Waterproofing the New Fracking Regulation: The Necessity of Defining Riparian Rights in Louisiana's Water Law

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Water, taken in moderation, cannot hurt anybody.
—Mark Twain

I. MAKING WAVES: THE HAYNESVILLE SHALE DISCOVERY AND ACT 955

It was not very romantic: There was no panning, no sifting through gravel of cold streambeds for gold flecks. There were no make-shift tents propped up on the sun-baked ground, no whistling steam engines, braying horses, or ringing of pickaxes against mountains. But in 2008, the atmosphere in North Louisiana must have been thick with a similar excitement. When Chesapeake Energy Corporation announced the discovery of an immense natural gas deposit, now known as “the Haynesville Shale,”1 Louisiana’s Mineral Board Secretary described the discovery’s impact on the state as “something akin to a modern day gold rush.”2 In place of pans, tents, and pickaxes came trucks, wells, and a flurry of property leases as energy companies rushed to capitalize on the shale.3 The venture made some Louisiana landowners millionaires overnight.4 Initial conservative estimates suggested that the Haynesville Shale may hold up to 200 trillion cubic feet of natural gas, equivalent to 18 years’ worth of current oil production in the United States.5 Other industry executives speculated that the deposit could be several times that size.6

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3. Don Briggs, president of the Louisiana Oil and Gas Association, called the leasing rush “historic”: “We’ve never seen anything like it in the United States. Companies were paying $10,000 to $30,000 an acre. There was $4 billion thrown into leases over the last year.” Experts Say Emerging Haynesville Shale Play Has Vast Potential, 16 BASIN OIL & GAS, Apr. 2009, http://www.fwbog.com/index.php?page=article&article=102.
5. Id.
6. Id.
As industry responded to the Haynesville Shale, so did the Legislature. On July 2, 2010, Louisiana Governor Bobby Jindal signed Act 955 of the 2010 Legislative Regular Session into law. The Act grants the secretary of the Department of Natural Resources authority to enter into “cooperative endeavor agreements” for the withdrawal of running surface water of the state. In a cooperative endeavor agreement, the secretary reviews applications for water withdrawal and, if an application is approved, collects “fair market value” for the water withdrawn.

The Act specifically exempts a certain class of landowners from its purview: Act 955 has no effect on “any rights held by riparian owners in accordance with the laws of this state.” The “laws of this state” are ambiguous, however, and the Legislature does not otherwise specify which riparian rights Act 955 will respect. Consequently, riparian landowners and oil and gas companies might be uncertain of their legal rights, and therefore may circumvent the Department of Natural Resources’ mandate by conducting independent withdrawals pursuant to leases or other arrangements.

Water fuels natural gas extraction; thus, considerations of how and by whom water may be withdrawn are crucial for those involved in the Haynesville Shale venture. This Comment explores the extent of riparian rights in Louisiana, particularly whether riparian rights encompass the use of running surface water for hydraulic fracturing (“fracking,” in industry vernacular). First, this Comment addresses whether Louisiana law recognizes a riparian right to withdraw running surface water for the purpose of fracting, the industry practice that Act 955 intends to regulate.

Second, assuming that Louisiana law does recognize this riparian right of use, this Comment explores whether riparians may convey that right to non-riparian oil and gas companies. A general evaluation of riparian rights suggests that fracking is a permissible riparian use of water. Such evaluation further suggests that this

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8. Id. at 3316.
9. Id. A riparian is a landowner whose land borders a body of water. DAVID H. GETCHES, WATER LAW IN A NUTSHELL 16 (4th ed. 2009).
right of use does not extend to non-riparians, nor is this right capable of being leased or sold. To maximize Act 955’s effectiveness, however, the Legislature should expressly state that there is no riparian right to convey water to a non-riparian for fracking. The Legislature must name its target; otherwise, Act 955 shoots and misses.

II. WHY REGULATE? HYDRAULIC FRACTURING AND ITS CONSTITUTIONAL IMPLICATIONS

Because of its extensive water use, fracking implicates two state constitutional provisions that seem to support Act 955’s regulatory scheme. First, the Public Trust doctrine requires the Legislature to enact laws to protect Louisiana’s natural resources, including water.11 Second, because water is a public thing, it may not be donated by the State.12 Act 955 is premised on the notion that if the State allows withdrawal of large amounts of running water for fracking, the result is an unconstitutional, tacit State donation of a public thing.13

A. The Fracking Process

Fracking in the Haynesville Shale was the catalyst for Act 955.14 Fracking is a process that increases output from natural gas wells.15 The fracking process involves a high-pressured injection of large amounts of fluid into a geologic formation.16 The fluid is primarily water, with some trace chemical additives.17 The pressure from the fluid creates or expands existing fractures in the underground rock.18 As the rock fractures, a “propping agent” such

11. LA. CONST. art. 9, § 1.
12. LA. CONST. art. 7, § 14.
13. See La. Atty. Gen. Op. No. 08-0176 (2010). Discussing the methods by which entities have removed water for fracking, the Attorney General explained that running water “cannot be donated by allowing a person with a tanker truck to pump it out of the creek from a public road right-of-way.” Id. at 4.
14. LA. DEP’T OF NAT. RESOURCES, supra note 2, at slides 2–6.
16. Id.
17. A spokesperson for Halliburton, for instance, states that chemical additives “typically comprise less than one-half of 1 percent of [its] hydraulic fracturing solutions.” Tom Zeller, Jr., E.P.A. to Study Chemicals Used to Tap Natural Gas, N.Y. TIMES, Sept. 9, 2010, at B3.
18. EPA STUDY, supra note 15, at 1.
as sand is pumped underground to keep the fractures open.\textsuperscript{19} Natural gas flows from the fractures into the well, where it is then extracted.\textsuperscript{20}

Fracking has become increasingly important in unlocking previously unreachable gas reserves.\textsuperscript{21} Of the 450,000 operating gas wells in the United States, 90\% rely on fracking for production.\textsuperscript{22} This reliance on fracking is a concomitant reliance on water: fracking a single well may require millions of gallons of water.\textsuperscript{23} The Louisiana Ground Water Resources Program reported that from October 2009 to mid-July 2010, 80\% of the water used for drilling operations in the Haynesville Shale came from surface water sources.\textsuperscript{24} In that 10-month span, 1.5 billion gallons of surface water were used.\textsuperscript{25}

B. Constitutional Concerns with Fracking: Public Trust Doctrine and Donation of Public Things

The sheer volume of water at issue buttresses the logic behind regulation. But regulating the withdrawal of running surface water may be more than ostensibly sensible; it may be mandatory under at least two provisions of the Louisiana Constitution.

