

Private rights, public interests and water use conflicts: evolving water law and policy in Michigan

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Abstract

Water conflicts are rare across Michigan's history. As a result, water rights have received little attention by courts or the legislature. Traditionally, the common law of water rights in Michigan embraces the riparian doctrine for surface water and provides landowners with the right to use groundwater. However, two recent changes in common and statutory law significantly modify the legal relations among water users and others with a stake in water use decisions. A 2005 Michigan Court of Appeals decision created a new legal relation among riparian and groundwater rights holders. In 2008, Michigan's legislature passed laws aimed at regulating surface water and groundwater withdrawals. As an exercise of police power intended to protect public rights in water and associated environmental quality, the 2008 laws cap total water withdrawals. This program of restricting water withdrawals coexists with the state's common law which provides for reasonable use of surface water by riparian landowners and groundwater by owners of the overlying land. The result is a new set of legal relations, an uncertain legal environment, and a growing likelihood of water use conflicts. Because Michigan's body of water law is unique, neither courts nor legislature can rely on solutions used in other states.

Keywords: Legal relations; Michigan; Police power; Reasonable use; Water conflict; Water law

Introduction

All US states have a body of water law that reflects interests unique to the state and principles established in common across specific regions of the country. Generally US states east of Kansas City apply the riparian doctrine and western states use a system of prior appropriation. While these principles have changed little since their inception, the states' applications of these principles have evolved to reflect a growing array of interests that all have a stake in how water use decisions are made. Many eastern states have developed permitting systems to augment their application of the riparian doctrine (Abrams, 1989b; Dellapenna, 2003). As such, the evolution of water law and policy in Michigan is not exceptional in and of itself.

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However, when the context of recent changes in Michigan's water law and the relative rapidity of those changes are viewed against the backdrop of a long history of little attention to the structure of water rights in the state, an interesting story emerges. In 2008, Michigan passed a series of laws aimed at regulating the quantity of surface water and groundwater used throughout the state to comply with the requirements of the Great Lakes–St. Lawrence River Basin Water Resources Compact. In many ways, this adds Michigan to the list of states moving to regulated riparianism, a centralized system of water management where the state legislature defines water use priorities and empowers an agency to make decisions about which uses of water are reasonable (Dellapenna, 1997). However, Michigan's form of regulated riparianism is so limited that an argument can be made that it is a different system entirely (Kelley, 2014 §9.03). The situation is further complicated by the fact that these laws were passed only a few years after Michigan's courts (in 2005) made an important change to how water rights conflicts are adjudicated. The simultaneity and nexus of these changes in statutory and common law and their implications for water rights and water management in the state are the subjects of this paper.

In the next section, the framework used in this paper's discussion of water rights is presented. The purpose of this framework is to clarify the nature of the legal relations relevant to Michigan water rights so that the significance of these changes can be more easily understood. Next, changes in the common law governing surface and ground water rights in Michigan are reviewed. Then, Michigan's use of police power to protect the public interest in water resources is explained. Finally, the implications of the changes to these legal relations are discussed, with particular attention paid to the uncertainties caused by the rapidity of these changes.

A framework for discussing water rights

In the interest of clarity, two of the four fundamental legal relations originally proposed by Hohfeld (1917), with language provided by Bromley (1989), are used to frame the ways in which the evolution of Michigan's water law has affected water rights. These legal relations provide an analytical tool for understanding institutions in a relative way; a right granted to one individual always corresponds to a limitation placed on others. Consider rights holders Alpha and Beta, where Alpha is an individual and Beta is all other persons in a society. The structure of legal relations describes a *right* as an expectation held by Alpha that Beta will behave in a certain way. A corresponding *duty* means that Beta must behave in a specific way toward Alpha. Thus, if Alpha has a *right* then Beta has a *duty*. Alternatively, if Alpha has a *privilege* to behave in a certain way, then Beta has *no right* to stop Alpha's behavior. In the case of the privilege -no right correlate, the state takes a passive role; Alpha's privilege exists simply because there is no law restricting the privileged behavior. In contrast, with the right -duty correlate the state takes an active role, enforcing the exercise of Alpha's right by requiring exercise of Beta's duty.

In this review, rights of three groups of water users in Michigan are identified. The first consists of users of surface water, specifically riparian users. The rights of these users are connected to their ownership of land adjacent to the body of water being used (Tarlock *et al.*, 2002). Riparian uses may be extractive or in-stream. The second group consists of groundwater users. The rights of groundwater users are also tied to the ownership of land, specifically ownership of the land from beneath which groundwater is extracted. The rights in these first two categories are usufructuary,

which means that Michigan's water resources are formally owned by the state, and rights to use water are granted by the state (Tarlock *et al.*, 2002). These rights were established by and are protected under common law.

The third group of users, the public, enjoys rights of access to surface water for navigation, also created by and protected by common law. In addition, Michigan's constitution provides the public rights to health, safety and general welfare associated with the protection of water and other resources:

'The conservation and development of the natural resources of the state are hereby declared to be of paramount public concern in the interest of the health, safety, and general welfare of the people. The legislature shall provide for the protection of the air, water and other natural resources of the state from pollution, impairment and destruction' (Michigan Legislature, Constitution, art. IV, §51 and 52).

