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THE CASE FOR AN ACTION IN TORT TO RESTRICT THE EXCESSIVE PUMPING OF GROUNDWATER IN LOUISIANA

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Water is the oil of the 21st century.[1] It is a vital resource in the global economy with a multitude of uses, and the demand for water continues to increase worldwide.[2] Almost all of the planet's freshwater readily available for human use is groundwater.[3]

Louisiana, along with the rest of the United States, is heavily dependent on groundwater as a natural resource.[4] Louisiana's public policy regarding its natural resources is that they should be "protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people."[5]

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1. Andrew Liveris, CEO Dow Chemical, *quoted in Running Dry*, THE ECONOMIST, Aug. 21 2008, available at: http://www.economist.com/node/11966993.

2. *Running Dry*, THE ECONOMIST, *id.*

3. After discounting salt water located in the oceans and frozen water located in glaciers, permafrost, and ice caps, groundwater constitutes about 98.6% of the world's remaining water. World Water Assessment Program, United Nations, *The United Nations World Water Development Report 3: Water in a Changing World* 173, Table 10.4 (2008), http://unesdoc.unesco.org/images/0018/001819/181993e.pdf

4. Louisiana uses approximately 1.6 billion gallons of groundwater every day for various uses. Louisiana Governor Bobby Jindal and the Louisiana Department of Natural Resources have recently taken steps to emphasize the importance of groundwater as a natural resource in the state and to encourage groundwater conservation. Louisiana Department of Natural Resources, *DNR Secretary Angelle Commemorates 2011 Ground Water Awareness Week* (Mar. 7, 2011), http://dnr.louisiana.gov/index.cfm?md=newsroom&tmp=detail&aid=841; "In the United States [groundwater] is the source of drinking water for about half the total population and nearly all of the rural population, and it provides over 50 billion gallons per day for agricultural needs." United States Geological Survey, *USGS Fact Sheet-103-03: Ground-Water Depletion Across the Nation* at 1 (November 2003), http://pubs.usgs.gov/fs/fs-103-03/JBartolinoFS%282.13.04%29.pdf

5. LA. CONST. art. IX, §1.

Achieving the goals of protection, conservation, and replenishment of natural resources such as groundwater requires a balancing of interests. These interests include the private interests involved in using groundwater for productive industrial, agricultural, and domestic purposes, as well as the public interests in using groundwater for municipal purposes and in maintaining groundwater as a renewable resource for future generations.[6] As groundwater consumption increases, these interests will be increasingly brought into conflict with each other as they compete for the same resource.

Groundwater depletion has been a serious problem in Louisiana for years.[7] The current legal regime in Louisiana does not adequately protect against this problem. It is necessary for the legal system in Louisiana to develop a more effective means of resolving disputes regarding shared groundwater resources in order to protect the long-term sustainability of the state's aquifers. Part of the solution may be to recognize a cause of action that enables private individuals and businesses negatively affected by a neighbor's excessive groundwater withdrawal to enjoin and/or impose liability for the excessive use. This cause of action is

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6. As of the year 2000, the USGS estimated that Louisiana used groundwater in the following ways: Municipal use - 349 million gal./day, Domestic use - 41.2 million gal./day, Irrigation - 791 million gal./day, Livestock - 4.03 million gal./day, Aquaculture - 128 million gal./day, Industrial - 285 million gal./day, Thermo-electric power - 28.4 million gal./day. Susan S. Hutson, Nancy L. Barber et al., USGS, *Estimated Use of Water in the United States in 2000* Table 4 at 9 (2004), http://pubs.usgs.gov/circ/2004/circ1268/pdf/circular1268.pdf**,**

7. "Groundwater pumping by Baton Rouge, Louisiana, increased more than tenfold between the 1930s and 1970, resulting in groundwater-level declines of approximately 200 feet." United States Geological Survey, *USGS Fact Sheet-103-03: Ground-Water Depletion Across the Nation* at 2 (November 2003), http://pubs.usgs.gov/fs/fs-103-03/JBartolinoFS%282.13.04%29.pdf; Between 1990 and 2000, three of the major aquifer systems in Louisiana experienced declines in groundwater levels of 1ft/yr or greater. This widespread decline in groundwater levels indicates that groundwater is being withdrawn faster than it is being naturally replenished. Dan J. Tomaszewski, John K. Lovelace, & Paul A. Ensminger, USGS, *Water Resources Technical Report No. 68: Water Withdrawls and Trends in Ground-Water Levels and Stream Discharge in Louisiana* at 6 (2002), http://la.water.usgs.gov/publications/pdfs/TR68.pdf.

grounded in Louisiana Civil Code articles 667-669, which place limitations on certain uses of property which cause injury to one's neighbors.

Part I of this Essay explores the problem of groundwater depletion in Louisiana and explains why current regulatory law is insufficient to deal with this problem. Part II begins by highlighting two different concerns: who owns the groundwater, and who has the right to explore and pump for groundwater. Part II concludes by demonstrating that the right to explore and pump groundwater from underneath one's land is clearly established by the Louisiana Mineral Code and that this right is being jeopardized by the current unsustainable rate of groundwater decline. With a view towards curtailing unsustainable use of groundwater, Part III outlines the various ways in which uses of property can be legally restricted in order to protect the rights of others. Part III pays special attention to Louisiana Civil Code articles 667-669, which provide some basic guidelines for when uses of property can be restricted in Louisiana. Part IV explains how these Code articles can be interpreted so as to establish a tort claim for excessive pumping of groundwater, and describes what remedies might be available to a plaintiff who is successful in bringing such a claim. This Essay concludes by arguing that a tort action for excessive pumping of groundwater is both well-founded in Louisiana law and much needed to slow down the alarming rate of groundwater decline in the state.

I. BACKGROUND OF THE GROUNDWATER PROBLEM

Although Louisiana is typically considered a water-rich state, there has been growing concern in recent years that increased water consumption will threaten the quality and sustainability of the state's water resources.[8] Scientific studies have confirmed that

8. Tomazewski et al., *Water Resources Technical Report No. 68*, *id.* at 2.

water use in Louisiana has grown significantly in recent decades.[9] This growth in water use has had substantial effects on groundwater.[10] Most groundwater used by humans is stored in aquifers, which are underground layers of porous rock, sand, or gravel.[11] Aquifers are naturally recharged as surface water percolates down through the soil and flows into the aquifer.[12] Thus, the amount of water in an aquifer will naturally vary based on seasonal climate patterns, and the water table in an aquifer will naturally rise and fall.[13]

Human activities, however, also affect groundwater levels.[14] When groundwater is pumped from a well, "water levels in the aquifer are drawn down, and a cone-shaped depression is formed on the water-level surface of the aquifer."[15] If groundwater withdrawals in an area exceed the amount of water that is naturally recharged, water levels will inevitably decline. The decline in groundwater levels may be so significant that shallower wells suffer from a loss of well productivity, or even dry up entirely.[16] When the operator of a shallow well sees his production go down due to aquifer decline, he is faced with two unpleasant options: 1) increase the depth of his own well, thereby incurring significant

9. *Id.*

10. *Id.* at 6. Several large and important aquifer systems in Louisiana have experienced declines in groundwater levels of 1ft/yr or more in recent years.

11. Mark McGinley, *Aquifer*, The Encyclopedia of Earth, http://www.eoearth.org/article/Aquifer (last updated Nov. 11, 2011).

12. *Id.*

13. Tomazewski et al., *Water Resources Technical Report No. 68*, *supra* note 7 at 6.

14. *Id.* at 6. Seasonal patterns in agriculture and industry, as well as long-term changes in pumping patterns may affect groundwater levels.

15. *Id.* at 6. The so-called cone of depression may be very localized, or it may extend for many miles in an area where several high capacity wells are operating.

