 S.E.2d 866 (1982). In *Bradford v. Nature Conservancy*, the Supreme Court of Virginia held that one act passed in 1780 reserved title in the state to certain shoreland along the Atlantic Ocean for common use by the public, *Bradford*, 294 S.E.2d at 874, and that another statute enacted in 1888 prohibited alienation of marshland on the Eastern

public consumptive rights in water resources, these ordinances prompted constitutional challenges under the due process and takings clauses. Yet, in resolving the challenges, the courts generally were willing to uphold the ordinances as long as they were reasonable methods of protecting the public interest in controlling private land development.[215]

Perhaps the hesitancy of modern courts in recognizing public consumptive rights can be attributed to the fact that persistent water supply problems are a relatively recent occurrence in the eastern portion of the country. Given the prolonged absence of chronic water supply problems, as well as the agrarian surroundings in which the riparian doctrine developed, it is not surprising that the courts adopted a narrow, private-user-oriented perspective in defining and allocating consumptive rights. Although rapid growth in recent years has altered water supply conditions in many areas of the eastern United States, the principles of the riparian doctrine have become too firmly entrenched for many courts to respond quickly to the changes, or even recognize the need for reexamining some of those principles.

Whatever the reason for the judiciary's hesitation, it is time for the legal system to respond to the changes in water supply conditions that have begun to occur in many riparian jurisdictions. Unless the legislatures of riparian states are willing to respond with comprehensive reforms, the courts must accept responsibility for that task and develop a more acceptable accommodation of public and private interests.

This Article has suggested modifications that the judiciary could make to modernize the riparian doctrine and provide greater recognition of public consumptive interests. Effective implementation, though, would require an active judiciary committed to the task of updating the riparian doctrine and well-timed lawsuits permitting reinterpretation of appropriate riparian principles. Changes in the riparian doctrine that would need to be made include eliminating some of the archaic assumptions upon which the riparian doctrine is based,

---

Shore, *id.* at 872. Instead of construing the acts as reserving title in the state, the court could have concluded that the statutes merely give the public an easement or right to use the appropriate lands for fishing, hunting, fowling, and other related activities. This interpretation would have given greater effect to another Virginia statute that extends the boundary of land abutting bays, rivers, creeks, and the sea to the low water mark, but that makes the extension subject to the 1780 commons act. *See* VA. CODE § 62.1-2 (1982) (originally enacted as Act of February 16, 1819, 1818-1819 VA. ACTS, ch. 28, § 1).

215. *See, e.g.*, Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

modifying the riparian land and reasonable use restrictions to ratify reasonable expectations and promote current policy objectives, and interpreting the severability principle broadly to permit freer transferability of consumptive rights.

Even if these changes were implemented, though, unrestrained diversions for public use still would not be possible, because protection of present users' rights and reasonable expectations would require imposition of certain limitations. A court, for instance, should prevent attempts by populated localities to acquire use rights from the owner of a small riparian tract and then claim the right to conduct large-scale diversions to meet their consumptive needs. The purchaser of use rights should not acquire greater rights than his transferor, not even where the purchaser is a local government. Because limitations would need to be imposed on the use rights acquired by a locality, the modified riparian doctrine still may not accommodate the public interest to the satisfaction of some localities.

Although the localities' dissatisfaction may be somewhat justified, especially if the judiciary fails to broaden its perspective as much as suggested, their discontent ignores an important facet of the modifications. The proposed modifications represent attempts to work with the common-law allocation system to achieve an acceptable accommodation of private and public interests. They do not represent attempts to alter the common-law system radically. The modified principles do not give governmental entities free and unlimited water rights; nor do they guarantee that a locality's public consumptive needs will be met. Localities desiring more radical changes should urge development of a new allocation system or seek an independent theory for recognizing public consumptive rights.