When water uses conflict, the legal relations among surface water users, groundwater users and the public establish the basis for resolution of conflicts.

Among these three types of rights holders, six legal relations exist that include rights, duties, privileges, and the absence of rights (Hohfeld & Cook, 1964; Bromley, 1989). These are as follows:

1. The legal relations among riparians
2. The legal relations between riparians and the public
3. The legal relations among groundwater users
4. The legal relations between riparians and groundwater users
5. The legal relations between groundwater users and the public
6. The legal relations among the public.

This review of changes in Michigan's water law and policy will focus on the first five of these legal relations. However, as will become clear, the maturing of Michigan's water law has resulted in a collapse of the three types of rights holders into only two – water users and the public, –and reduced the six legal relations to only three. The subsequent sections are organized initially according to the first five legal relations, and the evolution of each legal relation will be described chronologically. The timeline in Figure 1 indicates when changes in legal relations were made and illustrates that significant changes have been made only recently.

Legal relations among riparians

Michigan courts have historically followed the riparian doctrine subject to the rule of reasonable use in disputes over the use of surface water. The doctrine excludes non-riparians from certain uses of some surface waters and creates a legal relation among riparian land owners. 'All riparians have a right to some depleting use of water but each use must be reasonable when related to the use of other riparians' (Schmid, 1960, p. 20). In the legal relations among riparians, each riparian user has a recognized right to reasonable use of surface water, and each riparian also has a duty to refrain from unreasonable interference with other riparians' reasonable uses. Over time, the exact nature of these rights and duties has evolved because of changes in the understanding of reasonableness of use.

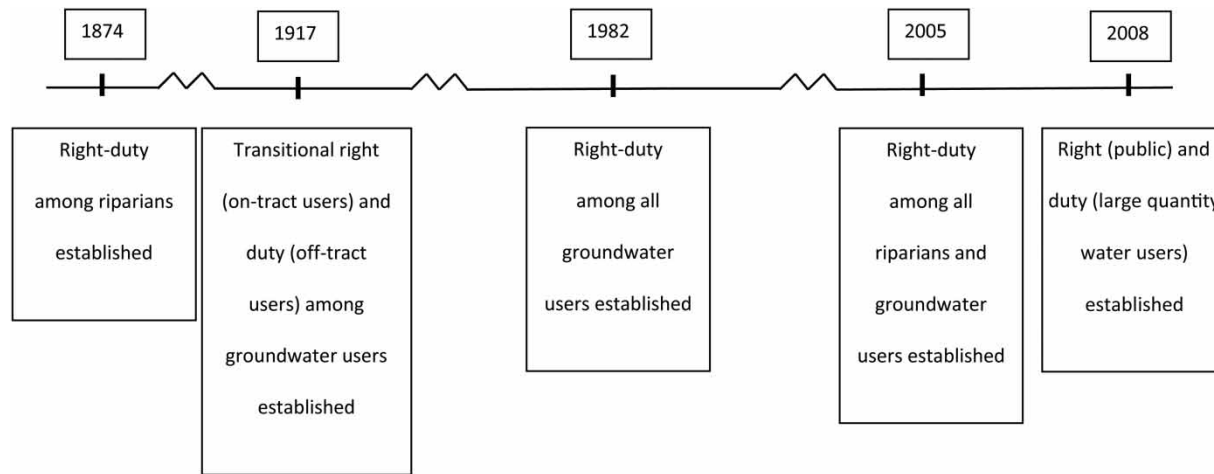


Fig. 1. Timeline showing changes in legal relations affecting Michigan's water law and policy.

The riparian doctrine of reasonable use was established for Michigan in *Dumont v. Kellogg* (1874) when the court rejected the idea that users should be given preference based on priority of appropriation. From *Dumont*:

‘between two proprietors,... it cannot be said that one ‘has no right to use the water to the prejudice of the proprietor below him,’ or that he cannot lawfully ‘diminish the quantity which would descend to the proprietor below’ ... Such a rule could not be the law so long as the equality of right between the several proprietors was recognized, for it manifest would give to the lower proprietor superior advantages over the upper...

(A)s between different proprietors on the same stream, the right of each qualifies that of the other, and the question always is, not merely whether the lower proprietor suffers damage by the use of water above him, nor whether the quantity flowing on is diminished by the use, but whether under all circumstances of the case the use of water by one is reasonable and consistent with a correspondent enjoyment of the right by the other’ (*Dumont v. Kellogg* (1874) at 423).

The rule of reasonable use gave each user similar water use rights and duties, and established the need for courts to examine each water use dispute and the relative reasonableness of the uses in contention on a case-by-case basis.

