

PROTECTING FRESHWATER RESOURCES IN THE ERA OF GLOBAL WATER MARKETS: LESSONS LEARNED FROM BOTTLED WATER

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ABSTRACT

Throughout human history, water has defined our sense of place. American water law reflects the connections between water and local people, communities, and the environment. Against this backdrop, global water markets have developed to sell and export this increasingly precious resource. Water markets are recognized in international trade law and take many forms, from tankers of freshwater crossing the Mediterranean to bottles of spring water coming to America from distant pacific islands. While the scale of water sales and exports is still relatively small, this emerging market represents a new challenge for management of water resources.

This article examines the challenge of protecting freshwater resources in the era of global water markets by looking at the most mature and developed example – bottled water. Bottled water in America dates back to colonial times, but over the past decade it has become a massive global industry. As bottled water has grown, so has the backlash against it. The resulting lawsuits and legislation offer a glimpse of the future of domestic water law in the global water market era. Bottled water fights provide important lessons for how the law should (and should not) respond to globalization of water use. By learning from these lessons, we can meet the challenge of global trade in water by developing effective legal protections for our freshwater resources.

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INTRODUCTION

Global water markets are now a reality. Whether water should be bought and sold, imported and exported, is a difficult and important question that raises issues ranging from human rights obligations and environmental ethics to economic liberalism and the role of corporations. It is also, for purposes of this article, totally moot. At some point in time in the recent past, most likely during my lifetime but before the turn of the twenty first century, water went global. We do not yet know how great or terrible the implications of global water markets will be for freshwater and the people, communities, and environment it sustains. That is still in our hands and depends largely on how domestic laws will manage and protect our freshwater resources in the era of global water markets.

The pressures on freshwater resources presented by global water markets are by no means distant or theoretical. Disputes have already arisen and are quickly growing in number. Because these disputes involve competing rights to the use of water, lawyers and lawmakers are at the frontlines. Water law has always been contentious and often implicates larger issues of social and economic change, such as industrialization,¹ urbanization,² and racial justice.³ Thus, a dispute between property owners on a small stream and a bottled water company seeking to pump groundwater connected to that stream is just as much about commoditization and export of water as stream flows and trout habitat.⁴

¹ See, e.g., THEODORE STEINBERG, NATURE INCORPORATED: INDUSTRIALIZATION AND THE WATERS OF NEW ENGLAND (1994) (providing a historical analysis of the role of changing water management laws in early New England industrialization).

² See, e.g., CYNTHIA BARNETT, MIRAGE: FLORIDA AND THE VANISHING WATER OF THE EASTERN U.S. 106-11 (2007) (detailing legal fights over water rights in the Tampa Bay water wars in the context of urbanization in Florida).

³ See, e.g., HOLLY DOREMUS AND A. DAN TARLOCK, WATER WAR IN THE KLAMATH BASIN 59-76 (2008) (discussing the recognition of reserved water rights for Native American tribes in the context of historical struggles for Native American justice).

⁴ See *Michigan Citizens for Water Conservation v. Nestlé Waters North America Inc.*, 709 N.W.2d 174 (Mich. App. 2005), *portions rev'd on other grounds*, 737 N.W.2d 447 (Mich. 2007) (resolving dispute over competing water rights between Dead Stream riparians and bottled water company seeking to pump groundwater connected to the Dead Stream) and DAVE DEMPSEY, GREAT LAKES FOR SALE 29-36 (2008) (discussing *Michigan Citizens for Water Conservation v.*

This article examines the challenges that global water markets present to the protection of freshwater resources under domestic law by looking at recent disputes over bottled water. Bottled water provides an ideal case study for several reasons. For Americans, bottled water is the most tangible and visible representation of water globalization. Your local grocery store may have for sale bottled water from every continent except Antarctica: Africa (for example, Karoo brand water from South Africa⁵), Asia (Himalayan Natural Spring brand water from Nepal⁶), Australia (Antipodes brand water from New Zealand⁷), Europe (San Pellegrino brand water from Italy⁸), North America (Ice Age brand water from Canada⁹), and South America (Petroa 9500 brand water from Chile¹⁰).

Thus, while scholars and commentators debate at what point water becomes a “good” subject to international trade laws, bottled water clearly crosses the line.¹¹ It is generally agreed that water in its natural state is not considered a good, but at some point in its extraction, use, and incorporation into a product water does become a good for purposes of trade law.¹² It is beyond the scope of this article to determine when exactly water becomes a good for purposes of international trade law, and such a discussion is not necessary here because bottled water lies at the far end of the spectrum. Water in its natural state may be a public resource, but water packed for sale in a bottle and sitting on the store shelf is obviously a good (try taking it out of your local grocery store without paying for it for a clear illustration of this point).

Nestlé Waters North America Inc. as a battle against corporate control and export of local water resources).

⁵ Fine Waters: Bottled Water from South Africa,
http://www.finewaters.com/Bottled_Water/South_Africa/Index.asp.

⁶ Fine Waters: Bottled Water from Nepal,
http://www.finewaters.com/Bottled_Water/Nepal/Index.asp.

⁷ Fine Waters: Bottled Water from New Zealand,
http://www.finewaters.com/Bottled_Water/New_Zeal_/Index.asp.

⁸ Fine Waters: Bottled Water from Italy,
http://www.finewaters.com/Bottled_Water/Italy/Index.asp.

⁹ Fine Waters: Bottled Water from Canada,
http://www.finewaters.com/Bottled_Water/Canada/Index.asp.

¹⁰ Fine Waters: Bottled Water from Chile,
http://www.finewaters.com/Bottled_Water/Chile/Index.asp.

¹¹ See Scott S. Slater, *State Water Resource Administration in the Free Trade Agreement Era: As Strong As Ever*, 53 WAYNE L. REV. 649, 651-52 (2007).

¹² See Marcia Valiante, *Harmonization of Great Lakes Water Management in the Shadow of NAFTA*, 81 U. DET. MERCY L. REV. 525, 534 (2003-2004).

Despite the many choices of imported waters, most of the shelf space for bottled water is taken up by domestic brands.¹³ Bottled water is produced throughout the United States, and some production sites have become the setting for high profile legal battles. From California to Maine, the pumping and bottling of water has led to litigation and new legislation. These legal disputes provide useful case studies of how domestic water laws respond to the new pressures of water bottling. When viewed systematically, the case studies of bottled water disputes provide valuable insights on the evolution of water law in the era of global water markets.

Opposition to the bottled water pumping is almost always based on two general sets of concerns. The first concerns relate to the impact of water extraction to fill the billions of bottles Americans purchase every year. Opponents are concerned that the high capacity water pumping, usually from groundwater that is critically important to relatively small connected springs, will reduce stream flows or otherwise harm the natural ecosystem and riparian interests. While water bottling has almost no impact on the total national freshwater supply,¹⁴ the majority of bottled water comes from groundwater which has a direct hydrologic connection to springs and other vulnerable surface waters. Thus, even relatively small water withdrawals for bottled water can produce significant impacts at the local scale on other water users and the environment.

This is essentially a traditional resource impact concern, in which one user of the water resource is allegedly harming other users and the natural functioning of the resource itself. As discussed in Part III, water law is evolving to address these concerns. States have in place and will continue to develop standards to determine how much water use is acceptable given impacts on other users and the environment. With a few notable

¹³ Of the 8.823 billion gallons of bottled water consumed by Americans in 2007, only 186 million gallons (just over 2%) were imported. Beverage Marketing Corporation 2006 Statistics, *available at* http://www.bottledwater.org/public/Stats_2007.doc.

¹⁴ Groundwater withdrawals for bottled water production represent well less than one-tenth of one percent (less than 0.03%) of the total groundwater withdrawals in the United States (not including the water required to make the plastic bottles). See notes 63-64, *infra*, and accompanying text.

exceptions,¹⁵ the law tends to allow some water use and resulting impacts, declining to give absolute rights to use unlimited quantities of water or total bans on all water use and harm to the environment.¹⁶ This is equally true for both litigation under the traditional common law system of water rights¹⁷ and legislation that brings modern proactive regulation to water use permitting.¹⁸ As a result, both water bottlers and the parties concerned about the impacts of the water withdrawal can often find some satisfaction in the law.

The second concern that underlies bottled water disputes is far less suited to legal relief. Some opponents object to the very nature of the use – that is, taking water from the ground or a river to sell it in a bottle.¹⁹ This concern is more social than environmental. It is based on a view that water is a public good and human right that should not be commoditized and sold for profit.²⁰ For opponents holding this view, reducing the quantity of the water being withdrawn to some level that minimizes impacts on other water users and the environment fails to solve the fundamental problem of water commoditization. These opponents object to the extraction and sale of water for profit under any circumstances.

Not surprisingly, the legal system provides little guidance and satisfaction to parties ultimately concerned with the ideological issue of selling water for profit. Opponents that raise this concern often point to the public trust doctrine to support their claim that water cannot be sold for profit.²¹ However, no court has ever applied the public trust doctrine to bar the sale of water for profit. The public trust doctrine, discussed further in Part IV, historically protected public interests in navigation of surface waters. While some courts have expanded the public trust doctrine to require consideration of the public's interest in environmental

¹⁵ See Part III.A.3, *infra*.

¹⁶ See, *i.e.*, Mich. Citizens for Water Conservation v. Nestlé Waters N. Am. Inc., 709 N.W.2d 174, 206 (Mich. Ct. App. 2005), *rev'd in part on other grounds*, 737 N.W.2d 447 (Mich. 2007) (plaintiffs lacked standing for a specific statutory claim).

¹⁷ See Part III.A.1-2, *infra*.

¹⁸ See Part III.B.1-2, *infra*.

¹⁹ See DEMPSEY, *supra* note ___, at 46-53.

²⁰ See *id.* at 46-48.

²¹ See *id.* at 23-26.

protection,²² no court has yet held that taking water (even navigable surface water traditionally subject to the public trust doctrine²³) and selling it in bottles violates the doctrine itself. And opponents concerned with commoditization have not found any other legal basis to prevent the bottling and sale of water on those grounds. Thus, for the social concern regarding the pumping of water for sale and profit, the law has provided no satisfaction.²⁴ This is not meant to imply that the law must change to address this concern; rather, perhaps opponents need to change their expectations of what water law can and cannot do to address ideological issues regarding freshwater resources in the era of globalized trade.²⁵

This article first provides in Part I some historical background on bottled water. Bottled water has been around a long time, both globally and in the United States, and a brief look at the history of industry gives context to its recent growth and globalization. The article then provides an overview of the current bottled water industry. Water bottling is big business and getting bigger, growing by about ten percent annually over the past five years. The recent growth has given rise to significant opposition and controversies. In addition to the concerns relating to the impact of the water withdrawals and the commoditization of water explained briefly above, the growth of the bottled water industry has caused concerns regarding the quality of bottled water, the waste and pollution associated with manufacturing, shipping, and

²² See *Nat'l Audubon Soc'y v. Superior Court (Mono Lake)*, 658 P.2d 709 (Cal. 1983).

²³ Most bottled water withdrawals involve groundwater, which in many states is not covered by the public trust doctrine. See Part IV.B, *infra*.

²⁴ See *Mich. Citizens for Water Conservation*, 709 N.W.2d at 206 (“The provision of [bottled] water to the general public is ... an economically and socially beneficial use of ... water). See also *In re Town of Nottingham*, 904 A.2d 582, 596 (N.H. 2006) (pumping ground water to meet “a strong existing public demand for bottled drinking water in the United States” was permissible).

²⁵ Some commentators have expressed optimism that the law may eventually come to reflect cultural norms concerned with bottled water and water privatization. “[A]t present it seems unlikely that courts would find extracting water for the purpose of bottling as per se unreasonable. ... However, if the anti-bottled water culture continues to gain force, it is both possible and plausible that at some point in the future bottled water will no longer be considered a reasonable use of a scarce resource.” Christine A. Klein and Ling-Yee Huang, *Cultural Norms as a Source of Law: The Example of Bottled Water*, 30 *Cardozo L. Rev.* 507, 539-40 (2008).

disposing of plastic water bottles, and the lack of investment in public water supplies.

Part II of this article examines the treatment of bottled water under international trade law and federal regulatory law. Bottled water disputes and controversies, and the resulting judicial decisions and legislative solutions, are generally the domain of state law. However, international trade law and federal food and drug regulatory law have created the ground rules for the bottled water industry. To best understand the challenges that bottled water presents under state law and resulting legal solutions, it is important to first examine what international trade law and federal regulatory law have done to shape the bottled water market.

This article then takes a detailed look at how state laws have dealt with the growth of the bottled water industry and resulting pressures on freshwater resources. Part III first looks at how courts have developed, reformed, and applied various common law systems of water rights in disputes involving bottled water. With apologies to Clint Eastwood,²⁶ this article categorizes the results as the good, the not-so-bad, and the ugly. Similarly, Part III also examines the state statutes and other regulatory efforts intended to address the pressure of water bottling and sale. As with the common law court decisions, these public laws are also evaluated and categorized as the good, the not-so-bad, and the (sometimes really) ugly.

Finally, in Part IV the article looks at lessons learned from bottled water disputes and the legal system's response. The case studies examined in Part III offer hard learned lessons in how (and how not) to protect freshwater resources in the era of globalization and water markets. Part IV also includes a brief discussion of the public trust doctrine and its suitability for meeting the challenge of bottled water disputes. While the public trust doctrine is offered by bottled water opponents as a solution to the perceived threat of commoditization, it is not the silver bullet hoped for by opponents or feared by the bottled water industry.

Bottled water offers a compelling contemporary issue to examine the diversity and evolution of state water law. Bottled water is a readily available and widely purchased product. Its popularity with consumers is matched by the passionate opposition

²⁶ "The Good, the Bad and the Ugly" (1966), directed by Sergio Leone and starring Clint Eastwood.

it brings out for a diverse range of environmental and social reasons.²⁷ Further, bottled water is only the most mature example of a growing global water market. By looking at the recent disputes and resulting legal reforms involving bottled water, we can better anticipate future controversies and design modern water laws to meet the challenge of globalization.

I. THE BOTTLED WATER MARKET AND CONTROVERSY

People have been bottling water since they had bottles. But this old industry has had a uniquely twenty-first century rebirth, as the combination of cheap packaging, consumer demand for convenient and healthy beverages, and globalized transportation and distribution have created a market for a wide range of bottled water products. Bottled water sales in the United States have already surpassed ten billion dollars annually, and the industry continues to grow.²⁸ The industry's growth and consumers' demand have given rise to significant opposition, both locally where water is bottled and globally as an environmental and social justice issue. This part looks at the history of bottled water, the current state of the bottled water business, and the opposition to the modern bottled water industry.

A. *A Brief History of Bottled Water*

While it seems simple enough to credit (or blame) bottled water's recent popularity on "clever marketing," the industry also has a foundation in a history of "deeply ingrained, cultural reverence for pure water."²⁹ Bottled water has been around a long time, and not just as small mom-and-pop operations. Bottled water in America predates the country's independence, with records of water bottled and sold from Jackson's Spa in Boston in 1767.³⁰ The bottled water industry took off in the beginning of the nineteenth century when new glass technologies made the cost of a bottle affordable and practical for mass production and

²⁷ See Klein and Huang, *supra* note __, at 507-08.

²⁸ Beverage Marketing Corporation 2006 Statistics, available at http://www.bottledwater.org/public/Stats_2006.doc.

²⁹ FRANCIS H. CHAPPELLE, WELLSPRINGS: A NATURAL HISTORY OF BOTTLED SPRING WATERS 17 (2005) ("[I]t is the history of human society, and the natural history of particular waters, that explains the allure of bottled water.")

³⁰ See *id.* at 73.

consumption.³¹ By 1856, over 7 million bottles were being produced annually at Saratoga Springs, one of the most popular early bottled water sources, and selling for up to \$1.75 per pint.³²

Much like today, when bottled water's popularity is motivated largely by health concerns,³³ consumers in the mid-1800s believed that bottled spring water had health benefits that bordered on the medicinal.³⁴ But also like today, the historical popularity of bottled water was further due to an associated image and status.³⁵ Then, as now, "[p]eople like their water to be clean and stylish, preferably both."³⁶ Historically, bottled water from springs was even perceived as having mythical and spiritual significance.³⁷ In a preview of the modern debate over ownership of precious water resources, the owner the land surrounding Healing Springs in South Carolina was so convinced that the water was a gift from God that he gave it back to the Almighty in his will, so that the recorded deed still lists "God Almighty" as the owner of the property.³⁸

Bottled water went out of style and need in the early twentieth century, when the advent of chlorination in municipal drinking water supplies made public water consistently healthy and safe to drink.³⁹ But the allure of health and image fueled a bottled water comeback in 1977, when Perrier launched a \$5 million marketing campaign in the United States for its imported water.⁴⁰ Perrier's marketing and timing were perfect, as it took advantage of "concerns about pollution and poor-quality tap water, and it caught the yuppies just as they were beginning to flex their consumer muscles."⁴¹ In short, Perrier "was all the things yuppies wanted in a lifestyle-defining product."⁴² After Perrier's success, a new market was created that led directly to the current growth and bottled water industry we see today.

