

Report as of FY2006 for 2006MI72B: "Exploring the Legal Landscape of Michigans Groundwater"

Publications

Project 2006MI72B has resulted in no reported publications as of FY2006.

Report Follows

FY 2006 USGS 104(B) Annual Technical Report

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Research Category: Social Science

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* The NIWR report headings did not fit for the laws of Michigan

Groundwater Law and Regulated Riparianism

INTRODUCTION

In the United States, Groundwater Law arose separately from the law governing surface water withdrawal, whether riparian doctrine or prior appropriation. Now we have a much better understanding of hydrology and geology and that groundwater and surface water are often inextricably linked, to the point that withdrawal of water from the ground often results in a direct reduction of water from the surface, and vice versa¹. However, until the beginning of the mid- 1800s with the emergence of Darcy's Law,² groundwater movement was not understood to be connected to surface water flow in any predictable way, and was deemed to be so "secret, occult and concealed, that an attempt to administer any set of legal rules in respect to [it] would be involved in hopeless uncertainty, and would be, therefore, practically impossible."³ Therefore, the Rule of Capture (also known as the English Rule or the Absolute Ownership Rule⁴) was the first common law of groundwater, and was first articulated in the British 1843 case of *Acton v. Blundell*⁵,

¹ See Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc., 709 N.W.2d 174, 190 (Mich. Ct. App. 2005) (finding that groundwater pumping of 400 gpm (gallons per minute) reduced the flow of a nearby stream by 345 gallons per minute).

² See H. Darcy, *Les Fontaines Publiques de la Ville de Dijon*, Dalmont, Paris (1856) and Stauffer, Philip H. (2006). "Flux Flummoxed: A Proposal for Consistent Usage". *Ground Water* 44 (2): 125-128.

DOI: [10.1111/j.1745-6584.2006.00197](https://doi.org/10.1111/j.1745-6584.2006.00197).

³ *Frazier v. Brown*, 12 Ohio St. 294, 311 (Ohio 1861).

⁴ See James N. Christman, *Riparian Doctrine*, in WATER RIGHTS OF THE EASTERN UNITED STATES 21, 30 (Kenneth R. Wright, ed., 1998).

⁵ (1843) 152 Eng. Rep. 1223 (Ex. Ch.).

which stated that a landowner can pump any amount groundwater from her property, even if an adjoining landowner is harmed⁶.

RESEARCH PROGRAM

a. Project summary

Today, we have a better understanding of groundwater flow and its effects on surface water can often be understood. Most state courts have overturned the Rule of Capture⁷, although a few still apply it⁸. Those states that no longer apply the Rule of Capture apply Prior Appropriation⁹ (an analogous rule to the surface water rule of Prior Appropriation), Reasonable Use¹⁰ (a perhaps misleading name, this rule for groundwater is much like the Rule of Capture for on-track uses of water, however, off-track uses are deemed not reasonable and can be enjoined by on-track users), Correlative Rights¹¹ (a doctrine for groundwater which arose in California and is like the Reasonable Use doctrine for surface water; and includes the limitation that off-tract uses are not reasonable); or the Restatement approach,¹² (that uses a reasonableness balancing test for both on-tract and off-tract uses of groundwater).

⁶ *Id.* at 1235.

⁷ *See, e.g.*, *State v. Michels Pipeline Constr., Inc.*, 217 N.W.2d 339, 348 (Wis. 1974) (overruling previous decisions which upheld the absolute Rule of Capture, and creating a rule of reasonable use for Wisconsin); *Cline v. American Aggregates Corp.*, 474 N.E.2d 324, 327 (Ohio 1984) (overruling the prior common law of the Rule of Capture and instead adopting the Restatement (Second) of Torts § 858 as the law of Ohio).

⁸ *See, e.g.*, *Sipriano v. Great Spring Waters of Am., Inc.*, 1 S.W.3d 75, 76 (Tex. 1999) (upholding the Rule of Capture for Texas on the ground that any change should come from the legislature); *Maddocks v. Giles*, 728 A.2d 150, 152 (Me. 1999) (upholding the Rule of Capture for Maine using the premise that groundwater “is the absolute property of the owner of the land, just like the rocks and soil that compose it”).

⁹ *See, e.g.*, *Chatfield East Well Co. v. Chatfield East Prop. Owners Ass'n*, 956 P.2d 1260, 1268 (Colo. 1998)

¹⁰ *See* *Martin v. City of Linden*, 667 So. 2d 732, 738-39 (Ala. 1995) (finding that a city’s pumping of water away from the land from which it pumped was unreasonable); *Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc.*, 709 N.W.2d 174, 197 (Mich. Ct. App. 2005) (explaining the different common-law doctrines for groundwater withdrawal).