First, the need for regulation finds support in the Constitution’s mandate to protect state natural resources. The running waters of the state are a public thing, held in the public trust.\textsuperscript{26} Article IX, section 1, known as “The Natural Resources Article,” declares that “[t]he natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people.”\textsuperscript{27} Furthermore, the Article states that “[t]he legislature shall enact laws to implement this policy.”\textsuperscript{28} This provision

\textsuperscript{19.} \textsuperscript{Id.}\textsuperscript{.}
\textsuperscript{20.} \textsuperscript{Id.}\textsuperscript{.}
\textsuperscript{22.} \textsuperscript{Id.}\textsuperscript{.}
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\textsuperscript{24.} \textsuperscript{Id.}\textsuperscript{.}
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\textsuperscript{26.} \textsuperscript{Id.}\textsuperscript{.}
\textsuperscript{27.} \textsuperscript{Id.}\textsuperscript{.}
\textsuperscript{28.} \textsuperscript{Id.}\textsuperscript{.}
establishes a "public trust" doctrine, mandating an affirmative duty on the part of the State to protect public resources. The Louisiana Supreme Court explained that the Natural Resources Article "imposes a duty of environmental protection on all state agencies and officials, establishes a standard of environmental protection, and mandates the legislature to enact laws to implement fully this policy." 29

If fracking implicates environmental protection concerns, then it also implicates the Public Trust doctrine. Critics of the fracking process suggest it poses environmental risks. Presently, fracking is the subject of pending contamination lawsuits, 30 a New York moratorium, 31 and an ongoing EPA study of fracking’s environmental impact. 32 Other concerns about the safety of fracking include the design and soundness of well casings, potential chemical spills, and the ecological impact of removing millions of gallons of water from local water bodies. 33 Any real or perceived environmental risks associated with fracking are largely beyond the scope of this Comment. The very existence of the debate, however, does implicate the Public Trust doctrine, and may inform the question of "reasonable use," which is discussed below. 34

Additionally, the constitutional prohibition of the State’s donation of a public thing supports the regulation of the withdrawal of running surface water. The Louisiana Civil Code classifies the running water of the State as a public thing owned by the State in its capacity as a public person. 35 The State may not donate a public thing. 36 Because running water is a public thing, the Attorney General has opined that allowing industries to pump public water for its private interests is an impermissible donation. 37

31. Id.
32. Zeller, supra note 17. The EPA aims to publish the results of its study by the end of 2012. Id.
34. See infra Part III.A.
35. LA. CIV. CODE art. 450 (2009).
36. LA. CONST. art. 7, § 14.
When an oil and gas company appropriates millions of gallons of the public’s running water, the withdrawal must come with a price tag to avoid being an unconstitutional donation. Although the legislature may not donate a public thing, it may sell a public thing pursuant to statutory authorization, and Act 955 authorizes the State to sell running water.

III. NAVIGATING THE RIPARIAN RIGHTS EXCEPTION

Regardless of whether fracking is dangerous, harmless, or beneficial to the public, the real question is whether Act 955, as written, will lead to any cooperative endeavor agreements at all. One provision of the Act is particularly problematic for deciphering when cooperative endeavor agreements are necessary. The Act states that its provisions “shall have no effect on the rights provided for in Civil Code Articles 657 and 658 or any rights held by riparian owners in accordance with the laws of this state.” Riparians are exempt from the obligation to obtain cooperative endeavor agreements to withdraw surface water, at least insofar as that requirement contravenes “rights held by riparian owners in accordance with the laws of this state.” However, the “laws of this state” concerning riparian rights are ambiguous.

Unresolved questions pertinent to the implementation of Act 955 include what “uses” a riparian is permitted to make of water, and whether and to what extent those uses may be consumptive or polluting. Also at issue is how far geographically the riparian may exercise his or her right of use, and whether riparian rights are, like other property rights, capable of transfer or severance from the land. If riparians or those in the fracking industry can circumvent the cooperative endeavor agreement requirement under the mantle of exercising “riparian rights,” then Act 955 may be futile.

These questions are complicated by a sister piece of legislation, Act 994, which reconfigures the definition of riparian rights by carving an immense industry-based exception to Act 955. Under Act 994, water withdrawn for agricultural purposes is exempt from the requirement to enter into a cooperative endeavor agreement,
and therefore free from Act 955’s government-imposed fees.\textsuperscript{41} Whether Act 994 clarifies the extent of riparian rights or only further muddies the water depends on Act 994’s construction in conjunction with existing Louisiana law. Either way, any discussion of riparian rights must now address the implications of Act 994’s agricultural exception.

Act 955 expresses the legislative intent that it will “provide needed interim stewardship of running surface water . . . . so that a thorough, deliberate, public, legislative evaluation of the issues and concerns may be had before a permanent state policy is established.”\textsuperscript{42} Evaluating riparian rights is a necessary first step to determining a permanent state water policy. Interested parties need clarity and predictability to understand their rights and comply with the law, and the public needs security in the stewardship of its natural resources.\textsuperscript{43}

\textbf{A. The Riparian Rights Doctrine}

Louisiana’s water law is based on the doctrine of riparian rights.\textsuperscript{44} A riparian is a landowner whose land borders a waterbody.\textsuperscript{45} This proximity to water gives landowners rights relating to the use of water, called “riparian rights.”\textsuperscript{46} In riparian jurisdictions, a riparian’s right to use water on his or her land is

\begin{itemize}
\item[41.] Act No. 994, 2010 La. Acts 3534, 3335.
\item[42.] Act No. 955, 2010 La. Acts 3315, 3319.
\item[43.] Although beyond the scope of this paper, it is feasible that a situation could arise in which a riparian could demonstrate that the State’s issuance of a permit to a non-riparian, pursuant to a cooperative endeavor agreement, has materially interfered with the riparian’s rights of use. In such a situation, the State may be obligated to compensate the riparian for a “taking” of the riparian’s rights. Cf. McCook Irrigation & Water Power Co. v. Crews, 102 N.W. 249 (Neb. 1905). When an act authorized appropriation of state waters for irrigation, a riparian owner whose property rights were appropriated or impaired was entitled to compensation for injuries actually sustained. The Nebraska Supreme Court explained: “[I]t is the intent of the law that the private [riparian] right shall be subordinated, and, when required for public use, taken under the law of eminent domain, and for which the owner of the riparian estate whose property is taken or injured is entitled to due compensation.” Id. at 250–51. \textit{See also} Hanford v. St. Paul & Duluth R.R. Co., 44 N.W. 1144, 1146 (Minn. 1889) (the “right of the riparian . . . is a property right, vested in him, recognized and protected in the law as property. He cannot be deprived of it without due process of law. It cannot be taken from him, and devoted to public use, without compensation.”).
\item[44.] LA. CIV. CODE art. 657 (2009) (“The owner of an estate bordering on running water may use it as it runs for the purpose of watering his estate or for other purposes.”).
\item[45.] GETCHES, \textit{supra} note 9, at 16.
\item[46.] Doiron v. O’Bryan, 51 So. 2d 628 (La. 1951).
\end{itemize}
generally treated as a vested property right. The Louisiana Supreme Court has affirmed this treatment of riparian rights, noting that "[t]he courts are not always explicit about it; but impliedly, if not expressly, they recognize ... riparian rights ... as forms of property."

Louisiana operates under a riparian regime and acknowledges that appertaining rights are a form of property. Beyond those basic principles, Louisiana's drought of water rights jurisprudence makes it difficult to say with certainty what riparian rights mean in the state. Riparian rights in Louisiana have been described "so vaguely and contain so many gaps that the rights of landowners, nonriparians, and 'the state' with regard to withdrawing or using surface water—or restricting such use—are neither clearly delineated nor adequately protected by law." Because the new law implicates riparian rights, determining what riparian rights are is essential to coherently interpreting the legislation. Defining riparian rights in the context of Act 955 will affect statutory interpretation, understandings of parties' rights, and the efficacy of the legislation.