³¹ *See id.*

³² *See id.* at 59.

³³ *See* Klein and Huang, *supra* note __, at 514-15.

³⁴ *See* CHAPELLE, *supra* note __, at 12-14, 73-74.

³⁵ *See id.*; *see also* Klein and Huang, *supra* note __, at 517-19.

³⁶ CHAPELLE, *supra* note __, at 18.

³⁷ *See id.* at 22-25.

³⁸ *Id.* at 21.

³⁹ *See id.* at 3, 15-16. Chlorinating drinking water is credited with saving more human lives than any other health technology. *See id.* at 182.

⁴⁰ *Id.* at 16.

⁴¹ *Id.* at 16-17.

⁴² *Id.* at 17.

B. The Business of Bottled Water

Bottled water is big business. According to the Beverage Marketing Corporation, bottled water became the second largest commercial beverage category by volume in the United States in 2003, second only to carbonated soft drinks.⁴³ Americans buy more bottled water than beer, milk, or juice. In 2006, Americans consumed 8.25 billion gallons of bottled water, nearly ten percent more than the previous year.⁴⁴ This total consumption equates an average of 27.6 gallons of bottled water per person per year.⁴⁵ In 2007, total consumption of bottled water was expected to increase another ten percent and go over 9 billion gallons.⁴⁶ This is typical for the industry. In the past five years, bottled water consumption has almost doubled, averaging nearly ten percent annual growth.⁴⁷

The tremendous growth in consumption has correlated with similar growth in bottled water producer revenues. In 2005, bottled water sales in the United States surpassed ten billion dollars (\$10,000,000,000).⁴⁸ With revenues increasing by nearly ten percent annually over the past two years, 2007 sales of bottled water are expected to approach twelve billion dollars.⁴⁹ Just one example of the size and value of the bottled water industry is that Whole Foods, the nation's leading organic upscale food retailer, sells more bottled water than any other item.⁵⁰

The vast majority (over 95% the past two years) of bottled water consumed in the United States is domestically produced non-sparkling water.⁵¹ The largest producer of bottled water in the

⁴³ Beverage Marketing Corporation 2006 Statistics, *available at* http://www.bottledwater.org/public/Stats_2006.doc.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *See id.*

⁴⁸ *Id.*

⁴⁹ *Id.* The Beverage Marketing Corporation projects 2007 sales of bottled water to be \$11,905,000,000.

⁵⁰ Charles Fishman, *Message in a Bottle*, FAST COMPANY, Issue 117, at 110 (July 2007), *available at* <http://www.fastcompany.com/magazine/117/features-message-in-a-bottle.html>.

⁵¹ *See* Beverage Marketing Corporation 2006 Statistics, *supra* note ___. In 2005, Americans consumed 7,171.4 millions of gallons of domestic, non-sparkling water and 7,537.1 millions of gallons of total bottled water (including imported

United States is Nestlé Waters North America, with a 2006 market share of 32.4% of the bottled water sales.⁵² Nestlé Waters North America focuses on “spring water” (defined and discussed in Part II, *infra*), and markets its bottled water under different brand names by region. Its leading brands are “Poland Spring” (Northeast), “Arrowhead” (West), “Deer Park” (Mid-Atlantic), “Ice Mountain” (Midwest), “Ozarka” (Texas), and “Zephyrhills” (Florida), as well as the national brand “Nestlé Pure Life.”⁵³ The other leading bottled water companies are Coke, which sells the brand name “Dasani” and distributes “Evian,” and Pepsi, which sells the brand name “Aquafina.”⁵⁴ Both Coke’s Dasani and Pepsi’s Aquafina are purified municipal water from many sources around the country.⁵⁵

C. *Opposition to Bottled Water*

As the bottled water industry has grown, so has the size and passion of its opposition. Opponents of bottled water are motivated by a diverse range of concerns, from the wasted plastic in the packaging to the comparative quality of bottled versus tap water. Most of the litigation and legislation resulting from bottled water disputes involves the impacts of water bottlers’ groundwater and spring water extraction on other water users and dependent natural resources. To understand these impacts, it is important to first explain the applicable source and scale of bottled water withdrawals.

Bottled water is usually produced from one of two major sources. Less than half (44% in 2006⁵⁶) of bottled water in the

products and sparkling water). In 2006, the quantities were 7,899.9 millions of gallons and 8,253.6 millions of gallons, respectively. In 2007, the projected quantities are 8,7000.0 millions of gallons and 9,075.0 millions of gallons, respectively.

⁵² See Nestlé Waters North America Performance, *available at* <http://www.Nestlé-watersna.com/Menu/AboutUs/Performance.htm>. In 2006, Nestlé Waters North America had bottled water sales of \$3.846 billion. *Id.*

⁵³ See Nestlé Waters North America Share of Category, *available at* <http://www.Nestlé-watersna.com/Menu/AboutUs/Performance/Nestlé+Waters+North+America+Share+of+Category.htm>.

⁵⁴ See Fishman, *supra* note __.

⁵⁵ *Id.*

⁵⁶ ELIZABETH ROYTE, BOTTLEMANIA: HOW WATER WENT ON SALE AND WHY WE BOUGHT IT 38 (2008).

United States comes from municipal water supply (examples include Coke's Dasani brand and Pepsi's Aquafina brand).⁵⁷ Bottling municipal water almost never raises environmental concerns regarding the water withdrawal, since the water bottling is often using surplus municipal withdrawal and distribution capacity. While some critics charge that Coke and Pepsi are simply selling "tap water," such criticism ignores the fact that Coke and Pepsi use extensive filtering, treatment, and mineral processes to convert tap water into a product that consumers may prefer.⁵⁸ Further, using municipal supply insulates these water bottlers from most controversies and resulting legal actions concerning the environmental impact of groundwater and spring water extraction for water bottling. Thus, bottled water from municipal supply rarely gives rise to legal disputes.

In contrast, legal controversies often surround the majority of bottled water that is sold under the "spring water" label⁵⁹ and comes from groundwater connected to springs (the leading examples are the Nestlé regional brands noted above). As discussed below, the federal Food and Drug Administration allows water bottlers to collect "spring water" from drilled boreholes that tap groundwater connected to the spring water.⁶⁰ While this may seem deceptive to the consumer, since the spring water is really taken from the ground (what most people would then consider "groundwater"), there are good health and safety reasons to allow the practice. Open springs subject the water to environmental contamination (both natural and human), while groundwater is better (but not perfectly) protected from environmental contamination.⁶¹ For this reason, some state health departments actually require water bottlers to use boreholes to collect water from underground rather than taking spring water once it reaches the surface.⁶²

On a macro-national scale, water bottling from springs and connected groundwater is an insignificant amount of overall water extraction. Groundwater withdrawals for bottled water production represent well less than one-tenth of one percent (less than 0.1%)

⁵⁷ See *id.* at 37-38 (2008).

⁵⁸ See *id.* at 38, 157-58.

⁵⁹ See Part II.B, *infra*.

⁶⁰ 21 C.F.R. § 165.110(a)(2)(vi).

⁶¹ See CHAPELLE, *supra* note ___, at 125.

⁶² See *id.*

of the total groundwater withdrawals in the United States.⁶³ As detailed above, total annual bottled water production is approaching ten billion gallons (not all of which comes from groundwater). The United States Geological Survey estimates that total annual groundwater withdrawals in the United States in 2000 were 30,305 billion gallons.⁶⁴ Of this total, agricultural use of groundwater for irrigation comprises over 68% (20,769 billion gallons) of the total groundwater withdrawals.⁶⁵ Of course, water bottling results in a very high consumption of the water withdrawn, with essentially no water returning to the ground. However, agricultural irrigation also has very high consumptive use rates, with estimates ranging from seventy to ninety percent (70-90%),⁶⁶ so the resulting impact on total groundwater supplies is still tremendously disproportionate.

While water bottling has essentially no impact on the total national supply of groundwater, it can have significant impacts on local groundwater supplies. Groundwater extraction may affect the quantity and quality of the groundwater aquifer. Significant groundwater pumping can cause a temporary or permanent lowering of the water table, increased concentration of contaminants, and in some regions salt water intrusion into the aquifer. This affects other groundwater users whose wells go dry or stop producing potable water.⁶⁷

Moreover, groundwater is often hydrologically connected to fresh surface waters such as rivers, streams, and lakes (and groundwater that is bottled and sold as “spring water” is by definition hydrologically connected to natural springs, as discussed in Part II.B, *infra*). Pumping groundwater can take water from these surface water systems. The basic hydrology was succinctly described in a recent report commissioned by the Michigan

⁶³ This calculation does not include the water required to make the plastic bottles.

⁶⁴ United States Geological Survey, Estimated Use of Water in the United States in 2000, Table 4, *available at* <http://pubs.usgs.gov/circ/2004/circ1268/htdocs/table04.html>.

⁶⁵ *Id.*

⁶⁶ See GREAT LAKES COMMISSION, TOWARD A WATER RESOURCES MANAGEMENT DECISION SUPPORT SYSTEM FOR THE GREAT LAKES-ST. LAWRENCE RIVER BASIN 60 (2003), *available at* <http://www.glc.org/wateruse/wrmdss/finalreport/pdf/WR-ExSum-2003.pdf>.

⁶⁷ For a more thorough discussion of these impacts, see Robert Glennon, WATER FOLLIES: GROUNDWATER PUMPING AND THE FATE OF AMERICA'S FRESH WATERS (2002).

Legislature in the wake of the Nestlé bottled water litigation⁶⁸ in that state:

Over time, the dominant source of water to a well, particularly a well completed in an unconfined aquifer, changes to streams. This water may either be decreased groundwater discharge to the stream or increased recharge to the groundwater system from the stream. In either case, streamflow reduction occurs and is often referred to as streamflow capture. In the long term, the cumulative streamflow capture from a groundwater system can approach the total amount of water being pumped from that system.⁶⁹

Thus, groundwater pumping can directly impact surface water users, both consumptive water users and people who use the surface water for recreation and aesthetics. Further, when groundwater is hydrologically connected to surface water, a wide range of natural resources, including fisheries, wetlands, and aquatic invertebrates, often rely on the groundwater input to the surface water for their existence and health. The report commissioned by the Michigan legislature determined that “about 80 percent of the annual streamflow in [Michigan’s] Lower Peninsula results from groundwater discharge.”⁷⁰ Further, “[m]any lakes and wetlands do not have streams flowing into them, and groundwater, therefore, is the only inflow besides precipitation on the surface of the lake or wetland.”⁷¹ The report concluded that “[m]ost aquatic ecosystems in Michigan are dependent upon the discharge of groundwater into surface water.”⁷² While the report was specific to Michigan, the hydrological principles and potential impacts regarding groundwater pumping (for bottled water or any other use) are widely applicable.⁷³

⁶⁸ The Nestlé litigation is discussed in detail at Part III.A.1, *infra*.

⁶⁹ Groundwater Conservation Advisory Council, FINAL REPORT TO THE MICHIGAN LEGISLATURE IN RESPONSE TO PUBLIC ACT 148 OF 2003 (February 6, 2006), available at <http://www.deq.state.mi.us/documents/deq-gwcac-legislature.pdf>

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ For further discussion on the impacts of bottled water withdrawals on springs, groundwater, and connected water resources in Florida, see Kelly Samek, *Unknown Quantity: The Bottled Water Industry and Florida’s Springs*, 19 J.

The impact of bottled water's groundwater pumping on other water users and dependent natural resources is the primary focus of legal disputes over bottled water and the various legislative reforms intended to respond to the growing industry. However, these concerns may not be the primary motivation of bottled water opponents, but rather the legal hook for litigation and regulatory reforms. Thus, it is important to recognize and discuss other legitimate environmental and public health concerns with the bottled water industry that opponents have raised. While these concerns are almost never the focus of legal disputes or new legislation, they demonstrate the diverse and deep opposition to bottled water nationwide, and help explain the motivation for legal action against water bottlers.

The most tangible environmental impacts from the bottled water industry relate to the plastic bottles themselves. The pollution and waste resulting from the manufacturing, shipping, and disposal of plastic water bottles has received tremendous public attention and even some symbolic policy actions at the municipal level.

If bottled water had no water in it, and consumers simply purchased empty bottles, the environmental impact of the bottled water industry would still be significant. The pollution and waste resulting from the manufacturing, shipping, and disposal of plastic water bottles strikes many people as simply wasteful. Most water bottles are made from the plastic polyethylene terephthalate (PET), which is derived from crude oil. The Earth Policy Institute originally estimated that the manufacture of water bottles for United States consumption required more than 1.5 million barrels of oil annually, and later updated the estimate to 10 million barrels of oil annually.⁷⁴

Manufacturing is only the first step in an energy intensive process of distributing water in plastic water bottles. As noted by the Earth Policy Institute, “[i]n contrast to tap water, which is distributed through an energy-efficient infrastructure, transporting bottled water long distances involves burning massive quantities of

LAND USE & ENVTL. L. 569 (2004) and Tara Boldt-Van Rooy, “*Bottling Up*” *Our Natural Resources: The Fight Over Bottled Water Extraction in the United States*, 18 J. LAND USE & ENVTL. L. 267 (2003).

⁷⁴ Earth Policy Institute, BOTTLED WATER: POURING RESOURCES DOWN THE DRAIN (2006), available at <http://www.earth-policy.org/Updates/2006/Update51.htm>.

fossil fuels.”⁷⁵ Then, after drinking the bottled water, the bottle is generally thrown out. While PET plastic can be recycled (and the bottled water industry strongly encourages recycling⁷⁶), 86% of plastic water bottles used in the United States become garbage or litter.⁷⁷

As a result of the plastic bottles and long distance transport, bottled water uses up to 2,000 times as much energy to produce and distribute as tap water, according to Dr. Peter Gleick of the Pacific Institute.⁷⁸ The annual consumption of bottled water in the U.S. in 2007 required the equivalent of between 32 and 54 million barrels of oil.⁷⁹ Most of this energy is used to make the plastic bottles and then to ship the water from source to consumer (sometimes thousands of miles away).⁸⁰

The environmental concerns regarding the manufacturing, shipping, and disposal of plastic water bottles motivated the United States Conference of Mayors to recently pass a resolution to study the environmental impact of bottled water.⁸¹ The Conference of Mayors resolution noted:

bottled water must travel many miles from the source, resulting in the burning of massive amounts of fossil fuels, releasing CO₂ and other pollution into the atmosphere; ... plastic water bottles are one of the fastest growing sources of municipal waste; and ... in the U.S. the plastic bottles produced for

⁷⁵ *Id.*

⁷⁶ See International Bottled Water Association Recycling Resource Guide available at

http://www.bottledwater.org/public/05_IBWA_Recycle_Guide_1.pdf.

⁷⁷ Earth Policy Institute, *supra* note __. Not all plastic water bottles get landfilled – some become cell phones. Motorola has released a new mobile phone – the MOTO W233 Renew – with a plastic housing made entirely from recycled water bottles. See

<http://www.motorola.com/consumers/v/index.jsp?vnextoid=3bd6df420e68e110VgnVCM1000008406b00aRCRD>.

⁷⁸ Peter H. Gleick and Heather S. Cooley, *Energy Implications of Bottled Water*, 4 ENVIRONMENTAL RESEARCH LETTERS 1, available at <http://stacks.iop.org/ERL/4/014009>.

⁷⁹ *Id.*

⁸⁰ See *id.*

⁸¹ United States Conference of Mayors, Resolution regarding Importance of Municipal Water (2007), available at http://www.usmayors.org/uscm/resolutions/75th_conference/environment_02.as p.

water require 1.5 million barrels of oil per year, enough to generate electricity for 250,000 homes or fuel 100,000 cars for a year.⁸²

While the bottled water industry does not seem to dispute the statistics regarding the pollution and waste impacts relating to the manufacturing, shipping, and disposal of plastic water bottles, it may not be fair to compare these impacts to tap water. In a recent article on the subject, the CEO of Whole Foods Market made the argument that water bottles are simply substituting for other plastic beverage bottles in the marketplace: “It’s unfair to say bottled water is causing extra plastic in landfills, and it’s using energy transporting it. There’s a substitution effect – it’s substituting for juices and Coke and Pepsi.”⁸³

The substitution argument notwithstanding, the waste associated with bottled water seems to have caught the public’s attention. A recent New York Times article quoted a San Francisco citizen as saying that “fellow Bay Area residents act as if ‘you just killed their puppy’ if you dare throw a bottle in the garbage.”⁸⁴ Yet despite the attention, people still buy bottled water. While many consumers probably don’t consider the environmental impacts of energy and waste, a Seattle citizen admitted in the same New York Times article that she still buys bottled water as a “guilty pleasure.”⁸⁵

Several public interest organizations have also raised concerns about the health and safety of bottled water, both in comparison to municipal tap water and in contrast to the industry’s marketing image of pure water products. While bottled water is often perceived as being of higher quality than tap water, at least one prominent environmental organization has directly attacked this perception. The Natural Resources Defense Council (NRDC) issued a report in 1999, entitled “Bottled Water: Pure Drink or Pure Hype?”⁸⁶ In the report, NRDC warned the public that “[n]o one should assume that just because he or she purchases water in a

⁸² *Id.*

⁸³ See Fishman, *supra* note __ (quoting John Mackey, CEO of Whole Foods Market).