In *People v. Hulbert* (1902), the court established a list of criteria that should be considered during a determination of reasonableness, qualifying both the rights and duties of riparian water users. The list, which became the basis of the balancing test used to qualify the legal relations among riparians, included the purpose, extent, duration, and necessity of the use; the nature and size of the stream; other uses of the stream; and the extent of the injury to one use as compared to the benefit of the other. Later cases modified this list, specifying how these factors should be considered. For example, in considering the purpose of use, *Thompson v. Enz* (1967) established that riparian uses for what the court referred to as ‘natural purposes’ enjoyed a non-proratable preference over ‘artificial uses’. Natural uses ‘encompass all those uses absolutely necessary for the existence of the riparian proprietor and his family, without which both man and beast would perish, such as the quenching of thirst and use for household purposes’ (*Thompson v. Enz* (1967) at 689). Artificial uses ‘are those which merely increase one’s comfort and prosperity and do not rank as essential to his existence, such as uses for commercial profit and for recreation’ (*Thompson v. Enz* (1967) at 689). After *Thompson*, then, riparian users were divided into two groups; those using water for ‘natural purposes’ were given the right for reasonable water use corresponding with a duty of those using water for ‘artificial purposes’ to not interfere with those exercising rights for ‘natural purposes’.

Legal relations between riparians and the public

When a conflict occurs between a riparian user and the public’s interests in surface water use, the court must clarify the rights and duties of the riparian and the public. Not only do these legal relations change over time, classifying any one particular use or group of users as public at any point in time is difficult. According to Schmid (1960, p. 19), ‘designation as public only means that the particular use is not merely a private one but also one affected with the public interest’, and designating a use or user as public with rights to surface water has been used as a way to justify support for one use over another.

The legal relations between riparians and the public have been changed a number of times ‘to meet the changing circumstances and needs of the state’ (Schmid, 1960, p. 30). Examples include legislative action authorizing the use of condemnation of riparian rights for construction of mill dams in 1824 and improvements for navigation in 1875 because mill dams and improvements for navigation were ‘thought necessary to further the public interest in the frontier economy’ (Schmid, 1960, p. 30). The condemnation of riparian rights for mill purposes was subsequently struck down in *Ryerson v. Brown* (1877), not because the condemnation was a violation of riparian rights, but because the court concluded that this use of condemnation was no longer in the public interest. In his concurring opinion in *Ryerson*, Justice Campbell wrote, ‘The original enactment... of the law of 1824 can be readily understood when considered in the light of the conditions of the times, of which we must take judicial notice’ (*Ryerson v. Brown* (1877) at 345).

The history of public rights in navigable streams is another example. The 1787 Northwest Ordinance established that riparians could not use the water in any way that would interfere with navigation, a use of value to the public. Any ‘navigable stream’ was considered open to public use (Schmid, 1960). Initially, streams were considered navigable if they could be used by commercial vessels, but this changed in 1853. The court in *Moore v. Sandborne* (1853) found that a broader test was needed to meet the needs of the state’s expanding lumber industry.

‘The servitude of the public interest depends rather upon the purpose for which the public requires the use of its streams, than upon any particular mode of use... accordingly, we find that a capacity to float rafts and logs... where the manufacture of lumber is prosecuted as a branch of trade, is recognized as the criterion of the public right of passage and use’ (*Moore v. Sandborne* (1853) at 525).

In order to aid the lumber industry, the court expanded the definition of navigability to cover smaller streams used to transport lumber, effectively limiting the property rights of riparians in order to benefit the state’s economy.

Legal relations among groundwater users

Upjohn v. Richard Township (1881) is the oldest Michigan case involving groundwater. In this case, the Michigan Supreme Court ruled that groundwater users did not have standing to bring suit against those making an addition to a graveyard, which was deemed a proper use of land, despite possibly polluting nearby wells. In its decision, the Court applied a rule taken from English common law, stating that a landowner has no right to bring a case against a neighbor who has interfered with (e.g., contaminated) his groundwater (Schmid, 1960).

This application of English common law became known as the rule of absolute ownership (or the English rule), defined as:

‘That principle which gives the owner of the soil all that lies beneath his surface; that the land immediately below his property, whether it is solid rock, or porous ground, or venous earth, or part soil, part water; that the person who owns the surface may dig therein, and apply all that is found to his own purposes at his free will and pleasure’ (*Schenk v. City of Ann Arbor* (1917) at 83).

The rule of absolute ownership granted landowners the privilege to use groundwater and established that other landowners had no right to stop them. This essentially meant that groundwater users could use

(‘use’ being broad enough to encompass actions such as contamination) as much groundwater from beneath their own lands as they wanted, regardless of whether or not this use affected the water supply of their neighbors. It should be noted that when this rule was established the technology did not yet exist to observe the movement of groundwater, making it impossible for courts to actually know definitively if one user was indeed interfering with another. Therefore this ‘privilege’ reflected the inability of the courts to arrive at conclusions about the effects of any given withdrawal:

‘As long as the court could not scientifically arrive at [whether or not a particular withdrawal has caused a particular damage] it could not successfully determine the property rights in underground water and thus left it to the law of the jungle where if owners’ wells are dried up by a withdrawal of an adjoining landowner this is a loss without wrong, and for which there is no legal remedy’ (Schmid, 1960: 26).

Michigan’s next major groundwater case was *Schenk v. City of Ann Arbor (1917)*, and it played a major role in establishing how legal relations between groundwater users would develop. In *Schenk*, the plaintiff filed an injunction to prevent the city of Ann Arbor from continuing its groundwater withdrawals at a nearby pumping station. The plaintiff claimed that the city’s pumping station had caused his well to run dry, requiring him to lower the well in order to regain access to groundwater. Because the plaintiff was able to resume his use of the groundwater after drilling his well lower, the court did not grant the injunction he had requested. Instead, they required the city to pay him damages to compensate for the cost of lowering his well.

