

# Water Resources Committee Newsletter

Vol. 11, No. 1

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## MESSAGE FROM THE CHAIR

**David R.E. Aladjem**

As I write this message, we've just finished the election and the pundits are now beginning to shift from the question of "who will win the election?" to the question of "how will the Obama administration govern?" The newspapers and the Internet are filled with uncertainty and—yet—hope.

The current issue of the Water Resources Committee Newsletter gives all of us an appreciation of the challenges facing water lawyers in the new administration and in our profession generally. Merely surveying the topics—Indian reserved rights, water quality trading, and the public trust doctrine; water issues in the deep South; water law reform in South Carolina; and the Great Lakes Compact—shows that the problems of water resources management have truly become national, if not international, in scope. In a nation with increasing demands for water, both in terms of supply and quality, and with diminishing sources of supply as a result of global climate change, our profession is challenged as never before to use our creativity and imagination to find ways to productively use the available resources.

The articles in this issue of the newsletter, as always, give me hope that our colleagues around the country think and care deeply about these challenges. We may (and often do) disagree about proposed solutions and sometimes even about whether certain problems even

exist, but I have always found most of us able, willing, and even eager to discuss the challenges facing water resources in a civil, deliberate and thoughtful manner. It is those qualities that give me confidence that we can help our clients meet the challenges of this new century and that make it a pleasure and an honor to chair this committee.

The primary forum for our discussions, of course, is the 27th Annual Water Law Conference in San Diego. Registration is now open for the conference and I urge each of you to attend if it is at all possible. Each year I attend, knowing that I will have learn something new, find some insight, and meet new friends. I look forward to seeing you in February.

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Vol. 11, No. 1, December 2008  
Jeff B. Kray, Editor**

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**27TH ANNUAL WATER LAW CONFERENCE  
*Change In The Midst Of The  
Constants Of Water Law***

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**Elizabeth P. Ewens  
Paul R. Haik**

Change is good though sometimes change feels like a lot. The upcoming 27th Annual Water Law Conference is a very important forum and will become the sounding board for review and discussion of the changes rapidly coursing through water law. The theme of the conference is: *Change In The Midst Of The Constants Of Water Law*. The program will provide an overview of critical sectors and aspects of water law which will be the crucibles for change driven by climatic shifts and other causes. There will be four principal focuses: first, a focus upon re-balancing underway in relations between tribal and federal water rights and amongst states. Another focus will be changes occurring in surface and groundwater management through presentations covering reservoir operations and aquifer storage and recovery techniques. A third focus will be upon practical legal skills addressing the limits of zealous advocacy and the utilization of experts. The final focus will be upon changes in regulation governing transfers of water and response and adaptation to the consequences of climatic change.

Following a wonderful tradition, Hotel Del Coronado, San Diego, California, will again host the conference. The dates of the conference are Feb. 18-20, 2009 and offer a late Valentine Day opportunity for busy counsel to meet, greet, and enjoy the San Diego sunshine and warmth. Additional information about the 27th Annual Water Law Conference can be found on the Section's Web site at [www.abanet.org/enviro/](http://www.abanet.org/enviro/) or by calling the Section office at (312) 988-5724.

**Elizabeth P. Ewens** is an attorney with the firm of *Ellison, Schneider & Harris L.L.P.*, in Sacramento, California, and represents a variety of public and private organizations in their water management needs. **Paul R. Haik** is a shareholder of *Krebsbach and Haik, Ltd.*, in Minneapolis, Minnesota, and works in the areas of water and local government law.

# HOT TOPICS: INDIAN RESERVED WATER RIGHTS, WATER QUALITY TRADING, AND THE PUBLIC TRUST DOCTRINE

From 2008 Eastern Water Resources Conference

Charlotte, NC  
May 1-2, 2008

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**Hope M. Babcock**  
**Georgetown University Law Center**  
**Washington, D.C.**

Although superficially disparate, each of the three “hot topics” I address here is a legal response to pressure being placed on surface water and water-based resources. One, Indian reserved rights to water, is a prudential or judge-made doctrine that is over 100 years old, but until recently was never used in the east. Another, nutrient trading, is a relative new non-regulatory innovation under the federal Clean Water Act that appears to be taking a firm hold in the Chesapeake Bay even though there are both legal and practical questions associated with its use. While the third, the public trust doctrine, is a centuries old common law doctrine that re-emerged in this country in the mid-twentieth century. Government agencies and private parties have used the doctrine over the years, particularly in the East, to protect water-based resources from conversion to commercial uses and to assure public access to those resources. Each of these initiatives reflects a unique approach towards protecting eastern water and water-based resources from over-use, degradation, or conversion to another use. I will begin by providing you with some background information about the resources to which they are being applied, then describe the three approaches, how they are being used, and the controversy that surrounds their use, and conclude with my predictions about their future use.

## A. A Depleted Resource

Since the 1980s, the East has been subject to increasing dry spells at the same time that the number of people living in riparian corridors has grown substantially.<sup>1</sup> The growing demand on riparian resources has stressed the capacity of the common law riparian doctrine, to allocate surface flow fairly and

efficiently among users and at the same time preserve sufficient water to meet ecosystem needs.<sup>2</sup>

In response to increasing consumption of surface water and the unanticipated problem of potential over consumption, many eastern states have incorporated features of the western appropriation doctrine into the riparian regime for managing surface flows.<sup>3</sup> However, eastern water managers have generally overlooked Indian tribes when deciding who gets this water, despite the fact that many eastern tribes depend on the water in those rivers for food and income, as well as for cultural identity and ceremonial purposes. One such tribe is the Mattaponi Indian Tribe of Virginia whose reservation abuts the Mattaponi River and who has depended on that river for its shad fishery and other cultural and subsistence purposes for centuries. As the demands on surface water increase in the East, tribes like the Mattaponi, find themselves competing with powerful non-Indian interests for an increasingly scarce resource. The riparian regime, under which eastern tribes compete for water, is not favorable to their claims as they have no guaranteed or reserved right to that water unlike western tribes.

Indian reserved water rights originated in *Winters v. United States*, a case involving a claim by several Montana tribes to water that flowed past their reservation.<sup>4</sup> The Court in *Winters* ruled that when the federal government established a reservation for the Fort Belknap tribes, it implicitly reserved water sufficient for the tribes’ purposes.<sup>5</sup> Over time, the federal courts expanded the doctrine announced in *Winters* to apply to non-Indian public lands and resources.<sup>6</sup> Western tribes rarely asserted their reserved rights to water in the first half of the last century, but this is no longer so. The result is that adjudicated *Winters* rights are a major source of uncertainty in the West as the disputes over water grow in frequency and intensity.<sup>7</sup> Although federal courts have put severe constraints on the purposes to which tribes may apply their “Winters rights,” *e.g.*, limiting their use to agriculture and prohibiting their off-reservation transfer, these rights nonetheless have offered tribes access to water they might otherwise not have had in an increasingly competitive market for the resource.<sup>8</sup>

In a 2006 law journal article,<sup>9</sup> I set out various arguments and theories as to why eastern tribes could assert reserved rights to water even though the tribes were not federally recognized and did not occupy federal reservations (two predicate facts for the assertion of reserved Indian water rights by tribes up to this point) and were not living in jurisdictions which employ the appropriation system for awarding rights to water (a system that relies on permitted, quantifiable, transferable property rights in water that can be allocated among competing users). In that piece, I argued that the *Winters doctrine*, as the reserved Indian right to water became to be known, should be recognized in the East because the origins of the doctrine were in common law riparianism, the dominant method of regulating water in the East, that the purpose of tribal reserved water rights, as reflected in the Court's opinion in *Winters*, was to provide distributive justice to tribes, and that certain utilitarian benefits accrued from recognizing reserved Indian water rights, such as encouraging water conservation and helping to protect the environment because tribal uses generally depend on water not being diverted for offstream uses.

While I thought my arguments were theoretically persuasive, I never dreamed that a court would actually agree with me. But, in February of last year, a Virginia Circuit Court held that the Mattaponi Indian Tribe could assert a claim to reserved water rights in the river that bears the tribe's name.<sup>10</sup> The court reasoned that even though the doctrine's preemptive force stemmed from its federal origins, nonetheless the reasoning that animated the *Winters doctrine* did not preclude the same reasoning "from potentially having an effect on the state level." The court also found "the idea that a state government may impliedly reserve sufficient water to achieve its goals for its resident Indian tribes" to be "undeniably compatible with the *Winters doctrine*."<sup>11</sup> Just as in *Winters*, the Virginia trial court opined that the Mattaponi could have impliedly negotiated to set aside sufficient water to sustain its reservation and protect its aboriginal practices in various 17th century treaties between the Virginia tribes and the Royal Governor of the Virginia Colony<sup>12</sup>. Although the state court was skeptical that an eastern tribe in a water-rich jurisdiction like Virginia

could show it needed the reserved water, as required under both the *Winters* and riparian doctrines, nonetheless it specifically refrained from saying that showing could never be made.

The court ultimately found that the Mattaponi had not met its burden of showing necessity and, therefore, could not defend against the Commonwealth's demurrer. However, not before declaring that the "*Winters doctrine* effectively stands for the proposition that a government, as well as an Indian tribe, can impliedly reserve water for that tribe's sustenance and thereby override customary state water law, when *necessary* in light of inadequate protection offered by state water law," and further that "the inadequacy of riparian law could necessitate an implication that both a quantity and quality of water needed to achieve the purposes underlying an Indian reservation were reserved at the time of the Indian reservation's creation."