⁸⁴ Alex Williams, *Water, Water Everywhere, but Guilt by the Bottleful*, THE NEW YORK TIMES (August 12, 2007).

⁸⁵ *Id.*

⁸⁶ See Natural Resources Defense Council, BOTTLED WATER: PURE DRINK OR PURE HYPE? (1999), available at <http://www.nrdc.org/water/drinking/bw/bwinx.asp>.

bottle that it is necessarily any better regulated, purer, or safer than most tap water.”⁸⁷ NRDC performed “‘snapshot’ testing of more than 1,000 bottles of 103 brands of water by three independent labs [and] found that most bottled water tested was of good quality, but some brands’ quality was spotty.”⁸⁸

Not surprisingly, the bottled water industry disputes NRDC’s findings and conclusions. An analysis of the NRDC report by the Drinking Water Research Foundation concludes:

Throughout all of their analysis, NRDC found not one instance of contamination that would raise a legitimate health concern. Indeed, the survey could find only four results where federal health standards were exceeded. Closer inspection reveals that the two results charged by the NRDC Report to exceed total coliform standards, were in fact quite likely false positives because they could not be replicated in subsequent tests as required by federal standards. The other two exceedances were for a fluoride standard so narrow, and with such limited application, as to be irrelevant to public health. In fact, the levels found in the bottled water are below the EPA health-based fluoride standard for public water systems.⁸⁹

It should also be noted that NRDC has subsequently determined that many municipal water supplies also have exceedances of drinking water standards.⁹⁰ For purposes of this analysis, it is fair to conclude that concerns remain regarding drinking water quality standards (from both bottles and tap),⁹¹ and environmental groups such as NRDC would advocate stronger standards and more enforcement to protect public health from all drinking water sources.

⁸⁷ *Id.*, Executive Summary.

⁸⁸ *Id.*

⁸⁹ Drinking Water Research Foundation, Analysis of the February, 1999 Natural Resources Defense Council Report on Bottled Water, *available at* http://www.dwrf.info/nrdc_bottled_water.htm.

⁹⁰ *See generally* Natural Resources Defense Council, WHAT’S ON TAP? GRADING DRINKING WATER IN U.S. CITIES (2003), *available at* <http://www.nrdc.org/water/drinking/uscities/contents.asp>.

⁹¹ *See* ROYTE, *supra* note __, at 142-44 (further noting that exceedances of drinking water standards from municipal supplies are better disclosed to the public than exceedances from bottled water supplies).

All of these environmental and public health concerns – the impact of the water withdrawals on other users and the ecosystem, the waste and pollution of the plastic bottles, and the inconsistent quality and safety of bottled water, are fairly conventional environmental and public health regulatory problems. They are similar to the concerns with any other extractive and consumer product industries, and our public regulatory system is well equipped to address these issues. That doesn't mean that all parties would be satisfied by the regulatory decisions and enforcement, but there is a legal system and administrative and political process to balance the competing concerns of the industry and public. Significant portions of this article will discuss in detail how state governments and courts have sought to better regulate water withdrawals and resolve bottled water disputes, primarily involving the impacts of the water use rather than the plastic bottles or the health and safety of the product. However, a discussion of the concerns regarding bottled water would be misleadingly incomplete without acknowledging what is often the primary and fundamental basis for opposition – the perceived privatization and commoditization of water through bottling and sale of water.

Water privatization and commoditization is a complex and contentious issue that often motivates bottled water opposition even when the legal issues litigated relate to other concerns. The fundamental concern is articulated by the Sierra Club's Water Commodification and Corporate Privatization of Municipal Water/Sewer Services Policy, stating that "water is a public resource, not a commodity" and a basic right for all people.⁹² The bottling and sale of water is often seen as a clear example of water privatization and commodification, with other examples including private control of water distribution systems and schemes for the bulk export and trade of water at a global scale.⁹³ It may not be fair to characterize these concerns as "environmental," since they are more fundamentally about social justice, human rights, and

⁹² Sierra Club Water Commodification and Corporate Privatization of Municipal Water/Sewer Services Policy, *available at* <http://www.sierraclub.org/policy/conservation/commodification.asp>.

⁹³ *See, e.g.,* Public Citizen, Water Privatization Overview, *available at* <http://www.citizen.org/cmep/Water/general/>.

public governance. Nonetheless, the concerns often are at the heart of environmental opposition.⁹⁴

According to author and environmental activist Dave Dempsey, allowing bottled water is a “big step” towards the “transformation of water from the public commons to private ownership.”⁹⁵ The result, according to Dempsey, is that allowing bottled water “essentially conced[es] that water is a commodity.”⁹⁶ In Dempsey’s view, the growth in bottled water’s popularity is a direct result of the “notion that something public is inherently bad and something private is inherently good. For this, in the United States, we have 30 years of conservative attacks on government’s competence and legitimacy and a cult of privatization to thank.”⁹⁷ Dempsey concludes that allowing bottled water will directly result in the “commercialization” of the Great Lakes and other public water.⁹⁸

Dempsey’s slippery slope arguments reflect the fears and concerns shared by many people and resonant with policy makers.⁹⁹ The argument articulated by Dempsey often motivates legal opposition to bottled water withdrawals, even though the resulting cases are decided on more traditional water law and

⁹⁴ Apparently, not all “environmentalists” share the concerns of the Sierra Club, Natural Resources Defense Council, and other prominent organizations. Perhaps the two most prominent leaders of the modern environmental movement, former Vice-President and Nobel Peace Prize winner Al Gore and author, activist, and attorney Robert Kennedy Jr. are public consumers and supporters of bottled water. Gore requested bottled spring water (“a regional brand, ‘not Evian’”) throughout his “An Inconvenient Truth” tour. ROYTE, *supra* note __, at 150. Kennedy founded “Keeper Springs,” a small Vermont-based bottled water company, which in Robin Hood style sends all after-tax profits to the nonprofit advocacy group Waterkeeper Alliance. *See id.* at 162-63.

⁹⁵ DEMPSEY, *supra* note __, at 48.

⁹⁶ *Id.* at 46.

⁹⁷ *Id.* at 53-53.

⁹⁸ *Id.* at 99.

⁹⁹ While author Dempsey is the leading expert for articulating these concerns in detail, the rap artist Mos Def makes the same point more succinctly and entertainingly in “New World Water:

Tell your crew use the H2 in wise amounts
since it’s the New World Water and every drop counts.
You can laugh and take it as a joke if you wanna
but it don’t rain for four weeks some summers.
And it’s about to get real wild in the half;
you be buying Evian just to take a fuckin bath.

Mos Def, *New World Water*, BLACK ON BOTH SIDES (1999).

environmental law doctrines.¹⁰⁰ This leads bottled water opponents to pursue some counterproductive and ultimately ineffective policy goals, such as expansion of the public trust doctrine (discussed in Part IV *infra*). Further, even when bottled water opponents prevail in litigation or in a legislative forum by enacting new regulations, the resulting legal reforms don't really address the opponents' fundamental concerns.¹⁰¹ As discussed in more detail in the following sections, the real challenge with bottled water opposition is using their underlying concerns as motivation to create meaningful and effective freshwater laws and policies that go beyond fearful protectionism and reactionism and towards proactive protection that incorporates current values and science. Case studies of such efforts at the state level are the focus of Part III of this article, but first it is important to provide a brief overview of the ground rules for bottled water from international and federal law.

II. THE GROUND RULES: INTERNATIONAL AND FEDERAL LAW

Bottled water withdrawals are generally subject to state water use laws, and disputes over bottled water are generally resolved pursuant to state law. However, international trade law and federal food law have framed the ground rules for the global bottled water industry. The North American Free Trade Agreement¹⁰² ("NAFTA") and the General Agreement on Tariffs and Trade¹⁰³ ("GATT") generally prohibit restrictions on exports of products or goods (including bottled water) to other countries, subject to limited exceptions. At the federal level, the Food and Drug Administration (FDA) regulates bottled water for drinking water quality and labeling accuracy, with the unintended effect of creating increased market pressure for "spring water" pumped from some of the most vulnerable water resources. Taken together, international trade law and federal food law create a market in bottled water with a premium on "spring water" that both limits and challenges traditional state water law.

¹⁰⁰ See DEMPSEY, *supra* note ___, at 30-34 (referring to the *Michigan Citizens for Water Conservation v. Nestlé Waters North America Inc.* discussed in detail at Part III.A.1, *infra*).

¹⁰¹ See *generally id.* at 40-54.

¹⁰² North American Free Trade Agreement, Can.-Mex.-U.S., Dec. 8-17, 1992, 32 I.L.M.289 (1993).

¹⁰³ General Agreement on Tariffs and Trade, Oct. 30, 1947, 55 U.N.T.S. 194.

A. *International Trade Law and Bottled Water*

International trade law facilitates the global market in bottled water while restricting the ability of states to limit the sale and export of bottled water products. Under NAFTA and GATT, states may not enact “prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures ... on the exportation or sale for export of any product destined for the territory of another [state].”¹⁰⁴ The threshold question is to what extent water is a good or product subject to NAFTA and GATT. Under NAFTA, “goods” are defined as “domestic products as these are understood in the General Agreement on Tariffs and Trade or such goods as the Parties may agree.”¹⁰⁵ GATT does not define a “product,” leaving the question of the whether the term applies to water subject to interpretation and debate.

This is an important question, but it does not need to be addressed in detail for purposes of this Article. The extent to which GATT and NAFTA restrict the export and sale of *bulk* water it is still hotly debated,¹⁰⁶ but it is widely agreed that they apply to *bottled* water as a good.¹⁰⁷ There is a clear distinction under international trade law between water in its natural state (which is not a good) and bottled water as a product (which is a good), with bulk water occupying a place in between still subject to ongoing debate.¹⁰⁸ This distinction was made clear in a joint statement issued by the federal governments of Canada, the United States and Mexico in 1993 in response to concerns regarding the applicability of NAFTA to water:

[U]nless water, in any form, has entered into commerce and become a good or product, it is not covered by the provisions of any trade agreement,

¹⁰⁴ GATT, art. XI; NAFTA, art. 309.

¹⁰⁵ NAFTA, art. 201.

¹⁰⁶ See Marcia Valiante, *Harmonization of Great Lakes Water Management in the Shadow of NAFTA*, 81 U. DET. MERCY L. REV. 525, 534 (2003-2004) (“In the continuum between resource and commodity, water at some point becomes subject to trade obligations, but there is still ambiguity as to when this occurs.”) See also A. Dan Tarlock, *The Strange Career of the Dormant Commerce Clause and International Trade Law in the Great Lakes Antidiversion Regime*, 2006 MICH. ST. L. REV. 1375, 1393-94 (2006).

¹⁰⁷ See Slater, *supra* note __ at 651-52.

¹⁰⁸ See *id.*

including the NAFTA.... Water in its natural state in lakes, rivers, reservoirs, aquifers, waterbasins and the like is not a good or product, is not traded, and therefore is not and never has been subject to the terms of any trade agreement.¹⁰⁹

This statement is not binding on the NAFTA parties or on the World Trade Organization, but it nonetheless provides a clear distinction between water in its natural state, which states can protect without running afoul of NAFTA (and likely GATT) and bottled water, which as a product in commerce cannot be banned or restricted unless allowed under a NAFTA or GATT exemption.

Additional evidence that bottled water is a good is seen in the International Convention on the Harmonized Commodity Description and Coding System adopted by the GATT parties, which uses an international coding system (the HS Code) to describe goods for tariff purposes.¹¹⁰ The HS Code includes product descriptions for water, defined as “waters, including natural or artificial waters and aerated waters, not containing added sugar or other sweetening matter nor flavouring; ice and snow.”¹¹¹

Considering bottled water as good for purposes of international trade law does not end the debate over regulating bottled water, but it does frame and limit the approaches states can take in restricting bottled water exports. Both NAFTA and GATT allow states to implement measures “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.”¹¹² Such measures may not be “applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination” nor be “a disguised restriction on international trade.”¹¹³ Thus, states may regulate and restrict bottled water to

¹⁰⁹ Canadian Intergovernmental Conference Secretariat, 1993 Statement by the Governments of Canada, Mexico and the United States.

¹¹⁰ ANWARUL HODA, TARIFF NEGOTIATIONS AND RENEGOTIATIONS UNDER THE GATT AND THE WTO: PROCEDURES AND PRACTICES 270 (2001). The Harmonized Commodity Description and Coding System (HS) of tariff nomenclature is developed and maintained by the World Customs Organization.

¹¹¹ Harmonized Commodity Description and Coding System Code § 22.01.09, available at www.upu.int/customs/en/country_list_en.pdf.

¹¹² GATT, art. XX(g); NAFTA, art. 2101 (incorporating GATT Article XX(g) and stating that it applies to measures relating to the conservation of living and non-living exhaustible natural resources).

¹¹³ *Id.*

the extent necessary to conserve their water resources. This limitation should not be viewed as an obstacle to sound state water policy and bottled water regulation. Rather, the limitations imposed by international trade law simply force states to focus their bottled water regulations on protection of water resources. Thinly disguised protectionism and outright discrimination against the use of water for bottled water would run afoul of NAFTA and GATT. More fundamentally, such an approach would not serve a state's interest in managing and protecting water resources. The task for states is to use the concern over bottled water exports to put in place non-discriminatory water use regulations focused on the protection of natural resources.

B. *Federal Regulation of Bottled Water as a Food Product*

As a general matter, the federal government does not regulate water withdrawals and water use from surface waters or groundwater for bottled water or any other purpose. Water law is primarily state-based law, as discussed in the next part. However, because bottled water is considered a food product under the Federal Food, Drug and Cosmetic Act,¹¹⁴ the Food and Drug Administration (FDA) regulates bottled water for drinking water quality and labeling accuracy. The quality of other drinking water supplies, including municipal tap water, is regulated by the U.S. Environmental Protection Agency (EPA) pursuant to the Safe Drinking Water Act.¹¹⁵ While bottled water is not subject to the EPA's Safe Drinking Water Act regulation, the FDA is required to ensure that bottled water quality standards are compatible with EPA drinking water quality standards.¹¹⁶ Further, whenever the EPA revises its drinking water standards, the FDA must also set a similar level for bottled water or report in the Federal Register why it is not doing so.¹¹⁷

In addition to its water quality protection regulations, the FDA regulates "identity" labeling of bottled water.¹¹⁸ The identity

¹¹⁴ 21 U.S.C. §§ 301-321(f).

¹¹⁵ 42 U.S.C. § 300(f) (1974), amended by Pub. L. No. 104-182, 110 Stat. 1613 (1996).

¹¹⁶ See Tara Boldt-Van Rooy, "Bottling Up" *Our Natural Resources: The Fight Over Bottled Water Extraction in the United States*, 18 J. LAND USE & ENVTL. L. 267, 275 (2003).

¹¹⁷ 21 U.S.C. § 349.

¹¹⁸ 21 C.F.R. § 165.110(a).

regulations describe the different types of bottled water by source and treatment process. In addition to simply labeling a product as “bottled water” or “drinking water,” producers obtaining water from certain sources or meeting specified treatment standards can use numerous other labels, including “artesian water,” “ground water,” “mineral water,” “purified water,” “distilled water,” “sparkling bottled water,” “sterilized water,” and “well water.”¹¹⁹ Further, bottled water must be labeled as “from a community water system” or “from a municipal source” unless the bottled water has met certain treatment standards.¹²⁰

The labeling requirements for “spring water,” which seems to be the identity that consumers prefer, is particularly important because of its implications for the impact of water withdrawals and the severity of bottled water disputes. The FDA regulations provide:

The name of water derived from an underground formation from which water flows naturally to the surface of the earth may be “spring water.” Spring water shall be collected only at the spring or through a bore hole tapping the underground formation feeding the spring. There shall be a natural force causing the water to flow to the surface through a natural orifice. The location of the spring shall be identified. Spring water collected with the use of an external force shall be from the same underground stratum as the spring, as shown by a measurable hydraulic connection using a hydrogeologically valid method between the bore hole and the natural spring, and shall have all the physical properties, before treatment, and be of the same composition and quality, as the water that flows naturally to the surface of the earth. If spring water is collected with the use of an external force, water must continue to flow naturally to the surface of the earth through the spring’s natural orifice. Plants shall demonstrate, on request, to appropriate regulatory officials, using a hydrogeologically valid method, that an appropriate hydraulic connection

¹¹⁹ 21 C.F.R. § 165.110(a)(2).