¹¹ *See, e.g.*, *Los Osos Valley Associates v. City of San Luis Obispo*, 36 Cal. Rptr. 2d 758, 762 (Cal. Ct. App. 1994) (explaining that “[u]nder the ‘correlative rights doctrine,’ as between the owners of land overlying strata of percolating waters, the rights of each to the water are limited, in correlation with those of others, to his ‘reasonable use’ thereof when the water is insufficient to meet the needs of all”) (citations omitted).

¹² *See, e.g.*, *Cline v. American Aggregates Corp.*, 474 N.E.2d 324, 327 (Ohio 1984). The Restatement (Second) of Torts § 858, entitled “Liability for Use of Ground Water” reads:

- (1) A proprietor of land or his grantee who withdraws ground water from the land and uses it for a beneficial purpose is not subject to liability for interference with the use of water by another, unless (a) the withdrawal of ground water unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure, (b) the withdrawal of ground water exceeds the proprietor's reasonable share of the annual supply or total store of ground water, or (c) the withdrawal of the ground water has a direct and substantial effect upon a watercourse or lake and unreasonably causes harm to a person entitled to the use of

Problem and Research Objectives

Michigan historically used the reasonable use Riparian Rights rule for surface water withdrawals, whereby each riparian owner's reasonable use is balanced against other riparian owners' reasonable uses.¹³ While Michigan law regarding surface water use has been relatively straightforward and stable, the law regarding groundwater use has evolved with different court cases. The leading groundwater withdrawal case in Michigan was the 1917 case of *Schenk v. City of Ann Arbor*¹⁴, where the court declared that the rule of Reasonable Use for groundwater applied in Michigan; under this rule, groundwater withdrawals for use not connected with the land were permitted, but only to the extent that they did not interfere with an adjacent user's reasonable on-tract use¹⁵, while groundwater withdrawals for use connected with the land were absolutely permitted, even if it harmed a neighbor's use.¹⁶ However, later on the courts changed this rule to a rule which balanced two on-tract uses of groundwater against each other, instead of the prior rule which would have allowed each use absolutely.¹⁷ Most recently, the Court of Appeals of Michigan has adopted a "reasonable use balancing test" to determine disputes between riparian and groundwater users, and to determine whether all uses of water, whether surface water or groundwater, are reasonable.¹⁸ Perhaps in part as a reaction to this case, in order to avoid the future litigation and associated costs involved in finding out what a "reasonable use" is for a water withdrawer, the legislature of Michigan passed in 2006 a new law which implemented a Regulated Riparian system for Michigan.¹⁹ Under this new system, no new withdrawals of over 100,000 gallons per day which have

its water. (2) The determination of liability under clauses (a), (b) and (c) of Subsection (1) is governed by the principles stated in §§ 850 to 857.

RESTATEMENT (SECOND) OF TORTS § 858 (1979). The principles stated in §§ 850 to 857 are the Restatement's reasonable use rules for surface water.

¹³ See *Dumont v. Kellogg*, 29 Mich. 420, 423-24 (Mich. 1874) ("as between different proprietors on the same stream, the right of each qualifies that of the other, and the question . . . [is] whether under all the circumstances of the case the use of the water by one is reasonable and consistent with a correspondent enjoyment of right by the other").

¹⁴ 163 N.W. 109 (Mich. 1917) (city does not have a right to pump water off the land it owns if to do so will materially injure neighbors in their reasonable use of the water).

¹⁵ *Id.* at 112.

¹⁶ *Id.*; see also discussion above on the Reasonable Use rule for groundwater.

¹⁷ See *Hart v. D'Agostini*, 151 N.W.2d 826, 828 (Mich. Ct. App. 1967) (withdrawing water in order to sink a sewer line is not an unreasonable use of water such that damages must be paid to the neighbor harmed by the use); *Maerz v. United States Steel Corp.*, 323 N.W.2d 524, 530 (Mich. Ct. App. 1982) (adopting the Restatement approach for the resolution of groundwater withdrawal conflicts (see groundwater withdrawal law discussion above for description of the Restatement approach)).

¹⁸ See *Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc.*, 709 N.W.2d 174, 201 (Mich. Ct. App. 2005) (bottled water company permitted to pump 200 gallons per minute until the trial court works out how much pumping should be allowed under the reasonable use doctrine to reasonably protect the plaintiff's riparian rights in enjoying a stream). Under this reasonable use balancing test, all uses of surface water and groundwater are balanced against each other, considering the factors of "(1) the purpose of the use, (2) the suitability of the use to the location, (3) the extent and amount of the harm, (4) the benefits of the use, (5) the necessity of the amount and manner of the water use, and (6) any other factor that may bear on the reasonableness of the use." *Id.* at 203. Additionally, natural uses are preferred over artificial uses, and uses on the land are preferred over uses that "ship the water away." *Id.* at 204.