Exploring the history and interpretation of riparian rights in other jurisdictions may assist in determining what Louisiana's riparian rights encompass. The Louisiana Civil Code's two ambiguous riparian rights articles have not been the subject of comprehensive judicial interpretation; therefore, there is scarce case law to provide guidance. Louisiana's own lack of jurisprudence invites jurisdictional comparisons, especially because the majority of American states follow the riparian doctrine, or some variation thereof. Because American riparian doctrine developed from civil law sources, American common law and Louisiana Civil Code articles draw from the same doctrinal

50. Walther, supra note 47, at 562 ("The fact that Louisiana has historically had a sufficient water supply undoubtedly accounts for the dearth of jurisprudence on water rights."); see also James M. Klebba, Water Rights and Water Policy in Louisiana: Laissez Faire Riparianism, Market Based Approaches, or a New Managerialism?, 53 La. L. Rev. 1779, 1791 (1993).
51. Getches, supra note 9, at 16 ("Twenty-nine states have systems rooted in the riparian doctrine. Ten others have a system based on some combination of riparian and prior appropriation doctrines.").
spring. Thus, examination of civilian history is illuminating. Furthermore, nothing in this state’s jurisprudence suggests that Louisiana would vary from common law jurisdictions in this respect, so a comparison provides useful guidance.

1. Riparian Doctrinal History and the Development of the Reasonable Use Doctrine

The doctrine of riparian rights is ancient, dating back to Roman Law. The Emperor Justinian’s Institutes listed running water among the “things that belong to all men,” as res communes. The corpus of the water itself was therefore insusceptible of ownership, and the Institutes provided that “the right to use water belonged only to those who had access to the water by virtue of their ownership of riparian land.” In 1804, the Code Napoleon codified the doctrine of riparian rights in modern continental Europe. The Code Napoleon elucidated two core principles of riparian rights: the limitation of water rights to riparian proprietors, and the requirement that any water used must be returned to its natural course.

In the early 19th century, the writings of jurists James Kent and Joseph Story introduced the concept of riparian rights into American common law. Prior to Kent’s and Story’s treatment of

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52. Id. at 16–17 (noting that some scholars diverge on whether the riparian doctrine is a product of the civil law or the English common law; however, riparian rights date back to Justinian’s Institutes in the civil law tradition).
53. Walther, supra note 47; Klebba, supra note 50, at 1791.
55. “By the law of nature these things are common to mankind—the air, running water, the sea, and consequently the shores of the sea.” THE INSTITUTES OF JUSTINIAN 2.1.1. (Thomas Collett Sandars trans., 1853). Since the late 1800s, Louisiana has enacted statutes asserting state ownership of things previously classified as “common.” The legislation secured administrative and financial advantages to the State, but “resulted in the near elimination of the category of common things.” A.N. YIANNOPoulos, PROPERTY § 46, in 2 LOUISIANA CIVIL LAW TREATISE 87 (4th ed. 2001). However, “the reclassification brought into line Louisiana law and modern continental doctrine and legislation. The 1978 revision, following this trend, has limited the category of common things to air and the high seas.” Id.
56. GETCHES, supra note 9, at 17.
57. Id.
58. Id. at 18.
59. Walther, supra note 47.
the issue, the civil law appraised riparian rights under the theory of "natural flow." Under the natural flow theory, each riparian is entitled to have water flow through his or her property in its "natural quality." This natural quality is subject only to small alterations by the natural uses of upstream riparians. These natural uses are "usually restricted to diminutions essential for domestic purposes," such as drinking, washing, and watering small gardens. Thus, riparian rights under the natural flow theory were rather limited.

Present American conceptions of riparian rights began with Justice Story's 1827 opinion in Tyler v. Wilkinson. Justice Story's discussion of riparian rights introduced the doctrine of "reasonable use" into American law. Essentially, a riparian is entitled to use water flowing over his land for any purpose, as long as his use is reasonable. The question of reasonableness hinges upon whether a particular use operates to the detriment of other riparians.

This decisive articulation of the "reasonable use" doctrine of riparian rights sprang from a dispute between riparian mill owners and defendants whose upstream dam diverted water from the plaintiffs' mills. Justice Story acknowledged the natural flow theory of riparian rights, explaining that by virtue of his or her riparian ownership, the landowner has "a right to the use of the water flowing over [riparian land] in its natural current, without diminution or obstruction." Although the riparian has the right to use the water's natural flow, "strictly speaking, he has no property in the water itself." The riparian is entitled only to "a simple use of it, while it passes along." Justice Story then went beyond the tenets of the natural flow theory, reasoning that "[t]he consequence of [the natural flow] principle is, that no proprietor has a right to

60. Id. at 555.
61. Id.
62. Id.
63. Id.
64. GETCHES, supra note 9, at 35. It is suggested elsewhere that the natural flow theory also allows the riparian "to make artificial use of the water, so long as he does not materially affect the natural flow of the stream through the property of the downstream proprietor." See Jerry G. Jones, Comment, Water Rights in Louisiana, 16 LA. L. REV. 500, 501 (1956).
65. 24 F. Cas. 472 (C.C.D.R.I. 1827).
66. GETCHES, supra note 9, at 21.
67. Id.
68. Tyler, 24 F. Cas. at 472.
69. Id. at 474.
70. Id.
71. Id.
use the water to the prejudice of another." Thus, water use is not limited to the domestic, subsistence uses traditionally permitted under the natural flow theory. Justice Story acknowledged that perfect apportionment of flowing waters between riparians is impossible. Although riparian landowners have a "common right" to the water that flows among them, Justice Story refused to hold "that there can be no diminution whatsoever, and no obstruction or impediment whatsoever, by a riparian proprietor, in the use of the water as it flows." Some diminution or alteration of the water's flow is an implied part of the right of using a stream. To construe the riparian right otherwise "would be to deny any valuable use of it. There may be, and there must be allowed of that, which is common to all, a reasonable use.

Justice Story shifted the inquiry from whether a particular use comports with water's natural flow to whether a use is reasonable. In so doing, Justice Story set forth a simple test for reasonableness: does the use injure other riparian proprietors? If not, then "[t]here may be a diminution in quantity, or a retardation or acceleration of the natural current indispensable for the general and valuable use of the water, perfectly consistent with the existence of the common right." Justice Story noted that "[t]he law here, as in many other cases, acts with a reasonable reference to public convenience and general good.

Less than one year after Justice Story's decision in Tyler v. Wilkinson, James Kent embraced the reasonable use doctrine in his Commentaries on American Law, specifically citing Justice Story's opinion. Like Justice Story, Kent affirmed the logic that because "[s]treams of water are intended for the use and comfort of man," it would be "unreasonable, and contrary to the universal sense of mankind, to debar every riparian proprietor from the application of the water to domestic, agricultural, and manufacturing purposes, provided the use of it be made under the limitations which have been mentioned."

Through Kent's influence, the transformation of the riparian doctrine from a theory of natural flow to reasonable use spread

72. Id. (emphasis added).
73. GETCHES, supra note 9, at 35.
74. Tyler, 24 F. Cas. at 474.
75. Id.
76. Id. (emphasis added).
77. Id.
78. Id.
79. GETCHES, supra note 9, at 21.
80. 3 JAMES KENT, COMMENTARIES ON AMERICAN LAW 440 (14th ed. 1896).
throughout the United States and surfaced across the Atlantic as English courts adopted Kent’s interpretation of riparian rights. Today, all riparian states employ some form of the reasonable use doctrine. Reasonableness continues to be a holistic inquiry, determined by the facts of the case, the utility of the use, and the severity of the use’s impact on other riparians.