¹²⁰ 21 C.F.R. § 165.110(a)(3)(ii).

exists between the natural orifice of the spring and the bore hole.¹²¹

The FDA thus requires that in order to produce bottled water with the consumer-desired label of “spring water,” a bottled water producer must draw water either directly from a spring or from groundwater that has a direct hydrological connection to a surface spring. This regulation has had the unintended consequence of putting tremendous demand and pressure on springs, which are typically some of the most fragile and vulnerable water resources. As examined in detail in the next part, the new and increased pressure on vulnerable springs for bottled water production is often the focal point for litigated disputes and new regulatory and environmental protection efforts at the state level.

III. ON THE GROUND: STATE LAW

Water law is state law. The diversity of approaches to the allocation and protection of freshwater resources in the fifty states provides numerous examples of how state law should (and should not) respond to the threat of water marketing in the era of globalization. Because most controversial bottled water operations involve the withdrawal of groundwater, state groundwater law becomes the focus of many disputes and reform efforts. Sometimes the reform occurs incrementally and responsively through litigation involving common law water rights. With the growth in public law for water management, most states now also have statutes that address water withdrawals and water rights, often with detailed regulations implemented and enforced by state administrative agencies. This Part first looks at case studies of litigated disputes and then at case studies of legislative and political responses to bottled water controversies.

A. *Bottled Water in the Courts: The Good, the Not So Bad, and the Ugly*

The diversity of state laws applicable to water resource management has given rise to a broad range of issues and outcomes in bottled water litigation. Many disputes focus on common law groundwater doctrines. State groundwater law can be

¹²¹ 21 C.F.R. § 165.110(a)(2)(vi).

characterized into five general approaches to groundwater allocation and dispute resolution:¹²² (1) the rule of capture;¹²³ (2) the “American” reasonable use doctrine;¹²⁴ (3) the correlative rights doctrine;¹²⁵ (4) the doctrine of prior appropriation;¹²⁶ and (5)

¹²² It should be noted that the common law rules in many states have been modified and in some cases significantly altered by statute.

¹²³ Connecticut – Roath v. Driscoll, 20 Conn. 533 (1850); Indiana – Wiggins v. Brazil Coal & Clay Corp., 452 N.E.2d 958 (1983); Iowa – Hougau v. Milwaukee & St. Paul Ry. Co., 35 Iowa 558 (1872); Kansas – State ex rel. Peterson v. Kansas State Board of Agriculture, 149 P.2d 604 (Kan. 1944); Kentucky – Nourse v. Andrews, 255 S.W. 84 (Ky. 1923); Louisiana – Adams v. Grigsby, 152 So. 2d 619 (La. App. 2d Cir. 1963); Maine – Maddocks v. Giles, 728 A.2d 150 (Me. 1999); Massachusetts – Gamer v. Milton, 346 Mass. 617 (1964); Mississippi – Clarke County v. Mississippi Lumber Co., 31 So. 905 (Miss. 1902); Montana – Ryan v. Quinlan, 124 P. 512 (Mont. 1912); Texas – Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75 (Tex. 1999); Utah – Crescent Mining Co. v. Silver King Mining Co., 54 P. 244 (Utah 1898); Vermont Chatfield v. Wilson, 28 Vt. 49 (1885); Virginia – C & W Coal Corp. v. Slayer, 200 Va. 18 (1958).

¹²⁴ Alabama – Martin v. City of Linden, 667 So.2d 732 (Ala. 1995); Arizona – Bristol v. Cheatham, 255 P.2d 173 (Ariz. 1953); Georgia – Stoner v. Patten, 63 S.E. 897 (Ga. 1909); Illinois – Bridgman v. Sanitary Dist. of Decatur, 164 Ill. App. 3d 287 (4th Dist. 1987); Maryland – Finley v. Teeter Stone Inc., 248 A.2d 106 (Md. 1968); Minnesota – Erickson v. Crookston Waterworks, Power & Light Co., 100 Minn. 481 (1907); Missouri – Higday v. Nickolaus, 469 S.W.2d 859 (Mo. App. 1971); Nebraska – Prather v. Eisenmann, 261 N.W.2d 766 (Neb. 1978); New Hampshire – Bassett v. Salisbury Mfg. Co., 43 N.H. 569 (1862); New Jersey – Meeker v. E. Orange, 74 A. 379 (N.J. 1909); New York – Smith v. City of Brooklyn, 18 A.D. 340 (1897); North Carolina – Bayer v. Nello L. Teer Co., 124 S.E.2d 552 (N.C. 1963); North Dakota – Volkman v. Crosby, 120 N.W.2d 18 (N.D. 1963); Oklahoma – Canada v. Shawnee, 64 P.2d 694 (Okla. 1963); Oregon – Bull v. Siegrist, 126 P.2d 832 (Ore. 1942); Pennsylvania – Rothrauff v. Sinking Spring Water Co., 14 A.2d 87 (Pa. 1940); South Carolina – Rouse v. Kinston, 188 N.C. 1, 17 (N.C. 1924); Tennessee – Nashville, C. & S. L. Ry. v. Rickert, 19 Tenn. App. 446 (Ct. App. 1935); West Virginia – Pence v. Carney, 52 S.E. 702 (W. Va. 1905).

¹²⁵ Arkansas – Lingo v. Jacksonville, 522 S.W.2d 403 (Ark. 1975); California – Katz v. Walkinshaw, 141 Cal. 116 (1903); Delaware – MacArtor v. Graylyn Crest III Swim Club, Inc., 187 A.2d 417 (Del. Ch. 1963); Florida – Cason v. Florida Power Co., 76 So. 535 (Fla. 1917); Hawaii City Mill Co. v. Honolulu Sewer & Water Comm'n, 30 Haw. 912 (1929); Washington – Patrick v. Smith, 134 P. 1076 (Wash. 1913).

¹²⁶ Colorado – Bruening v. Dorr, 47 P. 290 (Colo. 1896); Idaho – Bower v. Moorman, 147 P. 496 (Idaho 1915); Nevada – In re Manse Spring & Its Tributaries, 108 P.2d 311 (Nev. 1940); New Mexico – Yeo v. Tweedy, 286 P. 970 (N.M. 1929); South Dakota – Deadwood C. R. Co. v. Barker, 86 N.W. 619 (S.D. 1901); Wyoming – Bining v. Miller, 102 P.2d 54 (Wyo. 1940).

the Restatement (Second) of Torts doctrine.¹²⁷ As discussed below in the case studies from Michigan and Texas, these doctrines vary considerably in how well they address the new demands and pressures on groundwater resources from water bottling. Further, common law water rights are not the only, or even primary, legal issue in some bottled water cases. Opponents often look to enforce state environmental and administrative law to delay or prevent bottled water operations. Recent case studies from California and New Hampshire illustrate that this approach sometimes results in more comprehensive decision-making, but fails to address the real concerns in the dispute.

1. The Good: Michigan crafts a balanced approach to competing groundwater and surface water rights

While some version of common law correlative rights for competing groundwater uses have been long established in most states, bottled water disputes often involve groundwater withdrawals that impact surface waters. This gives state courts the opportunity to modernize the application of their groundwater laws to incorporate the hydrologic reality that groundwater and surface water are often connected. The leading example of a state court incorporating modern hydrological evidence with the common law doctrines to resolve a bottled water dispute comes from Michigan. In *Michigan Citizens for Water Conservation v. Nestlé Waters North America Inc.*,¹²⁸ the Michigan Court of Appeals applied the state's groundwater common law doctrine to address harm to connected surface waters, and reached a decision that provided for compromise between the disputing parties.

The dispute in the case originated from Nestlé's planned groundwater withdrawals in Mecosta County, Michigan. Nestlé, the defendant, sought to pump approximately 400 gallons per minute ("gpm"), 576,000 gallons per day, of groundwater from four wells located on a site called Sanctuary Springs.¹²⁹ Nestlé selected the Sanctuary Springs location because the groundwater

¹²⁷ Michigan – *Maerz v. United States Steel Corp.*, 116 Mich. App. 710 (Ct. App. 1982); Ohio – *Cline v. American Aggregates Corp.*, 15 Ohio St. 3d 384 (1984); Wisconsin – *State v. Michels Pipeline Construction, Inc.*, 63 Wis. 2d 278 (Wis. 1974).

¹²⁸ 709 N.W.2d 174 (Mich. App. 2005), *portions rev'd on other grounds*, 737 N.W.2d 447 (Mich. 2007).

¹²⁹ *Id.* at 184.

would meet the Food and Drug Administration's requirements to be marketed as "spring water" pursuant to 21 C.F.R. § 165.110(a)(2)(vi) (discussed previously).¹³⁰ Nestlé also obtained a water quality permit from the Michigan Department of Environmental Quality.¹³¹

Located to the north of the areas in dispute, the groundwater from Sanctuary Springs contributes to the water found in the Dead Stream, as well as the waters of man-made Osprey Lake, which was created from the waters of the Dead Stream.¹³² The Dead Stream flows southeast to feed into Lake Mecosta, as well as other nearby water bodies.¹³³ Nestlé planned to send the groundwater from Sanctuary Springs via pipeline to its "Ice Mountain" bottled water production facility located twelve miles away.¹³⁴ However, even before construction was complete on the bottling facility, Michigan Citizens for Water Conservation ("MCWC") filed suit to enjoin Nestlé from extracting the groundwater.¹³⁵

The plaintiffs, MCWC, included riparians along several nearby waterbodies, including the unfortunately named Dead Stream.¹³⁶ In challenging Nestlé's groundwater pumping, plaintiffs raised three principal legal issues. First, plaintiffs alleged that Nestlé's groundwater pumping would diminish hydrologically connected surface waters (including the Dead Stream), thereby violating plaintiffs' riparian rights in the recreational use and enjoyment of such surface waters.¹³⁷ Second, plaintiffs claimed that the groundwater use by Nestlé was per se unreasonable because it was off-tract and would cause harm.¹³⁸ Finally, plaintiffs argued that Nestlé's bottling and selling of groundwater outside of the source watershed violated the public trust.¹³⁹

¹³⁰ *Id.* at note 4. *See also supra* Part II.B.

¹³¹ *Nestlé*, 709 N.W.2d at 184

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.* at 185.

¹³⁶ *Id.* at 184.

¹³⁷ *Id.* at 205.

¹³⁸ *Id.*

¹³⁹ *Nestlé*, 709 N.W.2d at 185. MCWC also claimed that the groundwater pumping violated the Michigan Environmental Protection Act (MEPA), *Nestlé*, 709 N.W.2d at 185, which allows "any person" to bring an action "for the protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction," Mich. Comp. Laws

The trial court granted summary disposition to Nestlé for the plaintiffs' claim regarding their riparian rights, for which the plaintiffs took no appeal.¹⁴⁰ The trial court also granted summary disposition for the claim regarding the public trust doctrine, ruling that Michigan law does extend public trust protections for navigable waters to groundwater, which the plaintiffs appealed.¹⁴¹ At the trial itself, however, plaintiffs were largely successful. After a lengthy bench trial, the trial court found that because Nestlé was pumping the groundwater for bottling off-tract and eventual sale and distribution outside of the source watershed, Nestlé's water use was unreasonable. The court enjoined Nestlé from operating its bottling facility.¹⁴² Nestlé appealed.

The Michigan Court of Appeals first upheld the trial court's findings of fact, holding that the court did not abuse its discretion in making conclusions favorable to plaintiffs.¹⁴³ The trial court found that Nestlé's groundwater pumping would diminish the base flow of the hydrologically connected Dead Stream by 345 gpm,¹⁴⁴ meaning most of the 400 gpm of groundwater taken from Sanctuary Springs would otherwise contribute to the waters of the Dead Stream. The trial court found that the loss of water, around twenty-four percent of the total volume of the stream,¹⁴⁵ would result in the stream narrowing by more than four feet,¹⁴⁶ and a drop in the water level of two inches.¹⁴⁷ The court also found that the water level in nearby wetlands would drop nearly a foot.¹⁴⁸

The Court of Appeals then focused on the common law rules for surface water and groundwater use in Michigan. In

§ 324.1701 *et seq.* The trial court found that Nestlé violated MEPA, relying primarily on another Michigan statute, the Inland Lakes and Streams Act (ILSA), Mich. Comp. Laws § 324.30101 *et seq.*, which prohibits "diminishment" of an inland lake or stream without a state permit (which Nestlé did not obtain). The Michigan Court of Appeals reversed this holding. *Id.* at 216. While important to the case, this issue is not relevant for the purposes of this Article.

¹⁴⁰ *Id.* While the count that alleged a riparian violation was dismissed by the trial court on summary judgment and was not appealed, the riparian issue was addressed through the Court of Appeals' groundwater analysis.

¹⁴¹ *Nestlé*, 709 N.W.2d at 187.

¹⁴² *Id.* at 186.

¹⁴³ *Id.* at 193.

¹⁴⁴ *Id.* at 190.

¹⁴⁵ *Id.* at 206.

¹⁴⁶ *Id.* at 191.

¹⁴⁷ *Id.* at 189.

¹⁴⁸ *Id.* at 188-89.

addressing riparian rights, the court noted that Michigan follows reasonable use rules that balance “competing water uses to determine whether one riparian proprietor’s water use, which interferes with another’s use, is unreasonable under the circumstances.”¹⁴⁹ To balance competing uses, Michigan courts weigh factors on both sides of a dispute while acknowledging that “no list of factors is exhaustive,”¹⁵⁰ and that reasonable use must be determined on a “case-by-case basis.”¹⁵¹ In discussing Michigan’s rejection of the natural flow doctrine, the court pointed out that neither a diminution in water quantity, nor an alteration in flow, nor both, combined with injury, “will give a right of action, if in view of all the circumstances, . . . that which has been done . . . is not unreasonable.”¹⁵²

The rules in Michigan for groundwater use are, however, less clear. Michigan had already rejected an absolute rule of capture (discussed below) for groundwater use, but had never before considered the problem of groundwater use measurably affecting a hydrologically connected surface water. Upon surveying the development of groundwater law in Michigan, the Nestlé court concluded: “Michigan courts have consistently avoided strict rules that permit one water user to utilize water at the expense of an adjacent user.”¹⁵³ The Court wrote that a previous Michigan case had adopted reasonable use balancing for groundwater,¹⁵⁴ and consequently elected to apply this approach to disputes between riparian and groundwater users due to the “interconnected nature of water sources.”¹⁵⁵

The trial court had applied a “hybrid rule” to adjudicate the dispute, which required that groundwater withdrawals, when used off-tract, not diminish the natural flow of the surface water.¹⁵⁶ This rule, however, essentially made groundwater rights inferior to surface water rights, and signaled a return to an abandoned riparian doctrine – natural flow. Rejecting this rule because it was inconsistent with the balancing test for groundwater-surface water

¹⁴⁹ *Id.* at 196.

¹⁵⁰ *Id.* at 194-95 (quoting Stoebuck & Whitman, *The Law of Property* (3d ed), § 7.4, p 423).

¹⁵¹ *Id.* at 196 (citing *People v. Hulbert*, 170; 91 NW 211 (1902)).

¹⁵² *Id.* at 196 (quoting *Dumont v. Kellogg*, 29 Mich. 420 (1874)).

¹⁵³ *Id.* at 201.

¹⁵⁴ *Id.* at 200-01 (discussing *Maerz v. US Steel Corp*, 323 N.W.2d 524 (1982)).

¹⁵⁵ *Id.* at 201-02.

¹⁵⁶ *Id.* at 202.

disputes, the Michigan Court of Appeals articulated three principles that “that govern the process of balancing competing water uses.”¹⁵⁷ The court stated:

First, the law seeks to ensure a "fair participation" in the use of water for the greatest number of users. Hence, the court should attempt to strike a proper balance between protecting the rights of the complaining party and preserving as many beneficial uses of the common resource as is feasible under the circumstances. Second, the law will only protect a use that is itself reasonable. A plaintiff whose water use has little value or is excessive or harmful will be entitled to no protection. Third, the law will not redress every harm, no matter how small, but will only redress unreasonable harms.”¹⁵⁸

On top of these three underlying principles, the court announced a non-inclusive list of factors to be considered in adjudicating a water rights dispute:

These factors include (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.”¹⁵⁹

The court recognized the similarity that these factors bear to the Restatement (Second) of Torts § 850(a) and used its analysis in explaining the applicability of the factors.¹⁶⁰ The court also explained that natural uses of water (domestic use to support a household) always prevail over artificial uses (all other uses of water, including commercial, recreational, and aesthetic), and that on-tract uses benefiting the land are given preference over off-tract uses of surface water and groundwater.¹⁶¹

In applying these factors to the bottled water dispute, the court first noted that both competing uses (Nestlé’s water bottling

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 202-03.