16. *Id.* at 6. "When water levels continuously decline, a level may be reached that affects well use; shallower wells in the area can go dry or, more likely, the water level drops below the pump inlet. When this happens, even though the situation may be temporary, concern about the use, allocation, and availability of ground-water resources dramatically increases."

expense and further contributing to the overall problem of aquifer decline, or 2) do nothing and watch his well slowly dry up.

Recognizing the importance of maintaining the health and productivity of Louisiana's aquifers, the legislature in 2001 gave the Department of Natural Resources ("DNR"), through the Office of Conservation ("Office"), authority to regulate groundwater use on a statewide-basis.[17] The Office's activities to date concerning groundwater conservation have focused on identifying "Areas of Ground Water Concern."[18] The Office has also begun to develop a statewide "ground water resources management program" with an emphasis on "alternative supplies and technologies".[19]

Statewide regulations issued by the Office allow someone who is negatively affected by groundwater pumping in his area to file an application with the Commissioner of Conservation to declare an area of groundwater concern.[20] Upon reviewing the application, other available data, and after the opportunity for a public hearing, if the Commissioner determines that "unacceptable environmental, economic, social, or health impacts" have been caused by water level decline, he has the authority to designate an area of groundwater concern.[21] If the Commissioner chooses to do so, he will then issue a "recommended plan to preserve and manage the ground water resources" of the designated area.[22] To date, only certain areas of the Sparta Aquifer in north Louisiana have been recognized as areas of groundwater concern.[23]

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17. Office of Conservation, Louisiana Department of Natural Resources, *Areas of Ground Water Concerns*, http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=473.
18. *Id.*
19. *Id.*
20. LA. ADMIN. CODE tit. 43, §301. "Any owner of a well that is significantly and adversely affected as a result of the movement of salt water front, water level decline, or subsidence in or from the aquifer drawn on by such well shall have the right to file an application to request the commissioner to declare that an area underlain by such aquifer(s) is a an area of ground water concern."
21. LA. ADMIN. CODE tit. 43, §307, 309.
22. LA. ADMIN. CODE tit. 43, §505.
23. *Areas of Ground Water Concerns*, *supra* note 17.

This regulatory regime does not sufficiently protect the state's groundwater. State regulatory agencies like the DNR have limited financial resources with which to handle numerous responsibilities. As a result, protection of the state's aquifers is not always given top priority. This problem is illustrated by the fact that only the Sparta Aquifer has so far been declared an area of groundwater concern, while significant decline in groundwater levels has continued to be a problem in many other parts of the state.[24] The problem of limited governmental resources can be addressed in part by shifting some of the responsibility for groundwater protection to private parties. Moreover, while the DNR has the ability to declare an area of groundwater concern, this remedy is unlikely to apply to those landowners who find themselves in a very localized area of groundwater decline. Even if a landowner is able to successfully petition the DNR to declare an area of concern, it remains to be seen whether the management strategies employed by the department in such an area will adequately protect all interests involved.

Recognizing a cause of action in tort to enjoin a neighbor's excessive use of groundwater would allow private parties to play a more active role in protecting the public interest while simultaneously pursuing their own interests in conserving groundwater resources. Furthermore, the potential for tort liability may prove to be a more effective deterrent to excessive use of groundwater than the current regulatory regime.[25]

II. LEGAL RIGHTS IN GROUNDWATER

Groundwater is a valuable resource for municipal, agricultural, industrial, and domestic uses.[26] Encouraging the sustainable use of

24. *See* Tomazewski et al., *Water Resources Technical Report No. 68, supra* note 7 at 13.

25. Although beyond the scope of this essay, improvements in the regulatory regime that go hand-in-hand with tort law could go far in solving the groundwater problem.

26. *See* discussion *supra* part I.

this resource is good policy. With this in mind, it is important to emphasize the distinction between two separate legal issues: the question of who owns groundwater in Louisiana, and the question of who has the right to pump for groundwater in Louisiana. These two inquiries do not result in identical answers. As will be shown, one need not own groundwater located in an aquifer in order to have a right to pump for it. On the contrary, the right to pump for groundwater creates the potential to eventually become the owner of groundwater by reducing it to one's possession.

A. Ownership of Groundwater in Louisiana: The Rule of Capture

Louisiana is a state where the ownership of groundwater is determined by the "rule of capture".[27] The rule of capture is defined as a principle of water law whereby a surface landowner can extract and appropriate all the groundwater beneath the land, even if doing so drains away groundwater to the point of drying up springs and wells from which other landowners benefit.[28] Under the rule of capture, a landowner has no claim of ownership over the groundwater underlying his land until he pumps the water or otherwise reduces it to his possession. In this regard the legal regime governing ownership of groundwater differs from the doctrine of riparian rights which governs ownership of running surface water. In Louisiana, all running surface water is owned by the state,[29] and riparian land owners are only given a right to the reasonable use of that water.[30] When a landowner appropriates surface water that runs through or adjacent to his land, he does not thereby become the owner and is required to return the water to its channel after its use has been served.[31] A landowner who acquires

27. 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, 1824 (1993).
28. Black's Law Dictionary (9th ed. 2010).
29. LA. CIV. CODE art. 450.
30. Klebba, *supra* note 27 at 1798-1800.
31. *See, e.g*, Klebba, *supra* note 27 at 1793; LA. CIV. CODE art. 657-58.

ownership over groundwater by extracting it owes no corresponding duty to return the used water to the aquifer for the benefit of neighboring landowners.

The rule of capture has its origins in the common law where it is often referred to as the "English Rule," although it has been adopted by Louisiana courts dating at least as far back as the Second Circuit's decision in *Adams v. Grigsby*.[32] In *Adams*, plaintiff landowners complained of damage resulting from reduced access to groundwater because of the neighboring defendant's heavy pumping, but were denied injunctive relief and damages because the court determined they had no claim of ownership over the water while it remained in the ground.[33] As one scholar has already pointed out, the *Adams* court did not satisfactorily explain the legal basis for adopting this common law rule in Louisiana.[34] Nevertheless, for the time being it appears that Louisiana courts are willing to treat groundwater as a "fugitive mineral," which is not owned until it is reduced to one's possession.[35] Thus, groundwater in Louisiana is best classified as a *res nullius* susceptible of occupation. In effect, the rule of capture gives rise to the "Rule of the Biggest Pump," whereby one's ability to establish a claim of ownership over groundwater is limited only by one's ability to pump it, without regard to the use to which the water is being put or the rights of neighboring landowners.

B. The Right to Explore and Produce Groundwater From Beneath One's Land

Adams was decided before the adoption of the Louisiana Mineral Code in 1976. The Mineral Code codified the rule announced in *Adams* that treated groundwater as a "fugitive

32. Adams v. Grigsby, 152 So. 2d 619, 622-23 (La. Ct. App. 1963) *writ refused*, 153 So. 2d 880 (La. 1963).
33. Adams, 152 So. 2d 619.
34. Klebba, *supra* note 27, at 1826 n.225.
35. Figgie International, Inc. v. Bailey, 25 F.3d 1267, 1271 n.1 (5th Cir. 1994).

mineral" or a *res nullius*, the ownership of which is subject to the rule of capture.[36] However, the Mineral Code does more than just define when fugitive minerals become privately owned; it protects a landowner's right to explore and produce liquid and gaseous minerals from beneath his land, and also provides that landowners with rights in a common reservoir have correlative rights and duties with respect to one another.[37]

The right to explore and develop fugitive minerals (including groundwater) from beneath one's land is clearly established by the Mineral Code.[38] A situation in which neighboring landowners have rights in a common reservoir would arise whenever such a reservoir extends across those neighbors' boundary lines. The official comment to the relevant Mineral Code articles indicates that one purpose of the correlative rights and duties established by the Mineral Code is to assure landowners "the opportunity to produce a fair share of the common reservoir."[39] Thus, while no one owns groundwater as long as it remains in the aquifer, surface landowners nonetheless have rights in that water which are recognized by the Mineral Code. It is unclear to what extent, if any, the Mineral Code's reference to correlative rights can be

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36. LA. REV. STAT. ANN. § 31:4 (2005), "The provisions of this [Mineral] Code are applicable to . . . rights to explore for or mine or remove from land the soil itself, gravel, shells, *subterranean water*, or other substances occurring naturally in or as a part of the soil or geological formations on or underlying the land."(emphasis added); LA. REV. STAT. ANN. § 31:8 (2005), "A landowner may use and enjoy his property in the most unlimited manner for the purpose of discovering and producing minerals . . . . He may reduce to possession and ownership all of the minerals occurring naturally in a liquid or gaseous state that can be obtained by operations on or beneath his land even though his operations may cause their migration from beneath the land of another."