In *Schenk* the Michigan Supreme Court adopted a new rule while noting that the old rule, the rule of absolute ownership, should still be used in most cases:

‘While the rule of absolute ownership is the rule applied, and to be applied, in respect to most of the ordinary uses of the land, and the ordinary operations carried on upon and in the land, there is another doctrine... of reasonable user...introduced by equity to the law’ (Schenk v. City of Ann Arbor (1917) at 83).

The *Schenk* court defined the new ‘rule of reasonable user’ by citing *Meeker v. City of Orange (1909)*:

‘The doctrine of reasonable use does not prevent the proper use by any landowner of the percolating water subjacent to his soil in agriculture, manufacturing, irrigation or otherwise, nor does it prevent the reasonable development of his land by mining or the like, although the underground water of neighboring proprietors may be thus interfered or diverted. But it does prevent the withdrawal of underground waters for distribution or sale for uses not connected with any beneficial ownership or enjoyment of the land whence they are taken, if it results from there that the owner of the adjacent or neighboring land is interfered of sub-surface water upon his land, or if his wells, springs or steams are thereby materially diminished in flow, or his land is rendered so arid as to be less valuable for agriculture, pasturage or other legitimate uses’ (Schenk v. City of Ann Arbor (1917) at 84).

Essentially, *Schenk*’s ‘rule of reasonable user’ continued the rule of absolute ownership except in cases where the use of groundwater (a) does not benefit the land from which it is drawn and (b) impacts

a neighbor's use of groundwater. This placed groundwater users into two categories, on-tract and off-tract users. For on-tract users, the privilege -no right relationship continued to exist. However, the rule established a right -duty relationship between on-tract and off-tract users. Off-tract uses were deemed unreasonable to the extent that they interfered with the rights of on-tract users; off-tract users were vested with the duty not to interfere with on-tract users and on-tract users were vested with the right for their access to groundwater to be protected from off-tract users.

A superficial reading of *Schenk* makes it seem as if the court had provided on-tract users a privilege to use groundwater unchallenged, as well as a right to use water without interference from off-tract users, with off-tract users begin given a matching duty to avoid interference with on-tract users. However, this misses the very important point that the mix of privilege, rights, and duties was entirely reliant on the current state of knowledge regarding groundwater. While it may appear that the *Schenk* court went to lengths to establish the 'rule of reasonable user' as preserving the rule of absolute ownership for on-site uses, it is important to note the *Schenk* court specified that the rule should only be used as long as it is impossible for the courts to determine the facts in groundwater cases. The court quoted the following excerpt from *Meeker*:

'Again, the denial of applicability to underground waters of the general principles of law that obtain with respect to waters upon the surface of the earth is in part placed upon the mere difficulty of proving the facts respecting water that is concealed from view. But experience has demonstrated in a multitude of cases that this difficulty is often readily solved. When it is solved in a given case, by the production of satisfactory proof, this reason for the rule at once vanishes' (Meeker v. City of Orange, 1909).

With this quote in mind it is possible to view the *Schenk* court's 'rule of reasonable user' as an application of reasonable use in a situation without the complete facts. If the rule of absolute ownership was to be used in situations characterized by little to no understanding of groundwater movement, *Schenk* established that reasonable use should be used in situations with an understanding of groundwater complete enough to determine all of the facts relevant to the case. The 'rule of reasonable user' was therefore the beginning of the transition between these two extremes. While this transition would not be complete until *Maerz v. United States Steel Corp (1982)*, the interim cases show evidence of this transition.

Bernard v. St. Louis (1922) bears many similarities to *Schenk*. As with *Schenk*, the case involved a dispute between a private land owner (the owner of a sanitarium in this case) and a city whose pumping activities affected the land owner's well. The resolution was similar; an injunction was not granted, but the city was made to pay for damages caused by its pumping activities. The decision in *Bernard* appears on its surface to have followed the rule of reasonable user as established by the court in *Schenk*; the Supreme Court held that the plaintiff's right to reasonable use was violated by the defendant, entitling the plaintiff to damages. However, the *Bernard* ruling contains no language suggesting the plaintiff's claim would not have been actionable if the defendant's withdrawal of water had been for on-site purposes (noted by *Maerz v. United States Steel Corp, 1982*). This is a minor point, but worth considering as it supports the idea that the courts saw the 'rule of reasonable user' as a transitional application of reasonable use, rather than fixed legal doctrine itself.

The trend toward reasonable use is clearer in the *Hart v. D'Agostini (1967)* decision. In *Hart* the court was faced with a situation where both the plaintiff and the defendant were on-tract users. The plaintiff claimed that his access to water had been interfered with by the defendant's pumping of groundwater at

a nearby construction site. Because both the plaintiff and the defendant were on-tract users, a strict application of the ‘rule of reasonable user’ would have meant no consideration of reasonableness was necessary, since the rule of absolute ownership still applied in all situations when uses were on-tract. However, the court in *Hart* considered not only the precedent set by *Schenk* but also the Restatement of Torts (Restatement of Torts §822 1934) in its explicit consideration of the question of reasonableness:

‘The liability of interference with the subterranean water supply of a neighbor has been expressed, depending upon whether the causative activity (1) if intentional, was reasonable, or (2) if unintentional, was negligent. See Restatement, Torts [section] 822, at p 226; Annotation, 29 ALR2d 1357 (1935). Since the installation of the sewer was obviously intentional, the question becomes whether the activity was reasonable’ (Hart v. D’Agostini (1967) at 321; emphasis added).