Although the ruling went largely unnoticed in environmental circles, it achieved instant notoriety among Indian tribes as it was the first time that such a claim had been made on behalf of a non-federally recognized tribe in a riparian jurisdiction, let alone been recognized as viable by a state court judge. Therefore, I would be surprised if other eastern tribes did not attempt to make use of the doctrine. It is also conceivable that just as the *Winters doctrine* expanded over time to protect the water needs of other types of reserved western federal lands the concept of reserved Indian water rights may be expanded in the East to guarantee sufficient water not only for other federal reserved lands, but also for other types of state reserved lands.

## B. A Degraded Resource

The quality of water in the Chesapeake Bay and its aquatic-based habitat has continued to decline despite millions of dollars as well as a significant amount of human capital being spent on improving them.<sup>13</sup> Low oxygen levels, dead zones, algae blooms, loss of critical habitat for important commercial and recreational species, and declining populations of those species, continue to plague the Bay.<sup>14</sup> According to a

recent report by the Chesapeake Bay Program, “the overall ecosystem health of the Chesapeake Bay remains degraded . . . Major pollution reduction, habitat restoration, fisheries management and watershed protection actions taken to date have not yet been sufficient to restore the health of the Bay.”<sup>15</sup> The only way to get clear and well-oxygenated water, which are vital for a vibrant Bay ecosystem, is to reduce the amount of algae and turbidity in the Bay.<sup>16</sup>

Nutrient enrichment is a source of algae and turbidity in many mid-Atlantic estuaries, including the Chesapeake Bay. Nutrients cause algal blooms that lower dissolved oxygen levels below those necessary for healthy aquatic life.<sup>17</sup> Without sufficient dissolved oxygen underwater grasses, clams, and fish cannot survive. Algal blooms also block sunlight from submerged aquatic vegetation (SAV), which inhibits photosynthesis and oxygen production, causing the algae, as well as the SAV, to die and decompose.<sup>18</sup> As the SAV and algae decompose, they use dissolved oxygen that would otherwise be available to living organisms, further lowering dissolved oxygen levels and creating a positive feedback loop that reinforces the original cycle.<sup>19</sup> Decomposition of organic matter uses oxygen that living organisms need to survive and contributes to the water’s biological oxygen demand (BOD) level.<sup>20</sup> The higher the BOD level of water, the less dissolved oxygen is available for living organisms. Decomposing algae also contribute to the water’s turbidity, blocking sunlight and creating another destructive positive feedback loop.

Low dissolved oxygen levels and high turbidity harm the Bay’s resident species and interfere with commercial and recreational fishing.<sup>21</sup> Non-mobile species, like clams, worms and the fish and crabs that feed on them, adversely affected by low dissolved oxygen levels must relocate to areas with higher dissolved oxygen levels or perish.<sup>22</sup> Low dissolved oxygen levels and increased turbidity also kill vital bay grasses that provide food and shelter for aquatic creatures, such as the blue crab and summer flounder as well as spawning and nursery habitat for fish and waterfowl.<sup>23</sup>

The entire Maryland portion of the Bay has been impaired by excess nutrient pollution since 1996; little

progress has been made in reversing that effect.<sup>24</sup> For example, the Chesapeake Bay Program reported that 2005 had the lowest readings of dissolved oxygen since 1993, with approximately 10% of the Bay recording dissolved oxygen levels approaching zero.<sup>25</sup> The volume of hypoxic and anoxic waters in the Bay has more than tripled over the past forty years, while the Bay’s deep water dead zone, areas of the Bay with hypoxic or anoxic levels of dissolved oxygen, is expanding into major Bay tributaries like the Potomac River.<sup>26</sup> In July 2005, data from the Chesapeake Bay Program recounted that almost 40% of the Bay’s main stem beginning at Baltimore and extending 100 miles south to Hampton Roads, Virginia, is now dead — “the largest area of oxygen depleted water seen since monitoring began 20 years ago.”<sup>27</sup>

Nutrient loadings to the Bay and its tributaries from farm fields and sewage treatment plants are the principal cause of low dissolved oxygen levels and high turbidity, but reducing, let alone eliminating, the problem is neither easy nor cheap. The Bay watershed states estimate that it will take billions of dollars to design and implement measures for farmers to prevent soil, manure, and fertilizers from washing off their fields into the Bay watershed and to upgrade sewage treatment plants.<sup>28</sup> An additional problem facing state and federal officials is that runoff from farm fields is not regulated under the Clean Water Act.<sup>29</sup> Few municipalities or counties have the resources to upgrade sewage treatment plants.

Out of a sense of frustration with the “command-and-control” approach of the major pollution control laws, as well as allegations of the approach’s inefficiency, high cost, and barriers to innovation, economist since the 1970s have been urging the use of market-based mechanisms like emission trading programs as an alternative approach to controlling pollution. Initially proposed in Title IV of the Clean Air Act (CAA) for sulfur dioxide,<sup>30</sup> later by regulation for nitrogen oxide, and abortively mercury,<sup>31</sup> it would not take long for proponents of emission trading programs to propose its use for water pollution under the shadow of the Clean Water Act (CWA).<sup>32</sup> In water quality trading programs, the buyer is typically a permitted facility facing more stringent limitations and higher compliance costs, and the seller is an *unregulated* non point

source, most likely a farmer.<sup>33</sup> In this scenario, tradable credits are generated by either a point source from “over-controlling” its discharges or a nonpoint source by installing best management practice beyond those required to meet baseline (the discharge level that applies if there is no trading).<sup>34</sup> Thus, a trade involves the voluntary exchange of pollution reduction credits during which sources with higher pollution control costs purchase pollutant credits from sources with lower control costs. The idea behind trading is that water quality goals for the receiving stream can be met at a lower cost than by installing new technology, so the discharger saves money, and the credit supplier gains revenue. In addition to the direct benefits that the trading partners receive, where the trade involves a nonpoint source, there can be indirect benefits from the installation of best management practices to control farm runoff (and earn tradable credits), such as reduced erosion, improved habitat and flood retention, restoration of wetlands, and the simultaneous control of other harmful pollutants like pesticides that might also be washing off of farm fields.

A key element of any trading program, including those involving the discharge of pollutants to water, is a cap on the amount of pollution that can be emitted into the receiving environment. Once that number is established, in the case of water-based trades, either through the TMDL process<sup>35</sup> or through some other mechanism, including allowing the pollution sources to allocate the loadings among themselves, units of pollution can be bought, sold, or traded by those who are using the resource as a waste disposal sink so long as the over all cap is met. “Cap-and-trade programs require only that for every unit of resource that you use, you must buy an entitlement - which is to say, you pay for someone else to stop polluting, in an amount equivalent to your pollution, so that the total capped resource remains the same.”<sup>36</sup>

The U.S. Environmental Protection Agency issued a policy statement in January 1996 endorsing the use of effluent trading within watersheds.<sup>37</sup> Five months later, EPA supplemented its policy statement with a Draft Framework for Watershed Based Trading.<sup>38</sup> Among the principles that the Draft Framework set out was that trading participants must meet applicable effluent

limitations, that trades must be consistent with water quality standards in the entire watershed, and that trades must be developed within a TMDL or other comparable analytical and management framework. In January 2003, EPA released a revised Water Quality Trading Policy Statement,<sup>39</sup> which among other things emphasized EPA’s support for trading nutrients and sediment loadings, but declined to support trading other pollutants because they pose a higher risk of “hot spots” (concentrated areas of pollution) developing and require more scrutiny than might otherwise happen under its trading regime.<sup>40</sup> In the 2003 Trading Policy Statement, the agency changed its position on whether trading programs could be developed for waters where there is not yet a TMDL program in place.<sup>41</sup>

Additional elements of EPA’s recommended trading program include requiring that the program be specified in the facility’s individual discharge permit and that compliance with the program be tracked through monthly discharge monitoring reports. Trading cannot be used to meet technology-based effluent limits, cause a water body to go out of attainment for a particular water quality standard,<sup>42</sup> adversely affect water quality at a drinking water supply intake facility, or cause a cap established under a TMDL to be exceeded. EPA also “supports” public participating at the earliest stages and throughout the development of water quality trading program as well as easy and timely public access to information so the public can monitor trading activity.<sup>43</sup> EPA suggests that watershed permits issued to point sources involved in a trading program should include more stringent facility specific effluent limits or other conditions that would come into effect, if the pollutant cap established by the general watershed permit is exceeded.<sup>44</sup> The agency recommends that there be periodic assessments of the environmental and economic effectiveness of trading programs. These assessments should include ambient monitoring of the affected water body as well as studies that document nonpoint source load reductions, validate nonpoint source removal efficiencies, and determine whether water quality standards are actually being met.<sup>45</sup>

Although giving the outward appearance of “full-throated” support for water quality trading, a certain nervousness can be detected behind the agency’s

endorsement in the particulars of its recommendations. With good reason because “uncertainties” as well as practical and legal questions abound in trading water-based pollutants.<sup>46</sup> For example, determining the appropriate trading ratio between the trading partners involves a host of variables and measurement uncertainties, especially when nonpoint sources are involved, such as the distance between the buyer and seller, the distance from the source to the receiving water body, and the lack of equivalency among the pollutant forms.<sup>47</sup> These calculations are further complicated by the fact that when one of the trading partners is a nonpoint source, that source only generates *actual* pollution credits when it rains while the point source discharge creates a constant credit deficit from continuously discharging the pollutant. There will also be considerable uncertainty over the design, installation, maintenance, and effectiveness of proposed non point sources controls and the extent to which previously unregulated (and usually politically powerful) farmers will consent to inspections by government agencies or trading partners who may be liable if the controls are not effective. Best management practices to reduce nonpoint source pollution may take several years before they are actually effective, during which time the point source is continuing to discharge perhaps above permitted limits while the enforcing authorities look the other way. For all trading parties, whether point or non point sources, and for government agencies there are transaction costs involved in establishing and then administering a trading program, such as the cost of gathering information, negotiating the trade, implementing it and monitoring its performance.