37. LA. REV. STAT. ANN. § 31:9 (2005), "Landowners and others with rights in a common reservoir or deposit of minerals have correlative rights and duties with respect to one another in the development and production of the common source of minerals."; LA. REV. STAT. ANN. § 31:10 (2005), "A person with rights in a common reservoir or deposit of minerals may not make works, operate, or otherwise use his rights so as to deprive another intentionally or negligently of the liberty of enjoying his rights, or that may intentionally or negligently cause damage to him. . . ."

38. LA. REV. STAT. ANN. § 31:4 (2005).

39. LA. REV. STAT. ANN. § 31:9 (2005).

squared with the rule of capture as it pertains to groundwater in Louisiana. The most likely explanation for this apparent discrepancy is that the Mineral Code merely codified the rule of capture as articulated in *Adams* and left the further development of the correlative rights doctrine to the courts.[40] Accordingly, the problems associated with the common law rule of capture as it pertains to groundwater are not adequately addressed by application of the Mineral Code alone.

It is clear that the right to explore and produce groundwater from beneath one's land is not dependent on ownership. In this respect, Louisiana's groundwater regime more closely resembles the riparian rights doctrine in that landowners who cannot claim to be owners of the water in question nonetheless have legally-protected rights in that water. The right to explore and pump for groundwater beneath one's land, like the right to use surface water that runs through or adjacent to one's land, is vested automatically by operation of law and is distinct from the question of who owns the water.

C. Inadequacy of the Current Legal Regime Governing Groundwater in Louisiana

The right to explore and produce groundwater from beneath one's land is clearly established by the Mineral Code and deserves legal protection. The *Adams* holding, which denied relief to the plaintiffs because they did not own the groundwater located in the aquifer, overlooks the fact that landowners have rights in groundwater other than outright ownership.[41] Landowners must be given a realistic opportunity to actually explore and produce groundwater from beneath their land if that right is to have any

40. *See* Comment to LA. REV. STAT. ANN. § 31:8 (2005), ". . . Article 8 does not attempt . . . a full definition of the rules governing the landowner's freedom to operate and his liability for abuse of his property rights."

41. Considering that the right to explore and produce groundwater was established by the mineral code after the decision in *Adams*, this oversight only exists in retrospect.

significance. However, the right to explore and produce groundwater will soon become meaningless if the current rate of aquifer decline in Louisiana continues unchecked. The rule of capture, standing alone, does not provide any incentive for the conservation of groundwater nor does it provide any deterrent to its unsustainable or irresponsible use. Louisiana courts should entertain claims which seek to restrict the unsustainable use of groundwater if the right of every landowner to explore and produce this resource is taken seriously.

1. Uncertainties regarding rights of landowners

Under the current regime, landowners cannot be certain that the right to explore and pump for groundwater under their land will receive any legal protection. If a neighboring landowner is able to install a larger, deeper, or more powerful pump, then it is entirely possible that the groundwater reservoir will be drawn down or depleted to the point where his neighbors are no longer able to access that reservoir. This system creates incentives for landowners to pump more water than they might legitimately need. The doctrine of riparian rights addresses this problem in the surface water context by limiting landowners to a reasonable use of the disputed water resource.[42] A similar "reasonable use" limitation would be well-advised in the context of disputed groundwater rights as a means of protecting all interests involved.

The current system also creates an incentive for neighboring landowners to engage in a "race to the bottom," without regard for the long-term health of the aquifer. Usually, large commercial operations will be able to win this "race" against individual landowners for use of a shared groundwater reservoir, with devastating effects to those individual landowners who rely on that groundwater for their livelihoods. The right of every landowner in Louisiana to explore and pump for groundwater under their land

42. Klebba, *supra* note 27 at 1798-1800.

provides justification for the courts to prevent the inequity of allowing large users to trample the rights of smaller users.

2. Law and economics—the efficient allocation of natural resources

From a macro-economic perspective, the best way to manage a natural resource is to provide for the most efficient allocation of the resource among competing uses. This involves a balancing between the scarcity of the resource on the one hand, and the enforcement costs of protecting rights in that resource on the other.[43] This means that if the market value of a natural resource is less than the cost of enforcing rights in that resource, these rights should not be protected because it is more efficient for consumers to acquire the resource through the market.[44] If, however, the market value of a natural resource is greater than the cost of enforcing rights in that resource, these rights should receive legal protection because it is more efficient for consumers to maintain control over the resource through legal means.[45] In other words, the greater the scarcity of a natural resource, the larger the enforcement costs society is willing to tolerate.

Applying these principles to Louisiana's groundwater situation, it is clear that the more groundwater levels are depleted, the scarcer this resource becomes. As groundwater becomes scarcer, we should become more willing to accept stricter legal protections on rights in groundwater.[46] Assuming the costs of prosecuting a tort action in Louisiana remain relatively constant, the more that groundwater levels are depleted, the more efficient tort suits will be as a means of allocating groundwater to beneficial uses.

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43. Richard A. Posner, *The Law and Economics Movement* in LAW AND ECONOMICS: A READER 40, 45-6 (Alain Marciano ed., 2009).

44. *Id.*

45. *Id.*

46. For an argument that increased restrictions on groundwater use may produce greater economic benefits, *see* J. David Aiken, *Ground Water Mining Law and Policy*, 53 U. COLO. L. R. 505, 507 n.16 (1982).

III. THE LEGAL BASIS FOR RESTRICTING THE PUMPING OF GROUNDWATER: LIMITATIONS ON THE USE OF PROPERTY UNDER THE CIVIL LAW

The long-term solution to the problem of unsustainable use of groundwater is probably a more comprehensive regulatory regime than that currently employed by the DNR. To be effective, this regulatory regime would require sufficient financial backing so that DNR is able to carry out the more extensive regulatory duties likely to be required under such a system. This system might resemble the process of pooling and unitization, which the Commissioner of Conservation already uses to regulate the production of other subsurface minerals.[47] Until this is realized, however, the courts of Louisiana should play a more active role in upholding the constitutionally declared policy of natural resource conservation.[48] In upholding this constitutional mandate, courts should apply well-established legal principles regarding use of property in order to determine the circumstances under which the pumping of groundwater should be restricted. The civil law of Louisiana contains several guiding principles for when certain uses of property can be restricted, principles that may be readily adapted to this purpose.

A. Limitations on the Use of Property Generally: Sic Utere

As the Latin maxim *sic utere* indicates, the freedom to use one's property in any manner one pleases is usually not absolute. Rather, one should use one's property in such a manner so as not to injure that of another. This Roman law precept has been recognized in many civil law systems as well as in the Louisiana Civil Code.[49] The various limitations on property use may be organized into three broad categories, each discussed below.