In comparison to the ruling in *Schenk* and *Bernard*, the court in *Hart* clearly used recognizable reasonable use principles when it considered a number of other factors in the case beyond whether the withdrawn water was used on-tract. These criteria included the extent of harm created by the defendant’s use, the benefit of the defendant’s use to the surrounding community, and whether or not it would have been possible for the defendant to avoid interfering with the plaintiff’s use. The use of a reasonableness balancing test was accompanied by a more nuanced understanding of groundwater conflicts and an outright rejection of the rule of absolute ownership:

‘In our increasingly complex and crowded society, people of necessity interfere with each other to a greater or lesser extent. Subterranean water, which is no respecter of property lines, is often impossible to extract without water from adjoining lands percolating across the property line. The right to enjoyment of subterranean water beneath a person’s land cannot be stated in terms of an absolute right’ (Hart v. D’Agostini (1967) at 322; emphasis added).

Despite a clear trend toward reasonable use, the courts in Michigan had yet to explicitly state that reasonable use, rather than a transitional rule, was to be used in every case in the future. Still, the court in *Hart* clearly used a reasonableness test in a case involving two on-tract users by considering a broad list of factors contributing to reasonableness. This transition to a legal relation of right and duty qualified by a rule of reasonableness was affirmed in *Maerz v. United States Steel Corp (1982)*. The *Maerz* court officially stated that a test of reasonableness should be used in all future disputes over groundwater.

In *Maerz*, the plaintiff alleged that the defendant steel company had caused a well on the plaintiff’s property, the sole source of potable water on the property, to completely lose water. The defendant’s activities included blasting and dewatering a nearby quarry for mining purposes. The trial court ruled against the plaintiffs, stating that the defendant’s use of the groundwater (the dewatering of the quarry) was for the improvement of the land from whence the water had come. As an on-tract use, the defendant’s use of the water was therefore not actionable according to a strict interpretation of the ‘rule of reasonable user’.

The Court of Appeals overruled this decision, including the ‘rule of reasonable user’ as applied by *Schenk*. The Court noted that the decision in *Schenk* relied heavily on established rules from *Meeker v. City of Orange (1909)*, yet misrepresented the intent of the court in *Meeker*.

‘Schenk’s [quotation from Meeker] gives the impression the Meeker court intended to limit its repudiation of the English rule to situations involving withdrawals of subterranean waters for off-premises use. That impression is not correct’ (*Maerz v. United States Steel Corp* (1982) at 717–718).

As evidence for this claim, *Maerz* cites the decision in *P. Ballantine & Sons v. Public Service Corp of NJ* (1914), which was presided over by the same court that had presided over *Meeker* five years earlier:

‘Since the decision of this court (in 1909) in *Meeker* it is the settled law of this state that the landowner has not an absolute and unqualified property in all water found percolating in his soil to do what he pleases with it. He has the right to its use **only in a reasonable manner and to a reasonable extent**, for his own consumption as in agriculture, irrigation and the like, **and without undue interference with the rights of other landowners to the like use and enjoyment of such water**’ (*Maerz v. United States Steel Corp* (1982) at 718, citing *P. Ballantine & Sons v. Public Service Corp of New Jersey* (1914); emphasis added by *Maerz*).

In place of the ‘rule of reasonable user’ *Maerz* adopted a modification of the English rule which the court called ‘correlative rights,’ quoting the American Law Institute in the Restatement of Torts:

‘(1) A proprietor of land or his grantee who withdraws groundwater from the land and uses it for a beneficial purpose is not subject to liability for interference with the use of another user, unless
(a) the withdrawal of groundwater unreasonably causes harm to a proprietor of neighboring land through the lowering of the water table or reducing artesian pressure,
(b) the withdrawal of groundwater exceeds the proprietor’s reasonable share of the annual supply or total store of groundwater’ (Restatement (Second) of Torts §822 at p. 108 1965).

This definition of correlative rights actually referred to principles that are currently understood to be part of reasonable use. Modern legal commentators have established that the term ‘correlative rights’ should be applied only to rights systems where water is allotted strictly by proportion, rather than through a reasonable use balancing test (Kelley, 2014: 21.01, 22.01). The language in *Maerz* makes it clear that the court intended to keep the reasonable use balancing test as the primary way the courts would resolve conflicts over groundwater.