2. Reasonable Use in Louisiana

The law is not explicit, but it is fairly clear that Louisiana follows the reasonable use doctrine. The Louisiana Supreme Court addressed a dispute between riparian owners in *Long v. Louisiana Creosoting Co.* The defendant operated a creosoting plant near a creek that ran through the plaintiff’s farm, over a mile downstream from the plant. The plaintiff prevailed on his claim that the defendant’s use polluted the watercourse, and was awarded damages. However, the trial court refused to grant the plaintiff’s request for an injunction against the defendant. The Louisiana Supreme Court affirmed, clarifying that “[w]hether a use that pollutes a water course is a reasonable or an unreasonable use is for the judge or jury to determine from all the circumstances of a case.” The Court’s recognition that reasonableness is a factual inquiry echoes the principles of the reasonable use doctrine. The facts of *Long* further suggest that Louisiana follows the reasonable use doctrine instead of the natural flow theory. It is difficult to imagine a permissible use under the natural flow theory capable of polluting a waterway. However, by denying an injunction against use that was found to pollute the water, the *Long* Court made clear that even a polluting use may be permissible in certain situations.

In addition to case law, there is other support for the proposition that Louisiana follows the reasonable use doctrine, such as Civil Code article 657. The article provides that the “owner of an estate bordering on running water may use it as it runs for the

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81. Walther, *supra* note 47, at 555; Getches, *supra* note 9, at 19 (citing Mason v. Hill, 110 E.R. 692 (Eng. 1833), as the case in which the writings of Justice Story and Kent were incorporated into English riparian doctrine).

82. Getches, *supra* note 9, at 21. Although some courts continue to use “natural flow” language when discussing riparian rights, generally, this language actually refers to some variant of reasonable use. *Id.*


84. 69 So. 281 (La. 1915).

85. *Id.* Creosote, made from coal tar, is primarily used as a wood preservative.

86. *Id.* at 282.

87. *Id.* (emphasis added).
purpose of watering his estate or for other purposes." The inclusion of the phrase "for other purposes" would make the article unnecessarily broad if the redactors intended to allow only basic domestic uses under the natural flow rule. Finally, every other riparian state follows some version of the reasonable use doctrine, and there is nothing to indicate Louisiana would vary on this point.

B. Use and Consumption

Accepting that the riparian right is a right of reasonable use that may necessitate diminution of the water body, the question becomes whether "use" generally allows "taking" water, and to what extent such consumptive use is reasonable. Even if one assumes the use of water for fracking is a consumptive and somewhat polluting use, those characteristics would probably not remove water drawn for fracking from the pool of acceptable riparian uses.

1. Reasonable Use Includes Consumptive Use

Scholars recognize that it is a "paradox" that every riparian has a right to use the water abutting his land, "for how can all riparian owners take and use all of the same finite quantity of water?" Because all riparians cannot take and use the same finite quantity of water, the "material injury" standard controls riparian consumption. A riparian owner, "for the sake of the others, though he may use and temporarily detain the water, has the duty not substantially to diminish its quantity or level." Under the reasonable use doctrine, the general rule in riparian jurisdictions is that a riparian’s use may involve the removal of water from the watercourse. Riparians may always remove water for natural uses, because policy dictates that uses necessary to sustain life are inherently reasonable. Additionally, life-sustaining natural uses are categorically reasonable because such limited uses are unlikely to consume enough water to harm

88. LA. CIV. CODE art. 657 (2009).
89. Klebba, supra note 50, at 1791.
91. Id. (citing Samuel C. Wiel, Running Water, 22 Harv. L. Rev. 190 (1909), for "the classic discussion").
92. See GETCHES, supra note 9, at 35–39.
93. Id. at 36.
downstream riparians. In some jurisdictions, this reasonable use preference for natural uses may mean that a riparian can make natural uses of the water adjacent to his property regardless of the consequences for downstream riparians. Second, artificial uses of water for irrigation and industrial purposes necessarily consume water, but are simply subject to the test of reasonableness.

For more than a century, most riparian jurisdictions have found that reasonable use encompasses the use of water for domestic, agricultural, and manufacturing purposes, subject to the qualification that the use may "not work a material injury to the other proprietors." The proposed use of the water, however, may be a consideration in determining reasonableness. Depending on the jurisdiction’s policy preferences, some uses may be privileged over others based on the uses’ history and utility within the state.

The Restatement (Second) of Torts section 850A suggests the following factors for evaluating the reasonableness of water use:

(a) the purpose of the use, (b) the suitability of the use to the watercourse or lake, (c) the economic value of the use, (d) the social value of the use, (e) the extent and amount of the harm it causes, (f) the practicality of avoiding the harm by adjusting the use or method of use of one proprietor or the other, (g) the practicality of adjusting the quantity of water used by each proprietor, (h) the protection of existing values of water uses, land, investments and enterprises and (i) the justice of requiring the user causing harm to bear the loss.

Under the Restatement criteria, fracking may indeed be a reasonable use of water. By all accounts, the economic and social value associated with the use of water for fracking Haynesville

94.  Id. at 35–36; see also Meng v. Coffee, 93 N.W. 713, 717 (Neb. 1903) (noting the distinction between "modes of use which ordinarily involve the taking of small quantities and but little interference with the stream, such as drinking and other household purposes, and those which necessarily involve the taking or diversion of large quantities and a considerable interference with its ordinary course and flow, such as manufacturing").
95.  Id. at 35.
96.  Id.
97.  Hendrick v. Cook, 4 Ga. 241, 256 (1848); see, e.g., Meng, 93 N.W. at 717 (riparians must exercise rights of use with due regard for the rights of others); Harris v. Brooks, 283 S.W.2d 129, 133 (Ark. 1955) (reasonable use is a response to the “progress of civilization, particularly in regard to manufacturing, irrigation, and recreation,” and use of water is “limited to what is reasonable, having due regard for the rights of others”).
98.  Walther, supra note 47, at 555–56.
Shale wells is very significant, even though the use is highly consumptive. In assessing reasonableness, the benefits of fracking may outweigh the costs.

2. Polluting Use May Still Be Reasonable

In riparian states with permit regimes similar to Act 955's cooperative endeavor agreements, state authorities weigh pollution as a factor in determining whether to issue permits for the taking of water. Failure to consider pollution may violate the right of riparians to receive the natural flow of water in a "reasonably pure condition." Because the withdrawal of running surface water does not immediately impact the quality of the running waters that traverse riparian land, it is especially difficult to evaluate whether fracking pollutes the environment. Complaints about fracking and related activities concern primarily groundwater contamination. However, because groundwater is only one phase in the "vast circulatory system known as the hydrologic cycle," water "may be surface water one moment and ground water the next, and vice versa. But it is all water, and it must be considered as a whole—each phase in relation to the others and to the entire hydrologic cycle." Thus, the condition and supply of groundwater are "intimately connected to those of surface water." Almost every use of surface water will "necessarily alter the chemistry or temperature of a stream or lake either because it discharges some waste back into the stream or because the removal of water makes the stream less capable of diluting other contaminants." As a result, all water uses technically may be somewhat polluting. The Restatement factors apply with equal force to the polluting use inquiry in the context of fracking as with any other potentially polluting use: even assuming fracking poses environmental risks, the benefits of fracking prevail in the reasonableness calculus.