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47. *See* LA. REV. STAT. ANN. § 30:9 (2005).
48. LA. CONST. art. IX, §1.
49. A. N. Yiannopoulos, *Civil Responsibility in the Framework of Vicinage: Articles 667-69 and 2315 of the Civil Code*, 48 TUL. L. REV. 195 (1974).

Generally, one may not use his property in such a manner as might constitute 1) an illicit use of property; 2) an abuse of rights; or 3) a nuisance.

1. Illicit use of property

The first general limitation on the use of property is so obvious it need not be discussed in great detail. One may not use his property in a manner that is contrary to law. Thus, while one has the right to drive his car on a public road, one may not drive his car in a negligent manner which causes injury to another.[50] Such an illicit use of property may give rise to an obligation to pay damages or even criminal liability.

2. Abuse of rights

The concept of absolute rights has seen a gradual decline in most Western systems of law over the past few centuries.[51] As even the staunchest supporters of absolute rights concede, in certain circumstances, such as disagreements between neighbors, a regime of absolute rights may result in unfavorable outcomes.[52] The doctrine of abuse of rights has developed in both common law and civil law jurisdictions, although oftentimes implicitly and unsystematically, as a response to situations where the rigidity of absolute rights would dictate unjust or inequitable outcomes.[53] At least two kinds of abusive actions are condemned by the doctrine of abuse of rights: a) the predominant motive for the action is to cause harm; b) the exercise is totally unreasonable given the lack of any legitimate interest in the exercise of the right, and its exercise harms another.[54]

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50. *See* LA. CIV. CODE ANN. art. 2315 (2005).
51. Joseph M. Perillo, *Abuse of Rights: A Pervasive Legal Concept*, 27 PAC. L.J. 37, 48-49 (1995).
52. *Id*. at 49.
53. *Id.* at 40-44.
54. *Id.* at 47.

a) Predominant motive for the use of the right is to cause harm

The first embodiment of the abuse of rights doctrine is sometimes described as a use of a right which is motivated by a malicious desire to cause damage to another.[55] Examples of this type of abuse of right include the erection of fences or buildings out of spite for one's neighbor. A French case from the mid-1800s recognized that in such a situation, even though no law or regulation may bar a landowner from making such a construction, nevertheless a malevolent exercise of a right should be prohibited.[56] Louisiana courts have also explicitly recognized this limitation in the context of mineral rights.[57] The principle that a landowner may not exercise his rights for the sole purpose of maliciously causing harm to his neighbor was incorporated into the Louisiana Mineral Code.[58]

A "malicious use" limitation on the use of property is dependent on the defendant's subjective mental state; a defendant's subjective motivations are crucial to determining when he is abusing his right as opposed to exercising his right legitimately. This leads to situations in which a plaintiff must be forced to suffer harm because the defendant did not have the requisite mental state. For example, in the case of *McCoy v. Arkansas Natural Gas Co.*, the court held that a defendant who negligently allowed large quantities of natural gas to escape from his well was not liable to his neighbors because the loss was the result of "a mere exercise of bad judgment on the part of the [defendant] in drilling on his own land."[59] While it makes sense to provide harsher punishments to

55. *See* Julio Cueto-Rua, *Abuse of Rights*, 35 LA. L. REV. 965, 978-82 (1975).

56. Perillo, *supra* note 51 at 44.

57. Higgins Oil & Fuel Co. v. Guaranty Oil Co., 82 So. 206 (La. 1919) (a defendant may be prevented from leaving a well uncapped where the purpose was to decrease the pumping efficiency of a neighbor's well).

58. *See* LA. REV. STAT. ANN. § 31:9 (2005); LA. REV. STAT. ANN. § 31:10(2005), and comments.

59. McCoy v. Arkansas Natural Gas Co., 143 So. 383, 386 (La. 1932).

those who have more culpable mental states, it does not necessarily make sense to deny any and all recovery to innocent plaintiffs who suffer injury just because the defendant was acting negligently rather than maliciously.

b) Use of right without legitimate interest whose exercise causes harm

The second embodiment of the abuse of rights doctrine is stated as a prohibition against a use of a right which is not motivated by a serious and legitimate interest. Examples of this type of abuse of right include wasteful extraction of groundwater or other minerals beyond that which the landowner is able to legitimately use.[60] Once again, a French case from the mid-1800s is illustrative: the owner of a spring installed a powerful pump that extracted far more water than the owner could market or use; it was determined to be an abuse of right.[61]

The *Adams* court also recognized this limitation as being applicable in the context of groundwater extraction when it postulated that the defendant might be liable "if he simply opened his own well and allowed it to pour out the water as waste without benefit to himself."[62] The principal that an abuse of right occurs when a right is exercised without a legitimate interest is necessary because in not all situations will it be possible to show a malicious intent on the part of one who is abusing a right. As the Supreme Court of Louisiana held in *Morse* v. *J. Ray McDermott & Co.*, "the exercise of a right [...] without legitimate and serious interest, even where there is neither alleged nor proved an intent to harm, constitutes an abuse of right which courts should not countenance."[63]

60. Perillo, *supra* note 51 at 43-44.
61. *Id*.
62. Adams, 152 So. 2d at 624.
63. 344 So. 2d 1353 (La. 1977). *See also* Michael Byers, *Abuse of Rights: An Old Principle, A New Age*, 47 MCGILL L.J. 389 (2002).

c) Nuisance

The last category of limitations on the use of property is of more recent vintage.[64] Certain uses of property, even if they are conducted with due diligence and in accordance with other rules of law, may nonetheless cause damage to others situated nearby.[65] Since the onset of the industrial revolution, the magnitude of this problem has increased.[66] This type of property use may be restricted or give rise to an obligation to pay damages not because it is illicit or abusive, but because it is "excessive" in the sense that the use is not "normal" or "regular" according to the circumstances.[67] Determining when a use of property is excessive by reason of circumstances or surroundings is obviously a factually dependent inquiry.

B. Louisiana Civil Code Articles 667-669

Louisiana Civil Code articles 667-669 are the primary source of law in Louisiana regarding general limitations on the use of property.[68] They provide:

Art. 667. Limitations on use of property:

> Although a proprietor may do with his estate whatever he pleases, still he cannot make any work on it, which may deprive his neighbor of the liberty of enjoying his own, or which may be the cause of any damage to him. However, if the work he makes on his estate deprives his neighbor of enjoyment or causes damage to him, he is answerable for damages only upon a showing that he knew or, in the

64. *See* Yiannopoulos, *supra* note 49, at 200. In France, the law of nuisance is referred to as *Trouble du Voisinage*. *Id.*

65. *Id.*

66. *Id.*

67. Cueto-Rua, *supra* note 55, at 977. Common law jurisdictions have also developed their own body of nuisance law. Although modern Louisiana courts may be unwilling to analogize to the common law of nuisance, the concepts embodied therein have been utilized by Louisiana courts in the past, especially when interpreting Civil Code articles 667-669. *See, e.g.*, Robichaux v. Huppenbauer, 245 So. 2d 385 (La. 1971).

68. *See* LA. CIV. CODE art. 1-3. Legislation and custom are the sources of law in Louisiana. When the two conflict, custom may not abrogate legislation.