Legal relations between riparians and groundwater users

Prior to 2005, Michigan law did not acknowledge the relationship between groundwater and surface water, meaning no protections were available for a riparian user whose use was being interfered with by a groundwater user. Nor were protections available for a groundwater user whose use was being interfered with by a riparian user. In the legal relationship between riparians and groundwater users, each group of users was vested with the privilege of surface water (the riparians) or groundwater use, and no rights were recognized for a user in either group to be protected from the withdrawals by a user in the other. Then, in 2005, the Michigan Court of Appeals applied the balancing test established by *Maerz* to a conflict between groundwater and surface water

users in *Michigan Citizens for Water Conservation v. Nestle Waters North America Inc. (2005)*. In this case, the Court of Appeals also decided issues of standing under the Michigan Environmental Protection Act which were later overturned by the Michigan Supreme Court (*Michigan Citizens for Water Conservation v. Nestle Waters North America Inc., 2007*). However, in that ruling the Supreme Court affirmed the Court of Appeals' application of this balancing test between groundwater and surface water users.

The plaintiffs in *Nestle*, a local group of riparian land owners, claimed that pumping of groundwater at a water bottling plant owned by the defendant had caused damages to nearby streams and wetlands and interfered unreasonably with their riparian rights. The trial court based its decision for the plaintiff in *Nestle* on the principle of reasonable use in the riparian doctrine as applied in *Dumont*.

'A riparian owner may make any and all reasonable uses of the water, as long as they do not unreasonably interfere with the other riparian owner's opportunity for reasonable use. [This does not apply] in the case of a stranger who, by any means, or by any cause, diminishes the flow of waters; [this] is wholly wrongful, and no question of the reasonableness of his action can possibly arise' (Dumont v. Kellogg (1874) at 422).

The Court of Appeals overturned this decision, stating '*Dumont's* use of the word 'stranger' suggests that the Court was referring to a non-riparian who attempted to exercise riparian water rights' (*Michigan Citizens for Water Conservation v. Nestle Waters North America Inc. (2005)* at 56). In this case, however, the defendant was attempting to exercise rights to groundwater use only. To address this conflict between a riparian and a groundwater user, the *Nestle* court applied a balancing test, as used by *Hulbert* for surface water and by *Maerz* for groundwater, to determine reasonableness in *Nestle*. In so doing, the *Nestle* court recognized the connection between groundwater and surface water and changed the way in which water law is applied in Michigan.

'[The balancing test] recognizes that virtually every water use will have some adverse effect on the availability of this common resource. For this reason it is not merely whether the quantity of water available is diminished, 'but whether under all the circumstances of the case the use of the water by one is reasonable and consistent with a correspondent enjoyment or right by the other' (Michigan Citizens for Water Conservation v. Nestle Waters North America Inc. (2005) at 69, citing Dumont v. Kellogg (1874)).

Traditionally, the common law rules for surface water and groundwater were separate but, by applying the balancing test here, the court essentially combined the two into a single law with the principle of reasonable use at its center. Applying the balancing test in this case created a legal relation among all water users, whether surface water or groundwater, with all water users afforded a right to reasonable use of water and a correlated duty to avoid unreasonable interference with the rights of other users.

In its early stages, plaintiffs in the *Nestle* case attempted to include more wide-scale damages to public rights in Michigan's water, but the Court concluded that the case should be decided based strictly on the common law of water rights. Thus, while *Nestle* changed the legal relation among water users, it did not address legal relations between water users and the public. Nevertheless, it did reduce the types

of rights holders in water to only two, water users and the public, and the types of legal relations to only three. As noted earlier, those of interest for this review are:

1. the legal relations among water users, and
2. the legal relations between water users and the public.

The legal relations between water users and the public

The legal relations between water users and the public were addressed with recent changes in Michigan statutes to adopt and implement the Great Lakes–St. Lawrence River Basin Water Resources Compact (the Compact). Because of concerns over the threat of outside diversions to the long-term health of the Great Lakes, the Great Lakes states have long worked to prevent large-scale diversions of water from the Great Lakes Basin to other areas of the country (Annin, 2006). In order to protect the Lakes and the many public and private uses they support, the states within the basin established the Compact, signed by all eight states and ultimately ratified by Congress in 2008¹. The Compact clarifies the intent of the Great Lakes states to prevent diversions in order to protect ecological health within the basin and, as a result, protect the public's interest in the Great Lakes.

Prior to the Compact, the Great Lakes states had made formal agreements to ban any attempts to divert waters to out-of-basin uses. However, in 1999, a study commissioned by the governors of the Great Lakes states raised serious questions about the legality of this approach (Lochhead *et al.*, 1999). The Interstate Commerce Clause (ICC) of the US Constitution forbids states from banning the transport of commodities across state lines (US Constitution, Art. 1, §8, cl. 3.). Application of this clause to water was tested in *Sporhase v. Nebraska* (1982), and the court ruled that two standards must be met in order for a state to restrict the diversion of water from within its boundaries. First, the restriction cannot be for the economic protection of in-state interests. Second, the state must treat in-state and out-of-state interests evenhandedly.

Therefore, the states signing onto the Compact must protect the Great Lakes ecosystem from in-basin uses of water as well. The Compact requires each state to manage its water resources to prevent adverse resource impacts (ARIs). Recognizing that groundwater withdrawals have the potential to damage stream ecosystems by drawing down the water levels of nearby water bodies, groundwater use is included in the water management requirement. Michigan passed its implementing legislation at the same time it adopted the Compact. The subsequent body of statutory law, through its application of the police power, grants the public a right to be protected from water withdrawals that harm the state's natural resources and creates a correlated duty for water users to avoid causing such harm (characterized as ARIs).