101. Getches, supra note 9, at 37.
102. Stoebeck, supra note 90, at 401 (citing 1 H. Farnham, Waters and Water Rights 285–90 n.20 (1904)); see also Yiannopoulos, supra note 55, § 57, at 104 ("[T]he user of running water should consider the rights of other persons and refrain from pollution.").
103. See Zeller, supra note 30.
105. Klebba, supra note 50, at 1819.
106. Getches, supra note 9, at 43.
3. Consumptive and Polluting Uses in Louisiana

Louisiana law recognizes that water is a valuable commodity of diverse value, naming uses for municipal, industrial, agricultural, and domestic purposes as uses for which no charge may be assessed against any person. The law does not qualify this freedom of use with any requirement that such uses be neither consumptive nor polluting.

a. Louisiana's Liberal Water Use History

Louisiana Revised Statutes section 9:1101 expresses a policy of free water use for the general public. This policy is an important underlying consideration in determining whether Louisiana riparian rights include uses that may be consumptive or polluting. Water should be freely available to the public; furthermore, the Civil Code privileges riparians over the general public, granting them specific rights of water use. A fortiori, riparians should be able to use water for section 9:1101's listed purposes to an even more liberal extent than the general public. Louisiana Civil Code article 657 declares that the owner of an estate bordering on running water may use the running water as it runs for the purpose of watering his estate or for other purposes. The meaning of the phrase “for other purposes” is ambiguous, as is the amount of water the riparian may use. However, the article allows a riparian to water his estate, and irrigation requires large amounts of water. Civil Code article 657 suggests riparian rights are broad, but it does not spell out an appropriate standard for determining what constitutes a reasonable use. Outside of Louisiana, the riparian rights doctrine is construed to suggest that the appropriate measure of permissible water withdrawals is whether the withdrawals cause material harm to other riparians.

108. Id.
110. Id.
111. Jones, supra note 64, at 507.
113. “[A]ll riparian proprietors, having equally the right of access, must exercise the resulting usufruct reasonably, with due regard to the rights of their neighbors on the stream.” Wiel, supra note 91, at 208.
But Louisiana’s riparian rights, whatever they are, must be newly evaluated in the context of Louisiana’s new laws. Act 994, codified at the same time as Act 955, exempts agricultural water withdrawals from the requirement of cooperative endeavor agreements.114 Because Act 994 implicates riparian rights, it is worthwhile to explore the Act’s possible application in a debate over whether water withdrawal for fracking is a riparian right of use.

b. Filtering the Debate: Act 994’s Consumed/Used Distinction for Water Use and Its Implications for Construing Riparian Rights

Act 994 introduces a distinction between water that is consumed and water that is merely used. Act 994 section 1(A) “finds that waters used in agricultural or aquacultural pursuits are not consumed, rather they are merely used.”115 The distinction is noteworthy, if arbitrarily reached. Act 994 performs philosophical acrobatics to make its consumed/used distinction; in sum, agricultural and aquacultural uses of water are “value-adding processes” because they accelerate water’s transit through the hydrological cycle.116 According to Act 994, the “direct and indirect effects that result from these uses bring a positive impact on the resource and the environment that yields a value far in excess of the value of the resource as mere running water.”117 This analysis resulted in Act 994’s legislative finding that “there is no prohibited donation by agricultural and aquacultural uses of these sorts.”118 Thus, a non-riparian may use water for agriculture or aquaculture without paying for the water that it withdraws, and the State will not classify this withdrawal as a “donation.”119 It is unclear whether the Legislature arrived at its “no donation” conclusion through the vehicle of “no consumption,” through “positive impact,” or through some combination of both. In any event, Louisiana has decided that riparian rights include the right to grant a non-riparian access to withdraw running water for agricultural or aquacultural purposes, free from state fees.120

115. Id.
116. Id.
117. Id.
118. Id.
119. Id.
120. Id. at 3535. An “agricultural or aquacultural purpose” means “any use by a riparian owner or an assignee of a riparian owner of running surface waters withdrawn and used for the purpose of directly sustaining life or providing
The distinction between water that is consumed and water that is merely used, however, must be conceptually separated from the question of limits on riparian rights of use. The consumed/used distinction is a channel for the Legislature to find that there is no donation when water is used by a non-riparian for agriculture. Thus, the consumed/used distinction implicates water use by non-riparians; it does not, however, propose that riparian rights are limited to water uses of the “merely used” variety. The Legislature wanted to give farmers the ability to take water free of charge. Act 994 accomplishes this by looking to those who already have the right to use water free of charge—riparians—and then duplicating that right by allowing riparians to extend their own rights to non-riparians for agricultural use.

Those favoring an anti-fracking statutory construction of Act 994 may argue there is no riparian right to use water for fracking because fracking consumes water, rather than merely using it. One may argue that because Act 994 enumerates two specific purposes for which water is used instead of consumed, water use for any purpose other than agriculture or aquaculture is impliedly not “used,” but rather consumed. However, this argument misreads Act 994. The Act’s distinction between whether water is consumed or used addresses whether water is donated by the state when a non-riparian takes it. Act 994 is not a restrictive definition of what riparian rights of use are, because Act 955 expresses the intent to leave riparian rights intact. And discussion of riparian rights indicates that rights of use include consumptive uses. Act 994’s “value-adding” analysis is simply the mechanism by which existing riparian rights may be extended to a non-riparian, without the use being considered an unconstitutional donation of the public’s water. Thus, Act 994 does not say that water must be “value-adding” and thus “merely used” when determining what constitutes a permissible riparian use. To the contrary, Act 994 implies that some riparian rights of use include uses that consume water. Act 994 qualifies that a riparian may assign to a non-riparian access rights equal to his own “for any agricultural or aquacultural purpose.” If riparian rights of use encompassed only value-adding, non-consumptive agricultural or aquacultural habitat to sustain life of living organisms that are customarily or actually intended to be brought to market for sale.”

121. Id. at 3534.
123. See supra Part III.B.1.
uses, then the Act would simply provide that a riparian may assign to a non-riparian "access rights equal to his own."

c. A Leak in the Vessel: Why Act 994’s Intent to Subject Fracking to Regulation by Cooperative Endeavor Agreements is Insufficient

Act 994 exempts agricultural use of water from Act 955’s requirement of cooperative endeavor agreements. By expressly stating that riparians may extend their rights of use to non-riparians for agriculture, Act 994 implies that riparians may not extend their rights of use to non-riparians for any other purpose. Act 994 carefully explains why non-riparian agricultural use of water is not a donation, implying that other non-riparian uses of water would be unconstitutional donations. Acts 955 and 994 in concert clearly intend for non-riparian fracking to be subject to cooperative endeavor agreements, but neither Act explicitly states it. Act 994 states that a riparian may grant waterway access, with attendant rights of water use, to a non-riparian agrarian, and that such use is beneficial and not consumptive. This provision is a limited statement of riparian rights of use, not a complete statement. It is an implication that riparians cannot extend rights of use for fracking to non-riparians, but it is not express policy. The implication alone may not be sufficient to curtail the ability of a riparian to extend his or her rights of use to a non-riparian for fracking. Because Act 955 states that the legislation “shall have no effect on . . . any rights held by riparian owners in accordance with the laws of this state,” Act 994’s insinuations are insufficient to overcome law to the contrary, if such law exists. Thus, the inquiry is still two-fold: whether fracking is a riparian right, and if so, whether the right may be conveyed to a non-riparian.

d. Standards for Permissible Withdrawal: Material Injury and Environmental Balancing

Whether fracking is a riparian right depends in part on how much water may be taken under the riparian right of use. Act 994 provides that, for agricultural purposes, there is essentially a

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125. Id.
126. Id. at 3534.
duplication of the riparian right of use. A riparian must already have a right in order to grant that right to another. Act 994 allows a non-riparian to withdraw water for agriculture, pursuant to a riparian’s authorization. The riparian assigns rights “equal to his own”—so the riparian right must include the right to such water use in the first place. The only limitation to this duplication of the riparian right is the Natural Resource Article’s commitment to protect the environment. Act 994, by allowing a riparian to assign rights “equal to his own” for agricultural purposes, equivocally acknowledges that riparian rights include use of water for agriculture, which entails use of significant quantities of water. The standard for permissible withdrawal is still unknown, although it seems that two possibilities exist: the permissibility of water taken may be evaluated under a material injury standard, or an environmental balancing test.