> exercise of reasonable care, should have known that his works would cause damage, that the damage could have been prevented by the exercise of reasonable care, and that he failed to exercise such reasonable care. Nothing in this Article shall preclude the court from the application of the doctrine of *res ipsa loquitur* in an appropriate case. Nonetheless, the proprietor is answerable for damages without regard to his knowledge or his exercise of reasonable care, if the damage is caused by an ultrahazardous activity. An ultrahazardous activity as used in this Article is strictly limited to pile driving or blasting with explosives.[69]

Art. 668. Inconvenience to neighbor

> Although one be not at liberty to make any work by which his neighbor's buildings may be damaged, yet every one has the liberty of doing on his own ground whatsoever he pleases, although it should occasion some inconvenience to his neighbor.
> Thus he who is not subject to any servitude originating from a particular agreement in that respect, may raise his house as high as he pleases, although by such elevation he should darken the lights of his neighbors's [neighbor's] house, because this act occasions only an inconvenience, but not a real damage.[70]

Art. 669. Regulation of inconvenience

> If the works or materials for any manufactory or other operation, cause an inconvenience to those in the same or in the neighboring houses, by diffusing smoke or nauseous smell, and there be no servitude established by which they are regulated, their sufferance must be determined by the rules of the police, or the customs of the place.[71]

These three articles have been a part of Louisiana law since the Code of 1808.[72] Because these three articles derive from a common source and govern the basic limitations on the use of

69. LA. CIV. CODE art. 667.
70. LA. CIV. CODE art. 668.
71. LA. CIV. CODE art. 669.
72. Dean v. Hercules, Inc., 328 So. 2d 69 (La. 1976). These articles have no counterpart in the French CODE CIVIL, but appear to be taken from the text of Domat. Rodolfo Batiza, *The Louisiana Civil Code of 1808: Its Actual Sources and Present Relevance*, 46 TUL. L. REV. 4, 69 (1971).

property in Louisiana, they are often discussed and interpreted in conjunction with each other.[73] Generally, article 667 prohibits uses of property which cause damage or deprive neighbors of the enjoyment of their property, while article 668 allows uses of property that only cause "some inconvenience" to neighbors.[74] Article 669 provides that certain inconveniences which must be allowed under article 668 "may be [either] tolerated or suppressed, depending on police regulations and local customs."[75] Essentially, these three code articles establish the following legal regime. First, one may not use property so as to cause actual damage or substantial interference with the enjoyment of another's property. Second, most other types of interferences are considered to be lesser inconveniences which must be tolerated.[76] Third, certain specific types of lesser inconveniences (i.e., the diffusion of smoke or odors from "manufactory or other operations") may be prohibited by local regulations or customs.[77]

The broad language of these articles has often created confusion as to which uses of property are prohibited and which are allowed, but the scope of these articles is sufficiently broad to encompass all three types of general limitations on the use of property discussed above.[78] These articles have been applied by Louisiana courts to restrict or impose liability on illicit uses of property,[79] abusive uses of property,[80] and nuisances.[81]

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73. *See, e.g.*, Yiannopoulos, *supra* note 49, at 204. "Articles 667-69 form a unit in the Louisiana Civil Code of 1870, and, for a proper understanding, they must be read together."

74. *Id.* at 204-05.

75. LA. CIV. CODE art. 669.

76. Yiannopoulos, *supra* note 49, at 205.

77. Yiannopoulos, *supra* note 49, at 205; LA. CIV. CODE art. 669.

78. Cueto-Rua, *supra* note 55, at 1012-13. *See also* Yiannopoulos, *supra* note 49, at 203. "Articles 667-69 of the Louisiana Civil Code were apparently conceived as an application of the *sic utere* doctrine."

79. Langlois v. Allied Chemical Corporation, 249 So. 2d 133 (La. 1971) (holding defendant chemical plant liable for personal injuries sustained by a firefighter as a result of exposure to gas that escaped from the plant). In imposing liability, the court looked in part to the duty imposed by Civil Code articles 667 and 669. The court held, "The defendant has injured this plaintiff by

In 1996, the Louisiana Legislature undertook broad-based revision of the Civil Code articles relating to delicts and quasi-delicts, including article 667. The purpose of these amendments was to change from a strict liability standard to one of negligence.[82] Thus, it is clear that a defendant will not be liable under article 667 based on a theory of strict liability, except for specific ultrahazardous activities.[83] Although the current standard of care imposed on proprietors by article 667 is to act reasonably (i.e., to avoid acting negligently), there is no reason to doubt that this article along with articles 668 and 669 still embody the concept of *sic utere* in Louisiana law. In other words, while a plaintiff seeking to invoke liability under article 667 now must prove the defendant's negligence, the *types* of activities from

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its fault as analogized from the conduct required under Civil Code Article 669 and others . . ."

80. Higgins Oil, 82 So. 206 (La. 1919) (a defendant may be prevented from leaving a well uncapped where the purpose was to decrease the pumping efficiency of a neighbor's well).

81. Salter v. B.W.S. Corporation, Inc., 290 So. 2d 821 (La. 1974) (defendant corporation was enjoined from disposing industrial waste on its property in a manner which would cause harm to neighbors, even though the corporation was granted a disposal permit from the state department of health to carry on its disposal operations at the site); Robichaux, 245 So. 2d 385 (La. 1971) (owner of horse stable was enjoined from operating the stable in such a manner as to cause harm to neighbors, even though the stable did not violate the city's ordinances or regulations); Devoke v. Yazoo & Mississippi Valley Railroad Company, 30 So. 2d 816 (La. 1947) (railroad company may not cause injury to those residing in the vicinity, even though it was engaged in the pursuit of a lawful trade, and was held liable for damages).

82. The language added to article 667 in 1996 includes the following: ". . . if the work [the proprietor] makes on his estate deprives his neighbor of enjoyment or causes damage to him, [the proprietor] is answerable for damages only upon a showing that he knew or, in the exercise of reasonable care, should have known that his works would cause damage, that the damage could have been prevented by the exercise of reasonable care, and that he failed to exercise such reasonable care. Nothing in this Article shall preclude the court from the application of the doctrine of *res ipsa loquitur* in an appropriate case." LA. CIV. CODE art. 667.

83. An ultrahazardous activity in the context of article 667 is "strictly limited to pile driving or blasting with explosives." LA. CIV. CODE art. 667. This essay is not concerned with strict liability for ultrahazardous activities, and the ultrahazardous activity exception to article 667 will be disregarded as inapplicable.

which the plaintiff may seek redress remain unchanged from prior law.

If articles 667-669 are to be applied to restrict the pumping of groundwater, then this activity must be classified as either an illicit act, an abusive act, or a nuisance. Otherwise, pumping of groundwater would not properly fall within the ambit of these articles. Pumping groundwater is not by itself illegal; the right to explore and produce groundwater from underneath one's land is clearly established by the Mineral Code.[84] Therefore, a proprietor cannot be limited from pumping groundwater on his land on the basis that this would constitute an illicit act. Neither does pumping groundwater in most circumstances constitute an abuse of property rights. Most proprietors who pump groundwater have a legitimate reason for doing so and are not acting maliciously to cause harm to others. Therefore, a proprietor usually cannot be limited from pumping groundwater on his land on the basis that this would constitute an abuse of rights. However, it is possible that a proprietor may be held liable for nuisance under the current version of these articles for negligently causing damage or a loss of enjoyment to his neighbors through excessive pumping of groundwater.

IV. APPLICABILITY OF LOUISIANA CIVIL CODE ARTICLES 667-669 TO EXCESSIVE PUMPING OF GROUNDWATER

A thorough analysis of the language of Louisiana Civil Code articles 667-669, along with the jurisprudence interpreting these articles, reveals that they are fully applicable to a tort claim for excessive pumping of groundwater.

84. *See* discussion *supra* part III.B; LA. REV. STAT. ANN. § 31:4 (2005); LA. REV. STAT. ANN. § 31:8 (2005).