Michigan applies an accounting approach to managing the state's water and preventing ARIs. Proposed new or increased large quantity withdrawals (100,000 gallons per day or larger) must be screened before they can be undertaken to insure that the ability of nearby streams to support characteristic fish populations (an indicator of overall ecological health) is not reduced below a mandated threshold (Natural Resources and Environmental Protection Act (1994): Mich. Comp. Laws §324.32705). Commonly referred to as

¹ For references to state and federal legislation, see <http://glscompactcouncil.org/Implementation.aspx>.

protection of environmental flows (Poff *et al.*, 2010), the thresholds vary depending upon size and temperature of streams (Zorn *et al.*, 2012). Screened withdrawals will be registered (or permitted if larger than 2 million gallons per day) if they will not cause an ARI.

The statute established a formal right–duty relation between the public and large quantity water users, but it includes a provision specifically stating that these rules are not meant to interfere with existing common law of water rights (Natural Resources and Environmental Protection Act (1994): Mich. Comp. Laws §324.32728). Thus, the legal relations among water users are still defined by the principles of reasonable use. Michigan’s Groundwater Conservation Advisory Council (2007), which drafted the statutes and designed Michigan’s water use regulations, explained the inclusion of this provision:

‘The Council recommends only implementing a Water Withdrawal Assessment Process that does not change Michigan’s system of riparian water rights. Riparian law is a means of allotting available water among potential users. By establishing a system that maintains flows protecting Characteristic Fish Populations, the legislature would be specifying how much water is available to be allotted through the riparian system. Therefore, even if a proposed withdrawal is initially denied because it would cause an Adverse Resource Impact, the person proposing the withdrawal still has recourse. That recourse is to assert common-law riparian rights to a reasonable use of water. These rights would be asserted in a common-law water rights adjudication against other users in the watershed. In effect, the person proposing the new withdrawal would assert that existing uses are not reasonable, thereby depriving him or her of the ability to make a reasonable use of the water without causing an Adverse Resource Impact. At the same time, other riparians have the right to challenge that the new or increased withdrawal is affecting their existing riparian water rights’ (Ground Water Advisory Council, 2007: 18).

Requiring that large quantity withdrawals be limited to prevent ARIs decreases the amount of available water and increases the likelihood of water use conflicts. Thus, further judicial attention to the legal relations among water users and the legal relations between water users and the public is likely. How Michigan’s courts will respond remains to be seen.

Conclusions

In an earlier review, Schmid (1960) described a shift over time in how Michigan courts applied a rule of reasonableness to address conflicts among water users and argued that changes in the courts’ views of reasonableness were responses to shifting economic conditions. As the state’s economy evolved, the courts updated the criteria for reasonableness and modified water rights in a way that furthered public interest based on two considerations, ‘the economic conditions of the time, and the legal and institutional environment necessary to further economic growth.’ (Schmid, 1960, p. 33). We expand on Schmid’s premise in three distinct ways. First, we review changes in legal relations, not merely changes in the courts’ application of reasonable use. Second, we observe that the changes to common and statutory law reflect a more accurate accounting for the hydrology and ecology of Michigan’s water and water-dependent resources. Third, we argue that changes to Michigan statutes to adopt the Great Lakes–St. Lawrence River Basin Water Resources Compact respond to a recognition that water use in Michigan affects not just users and the general public in Michigan but also the populations of other Great Lakes states and beyond.

During the past 20 years, Michigan courts have fundamentally altered the legal relations among water users. Within the last 10 years, changes in Michigan statute established a new legal relation between large quantity water users and the public. As a result, water users and the public at large find themselves in a new legal environment which requires attention to details not required before. Considering these changes, which began in 1982, ‘recent’ may seem a stretch, but because of abundant water resources, disputes over water in Michigan have been relatively uncommon (recall Figure 1). As a result, large quantity water users in the state have limited experience with changes in water rights.

In particular, the changes in legal relations of groundwater users may have introduced uncertainty as to the nature of water use rights. As evidenced by the *Maerz* decision in 1982, for most of the last century it was not clear whether conflicts over on-tract uses of water were actionable in court; judges in lower courts held to the interpretation that on-tract uses of water were always reasonable. In response to this, the *Maerz* court stated its intent clearly that groundwater disputes were to be governed by reasonable use. The *Nestle* court further altered the state’s legal relations by ruling that, in conflicts between groundwater and surface water use, a common test of reasonableness could be applied. Under the new legal relation the outcome of disputes in court is uncertain, as the court must examine a large list of factors which can change from case to case.

Michigan’s recent water use statutes have established a new legal relation that assigns to large quantity water users a duty to limit water use in order to protect the right of the public to benefit from the state’s water resources. This new legal relation has no effect on the existing legal relations among water users, but it does decrease the amount of water available for withdrawal.

The confluence of these changes creates a challenging situation for the state going forward. The new legal relation between the public and water users, administered through a cap on total withdrawals, increases the likelihood that conflicts will occur among water users. Attempts to access the state’s now limited water resources and the evolving legal relation among water users make the outcome of these conflicts uncertain. The principles of reasonable use are well suited to localized conflicts where courts must settle a dispute between two parties, but court decisions become increasingly unpredictable in situations involving absolute shortages where many water users will come into conflict over a broad area (Abrams 1989a). As Michigan faces the possibility of absolute shortages in some locations, the legal relations in the state will likely continue to evolve to accommodate this new reality.