Water quality trading programs also face an uncertain legal future because the CWA does not authorize trading, unlike the CAA. This creates serious legal risks for the permitted discharger if the Act’s requirements are not met. For example, because the CWA is silent on trading and the statute creates strict liability for any permittee discharging in violation of its permit, it would technically be a violation of the statute if a discharger uses trading to meet its permitted technology or water quality-based effluent limitations in exchange for reductions elsewhere. There may also be a legal argument that allowing a discharger to discharge

at levels that exceed permitted limits through an offsetting trading program violates the CWA’s “anti-backsliding” provisions, which prohibit changes to permits that weaken existing effluent limits.<sup>48</sup> There is additionally a practical concern that allowing a facility to continue to discharge in excess of its permitted limits would create “hot spots” in the receiving water body that could be a serious problem depending on where the discharging facility is located and might violate EPA’s antidegradation policy.<sup>49</sup> With this background on water quality trading programs, let me return to the Chesapeake Bay and Virginia’s nutrient trading program.

The Chesapeake Bay states and the District of Columbia entered into an agreement in 1983 to address the many sources of the problems I previously described.<sup>50</sup> The signatories amended the Agreement in 1987 specifically to address the problem of nutrient loadings and established a goal of attaining a 40% reduction in nitrogen and phosphorous in the Bay by 2000.<sup>51</sup> As it became clear to the signing parties that the 40% nutrient reduction goal would not be met, the signatories began to consider the possibility that trading might help achieve the goal, however, subject to certain limitations. Thus, trading would not be allowed for an individual source of nutrients unless the discharger had begun to implement the 40% goal; trading would only be allowed in the Bay’s major tributaries; and the program as a whole would be subject to a permit, regulation or an agreement that incorporated protection and enforcement provisions similar to those that could be found in a discharge permit.<sup>52</sup>

In 2005, Virginia enacted the Chesapeake Bay Watershed Nutrient Credit Exchange Program to meet the 40% reduction goal established in the 1987 Bay Agreement.<sup>53</sup> The law contains several features, which make it an interesting trading program to look at from both a practical and legal perspective.

One of these features is that Virginia’s trading program is authorized by a general permit, as opposed to individual discharge permits.<sup>54</sup> Putting aside the legality of using general permits for trading programs,<sup>55</sup> the Virginia general permit, which covers all facilities already holding individual discharge permits containing

effluent limits for the discharge of nutrients in five river basins,<sup>56</sup> specifically states that the numbers and requirements in the general permit shall preempt any other limits contained in those individual permits unless they are more stringent.<sup>57</sup> Since there is no TMDL for the Chesapeake Bay, each facility is given an annual mass load allocation of total nitrogen and phosphorous. Those plants that cannot meet their allocation can purchase credits reflecting reductions in those pollutants from a point source discharger in the same watershed as long as the purchasing facility applies the credits in the same calendar year in which the excess discharged occurred.<sup>58</sup> New or expanded facilities acquire annual mass load allocations, not credits, to compensate for their noncompliance with their allocation from either a permitted facility in the same tributary or by paying for the application of best management practices to reduce nonpoint source nutrient loadings.<sup>59</sup> There are no specific numeric criteria driving individual discharger performance either through a discharge permit or a TMDL; rather credits or waste load allocations are determined for each tributary with all the previously described attendant uncertainty that that process entails. In addition, because the general permit preempts individual permits none of the other requirements specifically included in individual NPDES permits that are not part of the general permit, such as the CWA's antidegradation policy and anti-backsliding provisions, are required.

A second unique feature of the Virginia law is that if a discharger is unable to purchase a sufficient number of credits to come into compliance with its annual mass load allocations, it can purchase equivalent credits by paying into the state Water Quality Improvement Fund, the primary goal of which appears to be public education not pollution reduction.<sup>60</sup> By allowing dischargers to offset any discharge in excess of their total annual waste load allocations through payment into a fund, which may not result in proportional water quality improvements, the provision may violate the CWA's anti-backsliding prohibition, which prohibit weaker effluent limits than those in place under prior permit,<sup>61</sup> and may not protect designated stream uses, another statutory violation. There is no comparable provision in the CWA authorizing payment into a fund in lieu of controlling a discharge of pollutants, and to

the extent the Virginia's law establishes a lower threshold of control than required by the CWA, it violates the federal statute.<sup>62</sup>

Another interesting aspect of Virginia's program is that the general permit does not demand compliance with the nutrient load allocations until January 1, 2011, five years after the permit came into effect, suspending all individual permit limits and compliance schedules for five years unless they are more stringent.<sup>63</sup> Additionally, the effectiveness of the trading program is averaged over a year, allowing periods in which there can be excessive point source nutrient loadings as long as those periods are offset by over-controlling at the end of the year. Those high loading periods could occur when the receiving waters are especially stressed, such as during the summer when nutrient loadings from farm fields are higher and dissolved oxygen levels are correspondingly lower. Another problem is that the program may encourage the creation of hot spots in a tributary where discharged nutrients would not be mitigated by downstream reductions or by upstream reductions that are too far removed from the source.

A final interesting facet of Virginia's trading program is that the exchange of credits is directly controlled by the dischargers through a non-stock corporation, the Virginia Nutrient Credit Exchange Association.<sup>64</sup> Among things that the Association is tasked with doing include the submission of a compliance plan on behalf of the dischargers to the state regulatory agency, assisting dischargers in identifying buyers or selling of credits, coordinating planning to be sure that there are sufficient credits in any given year, and generally doing whatever is necessary to be sure that the credit exchange program is effective and efficient. Compliance plans submitted by dischargers must contain the capital projects and implementation schedules required to come into compliance with the facility's individual load allocation.<sup>65</sup>

Although EPA is a big booster of water quality trading, trading has been slow to take hold, perhaps because of compliance uncertainties, transaction costs, and, in some cases, reduced economic benefit where dischargers have already spent money to upgrade their facilities. Additionally, the uncertainties associated with

point-nonpoint trades—*i.e.*, getting the calculations right, assuring that controls are effective, implemented and maintained—as well as the cost of monitoring non point source compliance and the consequences for the point source should the non point source not perform as expected, may make these, the most common and useful of potential trades, sufficiently unattractive to the potential trading partners to discourage their use.<sup>66</sup> Trading may be, especially unattractive to nonpoint sources who will be subjecting themselves to regulation—monitoring, perhaps enforcement—for the first time. Finally, there are legal risks to trading programs that do not meet the minimum requirements of the CWA both for the states that implement these programs and the facilities that execute trades under them. Nonetheless, it is safe to predict that water quality trading will not go away, and the only question is the extent to which EPA will allow states, like Virginia, to depart from its recommended programmatic features and legal requirements, in the interests of encouraging trading to occur.

### C. An Over-used Resource

Americans are loving their coastal and estuarine waters to death. More than half of our population live and work within 50 miles of the coastline;<sup>67</sup> on average, 3,600 people per day move to coastal communities.<sup>68</sup> Forty percent of new commercial development and 46% of new residential development happens near our coasts.<sup>69</sup> Over 43% of adult Americans visit a sea coast or estuary at least once a year for recreational purposes.<sup>70</sup> Yet coastal areas comprise only 11% of the nation's land base,<sup>71</sup> and estuaries 13%.<sup>72</sup> Incessant demands on coastal resources from population growth and commercial uses have severely strained those resources and the capacity of the legal system to protect them.

Our coasts, estuaries, and their watersheds as well as nearshore waters contain diverse habitats that performs many and varied functions of substantial benefit to humans and the species that depend upon them for some portion of their life cycle. These areas absorb and buffer the force of storm surges, filter pollutants, provide spawning grounds, nurseries, shelter, and food for marine and estuarine life that in turn support commercial and recreational fisheries,<sup>73</sup> including a

disproportionate number of rare and endangered species. While many of the development activities in these areas convey direct benefits to people, such as dredging rivers and harbors for navigational purposes,<sup>74</sup> placing support facilities for off- and near-shore oil and gas development on the coast,<sup>75</sup> converting forested areas and wetlands for farming and development, and building flood control dams and hydroelectric plants, these activities directly and indirectly degrade coastal and estuarine habitat and stress the species that depend upon them. Vast amounts of wetland acreage has been lost or significantly degraded as have mangrove forests, sea grass beds, and coral reefs as a result of coastal development.<sup>76</sup> Climate change, rising global temperatures, and sea-level rise are beginning to place added stress on the coastal environment.