Louisiana allows water to be used in a way that removes the water from the water body. No reported Louisiana case has explicitly addressed the question of how much water can be withdrawn “before the person taking it exhausted the riparian right, or activated the riparian right of another to prevent withdrawals.” The material injury standard built into reasonable use has apparently governed similar inquiries in the past.

129. For close to 200 years, Louisiana has recognized the principle of nemo dat quod habet—that no one can transfer a greater right than he himself has. See Davis v. Prevost’s Heirs, 1 Mart. (n.s.) 650, 675 (La. 1823); see also Modeliste v. Sehorn, 2008 La. App. Unpub. LEXIS 765, *8 (La. Ct. App. 4th 2008) (Louisiana Civil Code article 2452 expresses the principle of nemo dat quod habet).
130. Act No. 994 § 1(B), 2010 La. Acts 3534, 3535 (“A riparian owner may assign access rights equal to his own for the surface water adjacent to his riparian land for any agricultural or aquacultural purpose within the state of Louisiana by the non-riparian owner without restriction as to the form of any such agreement to another, provided that the withdrawal of running surface waters is environmentally and ecologically sound and is consistent with the required balancing of environmental and ecological impacts with the economic and social benefits found in Article IX, Section 1 of the Constitution of Louisiana. No riparian owner shall authorize the withdrawal of running waters for non-riparian use where the use of the water would significantly adversely impact the sustainability of the water body, or have undue impacts on navigation, public drinking water supplies, stream or water flow energy, sediment load and distribution, and on the environment and ecology balanced against the social and economic benefits of a contract of sale or withdrawal, or sale of agreement, or right to withdraw running surface water for agricultural and aquacultural purposes.”).
132. Id.
In *Jackson v. Walton*, the Second Circuit reversed an injunction against a non-riparian defendant. The defendant was removing water from a bayou pursuant to a contract with a riparian landowner across the bayou from the plaintiff’s land. Finding for the defendant, the court “seems to have assumed that the plaintiff had something that could be identified as a riparian right to prevent withdrawals from the stream by a non-riparian *if* these were shown to interfere with the riparian’s actual uses of the water.” *Jackson* is significant because it suggests the material injury standard applies not only to disputes between riparians, but also to disputes between riparians and non-riparians.

Although the redactors of the Louisiana Civil Code did not make provisions for non-riparian use, the omission did not equate to a prohibition of non-riparian use. If a non-riparian may withdraw water as long as other riparians are not injured, then *a fortiori* a riparian can do so as well.

If courts decline to apply this material injury standard, Act 994 suggests another standard for evaluating the measure of permissible riparian water use. Act 994 adopts the Natural Resources Article’s balancing test of environmental impact weighed against economic and social benefits to assess the permissibility of a non-riparian’s proposed agricultural use. If courts apply Act 994’s balancing test outside of its agricultural context to mediate disputes concerning a riparian’s use of water for fracking, the result would probably be the same as a result reached by a court applying the material injury standard.

The Natural Resources Article’s balancing test is not very rigorous. In fact, such a test may yield even more favorable results for the contested use than would the material injury standard. If a use survives the Natural Resources Article’s balancing test, Act 994 requires only that, when a riparian authorizes a non-riparian use, that use must not “significantly

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134. *Id.*
135. *Id.* The defendant was pumping water from the bayou to irrigate his land, which, although adjacent to the land of the riparian with whom he contracted, was not adjacent to the bayou. *Id.*
138. Act No. 994, 2010 La. Acts 3534, 3535. Riparians may grant their water rights to non-riparians for agriculture without restriction as to form, “provided that the withdrawal of running surface waters is ... consistent with the required balancing of environmental and ecological impacts with the economic and social benefits found in Article IX, Section 1 of the Constitution of Louisiana.” *Id.*
139. The Article provides simply that state natural resources “shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people.” *La. Const.* art. 9, § 1.
adversely impact" the water's sustainability, flow energy, etcetera. The focus is not on whether other riparians are injured by a use; rather, the use must not "significantly adversely impact" the environment. A use that affects the water's sustainability and other attributes may indeed materially injure another riparian, so some protection of riparians flows from Act 994's commitment to the environment. But concern for riparians is not a motivating factor.

Meanwhile, under the material injury standard, once a riparian demonstrates that another's use of water materially injures him or her, the injurious use immediately becomes unreasonable. Conversely, Act 994 could still allow a court to find that such an injurious use is permissible, as long as the use is otherwise socially or economically beneficial enough to "balance out" the harm caused to other riparians. Like the courts of its sister riparian jurisdictions, the Louisiana Supreme Court has explicitly held that some polluting uses are reasonable. Even if the evaluation shifts from material injury to Natural Resources balancing, the result should be the same. The reasonable use doctrine will likely not prevent fracking solely on the grounds of its being a consumptive and polluting use. It is reasonable to conclude that the use of water for fracking is a permissible riparian right of use.

C. Are Riparian Rights Limited to Riparians?

If the analysis ended here, fracking would be considered a reasonable riparian use, even though the use consumes large amounts of water, and even if the use ultimately pollutes the watercourse. However, Act 955 was not prompted by concern about...
riparian landowners personally removing water for fracking on their own estates. The legislation targets the activities of non-riparian oil and gas companies, so the analysis must continue.

Assuming the riparian right of reasonable use includes the use of running water for fracking, to whom is the right available? "The riparian" is the obvious answer, but it may not be the only answer. If, as jurisprudence suggests, the riparian has a vested property right to reasonably withdraw water, may he or she convey that right to another without a conveyance of the actual riparian property?

Resolving this question is crucial for the efficacy of Act 955. If the riparian right of use also includes the prerogative to convey that right, or to constructively duplicate that right by granting access to the water (as Act 994 allows for agriculture), oil and gas lessees could circumvent the authority of the Department of Natural Resources by dealing directly with riparians. Act 955 cannot be amended to prevent this scenario without addressing whether the power to convey riparian rights of use is, in fact, a vested property right.

Jurisdictions that eschew the riparian scheme, following what is known as the "prior appropriation" doctrine, recognize the right to convey water rights separate from an estate. Prior appropriation jurisdictions regard the right to use water as "a real property right, which, although appurtenant to land, may be separately conveyed." Under riparian doctrine, however, "riparian rights are an inherent aspect of upland ownership and are not severable from it." It was well-established long before Kent’s Commentaries that


145. The question is whether the riparian right of use is a right that may be severed from the rest of the riparian's property. See John S. Lowe, Oil and Gas Law in a Nutshell 39 (5th ed. 2009) ("It is axiomatic in Anglo-American law that an owner of property rights can transfer property rights in whole or in part. Where an owner transfers less than the whole bundle of property rights he or she owns, we say that rights have been ‘severed.’").

146. If an oil company is itself a riparian landowner, and the riparian right to use water includes fracking-destined withdrawal, such a company may continue using running surface water for fracking on an unregulated basis. Part III.A and III.B suggest that fracking is a permissible riparian use of water. If an oil and gas company becomes a riparian, it too would presumptively be able to use water for fracking on its own riparian land.