¹⁵⁹ *Id.* at 203.

¹⁶⁰ *Id.* at Note 46.

¹⁶¹ *Id.* at 204.

and the plaintiffs' recreational and aesthetic enjoyment of the Dead Stream) are artificial but also reasonable and beneficial, and that neither use was so preferable or necessary such that it would prevail on that basis alone.¹⁶² Instead, the court looked to the amount of pumping, the suitability of the water body for Nestlé's use, and the extent of the harm.¹⁶³ In this case, Nestlé did not need to pump 400 gpm from this location to meet its commercial needs, and further, that rate of pumping would cause unreasonable harm to the Dead Stream.¹⁶⁴ Therefore, the court ruled that Nestlé's pumping of 400 gpm at this location was unreasonable, and enjoined future pumping at that rate.¹⁶⁵ However, the court noted that Nestlé "should be permitted to have a 'fair participation' in the common water resources of the area,"¹⁶⁶ and so remanded the case to the trial court to determine what rate of pumping would be reasonable under this analysis.¹⁶⁷

The Michigan Court of appeals also affirmed the trial court's summary disposition in favor of Nestlé regarding the plaintiffs' public trust claim. Under Michigan law, the public trust doctrine only applies to navigable waters.¹⁶⁸ Finding that the Dead Stream was not navigable, the court held that the public trust doctrine did apply to this case.¹⁶⁹ Additionally, the court declined "plaintiffs' invitation to expand the public trust doctrine" to groundwater and non-navigable waters in Michigan.¹⁷⁰ Plaintiffs argued that case law, the Michigan Constitution, and several statutes supported their position.¹⁷¹ The court determined, however, that the cited case law reaffirmed the navigability test for public trust applicability and merely dealt with fishing regulations, while the Constitution and statutes only recognized the importance of water as a natural resource.¹⁷² Mentioning that Michigan had "long recognized that private persons obtain property rights in water on the basis of their ownership of land," the court concluded

¹⁶² *Id.* at 205.

¹⁶³ *Id.* at 205-06.

¹⁶⁴ *Id.* at 206.

¹⁶⁵ *Id.* at 209.

¹⁶⁶ *Id.* at 206.

¹⁶⁷ *Id.* at 209.

¹⁶⁸ *Id.* at 218 (citing *Bott v. Natural Resources Comm.*, 327 N.W.2d 838, 846 (Mich. 1982)).

¹⁶⁹ *Id.* at 219.

¹⁷⁰ *Id.* at 218.

¹⁷¹ *Id.* at 221.

¹⁷² *Id.*

that the dismissal of the public trust claim was proper.¹⁷³ Thus, Nestlé's groundwater pumping did not give rise to a public trust violation.

The *Nestlé* case received tremendous public attention, including coverage in national media outlets such as USA Today.¹⁷⁴ Much of the public attention was focused on bottled water, and the controversies surrounding diversion and sale of water in Michigan. However, the court's opinion did not focus on the bottling and sale of water, but instead on the competing legal rights of surface and groundwater users. The Michigan court, as is typical, did not treat the water bottler differently than other commercial water users. It nonetheless crafted a legally and scientifically sound approach to resolving disputes between competing groundwater and surface water users.

2. The Not So Bad: California and New Hampshire rely on state environmental and administrative laws to resolve bottled water disputes

State environmental and administrative laws often play a prominent role in water withdrawal disputes, and bottled water is no exception, as illustrated by recent cases from California and New Hampshire. In early 2007, a California appeals court considered a local government's compliance with the state's California Environmental Quality Act ("CEQA")¹⁷⁵ in a contentious bottled water dispute (again involving Nestlé Waters North America). In *Concerned McCloud Citizens v. McCloud Community Services District* ("McCloud"), the court addressed bottled water opponents' challenge to an agreement between McCloud Community Services District ("District") and Nestlé for the sale of spring water.¹⁷⁶ Plaintiffs, Concerned McCloud Citizens, challenged the District's approval of the agreement with Nestlé.¹⁷⁷

McCloud is a town located in Siskiyou County, California, near Mt. Shasta. Due to growing economic concerns, the District

¹⁷³ *Id.* at 221-22.

¹⁷⁴ Debbie Howlett, *Water Battle Dredges Up Acrimony*, USA TODAY, June 23, 2003, at 3A.

¹⁷⁵ CAL. PUB. RES. CODE, §§ 21,100.

¹⁷⁶ 54 Cal. Rptr. 3d 1 (Ct. App. 2007).

¹⁷⁷ *Id.* at 2.

sought extra income by selling rights to its spring waters to water bottlers. In 2003, after a public meeting to consider a proposal with Nestlé, the District entered into a tentative agreement for the sale of up to 1,600 acre feet of water per year for fifty years.¹⁷⁸ The agreement required a favorable feasibility evaluation by Nestlé, several actions to be taken by Nestlé and the District, and compliance with elements of CEQA.¹⁷⁹ Importantly, the agreement was contingent on the completion “of proceedings under CEQA,” and neither party was to be bound “unless and until District’s compliance with CEQA [was] completed” with no possibility of a challenge “pursuant to CEQA.”¹⁸⁰

CEQA requires that a public agency determine whether a project “may have a significant environmental impact ... before it approves that project.”¹⁸¹ If the agency determines that a significant environmental impact may occur, the agency must conduct an environmental impact review (“EIR”).¹⁸² Plaintiffs argued that the District should have complied with CEQA prior to signing the agreement, and the trial court agreed.¹⁸³ According to the trial court, “the approval of the agreement amounted to the creation of an entitlement for Nestlé and committed the District to a definite course of action.”¹⁸⁴ Because the agreement affected the vitality of an environmentally sensitive resource, the trial court held that the District abused its discretion by failing to proceed with CEQA compliance prior to approval of the agreement.¹⁸⁵ The trial court granted the opponents’ requested writ of mandate requiring the agreement to be vacated, set aside, and voided, finding that the District’s approval of the agreement was a prejudicial abuse of discretion.¹⁸⁶

On appeal, however, the District and Nestlé prevailed. The Court of Appeals reversed the trial court’s decision, finding that the District’s actions did not constitute the “approval” of a “project” required for CEQA compliance.¹⁸⁷ Thus, the District had

¹⁷⁸ *Id.* at 3. The agreement also contained a guaranteed right of renewal for an additional fifty years. *Id.*

¹⁷⁹ *Id.* at 4-5.

¹⁸⁰ *Id.* at 5.

¹⁸¹ *Id.* at 7 (internal citations omitted).

¹⁸² *Id.*

¹⁸³ *Id.* at 2, 5.

¹⁸⁴ *Id.* at 5.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.* at 2.

¹⁸⁷ *Id.* at 7.

no duty of compliance with CEQA. The court's decision turned on the fact that the agreement between Nestlé and the District was conditional on a series of "ifs," the biggest among them being the securing of all discretionary permits, "expressly defined as including CEQA documentation, review and approvals, along with the final adjudication of any legal challenges based on CEQA."¹⁸⁸ The court emphasized the abstract nature of the Nestlé agreement, noting its lack of specificity regarding locations and designs. According to the court, compliance with CEQA would be useless at this stage given the ambiguity in the agreement: "At the current planning stage of this proposed project, preparation of an EIR would be premature. Any analysis of potential environmental impacts would be wholly speculative and essentially meaningless."¹⁸⁹

Thus, the court of appeals concluded that that the trial court erred in its ruling against the District, reversed the trial court's judgment, and held that "subsequent compliance with the CEQA review procedures [was] permissible."¹⁹⁰ However, Nestlé has still not commenced water pumping and bottling operations in McCloud, as the agreement nonetheless was subjected to environmental review. Despite the litigation outcome, Nestlé reopened the EIR under pressure from the California Attorney General and bottled water opponents.¹⁹¹ Nestlé also agreed to limit the amount of water it will withdraw from springs and groundwater.¹⁹² It will still take over a year for the EIR to be completed, and once that is done, Nestlé may move ahead with its plans to begin pumping if it can obtain all of the necessary permits.

¹⁸⁸ *Id.* at 8-9. Other contingencies in the agreement referenced by the court are: (1) if Nestlé determines during the contingency period that water bottling from the springs is possible; (2) if Nestlé obtains all applicable government approvals and permits for the site and facility; (3) if the District approves a design for water testing, monitoring, collection and distribution; (4) and if the parties to the agreement are able to develop a water contingency plan to address potential emergencies. *Id.*

¹⁸⁹ *Id.* at 12.

¹⁹⁰ *Id.*

¹⁹¹ See Samantha Young, *Calif. AG cracks down on Nestle bottling plant*, Associated Press – SFGate (July 29, 2008), available at <http://sfgate.com/cgi-bin/article.cgi?f=/n/a/2008/07/29/financial/f135206D79.DTL>.

¹⁹² See Samantha Young, *Bottling plants face opposition as fears grow over water supplies*, Associated Press – SFGate (April 9, 2008), available at <http://sfgate.com/cgi-bin/article.cgi?f=/n/a/2008/04/09/national/a111630D72.DTL>.

The conflict may have been mitigated and delayed, but not resolved.

New Hampshire courts have also dealt with state environmental and administrative law in the context of bottled water disputes. In 2004, the New Hampshire Department of Environmental Services (“DES”) issued a large groundwater withdrawal permit to a water bottler, USA Springs, Inc.¹⁹³ USA Springs planned to withdraw up to 439,200 gallons of water per day from a spring and three wells for its bottled water operation.¹⁹⁴ The petitioners – Town of Nottingham, Town of Barrington, and Save Our Groundwater (a landowners group) – appealed the issuance of the state permit.¹⁹⁵

The petitioners raised several claims against the DES, including violations of New Hampshire’s Groundwater Protection Act,¹⁹⁶ failure to consider the public trust, failure to comply with the state’s wetlands protection statute,¹⁹⁷ and unconstitutional takings claims.¹⁹⁸ The New Hampshire Groundwater Protection Act requires the DES to “adopt rules in relation to, among other things, ‘[a]ll new groundwater withdrawals of 57,600 gallons or more in any 24-hour period.’”¹⁹⁹ However, the petitioners argued that language in a separate chapter of the New Hampshire Code²⁰⁰ directed the DES to consider the public trust in assessing an application to withdraw groundwater.²⁰¹ The relevant statute included the finding that surface water and groundwater constitute “invaluable public resource[s],” referenced the state as the “trustee of this resource for the public benefit,” and directed government agencies having authority over this resource to “comply with this policy.”²⁰²

The court, however, agreed with the respondent in finding that the Act’s public trust language did not bar the issuance of the

¹⁹³ *In re Town of Nottingham*, 904 A.2d 582, 589 (2006).

¹⁹⁴ *Id.* at 588.

¹⁹⁵ *Id.* at 587.

¹⁹⁶ N.H. Rev. Stat. § 485C.

¹⁹⁷ N.H. Rev. Stat. § 482

¹⁹⁸ *In re Town of Nottingham*, 904 A.2d. at 588.

¹⁹⁹ *Id.* (quoting N.H. Rev. Stat. § 485-C:4, XII).

²⁰⁰ N.H. Rev. Stat. § 481 (State Dams, Reservoirs and Other Water Conservation Projects).

²⁰¹ *Id.* at 589.

²⁰² *Id.* (quoting N.H. Rev. Stat. § 481:1).

permit in question.²⁰³ The court held that chapter 481 did not apply to DES because chapter 485 had its own statement of purpose, and chapter 481 provided no “specific additional test that DES must apply” in determining whether to issue a permit.²⁰⁴ The court also declined to adopt any contention that the common law public trust doctrine applied to DES.²⁰⁵ The court refused to “engraft common law tort principles onto the statutory and regulatory scheme governing groundwater withdrawals,” thereby concluding that the state legislature had included all factors for consideration by DES in the statute.²⁰⁶

The petitioners also argued that DES erred in not applying the wetlands protection statute, which states that “no person shall excavate, remove, fill, dredge, or construct any structure in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state without a permit from the department.”²⁰⁷ Though the court found that the statute was ambiguous, it held that no interpretation supported the petitioner’s argument, as the statute failed to regulate the removal of “water” in the wetlands.²⁰⁸ The existence of regulations under the Groundwater Protection Act that take into account the effect of groundwater withdrawals on surface waters served to bolster the court’s decision.²⁰⁹ Accordingly, the court concluded that that USA’s proposed groundwater withdrawal was not subject to the permitting requirements of the state’s wetland protection law.

The petitioners also argued that USA’s proposed withdrawals would amount to a taking under the State and Federal Constitutions, contending that the mining of water would decrease the water level in homeowners’ wells and contaminate and damage homeowners’ pumping equipment.²¹⁰ Key to their argument was the contention that “landowners have a property right in subterranean water flows.”²¹¹ The court, however, held that because New Hampshire applied a “doctrine of reasonable use” to

²⁰³ *Id.*

²⁰⁴ *Id.* at 589-90.

²⁰⁵ *Id.* at 590.

²⁰⁶ *Id.*

²⁰⁷ *Id.* at 590-91 (quoting N.H. Rev. Stat. § 482-A:3).

²⁰⁸ *Id.* at 591.

²⁰⁹ *Id.*

²¹⁰ *Id.* at 591-92.

²¹¹ *Id.* at 592.

groundwater,²¹² “[t]he right to use water does not carry with it ownership of the water lying under the land,” and that such a right is “not considered ‘private property’ requiring condemnation proceedings unless the property has been rendered useless for certain purposes.”²¹³ Thus, the court was not persuaded by the takings argument of the petitioners, finding that there had been no showing of a protected property interest under New Hampshire law.²¹⁴

Thus, the New Hampshire litigation produced the same result as the California litigation – judicial approval of a government’s application of state environmental and administrative laws to a bottled water dispute. From the perspective of the bottled water companies, the litigation creates increased transaction costs and may discourage investment in the state, but does not ultimately prohibit the withdrawal of water and sale of the bottled water product. From the perspective of bottled water opponents, the litigation delays the bottled water operation and may open the door to various compromises and concessions, but fails to stop bottled water companies from using the communities’ water resources. These outcomes have value, but unlike the Michigan *Nestlé* litigation, fail to resolve the primary issues of control and allocation of water resources within a community of water users.

3. The Ugly: Texas refuses to give legal protection for groundwater rights

While most states have adopted their common law doctrines to better incorporate the modern science of hydrology and provide more equitable correlative rights for groundwater use, a notable exception is Texas. In *Sipriano v. Great Spring Waters of America, Inc.*,²¹⁵ the Texas Supreme Court bucked the trend displayed by most other states and held fast to the rule of capture, which is basically no legal rule for groundwater extraction at all.

The dispute began when the defendant (another Nestlé company) sought a new source for its Ozarka “spring water”

²¹² *Id.*

²¹³ *Id.* (quoting *Village of Tequesta v. Jupiter Inlet Corp.*, 371 So.2d 663, 668 (Fla)).

²¹⁴ *Id.* at 593.

²¹⁵ 1 S.W.3d 75 (Tex. 1999).

brand. Nestlé initially began pumping a relatively modest 90,000 gallons of water per day from Rohr Springs in Big Rock, Texas.²¹⁶ Only four days after the pumping started, Bart Sipriano and several other local homeowners experienced decreases in their well water supply and brought suit against the water bottler.²¹⁷ The plaintiffs' suit was predicated on an attempt to reform the common law in Texas from a rule of capture to the more modern correlative rights approach.

In short, the plaintiffs failed. The Texas Supreme Court upheld the state's common law rule of capture, which had been in place for almost a century. As explained by the court, the "rule of capture essentially allows ... a landowner to pump as much groundwater as the landowner chooses, without liability to neighbors who claim that the pumping has depleted their wells."²¹⁸ In a separate concurrence, Texas Supreme Court Justice Hecht noted that Texas remained an unusual western state for following the outdated rule of capture,²¹⁹ but chose to leave to the state legislature the task of modernizing Texas groundwater law.²²⁰

This result is ugly, and not just for homeowners left with no legal remedy to protect their groundwater use from water bottlers and other large commercial water users. Texas and other states that adhere to the rule of capture leave any groundwater user without legal recourse, instead letting the biggest, deepest groundwater pumpers take as much water as they can. While the immediate result of the *Sipriano* litigation appears to be a win for Nestlé, it actually leaves Nestlé as vulnerable as Bart Sipriano

²¹⁶ *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d at 75-76.

²¹⁷ *Id.*

²¹⁸ *Id.* at 75.