¹⁹ See S.B. 0850 (Mich. 2006) available at <http://www.legislature.mi.gov/documents/2005-2006/billconcurrent/Senate/pdf/2005-SCB-0850.pdf>.

an adverse impact on designated trout streams are permitted,²⁰ and new withdrawals of over a certain amount are required to obtain a permit²¹. (Note, this language suggests that existing uses are exempted from permit requirements.) Additionally, more study was mandated by the legislature so that the state could achieve ways of preventing “adverse resource impacts” by water withdrawals.²²

Methodology

While many landowners believe that their right to the groundwater below the surface of their land belongs to them individually and absolutely, subject to no limitations, this view is based upon outdated and now invalid law. Today, an individual’s right to groundwater in Michigan is considered an *exclusive right*, as opposed to an *absolute right*. An absolute right would be the absolute unlimited right to any and all groundwater under one’s land. An exclusive right, in contrast, is less than an unlimited right but only subject to certain limitations set by the government. The holder of an exclusive right still has priority over any other individual to the groundwater under his land. A good example of an exclusive right would be that you may be the only one with the legal right to build a structure upon your land; however, you may be required by the local, state, or federal government to get a permit to do so.

Principal Findings

Like surfacewater riparian users, groundwater users do not have a personal ownership (or absolute) right in the water flowing underneath their land. However, unlike surfacewater riparian users who are subject to reasonable use, the users of Michigan’s groundwater have an exclusive right in the water flowing underground and do not follow a reasonable use standard, but instead follow a reasonable use balancing test standard *similar to* the rule stated in the Restatement (Second) of Torts, section 858 (section 858 has *not* been explicitly adopted by Michigan).²³

"(1) A proprietor of land or his grantee who withdraws ground water from the land and uses it for a beneficial purpose is not subject to liability for interference with the use of water by another, unless

²⁰ See MICH. COMP. LAWS §§ 324.32701, 324.32721 (2006) (no person may make a new large quantity withdrawal which has an “adverse resource impact on a designated trout stream,” and in two years no new withdrawal which has an “adverse resource impact” will be allowed).

²¹ A permit must be issued to a person with the capacity to withdraw more than 2,000,000 gallons of water per day from the waters of the state, other than the Great Lakes and their connecting waterways, or, a person who has the capacity to make a new withdrawal of more than 5,000,000 gallons of water per day from the Great Lakes and their connecting waterways. MICH. COMP. LAWS § 324.32723 (2006).

²² See MICH. COMP. LAWS § 324.32803 (2006).

²³ *Maerz v. United States Steele Corp.*, 116 Mich. App. 710, 720, 323 N.W.2d 524, 530 (Mich. Ct. App. 1982) and *Michigan Citizens for Water Conservation v. Nestle Waters North America Inc.*, 269 Mich. App. 25, 53, 709 N.W.2d 174, 194 (Mich. Ct. App. 2005).

(a) the withdrawal of ground water unreasonably causes harm to a proprietor of neighboring land through lowering the water table or reducing artesian pressure,

(b) the withdrawal of ground water exceeds the proprietor's reasonable share of the annual supply or total store of ground water."²⁴

For disputes between groundwater users utilizing the same underground water source, M.C.L. § 600.2941(1) addresses *groundwater waste* and states that if the water of a groundwater well is “unnecessarily allowed to run to *waste* in an unreasonable manner to the depletion or lowering of the head or reservoir thereof to the detriment or damage of other wells supplied from the same head or reservoir, is a nuisance, and (the well) owner and the owner of the land on which it is situated are subject to all the actions for abatement and damages in favor of the person or persons injured, as provided by law for other nuisances or tortious acts” (*Italics added*).

M.C.L. § 600.2941(2) addresses *unreasonable* use of groundwater and states:

“[w]here any well is supplied by a head, reservoir, stratum, or vein or by percolating waters common to other springs or wells, and the owner thereof or his lessee or licensee puts its waters to a use *unreasonable or unnecessary* (even if the use is not wasteful), in view of the condition and situation of the land on which it is situated, and through such unreasonable or unnecessary use, lowers or depletes the head, pressure, or supply of water of any spring or well dependent on the same head, vein, or stratum, to the detriment or injury of the owner or any person entitled to the use thereof, the well so unreasonably and unnecessarily used, is a nuisance, and its owner and the owner of the land on which it is situated are subject to all the actions for abatement and damages in favor of the person or persons injured, as provided by law for other nuisances or tortious acts.”