Michigan’s water use laws are unique. Like many of the eighteen eastern states that have implemented some form of regulated riparianism, Michigan’s legislature has limited the amount of water available for use. What makes Michigan unique is that it has a detailed and comprehensive statewide water accounting system that limits the amount of available water but makes no effort to prioritize how available water should be used. The water available for use under the new laws is still governed by the doctrine of reasonable use as determined by the courts. However, this untested approach means the state will face a new set of challenges where neither the courts nor the legislature will be able to rely on solutions used in other states across the country. This presents researchers and decision-makers with an enormous opportunity to observe and learn from Michigan’s experience.

References

- Abrams, R. H. (1989a). Replacing riparianism in the twenty-first century. *Wayne Law Review* 36, 93.
Abrams, R. H. (1989b). Water allocation by comprehensive permit systems in the east: considering a move away from orthodoxy. *Virginia Environmental Law Journal* 9, 255.

- Annin, P. (2006). *The Great Lakes Water Wars*. Island Press, Washington, DC.
- Bernard v. City of St. Louis*. 220 Mich. 159 (1922).
- Bromley, D. W. (1989). *Economic Interests and Institutions: The Conceptual Foundations of Public Policy*. Basil Blackwell, New York, Oxford.
- Dellapenna, J. W. (1997). The regulated riparian model water code. ASCE.
- Dellapenna, J. W. (2003). Adapting riparian rights to the twenty-first century. *West Virginia Law Review* 106, 539.
- Dumont v. Kellogg*. 29 Mich. 420 (1874).
- Ground Water Advisory Council (2007). *Report to the Michigan Legislature in response to 2006 Public Act 34*. Government Printing Office, Lansing, MI.
- Hart v. D'Agostini*. 7 Mich. App. 319 (1967).
- Hohfeld, W. N. (1917). [Fundamental legal conceptions as applied in judicial reasoning](#). *Yale Law Journal* 26(8), 710–770.
- Hohfeld, W. N. & Cook, W. W. (1964). *Fundamental Legal Conceptions as Applied in Judicial Reasoning* (Vol. 115). Praeger Pub Text, Santa Barbara.
- Kelley, A. K. (ed.) (2014). *Water and Water Rights*, Vol. 1. 3rd edn. LexisNexis/Matthew Bender, New Providence, NJ.
- Lochhead, J. S., Asarch, C. G., Barutciski, M., Monahan, P. J., Taylor, G. E. & Schenkkan, P. M. (1999). *Report to the Council of the Great Lakes governors governing the withdrawal of water from the Great Lakes*. Great Lakes Protection Fund, Chicago.
- Maerz v. United States Steel Corporation*. 116 Mich. App. 710 (1982).
- Meeker v. City of East Orange*. 77 N. J. L. 623 (1909).
- Michigan Citizens for Water Conservation v. Nestle Waters North America, Inc.*, 269 Mich. App. 25. (2005).
- Michigan Citizens for Water Conservation v. Nestle Waters North America Inc.*, 737 N.W.2d 447, 479 Mich. 280 (2007).
- Michigan Legislature, State Constitution, Art. IV, §51 and 52.
- Moore v. Sandborne*. 2 Mich. 519,525 (1853).
- Natural Resources and Environmental Protection Act (1994). Mich. Comp. Laws §324. 32701–324.32730.
- P. Ballantine & Sons v. Public Service Corp of NJ*. 86 NJL 331, 333–334 (1914).
- People v. Hulbert*. 131 Mich. 156 (1902).
- Poff, N. L., Richter, B. D., Arthington, A. H., Bunn, S. E., Naiman, R. J., Kendy, E. & Warner, A. (2010). [The ecological limits of hydrologic alteration \(ELOHA\): a new framework for developing regional environmental flow standards](#). *Freshwater Biology* 55(1), 147–170.
- Restatement of the Law, Second, Torts 2d. (1965). American Law Institute, St. Paul.
- Restatement of the Law, Torts (1934). American Law Institute, St. Paul.
- Ryerson v. Brown*. 35 Mich. 333 (1877).
- Schenk v. City of Ann Arbor*. 196 Mich. 75 (1917).
- Schmid, A. A. (1960). *Evolution of Michigan Water Laws: Response to Economic Development*. Circular Bulletin 227. Agricultural Experiment Station, East Lansing.
- Sporhase v. Nebraska*. 458 US 941 (1982).
- Tarlock, A. D., Corbridge, J. N., Getches, D. H. & Benson, R. D. (2002). *Water Resource Management: A Casebook in Law and Public Policy*. Foundation Press, New York.
- Thompson v. Enz*. 379 Mich. 667 (1967).
- Upjohn v. Richard Township*, (1881).
- US Constitution, Art. 1, §8, cl. 3.
- Zorn, T. G., Seelbach, P. W. & Rutherford, E. S. (2012). [A regional-scale habitat suitability model to assess the effects of flow reduction on fish assemblages in Michigan streams](#). *Journal of The American Water Resources Association* 48(5), 871–895.

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