²¹⁹ Texas may have been a lone star sticking with the rule of capture in the west, but had a contemporary companion on the east coast in Maine. Around the same time of the *Sipriano* decision, Maine's Supreme Court faced a similar legal challenge, and ruled the same way as Texas. In *Maddocks v. Giles*, 728 A.2d 150 (1999), the Maine Supreme Court opted to retain the rule of capture, rather than adopt the Restatement doctrine, as favored by the plaintiff. According to the court, the plaintiffs contended that the rule of capture was "based upon faulty science," and the court acknowledged that several other courts had used this argument when abandoning the doctrine. *Id.* at 153. Despite this recognition, the Maine Supreme Court declined to abandon the rule of capture, emphasizing *stare decisis* and the reliance of Maine groundwater users on the present property laws. *Id.* at 154. And like the Texas Supreme Court, the Maine Supreme Court reasoned that water policy reforms are best left to the state legislature. *Id.*

²²⁰ *Id.* at 81-83.

when a new groundwater user (such as another bottled water company) comes to town. Bottled water companies and many other commercial water users need some legal protection for their groundwater use to encourage investment in an area. The lack of legal protection and rules may also result in an unchecked run on a region's groundwater resource, since no party would have any legal or economic incentive to restrict its water use. In the end, the state will be left with depleted groundwater resources, the bottled water companies and other water users will be left with failed investments, and the environment will be severely impacted on the way. The courts seem to recognize that this, yet have put their faith in the political process and state legislatures to solve the problem. As the next section details with several case studies, that faith is sometimes justified, but politics and bottled water don't always mix well.

B. *Bottled Water in Legislatures and Politics: The Good, the Not So Bad, and the Really Ugly*

Nearly every state has statutory authority regarding groundwater withdrawals and management, ranging from basic reporting and registration requirements to extensive site specific permitted reviews of groundwater withdrawals.²²¹ Most of these

²²¹ Alabama Water Resources Act, Code of Ala. § 9-10B (2008); Water Use Act, Alaska Stat. § 46.15 (2009); Ariz. Rev. Stat. § 45 (2008); Arkansas Ground Water Management and Protection Act, Ark. Code Ann. § 15-22 (2008); Cal. Water Code §§ 10700 to 10795 (2008); Colorado Ground Water Management Act, Colo. Rev. Stat. 37-90 (2008); Conn. Gen. Stat. § 22a-351 (2008); Florida Waters Resource Act of 1972, Fla. Stat. § 373 (2009); Ground Water Use Act of 1972, Ga. Code Ann. § 12-5 (2008); State Water Code of 1987, Haw. Rev. Stat. § 174C (2008); Ground Water Act of 1951, Id. Code § 42 (2008); Illinois Water Use Act of 1983, Ill. Comp. Stat. 525-45 (2009); Ind. Code Ann. § 14-25 (2008); 1945 Water Appropriation Act, Kans. Stat. Ann. § 82a (2007); Ky. Rev. Stat. § 151 (2009); La. Rev. Stat. § 38-3097 (2008); 38 Me. Rev. Stat. § 404 (2008); Natural Resources and Environmental Protection Act, Mich. Compiled Laws § 324 (2008); Minn. Stat. § 103G (2008); Miss. Code Ann. § 51-3 (2008); Missouri Water Well Drillers Act § 256.600 to 640 (2009); Mont. Code Ann. §§ 85-2-501 to -522 (2007); Groundwater Management Act of 1976, Neb. Rev. Stat. § 46 (2008); Nev. Rev. Stat. Ann. § 534 (2008); Groundwater Protection Act, N.H. Rev. Stat. Ann. § 485C (2009); N.M. Stat. Ann. § 72-12 (2008); NY CLS ECL § 55 (2009); N.C. Gen. Stat. § 143-215 (2008); N.D. Cent. Code § 61-04 (2008); Ohio Rev. Code Ann. § 1521 (2008); Oklahoma Groundwater Law, 82 Okl. Sta. § 1020.1 to .22 (2008); Ore. Rev. Stat. §§ 537.505 to -796 (2007); R.I. Gen. Laws § 46-13 (2009); Groundwater Use and Reporting Act, S.C. Code Ann. §§ 49-5-10 to -150 (2008); S.D. Codified Laws § 46-6 (2009); Water

statutes predate the recent controversies surrounding bottled water. But as bottled water disputes have come to the public's (and politicians') attention over the past few years, several states – including Michigan, Maine, and Vermont – have responded with new regulatory measures. This has been a generally positive trend, as the resulting regulations provide increased protection for water resources while balancing water rights with hydrology and aquatic ecology concerns. However, politicians are also prone to overreact to the threat of bottled water with draconian measures that unsettle water rights and have no basis in science.

1. The Good: Michigan and the other Great Lakes states protect natural resources from bottled water withdrawals

Even before the Michigan court of appeals handed down its decision in the *Nestlé* case discussed above, the Michigan legislature made some modest reforms in groundwater law. In 2003, Michigan enacted a groundwater dispute resolution program. The program provides a simple process for small quantity well owners to “submit a complaint alleging a potential groundwater dispute if the small quantity well has failed to furnish the well's normal supply of water and the owner has credible reason to believe the well's problems have been caused by a high capacity well.”²²² Small quantity wells are defined as wells with less than 100,000 gallons per day of pumping capacity; high capacity wells are defined as wells with capacity greater than 100,000 gallons per day.²²³ Essentially, the statute provides a far cheaper and simpler mechanism than private litigation to protect the groundwater use rights of individuals and small businesses harmed by larger groundwater extractions.

After the *Nestlé* decision, the Michigan legislature made far more significant reforms. Statutes enacted in 2006 required any person that develops new or increased water withdrawal capacity of over 2 million gallons per day (gpd) from an inland water source (including groundwater) or 5 million gpd from the Great Lakes to

Resources Information Act of 2002, Tenn. Code Ann. §§ 69-7-301 to -309 (2009); Tex. Water Code § 36 (2007); Utah Code Ann. § 73-3 (2008); 10 Ver. Stat. Ann. § 48 (2009); Va. Code Ann. § 62.1 (2009); Rev. Code Wash. § 90.44 (2009); Groundwater Protection Act, W. Va. Code § 22-12 (2008); Wis. Stat. § 281.34 (2008); Wyo. Stat. § 41-2 (2008).

²²² Mich. Comp. Laws § 324.31702(1) (2006).

²²³ Mich. Comp. Laws § 324.31701(j) and (q) (2006).

obtain a water withdrawal permit.²²⁴ For withdrawals from inland waters and groundwater, the sole standard for issuance of a permit was whether or not the withdrawal was “likely to cause an adverse resource impact.”²²⁵ An “adverse resource impact” was defined as decreasing either the flow of a stream or the level of a body of surface water such that the water body’s “ability to support characteristic fish populations is functionally impaired.”²²⁶ Permit terms are not specified, but the state may revoke a permit if it “determines following a hearing, based upon clear and convincing scientific evidence, that the withdrawal is causing an adverse resource impact.”²²⁷ The permit process and appeals are subject to the Michigan Administrative Procedures Act.²²⁸ Water bottlers subject to the state Safe Drinking Water Act were held to essentially the same standards.²²⁹

Beyond the general reforms to water withdrawal law, the Michigan statute also subjects bottled water producers to many additional standards and requirements. Water bottlers were subject to a far lower permit threshold (new or increased withdrawal of 250,000 gpd) and required to meet the following standards:

- The proposed use is not likely to have an adverse resource impact.
- The proposed use is reasonable under common law principles of water law in Michigan.
- The withdrawal will be conducted in such a manner as to protect riparian rights as defined by Michigan common law.
- The person will undertake activities, if needed, to address hydrologic impacts commensurate with the nature and extent of the withdrawal. These activities may include those related to the stream flow regime, water quality, and aquifer protection.
- Advance consultation with local government officials and interested community members.

²²⁴ Mich. Comp. Laws § 324.32723(1) (2006).

²²⁵ Mich. Comp. Laws § 324.32723(5) (2006).

²²⁶ Mich. Comp. Laws § 324.32701(a) (2006).

²²⁷ Mich. Comp. Laws § 324.32723(8) (2006).

²²⁸ Mich. Comp. Laws § 324.32723(9) (2006).

²²⁹ Mich. Comp. Laws § 324.32723(10), § 325.1004(3),(4) (2006).

- Advance public notice and an opportunity for public comment.²³⁰

The statute also makes clear that water packaged in containers of 5.7 gallons or less (most bottled water products) is not considered a prohibited diversion under Michigan law.²³¹ Since 1985, Michigan law has prohibited diversion of water out of the Great Lakes watershed, effectively prohibiting almost any bulk diversion of water from the state.²³² However, because there has been some reason for concern about the Constitutionality of this blanket prohibition, the new statute expressly provides that if the prohibition is determined to be invalid, then new diversions are subject to the approval of the legislature's public trust duties.²³³

It is worth noting that almost all of the state's leading business, municipal, agricultural, and environmental organizations (including the bottled water industry) supported the passage of the legislation. The general consensus was that both water users and environmentalists would be better served by a proactive permitting system than common law litigation over water rights.

Michigan revisited its water withdrawal statutes in 2008 in connection with the state's approval of the Great Lakes-St. Lawrence River Basin Water Resources Compact.²³⁴ The Great Lakes Compact, approved by all of the eight Great Lakes states and Congress, generally bans the diversion and export of Great Lakes water outside of the Great Lakes basin.²³⁵ The compact defines water in containers greater than 5.7 gallons as a diversion, which is generally prohibited. However, the compact leaves to the individual states the decision of whether to treat water in containers of 5.7 gallons or less – meaning bottled water – as a prohibited diversion.²³⁶ If bottled water is not treated as a banned diversion by a state, it is still subject to numerous protective standards to ensure water conservation, environmental protection,

²³⁰ See Mich. Comp. Laws § 325.1017(3)-(5) (2006).

²³¹ Mich. Comp. Laws § 324.32701(e) (2006).

²³² Mich. Comp. Laws § 324.32703(2006).

²³³ See Mich. Comp. Laws § 324.32703a(2006).

²³⁴ Public Law 110-342, 122 Stat. 3739 (2008) (hereinafter "Great Lakes Compact").

²³⁵ See *id.* at §4.8. For a complete analysis of the Great Lakes Compact, see Noah D. Hall, *Toward A New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 Colo. L. Rev. 405 (2006) (and discussion of the compact's treatment of bottled water at pages 443-44).

²³⁶ Great Lakes Compact, *supra* note __, §4.12(10).

and reasonable use.²³⁷ None of the eight Great Lakes states, including Michigan, have elected to permanently ban the diversion and export of Great Lakes water in bottled water pursuant to the Great Lakes Compact, and will instead regulate bottled water withdrawals pursuant to the Great Lakes Compact's standards and state law.

Michigan did however enact stronger regulatory measures for bottled water than most other water withdrawals in the 2008 legislation.²³⁸ Michigan now regulates bottled water pursuant to the Great Lakes Compact by requiring water bottlers to obtain a permit for new or increased withdrawals of more than 200,000 gallons per day (a far lower threshold than for other water users).²³⁹ The state will only grant a permit for the withdrawal of water for bottled water if there are no individual or cumulative adverse resource impacts, the withdrawal is reasonable under state common law principles, and the water bottler has certified that it is in compliance with water conservation measures.²⁴⁰ Further, the state requires significant public notice and consultation procedures for proposed bottled water withdrawals.²⁴¹ With these measures, the Great Lakes states and Michigan statutory law protect both natural resources and the public's interest from bottled water withdrawals for more strictly than with any other type of water use.

²³⁷ Great Lakes Compact, *supra* note __, §4.11.

²³⁸ The major focus of Michigan's 2008 statutory reforms was a strengthening of its water withdrawal program by expanding its permit system and creating an assessment process to determine whether a proposed withdrawal may cause an adverse resource impact to river systems. Permits are now required for all new or increased withdrawals over 2 million gpd from any source, and these withdrawals are only allowed if they comply with the Great Lakes Compact and do not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties. *See* 2008 Michigan Public Acts 179-190. The most significant advancement of Michigan's 2008 statute is the development of a water withdrawal assessment process that determines the impact of a specific withdrawal on river systems by calculating the effect of the stream flow reduction on fish populations. The assessment process helps potential users and the state ascertain whether a new or increased "large quantity withdrawal" (withdrawals of over 100,000 gpd averaged over a 30-day period) from streams, rivers, or groundwater is prohibited because it causes an adverse resource impact. *See* Mich. Comp. Laws § 324.32721(1).

²³⁹ Mich. Comp. Laws § 325.1017(3).

²⁴⁰ Mich. Comp. Laws § 325.1017(4).

²⁴¹ Mich. Comp. Laws § 325.1017(5)-(6).

2. The Not So Bad: Modest regulatory reforms in New England

Bottled water controversies also recently led to legislative reforms in New England. Vermont significantly revised its groundwater policy in 2008,²⁴² requiring greater regulation and garnering national attention.²⁴³ Virginia Lyons, a Democratic state senator behind the reform declared that a goal of the new legislation was to “protect [Vermont’s] groundwater for the next several generations.”²⁴⁴ Much of the push for the reform came in the form of treating groundwater similarly to surface water in Vermont. Republican state senator Diane Snelling, also a primary sponsor of the legislation, stated that compared to surface water “[groundwater is] the same public resource; there’s no sharp divide between surface water and groundwater.”²⁴⁵ Many media commentators echoed similar sentiments.²⁴⁶

Vermont’s 2008 legislation significantly amended the “Groundwater Protection” Chapter in Title 10 of the Vermont Statutes.²⁴⁷ The legislation set a new tone for groundwater management in Vermont. The opening section of the chapter now recognizes that groundwater should be regulated “in a manner that benefits the people of the state; is compatible with long-range water resource planning, proper management, and use of the water resources of Vermont; and is consistent with Vermont’s policy of managing groundwater as a public resource for the benefit of all Vermonters.”²⁴⁸ Most of the public attention given to the legislation, however, has been its recognition that the “groundwater resources of the state are held in trust for the public.”²⁴⁹

²⁴² S. 304, 2007-2008 Sess. (Vt. 2008).

²⁴³ For example, the change in groundwater policy was reported by the New York Times. See Felicity Barringer, *Bottling Plan Pushes Groundwater to Center Stage in Vermont*, THE NY TIMES at A14 (August 21, 2008).

²⁴⁴ See Tom A. Peter, *Though Awash in Water, Vermont Set To Protect Springs*, CHRISTIAN SCIENCE MONITOR at 2 (April 29, 2008).

²⁴⁵ See Joel Banner Baird, *Town Debates Water Flow*, THE BURLINGTON FREE PRESS at 1B (February 26, 2008).

²⁴⁶ See, e.g., Editorial, *Groundwater Rules Make Sense For State*, THE BURLINGTON FREE PRESS at 6A (April 17, 2008).

²⁴⁷ S. 304, 2007-2008 Sess. (Vt. 2008).

²⁴⁸ 10 V.S.A. § 1390(2) (2008).

²⁴⁹ 10 V.S.A. § 1390(5) (2008).

The legislation details several requirements for users of large amounts of groundwater. Users withdrawing more than 20,000 gallons per day, averaged over one month, must report their withdrawals to the state's secretary of natural resources.²⁵⁰ More restrictively, new or increased extraction of more than 57,600 gallons a day from a single well or spring will require a groundwater withdrawal permit.²⁵¹ To receive a permit, the proposed withdrawal must meet a number of requirements, including efficiency of use, consistency with water management plans, no undue adverse effects on existing water uses, the water supply, or wetlands, and "any other consideration that the secretary determines necessary for the conservation of water or protection of groundwater quality."²⁵²

The seemingly strong statute, however, contains broad exemptions in both the reporting and permitting requirements. Many of the most significant water uses, including domestic, farming, dairy, public water, and geothermal heating are exempt from most of these requirements.²⁵³ Similarly, the statute undermines its recognition of groundwater as a public trust resource by limiting the application of the doctrine. The legislature granted a presumption of compliance to certain types of groundwater uses.²⁵⁴ Domestic use, public water systems, farming use, and dairy use are all presumed valid under the public trust.²⁵⁵

The Vermont legislation also appears to give special treatment to bottled water by specifically excluding bottled water from the list of uses that are presumed to be valid under the public trust,²⁵⁶ as well as providing for additional requirements for approval of a source permit for bottled water manufacturers.²⁵⁷ However, bottled water is singled out in the statute in order to correct a potential loophole in the legislation. Under Vermont law, bottled water manufacturers are regulated as public water systems.²⁵⁸ As public water systems are given special exemptions

²⁵⁰ *Id.* at § 1417(a).

²⁵¹ *Id.* at § 1418(a).

²⁵² *Id.* at § 1418(e).

²⁵³ *Id.* at §§ 1417(b) & 1418(b).

²⁵⁴ *Id.* at § 1418(i).

²⁵⁵ *Id.*

²⁵⁶ *Id.* at § 1418(i)(3).

²⁵⁷ *Id.* at § 1675(g).

²⁵⁸ *Id.* at § 1671(5)(B).

by the new regulations, the legislature made sure that bottled water manufacturers could not also use these exemptions.