Although there is a tangle of overlapping federal, state, and local laws that address many of these threats to coastal habitats, there are gaps in this legal framework that the common law doctrines can fill. One such doctrine is the public trust doctrine, an august common law property doctrine with roots in Roman law<sup>77</sup> that has been recognized in the United States since the early nineteenth century.<sup>78</sup> The public trust doctrine is based on the proposition that the sovereign holds certain common properties in trust in perpetuity for the free and unimpeded use of the public. Since public access to public trust resources is at the core of the doctrine, “absolute private dominion over property impressed with the public trust can never be granted unless it is in the public interest to do so”<sup>79</sup> because private ownership is usually inconsistent with public access. At its core, therefore, the public trust doctrine protects public rights in trust resources and prevents the government or private individuals from alienating or otherwise adversely affecting those rights. “The State can no more abdicate its trust over property in which the whole people are interested, like navigable waters and the soils under them, so as to leave them entirely under the use and control of private parties . . . than it can abdicate its police powers in the administration of government and the preservation of the peace.”<sup>80</sup>

Professor Joseph Sax re-deployed the near dormant doctrine in a 1970 article, in which he suggested it be used to deal with a variety of environmental harms not

yet addressed by Congress.<sup>81</sup> Since then, despite the alphabet soup of federal and state environmental laws, the doctrine has been widely employed to protect natural resources from commercial development and to assure public access to those resources.<sup>82</sup> One important aspect of any common law doctrine, like the public trust doctrine, is that it evolves and changes to reflect community standards.<sup>83</sup> Thus the doctrine has expanded over time to protect an array of different uses including some that are land-based resources, as well as instream flows,<sup>84</sup> wetlands, mudflats, and intertidal waters, and uses of those resources, including recreation, bird watching, and scientific study, even portaging across private property to avoid rocks in a non-tidal river.<sup>85</sup> However, the doctrine's most frequent use has been to protect coastal resources.<sup>86</sup>

Although courts vary in the standards they use to evaluate the permissibility of transferring trust resources to private holdings,<sup>87</sup> all courts closely scrutinize these transfer to determine if there is any diminution in the land's use for trust purposes and generally look askance upon any governmental conduct that reallocates a public resource to a more restricted use or converts a public use to the self-interested use of a private party.<sup>88</sup> While the doctrine places what can be an unexpected constraint on the right of coastal and estuarine landowners to develop or use their land and may require them to allow reasonable public access to their land, these same owners receive a reciprocal benefit from the location of their land and the public funds that are spent on maintaining that private investment.<sup>89</sup>

The public trust doctrine has lost none of its vitality over the centuries, especially in coastal areas.<sup>90</sup> For example, reflecting the importance of public access to coastal areas, the New Jersey Supreme Court in 2005, in *Raleigh Avenue Beach Ass'n v. Atlantic Beach Club, Inc.*,<sup>91</sup> held that the public trust doctrine applied to public access to the ocean through private property. Consistent with what is a long line of cases, in 2004 the Louisiana Supreme Court, in *Avenal v. State*,<sup>92</sup> invoked the public trust doctrine to defeat a takings claim levied against the state for constructing a water diversion project even though the project basically destroyed the value of affected oyster leases because

the project would forestall coastal erosion. According to the Louisiana court, compensation is not owed when the state's action is consistent with background principles of state property law that blocked the property owner from undertaking the actions he asserts were taken because he never had the right to undertake those uses in the first place. Similarly, in *McQueen v. South Carolina*,<sup>93</sup> the South Carolina Supreme Court in 2003 relied on the public trust doctrine to defeat a takings claim brought by a landowner who wanted to develop his beachfront property in violation of a state law protecting the state's coastline from development. And again, in the 2005 remand of *Palazzolo v. Rhode Island*,<sup>94</sup> the Rhode Island Superior Court invoked the public trust doctrine in support of its finding that the property owner had not suffered a compensable taking when he was prohibited from developing the part of his property that fell below the mean high water line, noting that the doctrine gave the state an irrevocable trust in those lands.<sup>95</sup>

The public trust doctrine is an infinitely malleable legal doctrine; its capacity to protect coastal and estuarine resources from harm undiminished by either the passage of time or laws. The success with which the doctrine has been used, especially along the Atlantic coast where its colonial roots are strong, suggests it will have a busy future as pressures on these resources increase and the effects of global warming are felt.

## Conclusion

If there is one conclusion that can be drawn about all three of these "hot topics" is that they reflect the law's creativity and plasticity. Whether it's taking older doctrines like *Winters* or the public trust and applying them in new ways or creating an entirely new approach to solve a recurrent problem, water quality trading, the law (and lawyers) are never static. Just as assuredly, each new application of the public trust or the reserved water rights doctrine will be met with opposition, requiring court intervention, and each totally new idea, like pollution trading, that alters the expected paradigm for solving a problem will generate detractors. While all new ideas are not necessarily good any more than all new uses of old ideas are necessarily bad, nonetheless

only by trying will we advance the law. Given the stakes involved in each situation where the tactic has been tried, whether it is an eastern tribe that can no longer subsist on its lands as it has for hundreds of years, an intact important ecosystem that is dying before our eyes, or a resource that is under threat from so many different sources that it defies the ability of our laws to protect it adequately, we have no other choice but to try.

## Endnotes

<sup>1</sup> See Hope M. Babcock, *Reserved Indian Water Rights in Riparian Jurisdictions: Water, Water Everywhere, Perhaps some Drops for Us*, 91 CORNELL L. REV. 1203, 1204, n.2 (2006) (providing support for the increasing scarcity of water generally, and in the East particularly).

<sup>2</sup> Babcock, *Reserved Indian Water Rights*, *supra* note 1 at 1205. An example of this conflict is the dispute between Georgia, Alabama, and Florida over the waters in Lake Lanier which Alabama and Florida depend on for power generation, industry, recreation, and commercial fishing and Georgia for drinking water. Brenda Goodman, *Georgia Loses Federal Case in a Dispute About Water*, New York Times, A13 (February 6, 2008).

<sup>3</sup> See generally Babcock, *Reserved Indian Water Rights*, *supra* note 1 at 1207-19 (discussing the three regimes for managing flow—riparianism, the prior appropriation doctrine, and regulated riparianism).

<sup>4</sup> 207 U.S. 564 (1908).

<sup>5</sup> 207 U.S. at 577.

<sup>6</sup> See *Cappaert v. United States*, 426 U.S. 128, 147 (1976) (finding presidential proclamation establishing as a national monument a cavern that is home to a unique species of fish reserved sufficient water to protect the endangered fish); *Arizona v. California*, 373 U.S. 546, 595, 601 (1963) (holding the federal government could assert reserved federal water rights on behalf of Indian reservations as well as wildlife refuges, national forests, and federal recreation areas) . . . *But see* *United States v. New Mexico*, 438 U.S. 696, 715-18 (1978) (limiting reserved federal water rights to only the primary purposes for which land was withdrawn).

<sup>7</sup> Babcock, *Reserved Indian Water Rights*, *supra* note 1 at 1220-21.

<sup>8</sup> See generally Babcock, *Reserved Indian Water Rights*, *supra* note 1 at 1228-33 (discussing the constraints on tribal assertions of their *Winters* rights).

<sup>9</sup> Hope M. Babcock, *Reserved Indian Water Rights in Riparian Jurisdictions: Water, Water Everywhere, Perhaps some Drops for Us*, 91 CORNELL L. REV. 1203 (2006).

<sup>10</sup> *Mattaponi Indian Tribe, et al v. Commonwealth of Virginia, et al*, Circuit Court No. 3001-RW/RC (Feb. 5, 2007). The Institute for Public Representation, which I co-direct, represented the Mattaponi Tribe in this and other

proceedings involving the City of Newport News' proposed construction of a drinking water reservoir near the Tribe's reservation.

<sup>11</sup> *Mattaponi Indian Tribe*, Circuit Court No. 3001-RW/RC at 15.

<sup>12</sup> These treaties included the 1646 Treaty of Necotowance, Hening 1809-1823, 1:323-26, and 1647 Treaty at Middle Plantation, B.P.R.O., C.O. 1/40 ff 202-203, published in Neville 1976, pp. 287-290, both of which applied to the Mattaponi Tribe.

<sup>13</sup> See generally Hope M. Babcock, *Administering the Clean Water Act: Do Regulators Have "Bigger Fish to Fry" when it Comes to Addressing the Practice of Chumming on the Chesapeake Bay*, 21 TUL. L.J. 1, 9-13 (2007).

<sup>14</sup> *Id.*

<sup>15</sup> Chesapeake Bay Program, Chesapeake Bay 2005 Health and Restoration Assessment, Part One: Ecosystem Health 1 (Mar. 2006, [http://www.chesapeakebay.net/pubs/2007reports/EPA06\\_BagHealthReport.pdf](http://www.chesapeakebay.net/pubs/2007reports/EPA06_BagHealthReport.pdf)).

<sup>16</sup> *Id.*

<sup>17</sup> See generally Babcock, *Administering the Clean Water Act*, *supra* note 12 at 9-13. Reflecting the importance of dissolved oxygen (DO) and concerns about low levels of DO in Atlantic coastal waters, EPA has established dissolved oxygen water quality criteria from Cape Cod in Massachusetts to Cape Hatteras in North Carolina. EPA, AMBIENT LIFE WATER QUALITY CRITERIA FOR DISSOLVED OXYGEN (SALTWATER): CAPE COD TO CAPE HATTERAS (Nov. 2000), EPA-822-R-00-012, available at <http://www.epa.gov/waterscience/criteria/dissolved/docriteria.pdf>.

<sup>18</sup> *Id.* at 10-11.

<sup>19</sup> See Babcock, *Administering the Clean Water Act*, *supra* note 12 at 11, n.57 (discussing positive feedback loops).

<sup>20</sup> See *id.* at 11 n.58 (explaining biological oxygen demand).

<sup>21</sup> Excess total suspended solids and nutrient loadings can also reduce the average price of a house. See Linwood Pendleton, *the Economic and Market Value of Coasts and Estuaries: What's at Stake?*, 30 National Wetlands Newsletter 12-13 (Mar.-Apr. 2008) (saying one unit (mg/L) increase in turbidity negatively impacts the average housing price by \$1,086 and a similar increase in nutrients by \$17,642).

<sup>22</sup> *Id.* at 12-13.

<sup>23</sup> *Id.* at 13.

<sup>24</sup> *Id.* at 11-12.

<sup>25</sup> *Id.* at 11.

<sup>26</sup> *Id.* at 12.

<sup>27</sup> *Id.* at 12.

<sup>28</sup> *Id.* at 13 n.78.

<sup>29</sup> 33 U.S.C. § 1251 *et. seq.*

<sup>30</sup> 33 U.S.C. § 7651 *et. seq.*

<sup>31</sup> EPA modeled both the nitrogen oxide and mercury trading rules on the sulfur dioxide trading program and implemented them under the Bush Administration's Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule, respectively. The D.C. Circuit overturned the Mercury Rule in *New Jersey v. EPA*, 517 F. 3d 547 (CADDC 2008), *rehearing denied*

May 20, 2008, *certiorari petition filed*, 77 USLW 3148 (September 17, 2008), and in July voided the CAIR rule (North Carolina v. EPA, 531 F. 3d 896 (CADC 2008). Petitions for rehearing *en banc* were filed in the CAIR case on September 28, 2008.