A. Codal Source of Liability

The first step in applying articles 667-669 to a claim for excessive pumping of groundwater is to determine which article is the source of liability. Some scholars have sought to draw a distinction between articles 667 and 668 on the one hand and article 669 on the other.[85] According to this understanding, articles 667 and 668 establish reciprocal duties that neighboring landowners owe each other, while article 669 specifically governs those inconveniences that correspond to the law of nuisance.[86] This approach suggests that excessive uses of property—those that are neither illicit nor abusive but nevertheless go beyond what is normal according to the circumstances—can only be restricted or regulated under article 669. However, Louisiana courts have apparently declined to adopt this interpretation. This is probably because the types of excessive inconveniences which are subject to potential regulation under article 669 are very limited and have been interpreted as exclusive rather than illustrative.[87] The original version of article 669 which appeared in the Code of 1808 contained a reference to "other different inconveniences," but this language is absent from the current article.[88] As a result, the restrictions placed on excessive uses of property are very limited under the current version of article 669. The courts have responded to this problem by allowing excessive use of property claims to be brought under article 667.[89] Article 669, in turn, has been

85. Yiannopoulos, *supra* note 49, at 206.

86. *Id.*

87. Robichaux, 245 So. 2d 385 (La. 1971) (Article 669 speaks only of "smoke" and "nauseous smell".)

88. Robichaux, 245 So. 2d 385 (La. 1971); The Editor's note to the 2011 edition of the Louisiana Civil Code article 669 states that "[t]he English text of CC 1808 is a more complete and preferable translation of the French text that the present English text."

89. Robichaux, 245 So. 2d 385 (La. 1971). "Despite the apparent failure of these articles to deal explicitly with the standards to be followed in operations which may cause inconvenience to neighboring property or the failure of these articles to more comprehensively enumerate the 'other inconveniences', they have nevertheless been employed by this Court together with the common-law

interpreted as establishing the legal restrictions which can be placed on those types of "mere inconveniences" which are not regulated under articles 667 and 668.[90] Considering the limited scope of article 669, a claim for excessive pumping of groundwater probably can't be brought under this article. In light of the broad application that article 667 has been given by the courts, such a claim is best brought under this article instead.

B. Preliminary Concerns

Before determining when a claim for excessive pumping of groundwater can be brought under article 667, it is necessary to define some key terms as they are used in the article. First, the jurisprudence is clear that the use of the word "work" in article 667 applies to activities as well as structures.[91] It cannot therefore be argued that drilling a well and pumping groundwater is not a "work" within the meaning of this code article. Also, damage need not be caused by actual physical invasion of property in order to be compensable under article 667.[92] For example, it has been held that the presence of a hazardous high pressure gas pipeline adjacent to a plaintiff's property gave rise to damages caused by the proximity of the pipeline, which impaired the market value and the full use of

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theory of nuisance to grant relief where a use of property causes inconvenience to a neighbor."; *See also* Dean, 328 So. 2d 69 (La. 1976) (allowing a claim for damages allegedly suffered as a result of chemical emissions to be brought under article 667 although there were no allegations that the defendant acted either illegally or maliciously towards his neighbors).

90. *See* Rodrigue v. Copeland 475 So. 2d 1071, 1075 (La. 1985) ("a mere inconvenience [is] subject to regulation by the 'rules of the police' [under] C.C. 669.")

91. Yokum v. 615 Bourbon St., L.L.C., 977 So. 2d 859, 875 (La. 2008) ("the 'work' to which Article 667 refers includes not only constructions but also activities that may cause damage.")

92. Hero Lands Co. v. Texaco, Inc., 310 So. 2d 93, 98 (La. 1975) (". . . damage may well be intrinsic in nature, a combination of facts and conditions which, taken together, do not involve a physical invasion but which, under the circumstances, are nevertheless by their nature the very refinement of injury and damage.")

the estate.[93] Thus, defendants cannot avoid liability on the basis that no physical intrusion onto the plaintiff's land occurred. Although the text of article 667 refers to proprietors, Louisiana jurisprudence has interpreted the article to apply to a broader category of persons than just landowners.[94] The article has been applied to lessees, including holders of mineral leases.[95]

C. Distinguishing Between Excessive and Non-Excessive Uses of Property

In applying article 667 to complaints against excessive uses of property, Louisiana courts have drawn an analogy to the common law theory of nuisance.[96] Generally, there are two types of nuisances–nuisances at law and nuisances in fact.[97] A nuisance at law is "an act, occupation, or structure which is a nuisance at all times and under any circumstances, regardless of location or surroundings."[98] Pumping groundwater is not a nuisance at law, because the right to explore and produce groundwater from one's own land is clearly established by the Mineral Code.[99] A nuisance in fact is an act, occupation, or structure which becomes a nuisance by reason of circumstances or surroundings.[100] Pumping groundwater can only be considered excessive by reference to the circumstances under which it is being withdrawn. If, according to the circumstances, groundwater pumping went beyond what is normal and became excessive, this would be considered a nuisance in fact under article 667. Determining what is normal and what is

93. *Id.*
94. Butler v. Baber, 529 So. 2d 374 (La. 1988); *See also* Yokum, 977 So. 2d 859, 874-75 (La. 2008).
95. *Id.* While the proper definition of the term "proprietor" under article 667 may be open to debate, it should be understood that this essay's use of that term is *not* limited to landowners.
96. Robichaux, 245 So. 2d 385 (La. 1971).
97. *Id.*
98. *Id.* at 389, n.4-5.
99. *See* discussion *supra* part III.B; LA. REV. STAT. ANN. § 31:4 (2005); LA. REV. STAT. ANN. § 31:8 (2005).
100. Robichaux, 245 So. 2d 385 (La. 1971).

excessive is a highly fact-sensitive inquiry, so it is difficult to make generalizations about this distinction. The best principle that can be extracted from the jurisprudence is a test of "reasonability."[101] When applying a reasonability test to a claim for excessive pumping of groundwater, reference could be made to the relative size of the cone of depression caused by the pumping at issue. If this cone of depression is much larger or more extensive than those created by pre-existing water wells in the area, the pumping might be unreasonable, i.e., excessive under the circumstances. However, even if a use of property is determined to be unreasonable or excessive under the circumstances, this does not automatically entitle the plaintiff to relief under article 667.[102] Rather, the threshold for relief under article 667 is whether one has suffered actual compensable injury in the form of either damage or loss of enjoyment.

D. Distinguishing Between Compensable and Non-Compensable Injuries

To state a claim under article 667, a plaintiff must demonstrate that the conduct in question causes actual damage or deprivation of the liberty to enjoy one's own property.[103] Conduct which merely occasions some inconvenience is not compensable.[104] The distinction that must be drawn between real injury and mere inconvenience appears at first glance to correspond closely to the distinction between a use of property that is excessive and a use of property that must be tolerated because it is normal according to the circumstances. Upon closer inspection of the codal language, however, it appears that not all excessive uses of property give rise

101. *Id.* at 389 ("Thus the principle is enunciated . . . that within reasonable limits the individual citizen has to submit to some annoyance and inconvenience from the legal exercise of the rights of others.").

102. *See* LA. CIV. CODE art. 668. ". . . everyone has the liberty of doing on his own ground *whatsoever* he pleases, although it should occasion some inconvenience to his neighbor." (emphasis added).

103. LA. CIV. CODE art. 667.

104. LA. CIV. CODE art. 668.

to compensable injury. After all, articles 667 and 668 do not state that only normal uses of property are allowed. To the contrary, article 668 states that one may do "on his own ground whatsoever he pleases, although it should occasion some inconvenience to his neighbor."[105] This provision would seem to indicate that even abnormal or excessive uses of property must be tolerated under some circumstances. The focus of articles 667 and 668 is on the *effect* which certain uses of property have on neighbors.[106] Simply determining that a certain use of property is excessive according to the circumstances is not enough. Rather, the crucial inquiry is whether the plaintiff has been deprived of the enjoyment of his own property or has suffered damage. If the plaintiff has only been exposed to "some inconvenience," he has not suffered a compensable injury.