The Vermont legislation was introduced with considerable fanfare, yet the original version of the bill was significantly different from the final version. Importantly, the standards first proposed were significantly stricter and had far fewer exemptions. In the bill's final version, the threshold amount of groundwater allowed to be withdrawn without registration was doubled, the threshold amount allowed without a permit was also modestly raised, and the implementation was delayed.²⁵⁹ Additionally, the original version of the bill placed the burden of proof on the applicant to prove that a proposed withdrawal complied with all requirements.²⁶⁰ Finally, the original version of the bill did not contain the exemptions to the permitting and reporting processes that appear in the final version.²⁶¹ It was the Senate Committee on Natural Resources that recommended adding most of the exemptions, while the House Committee on Fish, Wildlife, and Water Resources recommended adding the dairy industry to the exemptions.²⁶² These exemptions were likely created in order to quiet opposition and increase the likelihood of passage.²⁶³

Language relating to the public trust was also minimized as much as possible in the final version of the Vermont legislation. Though the original version required that no permit would be granted if it had an "adverse affect on the public good," the final version of the bill removed all references to the "public good."²⁶⁴ A proposed section that granted automatic standing to any person suing under the statute's public trust cause of action was deleted from the final version of the bill.²⁶⁵ Finally, the list of uses that are presumed valid under the public trust were added to the final version of the bill,²⁶⁶ further limiting the practical and legal importance of the public trust provision.

²⁵⁹ Compare S. 304 Introduced with S. 304. The original amount requiring reporting was 10,000 gallons per day and the original amount requiring a permit was 50,000 gallons per day. *Id.*

²⁶⁰ *Id.*

²⁶¹ *Id.*

²⁶² Compare S. 304 Introduced with S. 304 passed by first house and S. 304.

²⁶³ See Barringer, *supra* note __.

²⁶⁴ Compare S. 304 Introduced with S. 304.

²⁶⁵ *Id.*

²⁶⁶ *Id.*

Despite these changes, the Vermont legislation still garnered praise upon its passage. Environmental groups in Vermont considered it a promising step towards the future.²⁶⁷ However, the bill was not without its critics. One commentator, finding that the law did not go far enough, pointed out that the regulation would still allow large withdrawals of groundwater, thereby endangering the resource.²⁶⁸ Similarly, the business community found that the bill “duplicated existing requirements,” and so fell short of real reform.²⁶⁹ It is still too early to tell how much the new legislation will impact the water bottling industry in Vermont. Given the amount of discretion the secretary of natural resources has in granting permits, the way the laws are implemented will likely have a great bearing on the state’s bottled water business.

Maine also recently amended its water policy in response to bottled water controversies.²⁷⁰ In 2007, Maine passed legislation that created the Water Resources Planning Committee (“WRPC”) and created a permit system for groundwater extraction.²⁷¹ The new legislation requires the WRPC to “plan for the sustainable use of water resources” by reviewing current water use, investigating watersheds at risk, and making policy recommendations in the event that the committee finds that “oversubscription of water use” is present.²⁷²

The legislation also requires permits for the operation of “significant groundwater wells” (“SGWs”). Maine divides SGWs into two categories: Any method or device used to obtain groundwater that is located 500 feet or less from any freshwater

²⁶⁷ See, e.g., Johanna Miller, Op-Ed, *Lawmakers Took Long View In Protecting The State’s Groundwater*, BATTLEBORO REFORMER (Vermont) (June 7, 2008) (“The Legislature’s action . . . is timely and essential.”); *VNRC Celebrates Successful Effort to Help Protect Vermont’s Groundwater*, Vermont Natural Resources Council (Aug. 2008), <http://www.vnrc.org/article/articleview/7093/1/632/> (“Vermont, finally, has a law in place that will help protect our drinking water from overconsumption, depletion and privatization.”).

²⁶⁸ See the comments of Annette Smith, in Peter, *supra* note ____.

²⁶⁹ See Barringer, *supra* note ____.

²⁷⁰ See Associated Press, *Maine Water Extraction Bill Passes*, AFX INTERNATIONAL FOCUS (June 21, 2007) (describing a recurring referendum campaign regarding groundwater that is to be disbanded upon passage of the legislation).

²⁷¹ 2007 Me. Laws Chap. 399.

²⁷² ME. REV. STAT. ANN. tit. 5, § 3331(8) (20xx).

body or wetland and withdraws at least “75,000 gallons during any week or at least 50,000 gallons on any day” qualifies as a significant groundwater well.²⁷³ Beyond 500 feet, any method or device used to obtain groundwater must withdraw “at least 216,000 gallons during any week or at least 144,000 gallons on any day” to qualify as a significant groundwater well.²⁷⁴ For the department to grant a permit, an applicant must demonstrate that the withdrawal “will not have an undue unreasonable effect on waters of the state [and] water-related natural resources and existing uses.”²⁷⁵ The new statute requires the department to consider “the direct effects of the proposed withdrawal and its effects in combination with existing water withdrawals.”²⁷⁶ As with Vermont, some exceptions exist to the permit system in Maine, including public water systems (but not those used solely to bottle water), domestic uses, and agricultural uses.²⁷⁷

As was the case in Vermont, Maine’s legislation went through significant revisions before the final version was passed. The original bill proposed far more extensive revisions of Maine’s water policies than the version that was enacted. The original bill called for the creation of the Freshwater Resource Board (“FRB”) with far greater powers than those of the WRPC.²⁷⁸ The original bill required the FRB to “take all reasonable measures to ensure an adequate supply of groundwater.”²⁷⁹ The original bill did not set forth any of the groundwater withdrawal standards found in the final version, presumably because the FRB would have done so through administrative regulations. In addition to these changes, three substantive and contentious issues were completely removed from the final version of the legislation: a prohibition on bulk water transport for commercial purposes, the adoption of the Restatement reasonable use doctrine for groundwater, and the examination of the public trust doctrine and its applicability to groundwater to be carried out by the FRB.²⁸⁰ The true motivation and focus of the original bill can be found in its summary, which specifically mentions bottled water. Almost as though expecting

²⁷³ ME. REV. STAT. ANN. tit. 38, § 480-B(9)(A)(A) (20xx).

²⁷⁴ *Id.*

²⁷⁵ ME. REV. STAT. ANN. tit. 38, § 480-D(10)(10) (20xx).

²⁷⁶ *Id.*

²⁷⁷ ME. REV. STAT. ANN. tit. 38, § 480-B(9)(A)(B) (20xx).

²⁷⁸ *See* original bill (SP 610 - L.D 1743).

²⁷⁹ *Id.*

²⁸⁰ *Id.*

opposition to the legislation, the summary explains that “[t]he bill provides for the continuation of water removal by water bottling interests when the removal of water does not threaten [the goals of protecting Maine’s people, surface water, and wildlife].”²⁸¹

The passage of the water reform legislation in 2007 was neither the beginning nor the end of the groundwater debate in Maine. In previous sessions, failed proposals included an attempt to adopt a reasonable use doctrine for groundwater,²⁸² and a bill that would have made groundwater a public resource in Maine.²⁸³ As of early 2009, another proposal is gaining traction that would place a tax on bottled water.²⁸⁴

Clearly some good has come from the bottled water controversies in New England, as the legislatures (and presumably the public) in Vermont and Maine became aware of the need to better manage groundwater resources. However, in both states the resulting legislation fell short of the initial promise. In Vermont, bottled water opponents “won” legislative recognition of the public trust doctrine in groundwater, but with so many concessions that the recognition may have no real impact on major water users. In Maine, what began as an effort to provide more comprehensive water protection ended as a modest permitting statute, with very limited coverage and applicability. As these laws were just passed, time will tell if they are effective in resolving bottled water controversies or simply create another bureaucratic hurdle along the way.

3. The Really Ugly: Michigan’s Bottled Water Moratorium Executive Order

Before Michigan got water policy right in response to bottled water disputes, it got it very wrong. In 2005, Michigan Governor Jennifer Granholm issued a moratorium on bottled water permits for companies intending to export water outside the Great Lakes Basin.²⁸⁵ The executive directive was signed in late May of 2005, and was specifically aimed at an agreement for water supply

²⁸¹ *Id.*

²⁸² LD 1925, 122nd Leg. (2006).

²⁸³ LD 1489, 122nd Leg. (2005).

²⁸⁴ See Noel K. Gallagher, *Challenges piling up for Poland Spring*, PORTLAND PRESS HEARALD (Maine) at A1 (Feb. 6, 2009).

²⁸⁵ Exec. Directive No. 2005-5 (May 26, 2005).

made between the City of Ewart and Nestlé Waters North America.²⁸⁶ Governor Granholm described her reasons for the order in the directive itself. Referencing Michigan's vast water resources, the governor pointed out that "abundance is not a license to be reckless, foolish, or wasteful."²⁸⁷ The governor further noted the lack of clarity in Michigan law "regarding the regulation of water withdrawals and water bottling."²⁸⁸ Finally, the governor cited the legislature's failure to "seriously debate and act on this issue."²⁸⁹

For these reasons, the governor effectively halted new bottled water export outside of the Great Lakes Basin. The executive directive ordered all state departments and agencies to halt issuing permits or approvals for bottled water processors unless the applicant certified "that the delivery or sale of all bottled water production [would] be limited to the Great Lakes Basin."²⁹⁰ The directive concluded with a request that Michigan be equipped with policies and legal tools to make "principled determinations concerning ... future water bottling proposals."²⁹¹

In the same year that the Executive Directive went into effect, the Michigan Department of Environmental Quality ("MDEQ") issued several permits to Nestlé regarding its water extraction from a well owned by the City of Ewart.²⁹² The department attached several special conditions to each of the permits.²⁹³ The first of these special conditions required Nestlé to certify that the water purchased from the City of Ewart be "distributed solely within the Great Lakes Basin."²⁹⁴ Presumably, MDEQ placed this requirement on the permit to comply with the governor's Executive Directive. Challenging its legality, though,

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ *Id.*

²⁸⁹ *Id.*

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² First Amended Complaint for Declaratory and Injunctive Relief at 6-7, Nestlé Waters N. Am., Inc. v. Chester, No. 1:05-cv-00421 (W.D. Mich. Oct. 5, 2005).

²⁹³ *Id.*

²⁹⁴ First Amended Complaint for Declaratory and Injunctive Relief Exhibit 3, Nestlé Waters N. Am., Inc. v. Chester, No. 1:05-cv-00421 (W.D. Mich. Oct. 5, 2005).

Nestlé initiated legal proceedings against the director of MDEQ, as well as Governor Granholm, both in their official capacities.²⁹⁵

In its complaint, Nestlé challenged the special condition on the permit and the Executive Directive as violations of the “dormant” Commerce Clause of the U.S. Constitution.²⁹⁶ Nestlé also challenged the Water Resources Development Act of 1986 (“WRDA”), a federal law requiring every governor of the “Great Lakes States” to approve any diversion from the Great Lakes Basin,²⁹⁷ as not being applicable to their water extraction as well as violating the U.S. Constitution.²⁹⁸ In lieu of filing an answer to the complaint, the defendants filed a motion to dismiss, arguing that the federal abstention doctrine should be applied because of unresolved, complex state law issues that were to be decided by Michigan courts.²⁹⁹ Opposing the motion, Nestlé argued that the federal interests under the dormant commerce clause were too important for a federal court to abstain from the proceedings.³⁰⁰ Nestlé also argued that the related state court case on which plaintiffs relied was distinct, in that it only challenged the permits under state law, whereas the federal proceedings challenged the permits under the federal Constitution.³⁰¹

Less than a year after the case began and even before the motion to dismiss was argued, Nestlé dropped the suit and Governor Granholm lifted the moratorium on out-of-state bottled water permits.³⁰² Essentially a settlement was reached in the form of passage of long-awaited comprehensive water management laws by the Michigan Legislature (described above).³⁰³ Since the legislation exempted water in containers of 5.7 gallons or less from

²⁹⁵ See First Amended Complaint, *supra* note __.

²⁹⁶ *Id.* at 8-10.

²⁹⁷ 42 U.S.C. § 1962d-20.

²⁹⁸ See First Amended Complaint, *supra* note __ at 11-20.

²⁹⁹ See Defendants Steven E. Chesters and Jennifer M. Granholm’s Brief in Support of Motion to Dismiss or, in the Alternative, to Stay the Proceedings, Nestlé Waters N. Am., Inc. v. Chester, No. 1:05-cv-00421 (W.D. Mich. Oct. 5, 2005).

³⁰⁰ See Plaintiff’s Brief in Opposition to Defendants’ Motion to Dismiss or, in the Alternative, to Stay the Proceedings, Nestlé Waters N. Am., Inc. v. Chester, No. 1:05-cv-00421 (W.D. Mich. Oct. 5, 2005).

³⁰¹ *Id.* at 1.

³⁰² See John Flesher, *Company Drops Bottled Water Lawsuits*, MUSKEGON CHRONICLE (Michigan) at B2 (March 15, 2006).

³⁰³ *Id.*

the prohibition on out-of-basin diversions,³⁰⁴ Nestlé had no reason to continue its suit, as it could now obtain a permit for bottled water to be sold out of the state of Michigan, and outside of the Great Lakes Basin.

This controversy demonstrates the pitfalls of knee-jerk political reactions to bottled water disputes. While Nestlé's challenge was never considered because a settlement was reached, Michigan's initial approach to bottled water controversies certainly raised legitimate legal and policy concerns. Further, Michigan's moratorium on bottled water and limitation on the distribution of bottled water within the Great Lakes basin would do nothing to protect the overall health of water resources or other water users from water withdrawals. Fortunately, reason and good policy prevailed, and after the moratorium Michigan ultimately enacted the sound water withdrawal policy discussed above that protects the Great Lakes and other water resources from all water withdrawals, including bottled water.

IV. NEW STRATEGIES: WATER IS NOT FOR SALE (UNLESS THE STATE GETS PAID)

As the case studies illustrate, even the best state efforts for managing water resources in response to bottled water disputes leave bottled water opponents unsatisfied. To some extent, this is typical of the legal system and water law in particular, which tends to favor optimal utilization of water resources balancing multiple competing interests. Bottled water opponents will also be frustrated by state laws and judicial opinions that address the conditions for a water bottler's withdrawal, but leave unanswered fundamental questions of ownership, control, and the right to profit from water. With this collective experience, bottled water opponents have turned to two other approaches that go beyond improved regulation: the public trust doctrine and taxing bottled water. So far, neither has proven legally or politically fruitful, but that has not done anything to diminish the hope that opponents have for both strategies.

³⁰⁴ M.C.L. 324.32701(1)(p).

A. *The False Hope of the Public Trust Doctrine*

Disappointed by judicial and regulatory outcomes, bottled water opponents have turned their attention to the public trust doctrine as a tool for addressing their concerns. Maude Barlow, one of the leading opponents of bottled water and water commoditization,³⁰⁵ told the New York Times that reliance on the public trust doctrine to protect groundwater is critical in the fight against bottled water and prepares states for “the day when demand for groundwater outstrips supply.”³⁰⁶ Similarly, author David Dempsey claims that the public trust doctrine provides the strongest argument that states “can ‘just say no’ to water exports and diversions” including bottled water.³⁰⁷

The public trust doctrine has been extensively analyzed, discussed, and written about in hundreds of law review articles since Professor Joe Sax reintroduced the concept into environmental law in 1970³⁰⁸ and needs only a brief introduction here. At its core, the public trust doctrine protects public rights in navigable waters by ensuring public access to navigable waters and limiting the state’s ability to divest itself of navigable waters for the gain of private parties.³⁰⁹

However, there are two significant problems with relying on the public trust doctrine to oppose bottled water withdrawals. First, almost all contentious bottled water disputes involve small springs and groundwater, and very few states have extended the public trust doctrine to non-navigable springs and groundwater. Second, even if the public trust doctrine did apply to the small springs and groundwater used by many water bottlers, there is no legal authority to suggest that the bottling and sale of water infringes on public rights to the water and would thus violate the principles of the public trust doctrine.

³⁰⁵ Ms. Barlow is the Senior Advisor on Water to the President of the United Nations General Assembly and author of *BLUE COVENANT: THE GLOBAL WATER CRISIS AND THE COMING BATTLE FOR THE RIGHT TO WATER* (2008).

³⁰⁶ Barringer, *supra* note __.

³⁰⁷ DEMPSEY, *supra* note __.

³⁰⁸ See Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 473 (1970).

³⁰⁹ *Illinois Central Railroad v. Illinois*, 146 U.S. 387 (1892).

A survey of the application of the public trust doctrine indicates that only a handful of states – notably California,³¹⁰ Hawaii,³¹¹ and most recently Vermont³¹² – have explicitly extended the public trust doctrine to groundwater. Numerous states have expressly rejected attempts to expand the public trust doctrine beyond its historic navigable waters roots.³¹³ Legal scholars, armed with scientific arguments demonstrating the clear hydrologic connection between groundwater and surface waters and the slow pace of groundwater regulation reforms, have urged legislatures and courts to expand the public trust doctrine to groundwater.³¹⁴ While modern scientific knowledge of groundwater-surface water hydrology certainly gives some merit to this argument, the law of the public trust doctrine itself makes it an odd fit for groundwater resources.