<sup>32</sup> Water quality trading has been the subject of many articles, including, Joseph T. Braum, *Market by the Bay: A Market-Based Approach to Nutrient Pollution in the Chesapeake Bay*, 15 PENN. ST. ENVTL. REV. 131 (2006); Sarah Brull, *An Evaluation of Nonpoint Source Pollution Regulation in the Chesapeake Bay*, 13 U. Balt. J. Envtl. L. 221 (2006); Joel B. Eisen, *Rapanos, Carabell, and the Isolated Man*, 40 U. RICH. L. REV. 1099 (2006); Lynda Hall & Eric Raffini, *Water Quality Trading: Where Do We Go From Here?*, 20-SUM. NAT. RESOURCES & ENV'T 38 (2005); Darin Michael Lowder, Casenote, *Strange Watershed Bedfellows? Will the EPA's Water Quality Trading Policy Encourage Unlikely Clean Water Alliances?*, 13 GEO. MASON L. REV. 411 (2005); Thomas K. Ruppert, *Water Quality Trading and Agricultural Nonpoint Source Pollution: An Analysis of the Effectiveness and Fairness of EPA's Policy on Water Quality Trading*, 15 VILL. ENVTL. L.J. 1 (2004); Ann Powers, *The Current Controversy Regarding TMDLs: Contemporary Perspectives "TMDLs and Pollution Trading"*, 4 RES COMMUNES 2 (2002-2003); Kurt Stephenson, Leonard Shabman & L. Leon Geyera, *Toward and Effective Watershed-Based Effluent Allowance Trading System: Identifying the Statutory and Regulatory Barriers to Implementation*, 5 ENVTL. LAW. 775 (1999); Esther Bartfield, *Point-Nonpoint Source Trading: Looking Beyond Potential Cost Saving*, 23 ENVT. L. 43 (1993).

<sup>33</sup> Trading is only one of several options for a discharger of nutrients when faced with a new or lower permit limit. Other options include pollution prevention, recycling or reusing the pollutants, or installing pollutant removal technology.

<sup>34</sup> For a nonpoint source, this assumes that the source is part of a TMDL and has received a load allocation. If there is no TMDL covering a nonpoint source then unless the state or local government has figured out what the baseline is for those sources and imposed best management practices to achieve it, the baseline would have to be calculated before any trade could take place involving a nonpoint source.

<sup>35</sup> Under this process, for streams that are exceeding water quality standards, the state calculates the total maximum daily load of the pollutants that are causing the standards to be exceeded and then allocates the burden of coming into compliance among the contributing sources. Administering this program requires monitoring and reporting as well as a cap on the total loadings for the stream. The TMDL must take account of the contribution from nonpoint sources; individual load allocations are incorporated into the permits of the contributing point sources. See 33 U.S.C. § 1313(d)(1) (TMDLs must be established for waters a state identifies for which "effluent limitations are not stringent enough to implement any water quality standard applicable to such waters").

<sup>36</sup> Carol M. Rose, *Environmental Law Grows Up (More or*

*Less), and what Science Can do to Help*, 9 LEWIS & CLARK L. REV. 273, 282 (2005). It is important to note, however, that the Clean Water Act, as distinguished from the Clean Air Act, contains a zero discharge goal, 33 U.S.C. 1251 (a)(1). The Clean Water Act also has provisions that prevent a polluter from backsliding to a lower level of pollution removal. 33 U.S.C. § 402(o) and states from allowing their waters to degrade below a level of quality that they could otherwise achieve or have already achieved, 40 C.F.R. §§ 131.10, 131.11, 131.12.

<sup>37</sup> EPA, *Effluent Trading in Watersheds Policy Statement* ("EPA will actively support and promote effluent trading within watersheds to achieve water quality objectives, including water quality standards, to the extent authorized by the CWA and implementing regulations"), available at <http://www.epa.gov/EPA-WATER/1996/February/Day-09/pr-230.html>.

<sup>38</sup> EPA Draft Framework for Watershed Based Trading (May 30, 1996), 800R96001, available at <http://nepis.epa.gov/EPA/html/Pubs/puntitleOW.html>. The Draft Framework has never been finalized.

<sup>39</sup> EPA, *Water Quality Trading Policy Statement* (Jan. 30, 2003), 68 Fed. Reg. 1608 (Jan. 13, 2003), available at [http://es.epa.gov/ncr/events/calendar/2007/sep\\_26/inalpolicy2003.pdf](http://es.epa.gov/ncr/events/calendar/2007/sep_26/inalpolicy2003.pdf).

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> Water quality standards have three elements, designated uses, numeric criteria, and EPA's antidegradation policy that prevents states from downgrading a designated use once it has been achieved, 40 C.F.R. §§ 131.10, 131.11, 131.12.

<sup>43</sup> Environmental Protection Agency Water Quality Trading One-Day Training Program at 7.9 Washington, D.C., December 5, 2007) (in possession of author). Virginia had two public comment periods before issuing its water quality trading general permit in September 6, 2006. See State Board, *Notice of Intended Regulatory Action - Agency Background Document* (Apr. 13, 2005), available at: [http://www.townhall.state.va.us/I/GelFile.cfm?File=E.%5D////townhall\\_%5Ddocroot%5C103%5C1737%5C3150%5CAgencyStaement\\_DEQ\\_3150\\_vl.pdf;Board, Fact Sheet - Issuance of a General VPDES Permit to Discharge to State Waters and State Certification under the State Water Control Law, available at http://www.deq.state.va.us/vodes/pdf/9VAC25-820-FactSheet.pdf](http://www.townhall.state.va.us/I/GelFile.cfm?File=E.%5D////townhall_%5Ddocroot%5C103%5C1737%5C3150%5CAgencyStaement_DEQ_3150_vl.pdf;Board, Fact Sheet - Issuance of a General VPDES Permit to Discharge to State Waters and State Certification under the State Water Control Law, available at http://www.deq.state.va.us/vodes/pdf/9VAC25-820-FactSheet.pdf).

<sup>44</sup> EPA *Water Quality Trading Policy Statement*, *supra* note 38 at 7.

<sup>45</sup> EPA Training Program, *supra* note 42 at 7.12.

<sup>46</sup> As of the date of this article, several states, Connecticut (Long Island Sound), North Carolina (Neuse River), and Minnesota (Minnesota River) are implementing point-point source trades; Colorado (Cherry Creek, Dillon Reservoir, and Chatfield), Minnesota (Rahr Malting, Southern MN Beet Sugar Cooperative), Wisconsin (Red Cedar River), and Ohio (Miami River) are involved in point-nonpoint source trades, and New Jersey has established a pretreatment trading

program (Passaic Valley Sewerage Commissioners). Local trading programs are under development on the Passaic River in New Jersey, Cape Fear River in North Carolina, Kalamazoo River, in Michigan, Bear River in Utah, Idaho and Wyoming, Lake Tahoe in California and Nevada, Lower Boise River in Idaho, and in the Willamette River Basin in Oregon. Watershed trading programs are in place in Connecticut for Long Island Sound, Virginia for the Chesapeake Bay, and in Delaware for Inland Bays. Michigan, Ohio, and Vermont have developed statewide regulatory trading frameworks; Colorado, Oregon, and Pennsylvania have statewide trading policies, Idaho has issued guidance, while Florida and Minnesota are developing trading regulations, and Maryland and Virginia are developing policies. A total of 106 NPDES permits allow trading veering 373 facilities, of which only 127 have actually participated in trades. Environmental Training Program, *supra* note 42 at 4.11-13.

<sup>47</sup> EPA Training Program, *supra* note 42 at 5.4.

<sup>48</sup> 33 U.S.C. §§ 303(d)(4) and 402(o).

<sup>49</sup> 33 U.S.C. § 303(c) and 40 C.F.R. Parts 122, 123, and 124.

<sup>50</sup> Chesapeake Bay Program, 1983 *Chesapeake Bay Agreement*, available at <http://www.chesapeakebay.net/ubs/199.pdf>.

<sup>51</sup> Chesapeake Bay Program, 1987 *Chesapeake Bay Agreement*, available at <http://www.chesapeakebay.net/pubs/1987ChesapeakeBayAgreement.pdf>.

<sup>52</sup> Ann Powers, The Current Controversy Regarding TMDLs: Contemporary Perspectives, 4 VT. J. ENVTL. L. 1, 10 (2003).

<sup>53</sup> Va. Code Ann. § 62.1-44.19:14. The Virginia State Water Control Board issued the general permit, on November 1, 2006.

<sup>54</sup> Virginia's authority to issue a general permit is found in the Virginia State Water Control Law §§ 62.1-44.15(5), (10), and (14) and authorizes general permits to cover one or more category of dischargers from point sources of treatment works. 9 Va. Admin. Code § 25-31-170.

<sup>55</sup> EPA authorizes issuance of general permits under 40 C.F.R. § 122.28 even though the CWA only authorizes the use of general permits for the discharge of dredged or fill material, 33 U.S.C.A. § 1344(e), raising a serious question about EPA is using general permits under the CWA.

<sup>56</sup> See 9 Va. Admin. Code § 24-720.

<sup>57</sup> Va. Code Ann. § 62.1-44.19:14(A) and (B).

<sup>58</sup> 9 Va. Admin. Code. § 25-820-10. The process for determining the amount of the particular credit is complex and involves determining the difference between the waste load allocation for the facility, specified as an annual mass load of total nitrogen or phosphorous and the monitored annual mass loadings of those pollutants, where the latter is less than the former and where that difference is then adjusted by the applicable delivery factor expressed as pounds per year of delivered total nitrogen and phosphorous. 9 Va. Admin. Code § 25-820-10 (West 2007).