147. Walther, supra note 47; see e.g., Utah Code Ann. § 73-1-11 (Westlaw 2010).

a riparian, though having no property right in the water itself, enjoys a usufruct in running water by virtue of his proximity to the water. The riparian right exists because of the riparian’s adjacency to water, so that right cannot be severed from the property that is the source of the right. However, the practice of riparian states has been inconsistent with doctrine. Many state supreme courts in riparian jurisdictions have held that, in at least some instances, certain riparian rights may indeed be conveyed separately from ownership of the riparian land. On the other hand, Louisiana may find guidance more aligned with riparian doctrine in its French civilian heritage. French law affirmed the doctrinal principle that riparian rights are inseparable from ownership of the land: “The quality of being riparian does not transfer itself by means of the agreement to those who do not possess anything along the rivers, hence the rights attached to the quality of being riparian are equally non-transferable to others.”

1930) ("[T]he riparian right is in its nature a tenancy in common and not a separate or severable estate.").

149. KENT, supra note 80, at 439; see also Crawford Co. v. Hathaway, 93 N.W. 781, 790 (Neb. 1903) ("The law does not recognize a riparian property right in the corpus of the water. The riparian proprietor does not own the water. He has the right only to enjoy the advantage of a reasonable use of the stream as it flows by his land, subject to a like right belonging to all other riparian proprietors." (citations omitted)).

150. See Duckworth v. Watsonville Water & Light Co., 89 P. 338 (Cal. 1907); McCord v. The Big Brothers Movement, Inc., 185 A. 480 (N.J. Ch. 1936) (suggesting that water taken under the riparian rights doctrine may not be used for the benefit of non-riparians).

151. See e.g., Burwell’s Bay Improvement Ass’n v. Scott, 672 S.E.2d 847, 849 (Va. 2009) ("The law in Virginia is clear, as both parties agree, that riparian rights are severable from the property to which the rights were originally appurtenant."); Belvedere Dev. Corp. v. Dep’t of Transp., Div. of Admin., 476 So. 2d 649, 651 (Fla. 1985) ("[R]iparian rights may sometimes be severed from the ownership of the land to which they attach. . . . There is nothing novel about the notion of finding a legal separateness of an incorporeal interest such as a riparian right. The law has long recognized the separateness of nonpossessory property interests, including incorporeal heriditaments and future interests."); Mayer v. Grueber, 29 Wis. 2d 168, 176 (Wis. 1965) ("The cases, however, are in accord that the riparian rights and title to the land under the water are severable if the deed makes that limitation clear."); Hanford v. St. Paul & Duluth R.R. Co., 43 Minn. 104, 119–20 (Minn. 1889) ("The rights of no one are affected by allowing the riparian owner to convey away this part of his property as he may his other property. It is only an abstract question whether the right, originating in custom, and having originally attached as an incident to his riparian lands, may now be sold and conveyed, and be enjoyed by the purchaser. . . . No one is interested in opposing such unrestricted alienability and use.").

152. 7 LAURENT, PRINCIPES DE DROIT CIVIL FRANCAIS 356 (2d ed. 1876) (quoted in Samuel C. Wiel, Origin and Comparative Development in the Law of
Whether the right to use water can be transferred absent a conveyance of riparian rights in Louisiana is still "an open issue."\footnote{153} The \textit{Jackson} court did not invalidate a contract granting a non-riparian access to the waterway absent actual harm to other riparians.\footnote{154} Although the non-riparian used his access to remove water, the court did not discuss the validity of the contract.\footnote{155} In fact, it appears that Louisiana courts have never directly addressed whether riparian rights may be transferred separately from the full ownership of riparian land.\footnote{156}

The nature of Louisiana water rights, however, may hold the answer to the question. The Civil Code articles on riparian rights are located under the chapter of natural servitudes, suggesting, \textit{pro subjecta materia}, that riparian rights are governed by the law of servitudes.\footnote{157} A natural servitude arises from the natural situation of estates.\footnote{158} The riparian water rights servitude is a natural servitude, because it arises from the riparian estate's contiguity to a watercourse.\footnote{159} A landowner cannot convey a natural servitude separately from the land to which it is attached.\footnote{160} Therefore, even if other jurisdictions construe riparian rights to allow water rights to be conveyed separately from the land, such a construction does not apply in Louisiana.\footnote{161}

Although riparians may not sever their rights of use from their riparian estates, it is less clear whether riparians may duplicate those rights by assigning their rights of use to non-riparians, as contemplated by Act 994. Pursuant to Act 994, in agricultural situations, Louisiana deviates from the general riparian principle that the "formality of owning a square foot of riparian land limits the right to use water on non-riparian land to people who are riparian landowners."\footnote{162} Act 994 moots the issue of "severance" because it

\footnotesize

\textit{Watercourses in the Common Law and in the Civil Law}, 6 \textit{CAL. L. REV.} 342, 367 (1918)).
\footnote{155} \textit{Id.}
\footnote{156} \textit{Id.}
\footnote{157} \textit{See} \textit{LA. CIV. CODE} art. 655 (2009) (creating a servitude in favor of the upstream estate).
\footnote{158} \textit{LA. CIV. CODE} art. 654 (2010).
\footnote{159} \textit{See} Doiron v. O'Bryan, 51 So. 2d 628 (La. 1951).
\footnote{160} \textit{LA. CIV. CODE} arts. 652-54 (2009). "[S]ervitudes are non-transferable separate and apart from the dominant estate. Thus the only transfers of the right of water usage permitted are those accomplished by a transfer of the title in the riparian estate." \textit{Jones}, \textit{supra} note 64, at 507.
\footnote{161} Walther, \textit{supra} note 47, at 563-64.
\footnote{162} \textit{GETCHES}, \textit{supra} note 9, at 55.
allows a riparian to assign a right equal to his or her own to a non-riparian seeking water for agricultural pursuits.\textsuperscript{163} Thus, if a riparian can lease or sell water rights to a non-riparian and still retain his or her own rights in the property, the riparian right is not truly "severed" from the land, and inhere with the riparian landowner. In Act 994, a sale does not sever the riparian right; rather, assignment seems to duplicate the riparian right.\textsuperscript{164} In any event, Act 994 only addresses non-riparian \textit{agricultural} use. The Act does not encompass the permissibility of granting access or withdrawal privileges, or both, to non-riparians for industrial purposes like fracking.

Long before Act 994's enactment, limited jurisprudence has suggested that riparians have the ability to grant non-riparians the general right to withdraw water. In \textit{Keeley v. Schexnailder}, the Louisiana Third Circuit upheld a riparian landowner's grant of access to water to a non-riparian.\textsuperscript{165} The court did not address whether it would uphold a grant of the right to withdraw water.\textsuperscript{166} In \textit{Jackson v. Walton}, however, the court's refusal to invalidate the riparian's grant of access to a non-riparian necessarily confirmed the non-riparian's continued withdrawal of surface water.\textsuperscript{167}

Of course, no matter how one construes prior jurisprudence, it is well-settled in Louisiana law that one cannot grant greater rights to a thing than one owns.\textsuperscript{168} Thus, at most, a grant of the right to withdraw water cannot exceed the riparian's own right to withdraw. If the legislature or the courts determine that a riparian owner does not have a vested property right in withdrawing water for fracking, then a riparian could not grant such a right of use to oil and gas lessees. Presently, although one could construe the vagaries of Acts 955 and 994 to include this limitation, the legislature has made no such determination.