Distinguishing between real injury and mere inconvenience proves difficult in real-world situations. The Code articles themselves do not provide much guidance on where to draw the line. As a result, it is not surprising that Louisiana courts have treated this determination as a factual inquiry.[107] In making this factual determination, courts have considered the nature and degree of the intrusion on plaintiff's property, the character of the neighborhood, and the extent or degree of the damage including the effect on the health and safety of the plaintiffs.[108]

Applying these factors to an excessive pumping of groundwater claim, a plaintiff must be able to show more than just

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105. *Id.*

106. The focus of articles 667 and 668 on the effect of certain uses of property in order to determine when a neighbor is entitled to legal protection is entirely consistent with civilian doctrine. *See* AUBREY ET RAU, PROPERTY § 194 *et seq.* "Although in principle it is not prohibited to cause nuisances to a neighbor. . . such a damage becomes illegal when the source exceeds certain intensity.. . . for one cannot expect to live in a group without causing some inconvenience to neighbors."

107. Barrett v. T.L. James, 671 So. 2d 1186 (La. Ct. App. 1996) ("When the actions or work cease to be inconveniences and become damaging is a question of fact.").

108. Barrett, 671 So. 2d 1186.

mere inconvenience. First, it must be recognized that when proprietor A pumps groundwater and thereby reduces proprietor B's access to that same groundwater reservoir, this constitutes a *de minimus* (or even non-existent) intrusion on proprietor B's property. Proprietor A has not interacted with proprietor B's property except to cause the migration of groundwater from underneath B's land. For this reason, this factor weighs against a finding that excessive withdrawal of groundwater constitutes a compensable injury. However, actual physical intrusion is not required under article 667, and the lack of physical intrusion could be outweighed by other factors under certain circumstances.[109] For example, the character of the neighborhood might be such that all proprietors have historically made moderate withdrawals from a common groundwater reservoir for domestic uses or for raising livestock. If a proprietor in this neighborhood withdraws significantly greater amounts of water from that reservoir for use in industrial or mining operations, such a use would not be in line with the character of the neighborhood. To the extent that the other proprietors are prevented or restricted from making use of the groundwater in the manner to which they are accustomed, this would weigh in favor of a finding of compensable injury rather than mere inconvenience.

Additionally, the greater the effect on the plaintiff's health, safety, and welfare occasioned by the excessive withdrawal, the greater the chance that a court will find that a compensable injury has occurred. This might be shown by proof of a negative effect on the plaintiff's livelihood, such as when the plaintiff's access to groundwater has been reduced to such an extent that the plaintiff's agricultural or ranching operations have become impractical or prohibitively expensive. Also, if the plaintiff is able to show that

109. Hero Lands Co., 310 So. 2d 93, 98 (La. 1975) (". . . damage may well be intrinsic in nature, a combination of facts and conditions which, taken together, do not involve a physical invasion but which, under the circumstances, are nevertheless by their nature the very refinement of injury and damage.")

his neighbor's excessive withdrawal of groundwater has reduced the plaintiff's ability to obtain safe drinking water and thus exposed his family to greater health risks, this would weigh in favor of a finding that a compensable injury has occurred.

The factors used by the courts to determine whether a particular use of property creates a compensable injury essentially guide the courts in an assessment of the severity of the disturbance suffered by neighbors.[110] The more severe the disturbance created by a particular use of property, the more likely a court is to find that a real injury has occurred.

E. Additional Elements of Negligence as Applied to a Tort Claim under Article 667 for Excessive Pumping of Groundwater

After the court makes the preliminary determination that a compensable injury has occurred, the plaintiff still must prove three distinct elements to impose liability on the defendant under article 667: 1) the defendant had actual or constructive knowledge that his works would cause damage; 2) the damage could have been prevented through the exercise of reasonable care; and 3) the defendant failed to exercise reasonable care. These elements were added to article 667 in 1996 in order to change the law from strict liability to a negligence standard.[111]

1. Actual or constructive knowledge

A defendant "is answerable for damages only upon a showing that he knew or, in the exercise of reasonable care, should have known that his works would cause damage."[112] The knowledge element might serve to immunize some proprietors who are ignorant of the possibility that their excessive groundwater

110. *See* AUBREY ET RAU, PROPERTY § 194 *et seq*. "Although in principle it is not prohibited to cause nuisances to a neighbor. . . such a damage becomes illegal when the source exceeds certain intensity."
111. *See* discussion *supra* part III.B.
112. LA. CIV. CODE art. 667.

pumping would cause damage to their neighbors if the possibility of this damage was not discoverable or predictable through the exercise of reasonable care. However, given the sophisticated nature of the science of hydrogeology, the ignorance defense may be a "tough sell." This is especially true if the defendant is a large firm conducting mining or secondary recovery operations and has significant scientific knowledge and resources at its disposal. Such a large and sophisticated firm should probably know, through the exercise of reasonable care, the effects of its groundwater pumping operations on the underlying aquifer and the resultant harms which might be suffered by neighbors. Furthermore, because Louisiana state regulations require that new water wells be installed by a licensed contractor, the level of knowledge imputed to those who install large capacity wells should be considerable.[113] Thus, the knowledge which a court would expect a groundwater withdrawer to obtain through the exercise of reasonable care may depend in large part on the size of the well and the expected amount of water to be pumped.[114]

2. Damage could have been prevented through exercise of reasonable care

For a defendant to be liable under article 667, a plaintiff must show that "the damage could have been prevented by the exercise of reasonable care."[115] This may be the most difficult element for a plaintiff to prove in a case of excessive withdrawal of groundwater. Clearly, any amount of withdrawal is going to draw

113. LA. ADMIN. CODE tit. 43, §701.

114. Steven J. Levine, *Ground Water: Louisiana's Quasi-Fictional and Truly Fugatious Mineral*, 44 LA. L. REV. 1123, 1145 (1983-1984). "Wells that a reasonable person would not install without first making hydrologic tests would be defined as high-capacity wells, and owners of such wells would be charged with knowledge revealed by the tests and could be liable for unreasonable injurious consequences. Small wells would be defined as those which a reasonable person would install without expensive testing. Owners of small wells would be charged only with knowledge reasonably available to them."

115. LA. CIV. CODE art. 667.

down the groundwater reservoir to some extent, so the question becomes how a proprietor might prevent damage to a neighbor through the exercise of reasonable care. At the very least, a proprietor can prevent damage to neighbors by not withdrawing more groundwater than he is able to put to a productive use. If a proprietor withdraws more groundwater than he is able to productively use, then it can be presumed that this waste could have been prevented through the exercise of reasonable care and any damage which results from this waste would be imputable to the excessive withdrawer.

Furthermore, a proprietor could prevent damage to a neighbor by making use of other reasonably available alternative sources of water. This argument could cut both ways, however, because if there are alternative sources of water reasonably available to the defendant, those alternative sources might also be available to the plaintiff, in which case it would be harder for the plaintiff to show that he has suffered real damage.[116] Still, it is conceivable that a large industrial user of groundwater has a greater ability to obtain alternate sources of water due to its greater financial resources and larger economies of scale than an individual user. If a large groundwater user has reasonably-available alternative sources of water that it can use to avoid severely limiting a smaller neighbor's access to a common groundwater resource, then it can be fairly claimed that the damage suffered by the smaller user could have been prevented through the use of reasonable care on the part of the larger user. In the context of industrial or mining operations where the quality of the water is of little importance, it might also be reasonable to expect this operation not to deprive its neighbors of access to a pristine source of groundwater that is being used for human consumption, animal consumption, or agricultural purposes. In such a situation it would be reasonable to expect such an industrial or mining operation to make use of reasonably-

116. *See* discussion *supra* part IV.D.

available alternative sources of water, such as untreated surface water, that are not suitable for its neighbors' more sensitive uses.