<sup>59</sup> Va. Code Ann. § 10.1-2117:15 (West 2007). New or expanded facilities that cannot acquire sufficient allocations

from point or nonpoint sources may resort to "other means," upon approval by the state regulatory agency based on a showing that the facility has made a good faith effort to acquire the necessary allocation from a permitted facility or through the application of best management practices and that these allocations were not "reasonably available." Va. Code Ann. § 10.1-2117:15.B.2 (West 2007).

<sup>60</sup> This Fund contains appropriated money from the Virginia General Assembly and money from penalties and damages and is to be used to educate people about point and nonpoint source pollution prevention, reduction and control programs. For a nutrient discharger to be able to take advantage of the Fund as a source of credits, there must be sufficient credits in the Fund for that year to cover the discharger's shortfall; otherwise there will be no credits for the facility to purchase. 9 Va. Admin. Code § 25-820-10.1-2128 (West 2007). *But see* § 62.1-44.19:18(B)(2) (any payments to the Fund must be "promptly applied to achieve equivalent point or nonpoint source reductions in the same tributary beyond those reductions already required or funded under federal or state law, of the Virginia tributaries strategies plan. Dischargers must pay \$11.06/lb of nitrogen and \$5.04/lb of phosphorous. 9 Va. Admin. Code 25-820-70(J)(3). However, since the actual point source reductions need not occur until June of the year following the violation, may have no effect on localized water quality problems.

<sup>61</sup> The two exceptions to this prohibition do not seem to be implicated here as there has been no demonstration yet the revised effluent limitation will assure attainment of water quality standards nor that these changes to waste load allocations will be consistent with EPA's antidegradation policy. 33 U.S.C. §§ 1313(d)(4)(A) and 1313(d)(4)(B).

<sup>62</sup> 33 U.S.C. § 1370 (prohibiting states from adopting or enforcing any effluent limitation or standard that is less stringent than the extant federal limitation or standard).

<sup>63</sup> 9 Va. Admin. Code § 25-820-10; 9 Va. Admin. Code § 25-820-30.C (West 2007).

<sup>64</sup> Va. Code Ann. § 62.1-44.19:17 (West 2007).

<sup>65</sup> Va. Code Ann. § 62.1-44.19:14.C.3 (West 2007).

<sup>66</sup> Reflecting these uncertainties, EPA has recommended a greater than 1:1 trade ratio for any trades involving nonpoint sources as well as on-site verification of BMPs and monitoring of flows, use of conservative demonstrated performance values, and site-specific discount factors. EPA Training Course, *supra* note 42 at 7.6. Some states in addition, like Ohio, have required that there be continuous flow monitor at the bottom of the watershed and nutrient monitoring sites at the mouth of each sub-watershed as well as an insurance pool to provide back-up credits if the BMPs fail; while Minnesota requires that an auditor certify implementation of BMPs. *Id.*

<sup>67</sup> U.S. COMMISSION ON OCEAN POLICY, *An Ocean Blueprint for the 21st Century*, Final Report 14 (2007).

<sup>68</sup> *Id.* at 14.

<sup>69</sup> *Id.*

<sup>70</sup> Pendleton, *What's at Stake?*, *supra* note 20 at 11.

<sup>71</sup> National Oceanic and Atmospheric Administration, Ocean Facts on Coastal Development, <http://www.yoto98.noaa.gov/facts/devel.htm> (last visited Mar. 19, 2008).

<sup>72</sup> Pendleton, *What's at Stake?*, *supra* note 20 at 11.

<sup>73</sup> EPA estimates that almost 75% of the commercial fish landings, valued at over \$3.8 billion unprocessed, are estuarine dependent. *Id.* at 12.

<sup>74</sup> In 2003, more than \$841 billion in trade passed through a United States' port. Pendleton, *What's at Stake?*, *supra* note 20 at 12.

<sup>75</sup> Approximately 30% of the country's crude oil production, 20% of its natural gas production, and in excess of 45% of petroleum refining capacity is within the Gulf of Mexico's coastal zone. Pendleton, *What's at Stake?*, *supra* note 68 at 12.

<sup>76</sup> More than 50 percent of the historical sea grass cover has been lost in Tampa Bay, 76 percent in the Mississippi Sound, and 90 percent in Galveston Bay. Extensive sea grass losses have also occurred in the Chesapeake Bay, Puget Sound, San Francisco Bay, and Florida's coastal waters. U.S. COMMISSION ON OCEAN POLICY, *An Ocean Blueprint for the 21st Century*, Final Report 41 (2007).]

<sup>77</sup> THE INSTITUTES OF JUSTINIAN 90 (Thomas Collett Sandars trans, Longmans, Green & Co. (1905), cited in Timothy Mulvaney & Brian Weeks, "Waterlocked": *Public Access to New Jersey's Coastline*, 34 *Ecology L.Q.* 579, 582 (2007).

<sup>78</sup> See e.g. *Arnold v. Mundy*, 6 N.J. 1 (1821); *Martin v. Waddell's Lessee*, 41 U.S. (16 Pet.) 367 (1842); *Shively v. Bowlby*, 152 U.S. 1 (1894).

<sup>79</sup> *Illinois Central R.R. Co. v. Illinois*, 146 U.S. 387, 433 (1892).

<sup>80</sup> See e.g., *Illinois Central R.R. Co.*, 146 U.S. at 453. Under limited circumstances public trust resources can be conveyed to private hands, if the alienation serves the public interest without harming trust uses in the remaining land, *Illinois Cent. R.R.*, 146 U.S. at 453, and there can be private title in trust resources as long as the private use of trust resources is consistent the trust's purposes, does not interfere with uses protected by that doctrine, and will preserve those purposes for both present and future generations, *id.*

<sup>81</sup> Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 *MICH. L. REV.* 471 (1970).

<sup>82</sup> On the origins and uses of the public trust doctrine, see generally Hope M. Babcock, *Does Lucas v. South Carolina Coastal Council Protect Where the Wild Things Are? Of Beavers, Bob-O-Links. and Other Things that Go Bump in the Night*, 85 *IOWA L. REV.* 849 (March 2000); Hope M. Babcock, *Has the Supreme Court Finally Drained the Swamp of Takings Jurisprudence: The Impact of Lucas v. South Carolina Coastal Council on Wetlands and Coastal Barrier Beaches*, 19 *HARV. ENVTL. L. REV.* 1 (1995); Hope M. Babcock, *Grotius, Ocean Fish Ranching, and the Public Trust Doctrine: Ride 'Em Charlie Tuna*, 26 *STAN. L. REV.* 3 (2007).

<sup>83</sup> *Borough of Neptune City v. Borough of Avon-by-the-Sea*, 294 A.2d 47, 47 (N.J. 1972); see also John A. Humback,

*Evolving Thresholds of Nuisance and the Takings Clause*, 18 *COLUM. J. ENVTL. L.* 1, (1993) (criticizing the *Lucas* Court for relying on indeterminate, judge-made common law doctrines like nuisance).

<sup>84</sup> *National Audubon Soc'y v. Superior Court of Alpine County*, 658 P.2d 709 (Cal. 1983) (applying the public trust doctrine to stop Los Angeles from diverting a non-tidal tributary of an inland lake).

<sup>85</sup> See generally Babcock, *Wetlands and coastal barrier Beaches*, *supra* note 81 at 40-49 (discussing a variety of uses of the public trust doctrine).

<sup>86</sup> Most states extend public ownership in tidal water up to the mean high or low water lines, although a few states like Delaware, Maine, Massachusetts, New Hampshire, and Virginia are "low water states," meaning that the state owns the submerged lands that extend seaward of the mean, and some states like New Jersey and Oregon grant the public rights to the shore above the high watermark. Mulvaney & Weeks, "Waterlocked," *supra* note 76 at 584-85; see also *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 365 (N.J. 1984) (granting public access to the beach above the high watermark).

<sup>87</sup> Babcock, *Ocean Ranching*, *supra* note 81 at 50-51 (discussing the different approaches courts take to this question).

<sup>88</sup> Sax, *Public Trust*, *supra* note 80 at 490.

<sup>89</sup> Mulvaney & Weeks, "Waterlocked," *supra* note 76 at 613-14 (discussing the public funds that are expended on activities like beach replenishment, building seawalls and groins, maintaining public roads, potable water and other expensive infrastructure in coastal areas, among others). See also Pendleton, *What's at Stake?*, *supra* note 20 at 12 (noting that "beach front proximity" increased a home's value by 207% compared to a house two blocks away; while location on an estuary added 73% to the property's value).

<sup>90</sup> For a comprehensive discussion of modern uses of the public trust doctrine in New Jersey as well as its use in the state's early history, see Mulvaney & Weeks, "Waterlocked," *supra* note 76.

<sup>91</sup> 879 A.2d 112 (N.J. 2005).

<sup>92</sup> 886 So.2d 1085 (La. 2004). See also John J. Costonis, *Two Years and Counting: Land Use and Louisiana's Post-Katrina Recovery*, 68 *LA. L. REV.* 349, 366 (2008).

<sup>93</sup> 354 S.C. 142, 580 S.E. 2d 116 (2003).

<sup>94</sup> No. WM 88-0297, 2005 WL 1645974 (R.I. Super. 2005). See generally Michael C. Blumm and Sherry L. Bosse, *Justice Kennedy and the Environment: Property, States' Rights, and a Persistent Search for Nexus*, 82 *WASIL. L. REV.* 667 (2007); Robert L. Bunting, Esq., *Average Reciprocity of Advantage: Magic Words of Economic Reality – Lessons from Palazzolo*, SN005 ALI-ABA 333 (2007).

<sup>95</sup> Palazzolo, No. WM 88-0297, 2005 WL 1645974 \*12-14 (R.I. Super. 2005).