The public trust doctrine serves four primary purposes: (1) it limits to some extent the ability of the state to divest itself of, or otherwise transfer title to, public trust assets to private parties; (2) it provides public access for the exercise of traditionally protected public rights such as fishing and navigation; (3) it provides a basis for government regulation to protect natural resources; and (4) it may provide a legal cause of action for citizens seeking to prevent environmental harm to a resource. To consider the merits and need for extending the public trust doctrine to groundwater, it is useful to examine each purpose as it relates to groundwater.

(1) The public trust doctrine limits, to some extent, a state's ability to divest itself of, or otherwise transfer title to, public trust assets to private parties. This principle was first

³¹⁰ In *Nat'l Audubon Soc'y v. Super. Ct. of Alpine County (Mono Lake)*, 658 P.2d 709, 721 (Cal. 1983), the California Supreme Court held that the public trust doctrine applies to non-navigable waters that are tributary to a navigable water, which could then apply to groundwater when hydrologically connected to navigable waterway.

³¹¹ See *In re Water Use Permit Applications*, 9 P.3d 409, 447 (Haw. 2000).

³¹² See 10 V.S.A. § 1390(5) (“groundwater resources of [Vermont] are held in trust for the public”).

³¹³ See, e.g., *Bott v. Natural Resources Comm.*, 327 N.W.2d 838, 846 (Mich. 1982); *Evans v. City of Johnstown*, 410 N.Y.S. 2d 199, 206 (N.Y. Sup. 1978); *Gwathmey v. State Through Dept. of Environment, Health, and Natural Resource* 464 S.E.2d 674, 686 (N.C. 1995); *Rettkowski v. Dep't of Ecology*, 122 Wash. 2d 219, 232-4, 858 P.2d 232, 239 (Wash. 1993).

³¹⁴ See, e.g., Jack Tuholske, *Trusting the Public Trust: Application of the Public Trust Doctrine to Groundwater Resources*, 9 VERMONT J. OF ENV. LAW. 189 (2008).

established by the United States Supreme Court in *Illinois Central Railroad v. Illinois*.³¹⁵ In this famous decision, the Supreme Court held that the state of Illinois could not convey title to a critical portion of Lake Michigan shoreline to a railroad company. However, it remains unclear whether this limitation is substantive or merely procedural – that is, the public trust doctrine may only require certain procedures to guarantee public accountability when the state conveys trust property to a private party.³¹⁶ Even if the public trust doctrine provides only a procedural check on the state’s ability to transfer title to public trust resources to private parties, it is still an important and valuable protection for critical public trust resources.

However, this purpose of the public trust doctrine is not applicable to groundwater. Unlike the navigable waters and their shorelines and underlying beds, which are protected by the public trust doctrine, most states do not hold title to the groundwater within their borders. Thus, states would not generally be in a position to transfer title to groundwater resources to a private party. While many states have statutes which define “waters of the state” to include groundwater, this is for purposes of regulatory authority, not ownership.³¹⁷ Ohio provides a clear example of this point. Ohio’s water use statute defines “waters of the state” broadly to include “all ... watercourses, waterways, wells, springs, ... and other bodies or accumulations of water, surface and underground ... regardless of the depth of the strata in which underground water is located, that are situated wholly or partly within or border upon this state”³¹⁸ However, courts have made clear that the state of Ohio does not “own” the groundwater, and can even be liable for a taking when it interferes with private groundwater rights.³¹⁹

(2) The public trust doctrine protects traditional public rights such as fishing, navigation, and in some states recreational use of public trust waters.³²⁰ Public access for

³¹⁵ 146 U.S. 387 (1892).

³¹⁶ See Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986).

³¹⁷ See, e.g., Conn. Gen. Stat. § 22a-15 (1995); Mass. Gen. Laws ch. 21L, § 1 (2004); Nev. Rev. Stat. § 533.025; New Jersey Statutes § 58:11A-2(b).

³¹⁸ Ohio Rev. Code § 1501.30(6).

³¹⁹ See *McNamara v. Rittman*, 838 N.E.2d 640 (Ohio 2005).

³²⁰ See, e.g., *Glass v. Goeckel*, 703 N.W.2d 58, 62 (Mich. 2005).

navigation, fishing, and recreation is the most fundamental and well-established purpose and legal implication of the public trust doctrine. For example, the Northwest Ordinance of 1787 provided that “navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways, and forever free....”³²¹ However, protecting traditional public rights such as fishing and navigation is simply not applicable to groundwater. One cannot navigate, fish, or otherwise use groundwater for recreation. While groundwater flows to a surface water may be necessary to ensure that the surface water can support protected public navigation, fishing, and recreation,³²² the protected public interest is still in the navigable water itself.

(3) The public trust doctrine has been cited as a basis for government regulation to protect natural resources. Governments have limited powers of regulation, and in some circumstances may lack the constitutional authority to regulate certain private conduct that could harm a natural resource. In these circumstances, it has been argued that the public trust doctrine gives government another legal basis for regulation.³²³ However, every state already has ample authority to protect groundwater and groundwater-dependent natural resources without the groundwater itself being subject to the public trust doctrine. State constitutions, statutes, and the police power allow states to regulate water use, include groundwater withdrawal, without expanding the public trust to groundwater.³²⁴

(4) The public trust doctrine may provide a legal cause of action for citizens seeking to prevent environmental harm to a resource. This was the hope for the public trust doctrine when Professor Joe Sax launched the modern public trust doctrine into the environmental law field in 1970.³²⁵ However, since 1970 the public trust doctrine has been used with only limited success as a

³²¹ The Northwest Territorial Government, Ordinance of 1787 art. IV (1787).

³²² See Robert Glennon, *WATER FOLLIES: GROUNDWATER PUMPING AND THE FATE OF AMERICA'S FRESH WATERS* (2002).

³²³ See Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. at 655-56.

³²⁴ See Part III.B., *supra*.

³²⁵ See Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 473 (1970).

cause of action for citizen lawsuits to protect the environment.³²⁶ This is due in large part to the rise of statutory environmental protections with citizen enforcement provisions since 1970.³²⁷ An ironic example comes from Professor Sax's work in Michigan, which passed the landmark Michigan Environmental Protection Act (MEPA), authored in large part by Professor Sax to further the goals of the public trust doctrine.³²⁸ MEPA provides that "any person may maintain an action in ... court ... against any person for the protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction."³²⁹ Thus, MEPA and similar statutes in other states give citizens a legal cause of action to prevent environmental harm to groundwater and groundwater-dependent natural resources. Even without express statutory authority, common law groundwater and riparian doctrines give citizens with protectable water rights legal relief for harm to water resources.³³⁰

Thus, expansion of the public trust doctrine to groundwater may not have the legal significance hoped for by proponents or feared by opponents. The primary purposes of the public trust doctrine are either inapplicable to groundwater or duplicative of existing Constitutional and statutory law. It seems that expansion of the public trust doctrine to groundwater is primarily a strategy based on the ideology of water ownership rather than the legal realities of the likely outcomes.³³¹

Nonetheless, there is room for a modest pragmatic proposal to apply the public trust doctrine to some groundwater withdrawals (including those for bottled water) that have the potential to impact navigable waters. Some groundwater withdrawals (individually or

³²⁶ See Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986).

³²⁷ See Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 NOTRE DAME L. REV. 699 (2006).

³²⁸ See *id.* at 721.

³²⁹ M.C.L. § 324.1701(1).

³³⁰ A notable exception is the "rule of capture" applied by some states to groundwater disputes, which does not give groundwater users any legal relief for harm. See Part III.A.3., *infra*.

³³¹ See Tuholske, *supra* note __ at 236 ("Adoption of the public trust to protect water resources provides an important statement that can shift public views in favor of protecting public resources. The public trust crosses over from the law to a pure statement of societal vision." [internal quotations and citations omitted])

cumulatively) could diminish the flows of a navigable surface water protected by the public trust doctrine under applicable state law. This should be guarded against by all branches of government (legislative, judicial, and executive) consistent with the public trust doctrine. Legislatures, agencies, and courts should not allow any withdrawal of groundwater to impair or diminish the public trust in connected navigable surface waters subject to the public trust doctrine. For example, if groundwater withdrawals were to threaten navigation on a navigable river, those groundwater withdrawals should not be allowed as they would violate the public trust doctrine. Similarly, if groundwater withdrawals lowered lake levels on a navigable inland lake such that the public could no longer access it for fishing or hunting, those groundwater withdrawals should not be allowed as they would violate the public trust doctrine.

Putting aside the potential for direct and indirect impacts on traditional public rights in navigable waters, there is simply no caselaw from any state to suggest that the pumping of groundwater for bottling and sale is prohibited by the public trust doctrine, regardless of whether that water is subject to the public trust doctrine or not. It's not for lack of trying by bottled water opponents, who often have a zealous and ideological passion for the public trust doctrine. Rather, no court has accepted the argument from bottled water opponents that the bottling and sale of water (even from a waterbody protected by the public trust doctrine) violates any of the doctrine's principles.

It is also worth noting that the public trust doctrine would not offer a defense to a NAFTA or GATT challenge to a state law limiting the export of bottled water, as some commentators have suggested.³³² While NAFTA and GATT allow export restrictions for "conservation of exhaustible natural resources,"³³³ there is no similar provision for export restrictions pursuant to the public trust doctrine. Justifying restrictions on bottled water with the public trust doctrine may satisfy some opponents' ideological concerns, but would do nothing to defend such restrictions from challenges pursuant to international trade law.

³³² See James M. Olson, *Navigating the Great Lakes Compact: Water, Public Trust, and International Trade Agreements*, 2006 MICH. ST. L. REV. 1103, 1129-32 (2006).

³³³ GATT, art. XX(g); NAFTA, art. 2101 (incorporating GATT Article XX(g) and stating that it applies to measures relating to the conservation of living and non-living exhaustible natural resources).

B. If Water is Going to Be Sold, the State Should Share in the Profits

While some bottled water opponents claim that the public trust doctrine should limit the bottling and sale of water, other opponents simply want to ensure that the state gets a share of the profits. For example, in early 2009, Governor Charlie Crist of Florida proposed a 6 cents-per-gallon water extraction tax on bottled water producers.³³⁴ Governor Crist noted that over twenty companies, including Nestle Waters of North America, Coca-Cola, and Pepsi, profit ten to one hundred times off of the cost of each bottle of bottled water since the only cost to pump and extract water is a one-time, \$150 water permit.³³⁵

The Florida Department of Environmental Protection (“DEP”), working with Governor Crist, estimates that a 6 cents-per-gallon extraction fee on water bottlers would apply to about 5.4 million gallons a day and would generate around \$56 million in the first year.³³⁶ The generation of \$56 million is in stark contrast to the \$15 million deficit the DEP is running on with regards to water projects.³³⁷ The DEP reported that if the fee were passed on to customers, the customer would see an increase in cost on a pint-sized bottle of less than a penny.³³⁸ The DEP would phase in the tax and use the money raised to finance alternative water supply sources, such as desalination plants.³³⁹

In response to Governor Crist’s proposal, Kent Koptiuch, a groundwater professional and the Natural Resource manager for a Nestle Waters North America bottling facility, counters that the water bottling companies did not “cause[d] the overdevelopment that has led to water shortages” and that the “tax will do nothing to

³³⁴ Marc Caputo and Steve Bousquet, *Gov. Charlie Crist sees bright spots with state budget*, Miami Herald, February 20, 2009, available at <http://www.miamiherald.com/news/legislature/story/914452.html>.

³³⁵ Mary Ellen Klas, *Charlie Crist wants to stop free flow for bottled water*, Miami Herald, March 3, 2009, available at <http://www.miamiherald.com/news/legislature/v-print/story/929571.html>.

³³⁶ *Id.*

³³⁷ *Id.*

³³⁸ *Id.*

³³⁹ *Id.*

prevent more of [the water shortages] from happening.”³⁴⁰ Koptiuch also argues that because water is a renewable resource, its use and withdrawal should not be taxed.³⁴¹ The problem Florida faces is not due to water bottling companies, Koptiuch suggests, but rather, the problem is due to Florida’s mismanagement of development and the water resource itself.³⁴² The tax would not create an incentive for communities to save water and singles out water bottling companies while other bottled drinks such as carbonated beverages and sports drinks are not subject to the tax, although they use water as well.³⁴³ Koptiuch points out that even those companies that freeze the water they extract and sell it as ice will not be taxed under Governor Crist’s proposal.³⁴⁴

Maine has also attempted several variations on limiting taxing water extraction by water bottlers. In 2004, a former Maine legislator, Jim Wilfong, leader of H2O for ME pushed for a 20 cents-per-gallon tax on groundwater extractions for bottled water.³⁴⁵ Wilfong suggested that the revenue from such a tax could generate \$80 to \$100 million a year and could be used for a Water Dividend Trust to support small business development and to monitor the water extractions from Maine’s aquifers.³⁴⁶ However, when Maine passed a new water management statute in 2007, it did not include an extraction tax.³⁴⁷

New Hampshire has also considered a tax on extractions by water bottlers.³⁴⁸ In 2004, the New Hampshire legislature was faced with a proposal for a 5 cents-per-gallon water tax.³⁴⁹ While both Republicans and Democrats agreed that a tax on commercial

³⁴⁰ Kent Koptiuch, *Crist’s Tax Plan Doesn’t Hold Water*, Tampa Tribune, March 18, 2009, available at <http://www2.tbo.com/content/2009/mar/18/nacrist-tax-plan-doesnt-hold-water/news-opinion-commentary/>.

³⁴¹ *Id.*

³⁴² *Id.*

³⁴³ *Id.*

³⁴⁴ *Id.*

³⁴⁵ *Group plans water-extractions tax, asks state support*, U.S. Water News Online, August, 2004, available at <http://www.uswaternews.com/archives/arcpolicy/4grouplan8.html>.

³⁴⁶ *Id.*

³⁴⁷ See discussion of Maine’s water withdrawal statute, Part III.B.2., *supra*.

³⁴⁸ *New Hampshire bill would tax water bottlers 5 cents per gallon*, U.S. Water News Online, January 2004, available at <http://www.uswaternews.com/archives/arcpolicy/4newxhamp1.html>.

³⁴⁹ *Id.*

water bottlers' water extractions would discourage the bottled water business in the state, they differed on the fundamental question of whether the state wanted to discourage water bottling.³⁵⁰ Representative Mark Carter, who proposed the tax, believed that it would discourage businesses from putting pressure on the state's water resources and the tax would be a "unique approach to managing water resources."³⁵¹ Opponents questioned whether the law would negatively impact jobs, and whether the tax on the water would be worth the negative impact.³⁵² Rene Pelletier, who ran the state's public drinking water program, said that the agency was already protecting water resources and could order businesses to pump less water if problems with withdrawals arise.³⁵³ A representative of Monadnock Mountain Spring Water Company stated that the tax would harm the business, eliminate jobs, and the New Hampshire property taxes that the company pays.³⁵⁴

State political leaders are always looking for a new revenue source for both their general funds and their water protection efforts. Taxing bottled water makes some political sense, as it is a profitable and not always popular industry. Charging water bottlers a modest fee for the water that they then turn around and sell for a buck a bottle makes a compelling political argument. The proposed taxes could be a valuable source of funding for cash-strapped state water protection agencies, and the funding could even be used to directly protect and manage state groundwater resources. However, taxing water bottlers but not other water users could create a dangerous incentive for state water regulators to favor bottled water over other uses that will not generate revenue for their departments' budgets. This debate will likely grow as bottled water becomes more controversial and states look for new ways to share in the profits.

CONCLUSION

Along with climate change, globalization may be the most significant challenge for state water law in the twenty first century. The pressures on water resources are no longer limited to local

³⁵⁰ *Id.*

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ *Id.*

users and property owners, but now include supply for a global water market. Bottled water is the oldest and most mature water market that transcends state lines. Bottled water disputes have forced state courts and political leaders to reevaluate old doctrines and water management regulations. In most cases, bottled water disputes have led to meaningful and useful legal reforms, especially in the area of groundwater management. However, in some cases bottled water disputes have exposed problematic flaws in state water law and protectionist knee-jerk reactions by state political leaders that would do nothing to better protect water resources. Unsatisfied by modest reforms in the courts and legislatures, bottled water opponents have turned their hopes to the public trust doctrine and taxing water bottlers, strategies with significant legal and political weaknesses. Instead, bottled water opponents and state leaders should take the challenge of bottled water as an opportunity to further reform water management law with an emphasis on resource protection, science-based decision making, and water conservation. These approaches will help protect water resources from the pressures of globalization while respecting property rights and international trade law rules.