Despite the laws of other riparian states, an amalgamation of Louisiana water law supports the contention that riparians may not convey their rights of use to non-riparians. Acts 955 and 994 in conjunction with Louisiana Revised Statutes section 9:1101 and Louisiana Constitution article 7, section 14, form a picture of water rights that can be summarized as follows: Louisiana Revised Statutes section 9:1101 declares that the waters of all waterbodies in the state are "property of the state."\textsuperscript{169} Water belongs to the State in

\begin{itemize}
\item \textsuperscript{163} Act No. 994, 2010 La. Acts 3534, 3535.
\item \textsuperscript{164} \textit{Id.} at § 1(B).
\item \textsuperscript{165} 708 So. 2d 838 (La. Ct. App. 3d 1998).
\item \textsuperscript{166} \textit{Id.} at 843; La. Atty. Gen. Op. No. 08-0176 (2010).
\item \textsuperscript{167} \textit{Jackson v. Walton}, 2 La. App. 53 (La. Ct. App. 2d 1925).
\item \textsuperscript{168} \textit{See supra} note 129.
\item \textsuperscript{169} LA. REV. STAT. ANN. § 9:1101 (2008).
\end{itemize}
its capacity as a public person.\textsuperscript{170} The State owns the water, and that ownership is exclusive, except to the extent the State permits others to have a share in the use of the water. Any non-riparian who wishes to use water by withdrawing it from a water body must do so pursuant to a cooperative endeavor agreement, by paying the State for the water withdrawn.\textsuperscript{171} However, riparians may withdraw water free of charge by virtue of their rights of reasonable use.\textsuperscript{172} Because the riparian has a right to withdraw water for his own reasonable use, that use is not a donation and is exempt from Act 955's cooperative endeavor agreement requirement. A riparian also has the right to extend his right of use to a non-riparian and to non-riparian land if the water is used for agricultural purposes.\textsuperscript{173} However, Act 994 implies that when non-riparians take water for their own non-agricultural use, it is the impermissible taking of a public thing.\textsuperscript{174} Although a riparian owner has special rights to use water, a public thing, he has no right to try to sell a public thing. Riparian owners cannot sell property that belongs to the State. Granting a lease of access to the water effectively "sells" water, since it allows the lessee to take away state-owned water. The Civil Code allows riparians to use water for the benefit of their own riparian land; it does not grant riparians an economic interest in the water itself, to be used, leased, or sold as the riparian pleases.

\textbf{D. Geographical Scope of the Riparian Right}

Even if a riparian landowner did have the right to sell or lease his own right of use to a non-riparian for non-agricultural purposes, that right would probably not extend to non-riparian land. Unless a natural gas well is located on riparian property, there is the additional issue of how far the riparian right to withdraw water extends geographically. Most riparian states limit rights of use to riparian lands.\textsuperscript{175} Because riparian jurisdictions find that rights attach only to a riparian's land within the watershed, most consider use outside the watershed of origin to be per se unreasonable.\textsuperscript{176} Many jurisdictions, however, will not prevent the use unless another

\textsuperscript{170} LA. CIV. CODE art. 450 (2009).
\textsuperscript{171} Act No. 955, 2010 La. Acts 3315, § 1.
\textsuperscript{172} LA. CIV. CODE art. 657 (2009).
\textsuperscript{173} Act No. 994, 2010 La. Acts 3534, 3535.
\textsuperscript{174} \textit{Inclusio unius est exclusio alterius}: Act 994 states that agricultural and aquacultural uses of water are not consumptive. Act No. 994, 2010 La. Acts 3534. By implication, any other use of water is consumptive and is therefore a "donation" to non-riparians if they do not purchase the water from the State.
\textsuperscript{175} GETCHES, \textit{supra} note 9, at 53.
\textsuperscript{176} \textit{Id.} at 31.
riparian is actually injured. Depending on a number of circumstances, the “best economic use of water may be for agriculture, mining, manufacturing, or other purposes on land apart from the waterbody.” There may be strong policy reasons to determine that a riparian right of use on non-riparian land is within the ambit of riparian rights, so long as that use does not harm other riparians. Indeed, “[r]easonable use jurisdictions now generally require proof of actual harm from a riparian’s use of water on non-riparian land within the watershed.”

Even if other reasonable use jurisdictions require proof of harm before a riparian may enjoin another riparian’s use of water on non-riparian land, Louisiana law interprets the right more narrowly. First, Civil Code article 658 provides that although a riparian owner may make use of the water running over his lands, he “cannot stop it or give it another direction and is bound to return it to its ordinary channel where it leaves his estate.” Fracking shoots water thousands of feet underground. One may argue such use gives the water “another direction,” which the Code specifically excludes from the ambit of riparian rights. A more logical interpretation is that the article refers to a situation in which the riparian would change the direction of the watercourse itself, since any “use” of water necessarily changes the direction of the appropriated water from the stream to the kitchen, garden, or sugar cane crop.

Second, Act 994 implies that riparian rights of use do not normally extend beyond riparian land. Act 994 makes several statements of legislative policy applicable to the general discussion of riparian rights. Most importantly, water used for agricultural purposes is not a prohibited donation. Because this specified agricultural use of water is not a donation, a riparian may assign rights of use equal to his own to a non-riparian. When a non-riparian uses water for agricultural purposes on non-riparian land, the legislature explains he has not “consumed” the state’s water. The non-riparian need only use the water for agricultural purposes somewhere “within the state.” Inclusio unius est exclusio alterius: when a non-riparian uses water for other purposes, it is consumption of a public thing; it is a donation unless conducted pursuant to an Act 955 cooperative endeavor agreement. Act 994 suggests that use

177. Id.
178. Id. at 55.
179. Id. at 53.
182. Id. at § 1(B).
183. Id. at § 1(A).
184. Id. at § 1(B).
of water on non-riparian land for purposes other than agriculture consumes water. Consequently, when the State permits such use, it effectively "donates" the water to the user. Because Louisiana's constitution forbids such donations, a riparian "right" at odds with the constitution cannot exist.\footnote{Laura Springer} Thus, the right of riparian use does not extend to non-riparian land except when used for agriculture.

IV. CONCLUSION

Act 955 purports not to affect riparian rights as recognized by the laws of this state. To determine precisely what Act 955 \emph{does} do, the legislature must clarify the meaning of "the laws of this state." Act 994 protects the agricultural industry from the requirement of cooperative endeavor agreements, but it does not, by implication, subject fracking initiated or allowed by a riparian to such agreements. The weight of riparian rights jurisprudence suggests that water withdrawn for fracking is a reasonable riparian use, logically within the rights that Act 955 purports to leave untouched. Louisiana's current water law suggests riparians may not lease or sell their rights of use, effectively selling public property—but this suggestion may be insufficient to support the policy intended by Act 955. Unless and until Act 955 clearly enunciates that riparian rights do not include the right to lease or otherwise grant access to water for fracking, it may be powerless to regulate the fracking activities of oil and gas companies using the shield of riparianism to engage in unregulated withdrawal of surface water. If the legislature intends to remove non-riparian fracking from the ambit of protected riparian water use, then, in the interest of clarity and predictability, it should specifically provide that there is no "right" to convey that particular riparian right of use recognized by the laws of this State.

\footnote{Laura Springer}

185. "[T]he content of [riparian] rights is determined in light of the superior claims of the general public or of the public authorities that are charged with the control and administration of the servitude of public use." \textsc{Yianopoulos}, supra note 55, § 87, at 184–85.

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