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**WATER ISSUES IN THE DEEP SOUTH**

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**Adam M. Kron  
David H. Pope  
Gilbert B. Rogers**

***Southern Environmental Law Center  
Atlanta, Georgia***

I. Introduction

Traditionally, there has been plentiful water in the Deep South region of the United States.<sup>1</sup> Although there have always been a variety of water uses in this region—municipal, agricultural, and industrial—conflicts historically tended to be of a small scale and between neighboring water users.<sup>2</sup> Accordingly, the law of water rights and uses developed under the traditional eastern United States common-law theories of reasonable use and riparian rights for surface water, and absolute ownership (or some modification thereof) for groundwater.<sup>3</sup> Until recently, regulation by the state was minimal, and most conflicts were settled in court, typically after a water use or interference with a use already had occurred.<sup>4</sup>

More recently, however, the Deep South—and more specifically Georgia and Alabama—has begun to experience stresses on its water supply by increasing population growth and drought. Between 1960 and 2000, the population of the southern United States nearly doubled, increasing from 55 million people to slightly over 100 million.<sup>5</sup> During that same period, Georgia's population increased from 3.9 million to 8.2 million, and Alabama's population increased from 3.3 million to 4.5 million.<sup>6</sup> Projected into 2030, Georgia and Alabama are expected to gain 4.5 million new residents.<sup>7</sup> Concurrent with this population growth, water use has also increased. Between 1990 and 2000, for example, Georgia's water use increased by 30 percent.<sup>8</sup>

Increasingly severe and more frequent droughts have been another recent stress on the Deep South's water supply. In the late 1990s and early 2000s, Georgia and Alabama experienced a severe drought that had profound effects on the Flint River Basin, ultimately resulting in a moratorium on water withdrawal permits

in southwest Georgia.<sup>9</sup> Most recently, beginning in the summer of 2006, Georgia and Alabama have been in the midst of “the worst drought on record in the Southeast.”<sup>10</sup> The drought has had widespread effects on the water supplies of both states; as matter of fact, it was only in March 2008 that the status of the drought was downgraded from “exceptional”—the highest ranking the U.S. Drought Monitor assigns to a drought—to “extreme.”<sup>11</sup> Since then, the drought situation has improved in Alabama to some degree;<sup>12</sup> but, as of November 11<sup>th</sup>, 2008, most of northeast Georgia has actually moved back into the “exceptional” drought ranking, and nearly half of Georgia still falls into either the “severe,” “extreme,” or “exceptional” drought ranking.<sup>13</sup> Furthermore, the National Weather Service Climate Prediction Center most recently has forecasted that Georgia’s drought will persist at least through January 2009.<sup>14</sup>

In addition to—and, indeed, because of—these pressures, Georgia and Alabama also have faced large-scale interstate and intrastate conflicts over water allocation. In terms of interstate conflicts, an ongoing tri-state “water war” has existed since 1990 between Georgia, Alabama, and Florida over water allocation in the Apalachicola-Chattahoochee-Flint River Basin, and between Georgia and Alabama over water allocation in the Alabama-Coosa-Tallapoosa Basin.<sup>15</sup> The “war” has taken place through court cases, federally assisted negotiations, and strong rhetoric; and it recently has heated up due to failed negotiations between the three states and the rejection of a settlement by the U.S. Court of Appeals for the District of Columbia Circuit.<sup>16</sup> Additionally, in what has been characterized as both troubling and “almost a joke,” the Georgia legislature has made a variety of recent attempts—including challenges to the border between Georgia and Tennessee—to gain water rights in the Tennessee River.<sup>17</sup>

Intrastate, both Georgia and Alabama face their own problems of shortage and conflicting demand. Georgia has attempted to handle such intrastate problems via limits on permitting in certain areas of the state,<sup>18</sup> limited statutory restrictions on interbasin transfers,<sup>19</sup> and recent efforts toward comprehensive water planning.<sup>20</sup> Alabama has handled its intrastate problems

very limitedly, with some recent action in the state legislature to prevent interbasin transfers from the counties on the Tennessee River.<sup>21</sup>

Overall, Georgia and Alabama are not well equipped to handle these stresses, physical or political, interstate or intrastate. Although both states have enacted some version of a regulated riparian framework—Georgia in 1972 and 1977, and Alabama in 1993—gaps in regulation and permitting of water use still remain. At the same time, another school of thought has come about in both states, proposing to institute western-style water markets that would allow the transfer and sale of water use permits.<sup>22</sup> The water market proposals necessarily would involve removing some state control and management of the water resources and giving it over to market forces and quasi-private ownership.<sup>23</sup>

In 2003, the Georgia General Assembly considered legislation altering Georgia’s regulated riparian system to allow for water markets.<sup>24</sup> Due to large-scale opposition on a number of fronts—including overburdening of the state’s water resources, abdication of the state’s authority to manage the waters, and philosophical and moral concerns—the bill died on the last day of the legislative session.<sup>25</sup> Five years later, proponents of water markets continue to make their case in both Georgia and Alabama.<sup>26</sup>

Accordingly, it is now more important than ever to state that the answers to Georgia’s and Alabama’s water supply problems do not lie in the implementation of water markets. In fact, markets will serve only to worsen these water problems by failing to meet—or, in some cases, confounding—the central goals of water management: accommodating multiple uses and users, long-term planning for and response to shortages, and protecting the public interest.

Rather, the best way to address Georgia’s and Alabama’s water supply problems is to continue with the current regulated riparian regime, but with the addition of certain essential elements such as more comprehensive permitting, increased information-gathering, improved response to shortages, and guaranteeing conservation and the protection of public

interest values. It is only under such an improved regulated riparian regime that Georgia and Alabama finally can begin effective management of water use and supply in their rivers and aquifers.

## II. Traditional and Current Law in Georgia and Alabama.

In managing both surface and groundwater, Georgia and Alabama are “regulated riparian” states. Both states began with traditional applications of common-law theories of surface and groundwater rights of water use, which were later legislatively modified to include more regulation and management by the state governments. While both states may be classified as using forms of regulated riparian systems, it should be noted that Georgia—with its actual permitting of surface and groundwater withdrawals over 100,000 gallons per day—is much further down the spectrum toward regulation than Alabama, which has the barest of permitting regimes.

### A. Georgia

#### 1. Surface Water and Groundwater Laws

As a state with a “regulated riparian” system of water rights, Georgia’s body of water law began with the common-law application of the “reasonable use” theory of riparian rights for surface water, which was later legislatively modified to the current system. Traditionally, Georgia’s courts approached surface water—and some limited groundwater—rights under a “standard reasonable use riparian theory.”<sup>27</sup> In one of the seminal cases on the topic, *Price v. High Shoals*, the Georgia Supreme Court laid out the “reasonable use” theory as meaning that “[e]very riparian owner is entitled to a reasonable use of the water,” and is “also entitled to have the stream pass over his land according to the natural flow, subject to such disturbances, interruptions, and diminutions as may be necessary and unavoidable on account of the reasonable and proper use of it by other riparian proprietors.”<sup>28</sup> A riparian owner’s right to the waters of the stream is a “common right,” entitling each riparian owner “to a reasonable use of the water with respect to the rights of the others.”<sup>29</sup>

Under this reasonable use theory, the primary question—which traditionally is left to the jury “with little or no instruction from the court”—is whether a particular water use is “reasonable relative to a competing user.”<sup>30</sup> The *Price* Court explained:

What is a reasonable use is a question for the jury in view of all the facts in the case, taking into consideration the nature and use of the machinery, the quantity of water used in its operation, the use to which the stream can be applied, the velocity of its current, the character and size of the watercourse, and the varying circumstances of each case.<sup>31</sup>

Aside from this reasonableness test and the consideration that non-riparian uses of water—that is, use by those who do not own riparian land—are per se unreasonable,<sup>32</sup> Georgia courts traditionally have not imposed any other restrictions on the use of surface water.<sup>33</sup>

Georgia law and courts have treated the issue of groundwater rights differently than surface water rights. This distinction is codified in sections of the Georgia code dealing with trespass law, which state that, while a riparian owner “is entitled to have the water in such streams come to his land in its natural and usual flow, subject only to such detention or diminution as may be caused by a reasonable use of it by other riparian proprietors,” such is not the case for underground streams, which “are so difficult of ascertainment that trespass may not be brought for any supposed interference with the rights of a proprietor.”<sup>34</sup> Accordingly, the Georgia code and courts originally treated surface water under the reasonable use theory and ground water under what has traditionally been called the “absolute ownership” or “absolute dominion” rule.