The requirement that proprietors can only be liable when the damages could have been prevented through the exercise of reasonable care is closely related to the causation element required in all tort actions. Clearly, if the damage suffered by a neighbor is not caused by the actions of the defendant in pumping groundwater, then this damage could not have been prevented by the exercise of reasonable care on the part of the defendant and the defendant would not be liable for those damages. The causation element allows a defendant to argue that the damage suffered by his neighbors was either caused by the neighbors' own actions, by the actions of a third party, or by some "act of God."[117]

3. Failure to exercise reasonable care

Failure to exercise reasonable care refers to a breach of the duty which one proprietor owes to another under article 667. This duty, as discussed above, consists of a requirement that all proprietors must exercise reasonable care in determining if their works might cause damage to a neighbor and to exercise reasonable care in preventing such damage. After a court weighs all the facts and determines that a duty exists on the part of the groundwater withdrawer to protect his neighbors from damage that could result from the withdrawal, the inquiry turns to whether the groundwater withdrawer breached this duty. While the delineation of the duty to avoid excessive pumping of groundwater that may cause damage to neighbors is the province of the court, the question of whether a groundwater withdrawer breached this duty is a question of fact.[118] In other words, once the court has identified the specific duty owed by a proprietor and articulated the reasonable care with which it is expected to exercise when

117. *See* Loescher v. Parr, 324 So. 2d 441 (La. 1975).
118. *See* Pinsonneault v. Merchants & Farmers Bank & Trust Company, 816 So. 2d 270 (La. 2002).

pumping groundwater, the question of whether the proprietor has failed to exercise reasonable care becomes a simple yes or no question submitted to the factfinder.

F. Available Remedies under Louisiana Civil Code Article 667 for Excessive Pumping of Groundwater

If a plaintiff establishes liability under article 667, a court must then determine the appropriate remedy: injunctive relief, monetary damages, or both. The remedy of injunctive relief will be sought by plaintiffs who are seeking to prevent future injury caused by excessive groundwater pumping. In many cases the plaintiff may also seek monetary damages as compensation for past injury which they have already sustained as a result of excessive groundwater pumping.

1. Injunctive relief

Injunctive relief is generally only available when the plaintiff is faced with "irreparable injury, loss, or damage."[119] The Louisiana Supreme court held in *Salter v. B.W.S. Corp., Inc.* that this limitation on the availability of injunctive relief is applicable in in an action predicated on Louisiana Civil Code article 667.[120] However, the *Salter* holding is arguably at odds with the general civil law principle that property rights (i.e., real rights) are *per se* entitled to injunctive protection and a showing of irreparable injury is usually not required.[121] Notwithstanding this apparent conflict, as long as the *Salter* rule remains in effect, a plaintiff must show that he has suffered or will suffer an irreparable injury to obtain injunctive relief in a claim involving excessive pumping of groundwater. An injury is irreparable when it "cannot be adequately measured or compensated by money."[122]

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119. LA. CODE CIV. PROC. ANN. art. 3601 (2005).
120. Salter, 290 So. 2d 821, 825 (La. 1974).
121. *See* Cosby v. Holcomb Trucking, Inc., 942 So. 2d 471, 475 (La. 2006).
122. Black's Law Dictionary (9th ed. 2010).

Louisiana Civil Code article 667 prevents a proprietor from making any work on his land which "deprive[s] his neighbor of the liberty of enjoying his own, or which may be the cause of any damage to him."[123] Thus, article 667 contemplates two distinct categories of injuries: 1) loss of enjoyment, and 2) damage. The nebulous notion of a loss of enjoyment, especially when contrasted with the more traditional notion of damage, might qualify as a type of injury which cannot be adequately measured or compensated. Accordingly, a plaintiff who is able to show that his reduced access to groundwater has deprived him of the liberty of enjoying his property may be entitled to enjoin his neighbor from making excessive use of the shared groundwater reservoir. This situation might arise when a plaintiff who relies solely on groundwater for his domestic use is deprived of the ability to enjoy his property when a neighbor's excessive pumping of groundwater makes this use impossible or impracticable. On the other hand, a plaintiff who suffers some monetary damage but is not prevented from using or enjoying his own land may not be entitled to enjoin his neighbor's excessive pumping. This situation might arise when a plaintiff has lost the use of a groundwater well but has other sources of water available to him such that he is not completely prevented from using or enjoying his property. The increased costs of obtaining these other sources of water would be readily quantifiable in the form of damages. While the circumstances surrounding such a situation must still weigh in favor of a finding that the plaintiff has suffered some compensable injury,[124] the appropriate remedy would be the awarding of monetary damages rather than injunctive relief. Interestingly, it is unclear whether the new elements of negligence that were added to article 667 in 1996 apply when a plaintiff is requesting only injunctive relief. The relevant codal language reads, "if the work he makes on his estate deprives his neighbor of enjoyment or causes damage to him, he is answerable

123. LA. CIV. CODE art. 667.
124. *See* discussion *supra* part IV.D.

for *damages* only upon a showing that [the new elements of negligence have been met]." (emphasis added). A literal reading of the article suggests that a plaintiff may be entitled to injunctive relief *regardless* of whether the defendant has acted negligently. Thus, a plaintiff may be able to enjoin a neighbor from making excessive use of groundwater even if the neighbor could not have discovered that injury would result from the excessive use and even if the neighbor otherwise exercised reasonable care.

2. Monetary damages

In cases where there is no showing of irreparable injury, a plaintiff may be limited to recovering monetary damages.[125] Article 667 has been successfully used as a legal basis for imposing on defendants an obligation to pay damages.[126] In theory, there is no reason to doubt that damages sustained by a plaintiff as a result of a defendant's excessive pumping of groundwater might give rise to an obligation to pay damages under article 667. For example, if a plaintiff temporarily lost access to water as a result of a neighboring proprietor's excessive pumping and the plaintiff's cattle subsequently died as a result, the excessive pumper might be held liable to pay to the plaintiff the value of the cattle, assuming all other elements of liability are met.

V. CONCLUSION

The growing use of water in Louisiana has the very real potential to negatively affect groundwater reservoirs throughout the state. As groundwater pumping increases, groundwater levels will continue to decline. This creates significant problems for operators of smaller wells and raises concerns for the long-term sustainability of Louisiana's groundwater resources.

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125. LA. CODE CIV. PROC. ANN. art. 3601 (2005).

126. *See* Butler, 529 So. 2d 374 (La. 1988) (holding defendants liable under article 667 to pay damages to plaintiffs as a result of damages sustained by plaintiff's oyster leases).

Present law is inadequate to address these problems. The rule of capture, which does not place any limits on how much groundwater a proprietor is able to withdraw from a reservoir underlying his land, does not provide incentives for conservation or encourage responsible use of groundwater. The Louisiana Department of Natural Resources has not yet demonstrated that its ground water resources management program has been able to address the problems of aquifer decline throughout the state.

The availability of a tort remedy against those who withdraw excessive amounts of groundwater to the detriment of their neighbors would provide a much needed supplement to Louisiana's stated goal of conservation of groundwater resources. This tort remedy is available as provided by Louisiana Civil Code article 667 which embodies the civil law maxim that no one may use his property so as to injure another. In order to prevail on such a tort claim, a plaintiff will have to prove that he has suffered actual injury as opposed to mere inconvenience. The determination that a plaintiff has suffered actual injury will depend on the circumstances surrounding the claim, including the nature and degree of the intrusion on plaintiff's property, the character of the neighborhood, and the extent or degree of the damage, including the effect on the health and safety of the plaintiff. The additional elements of negligence which were added to article 667 in 1996 will also have to be proven by the plaintiff.