So, if one groundwater withdrawer’s wasting or unreasonable use of withdrawn water causes any harm to a neighboring withdrawer, the one causing harm must correct those harms according to M.C.L. § 600.2941(3). By either reducing their own withdrawals to some practicable volume and/or adequately supplying the other user’s water needs by (1) paying for the equipment and installation needed to get an adequate supply for the harmed user or (2) paying for another source of water to adequately supply the harmed user as stated in *Bernard v. City of St. Louis*. It is a possibility that a user causing harm to another user could perhaps avoid the costs of supplying an adequate supply of water to the harmed user by *leasing* the water rights, essentially paying the harmed user for their lost water (*purchasing* these rights are probably not an option since water rights in Michigan are connected to the land and generally cannot be separated from that land). Remember that the Michigan Legislature has begun to implement restrictions designed so as to ensure that (1) all legitimate users will have access to

²⁴ Restatement (Second) of Torts § 858 (1979)

enough water to fulfill their adequate needs and (2) Michigan's environment will not suffer adverse impacts due to unreasonable withdrawals.

Significance for Project

Today, we have a better understanding of groundwater flow and its effects on surface water can often be understood. Most state courts have overturned the Rule of Capture²⁵, although a few still apply it²⁶. Those states that no longer apply the Rule of Capture apply Prior Appropriation²⁷ (an analogous rule to the surface water rule of Prior Appropriation), Reasonable Use²⁸ (a perhaps misleading name, this rule for groundwater is much like the Rule of Capture for on-track uses of water, however, off-track uses are deemed not reasonable and can be enjoined by on-track users), Correlative Rights²⁹ (a doctrine for groundwater which arose in California and is like the Reasonable Use doctrine for surface water; and includes the limitation that off-track uses are not reasonable); or the Restatement approach,³⁰ (that uses a reasonableness balancing test for both on-track and off-track uses of groundwater).

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Publication citations associated with the research project

- See, e.g.*, *Chatfield East Well Co. v. Chatfield East Prop. Owners Ass'n*, 956 P.2d 1260, 1268 (Colo. 1998)
- See* *Martin v. City of Linden*, 667 So. 2d 732, 738-39 (Ala. 1995) (finding that a city's pumping of water away from the land from which it pumped was unreasonable); *Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc.*, 709 N.W.2d 174, 197 (Mich. Ct. App. 2005) (explaining the different common-law doctrines for groundwater withdrawal).
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- Id.*; *see also* discussion above on the Reasonable Use rule for groundwater.
- See* *Hart v. D'Agostini*, 151 N.W.2d 826, 828 (Mich. Ct. App. 1967) (withdrawing water in order to sink a sewer line is not an unreasonable use of water such that damages must be paid to the neighbor harmed by the use); *Maerz v. United States Steel Corp.*, 323 N.W.2d 524, 530 (Mich. Ct. App. 1982) (adopting the Restatement approach for the resolution of groundwater withdrawal conflicts (*see* groundwater withdrawal law discussion above for description of the Restatement approach)).
- See* *Mich. Citizens for Water Conservation v. Nestle Waters N. Am., Inc.*, 709 N.W.2d 174, 201 (Mich. Ct. App. 2005) (bottled water company permitted to pump 200 gallons per minute until the trial court works out how much pumping should be allowed under the reasonable use doctrine to reasonably protect the plaintiff's riparian rights in enjoying a stream). Under this reasonable use balancing test, all uses of surface water and groundwater are balanced against each other, considering the factors of "(1) the purpose of the use, (2) the suitability of the use to the location, (3) the extent and amount of the harm, (4) the benefits of the use, (5) the necessity of the amount and manner of the water use, and (6) any other factor that may bear on the reasonableness of the use." *Id.* at 203. Additionally, natural uses are preferred over artificial uses, and uses on the land are preferred over uses that "ship the water away." *Id.* at 204.
- See* S.B. 0850 (Mich. 2006) available at <http://www.legislature.mi.gov/documents/2005-2006/billconcurrent/Senate/pdf/2005-SCB-0850.pdf>.
- See* MICH. COMP. LAWS §§ 324.32701, 324.32721 (2006) (no person may make a new large quantity withdrawal which has an "adverse resource impact on a designated trout stream," and in two years no new withdrawal which has an "adverse resource impact" will be allowed).

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Restatement (Second) of Torts § 858 (1979)

NOTABLE AWARDS AND ACHIEVEMENTS.

Through this project endeavor utilizing the USGS 104(B) project number 2006MI72B, the Institute of Water Research was awarded a \$540,000.00 grant from the Great Lakes Protection Fund to research “*Restoring Great Lakes Basin Water Through the use of Conservation Credits and Integrated Water Balance Analysis System.*” Project Number 763.

PUBLICATIONS FROM PRIOR PROJECTS

Great Lakes Protection Fund Final Report. “Restoring Great Lakes Basin Water Through the Use of Conservation Credits and Integrated Water Balance Analysis System. Project Number 763. <http://www.iwr.msu.edu/research/projects.html>