In the first case in a line of jurisprudence establishing the current understanding of groundwater law in Georgia, the Georgia Supreme Court made a further distinction, separating groundwater into two categories: percolating groundwater, “which without any distinct channel percolates in veins, oozes and filters,” and groundwater that runs in well-defined subterranean streams.<sup>35</sup> The Court held percolating groundwater subject to the absolute ownership rule, while

subterranean streams fell under the theory of reasonable use.<sup>36</sup>

Under the “absolute ownership” rule, a property owner, under whose property percolating groundwater resided, could use any and all of the groundwater, even if the groundwater percolated to the land of another and even if the property owner’s use of the water interfered with the use of another property owner.<sup>37</sup> As the Georgia Supreme Court explained, “the owner has the same exclusive proprietorship in the water which seeps through his soil and collects in the substrata, as in that water which falls from the clouds upon the roof of his house and is collected into a cistern, until the percolating water becomes a part of a well-defined stream.”<sup>38</sup> The main exception to this absolute ownership rule was that, if the property owner acted “in malice by wasting or diverting water, the plaintiffs are . . . entitled to equitable relief” for trespass.<sup>39</sup>

On the other hand, Georgia courts applied the reasonable use theory where a plaintiff could meet the strict burden of showing that the groundwater “is a stream of water flowing in a marked or well-defined channel in contradistinction to subsurface percolating water.”<sup>40</sup>

In 1972, the Georgia legislature enacted the Groundwater Use Act, under which it made the state’s groundwater resources subject to a framework of permitting and regulation administered by the state.<sup>41</sup> Under the permitting requirement of the act, any person withdrawing, obtaining, or utilizing more than 100,000 gallons per day of groundwater must obtain a permit from the Environmental Protection Division (“EPD”).<sup>42</sup> Furthermore, any person applying for a permit or a permit modification seeking an increase in water usage must also submit with the application a water conservation plan.<sup>43</sup> A permit need not be obtained if it can be shown that the water will not be used consumptively.<sup>44</sup>

In EPD’s decision whether to issue a groundwater use permit, “reasonable use” of the water is still a consideration, but that determination is now made by EPD rather than the courts, based on certain considerations codified in the Groundwater Use Act. These include: the nature and size of the aquifer in

question; “the physical and chemical nature of any impairment of the aquifer” affecting its fitness for use; any injury to public health, safety, or welfare, which would result from the impairment; the businesses or activities to which the water uses are related; any injury or detriment expected to be caused to other water uses; and any reduction in flows in other watercourses or aquifers.<sup>45</sup> Furthermore, the act specifically notes that EPD may deny any permit where it is found that the application or effect of the use is contrary to the public interest.<sup>46</sup>

Except for permits issued for farm uses—which are exempt from the following requirements, as will be discussed below—any permit issued will be of a term of ten to fifty years; must not be transferred without approval of EPD; and must comply with reporting requirements.<sup>47</sup> With respect to all permits, EPD has the power to grant a permit with conditions, to modify or revoke any permit, and to require the installation of water meters where the permittee is not submitting accurate reporting information.<sup>48</sup> Furthermore, EPD has the power, without prior notice or hearing, to issue emergency orders placing conditions on all permits.<sup>49</sup> EPD may issue such orders where it finds that “an emergency exists requiring immediate action to protect the public health or welfare.”<sup>50</sup> With the exception of farm users, who need not comply with the order during their appeal of any emergency order, all permittees must comply with any emergency orders immediately.<sup>51</sup> During such emergencies, EPD must “give first priority to providing water for human consumption and second priority to farm use.”<sup>52</sup>

Five years later, in 1977, Georgia amended its water quality statute to institute a very similar permitting and regulation framework for surface water.<sup>53</sup> Under the legislation, any user withdrawing or diverting more than 100,000 gallons of surface water per day must obtain a permit from EPD.<sup>54</sup> As with the groundwater permitting, surface water permitting involves a reasonable use determination by EPD, which evaluates certain codified considerations, such as “unreasonably adverse effects upon other water uses in the area,” the importance of the use, and the use’s injury to public health, safety, or welfare.<sup>55</sup> The act also requires EPD to give preference to existing uses over new applications.<sup>56</sup>

Additionally, the act makes certain provisions for permits which would allow interbasin transfers of surface water.<sup>57</sup> With respect to such transfers, EPD must give “due consideration” to competing uses and existing uses that would *not* involve such interbasin transfers; and, pursuant to its power in granting permits, EPD must “endeavor to allocate a reasonable supply of surface waters to such [non-interbasin] users and applicants.”<sup>58</sup> Furthermore, if EPD does issue a permit allowing an interbasin transfer, it must issue press releases to newspapers in areas affected by interbasin transfer.<sup>59</sup>

As with groundwater permitting, EPD has certain powers to revoke, modify, and suspend surface-water permits.<sup>60</sup> These powers include revocation for false statements, violation of permit conditions, or violation of the act; revocation for nonuse of the water supply (though this power does not apply to farm use permits); suspension or modification if the water quantity permitted is greater than the water quantity needed (also not applicable to farm use permits); revocation of farm use permits if EPD discovers that the quantity of water permitted would prevent reasonable use by other farm use permittees; and revocation “for any other good cause consistent with the health and safety of the citizens of [Georgia].”<sup>61</sup>

EPD’s emergency powers for surface water permitting are essentially identical to those for groundwater permitting, with two exceptions. First, the standard for issuing an emergency order is where a shortage exists “so as to place in jeopardy the health or safety of the citizens of such area or to threaten serious harm to the water resources.”<sup>62</sup> Second, before issuing such an order, EPD must make an effort to give written notice of the proposed action to all permittees affected.<sup>63</sup> During such emergency orders, EPD must give first priority to providing water for human consumption and second priority to farm use.<sup>64</sup>

## 2. Shortcomings

The two major gaps to Georgia’s permitting scheme are that (a) uses less than 100,000 gallons per day need not obtain permits, and (b) farm uses enjoy a “near complete exemption” from EPD’s regulatory oversight of the permit system.<sup>65</sup> The latter is a more

major weakness in the permitting system, given that farm uses account for “the vast majority of total withdrawal permits,” the largest consumptive use of water in the state, and the largest use of groundwater in the state.<sup>66</sup> As of 2001, there were 21,400 irrigation permits in Georgia, each accounting for at least 100,000 gallons of water use per day.<sup>67</sup> As a further matter, it is worth noting at the outset that Georgia includes in its definition of farm uses “the irrigation of recreational turf.”<sup>68</sup>

Under the agriculture exemption, EPD *must* issue a farm permit for surface or groundwater use upon a farm use applicant’s submission of an application.<sup>69</sup> If the application provides reasonable proof that the applicant’s farm use of surface or groundwater occurred prior to July 1, 1988, and if the application was submitted prior to July 1, 1991, then the quantity of water allotted under the farm use permit is based on the historic operating capacity of the withdrawal system—as of July 1, 1988—rather than any amount determined by reasonable use.<sup>70</sup> On the other hand, if the applicant submitted the application after July 1, 1991, or if the applicant’s farm use of surface or groundwater occurred on or after July 1, 1988, then the quantity of water allotted will be subject to the evaluation and classification requirements of the statutes.<sup>71</sup> In either case, the statutes are clear that the permit “shall be issued to ensure the applicant’s right to a reasonable use” of the water.<sup>72</sup>

Further elements of the farm use exemption include: the farm use permits are for an unlimited term;<sup>73</sup> they may be transferred automatically with the title to the land on which the water is used;<sup>74</sup> they may not be revoked or suspended for nonuse;<sup>75</sup> and they may not be modified or suspended where the quantity of water allowed under the permit is greater than that needed, except in cases where the use would prevent other farm use permittees from reasonable use of water.<sup>76</sup>

On the other hand, recent legislation now requires that water meters be installed and monitored – by the State Soil and Water Conservation Commission – for all new farm uses, and that all existing farm uses have such meters by July 1, 2009.<sup>77</sup> As will be discussed below, this legislation helps to mitigate the farm use exemption to a small extent—if not necessarily by narrowing the

exemption, then by providing EPD with more information on use of the water resource—especially with respect to farm use “sleeper permits,” as will be discussed below.

## B. Alabama

### 1. Surface Water and Groundwater Laws

Like Georgia, Alabama’s courts traditionally have approached surface waters under the “reasonable use” theory.<sup>78</sup> However, unlike Georgia, Alabama courts have approached groundwater law with a disjunctive mixture of the “absolute ownership” theory, reasonable use, and nuisance law.<sup>79</sup>

A further twist to the Alabama Supreme Court’s mixed theory of groundwater law is that the court often has claimed to apply one theory while actually using another.<sup>80</sup> For example, in *Adams v. Lang*, the Alabama Supreme Court claimed to have formally adopted the reasonable use theory for groundwater.<sup>81</sup> However, the court actually applied the reasonable use theory in name only, finding that, since the water in question was for a beneficial use on the land (as opposed to a use “incidental” to the land), the use was per se reasonable, and the user was not liable.<sup>82</sup> Notably, the court did not perform any balancing of uses as traditionally required under the reasonable use theory, thereby making the actual theory applied by the court more akin to the absolute ownership rule.<sup>83</sup> In fact, the only balancing the court proposed to undertake was in cases where the water use is “incidental” to the defendant’s use of his own land, and the defendant does not utilize the water itself—e.g., diverting water to dewater a quarry—in which the Court returned to the theory set out by *Henderson*, applying a nuisance law test to the water use.<sup>84</sup>

In one of its most recent cases on the topic, the Alabama Supreme Court left its nominal reasonable use theory largely in place, but added the corollary that the withdrawal of water for use on land not overlying the aquifer is unreasonable per se.<sup>85</sup> The court maintained the *Adams* rule that beneficial use on the overlying land is essentially reasonable per se.<sup>86</sup>

In 1993, Alabama took the step toward state regulation of water withdrawals with the enactment of the Alabama Water Resources Act (“AWRA”).<sup>87</sup> As noted above, the regulation scheme under AWRA is much less stringent than Georgia’s permitting system, imposing little more than administrative requirements on water users. Indeed, AWRA expressly states that it is not intended to “change or modify existing common or statutory law with respect to the rights of existing or future riparian owners concerning the use of the waters of the state.”<sup>88</sup> The three major components of AWRA are the establishment of the Office of Water Resources (“Office”) and the Water Resources Commission (“Commission”); the requirement of the submission of a Declaration of Beneficial Use; and the ability of the Office to establish “capacity stress areas.”<sup>89</sup>

Under the terms of AWRA, the Office’s functions and powers include “develop[ing] long-term strategic plans for the use of the waters of the state;” adopting and promulgating (through the Commission) rules, regulations, and standards; developing policy for the state regarding the waters of the state; “implement[ing] quantitative water resource programs and projects for the coordination, conservation, development, management, use, and understanding of the waters of the state;” reviewing Declarations of Beneficial Use; and bringing civil actions against those who fail to submit or make false statements within Declarations of Beneficial Use.<sup>90</sup> However, the Office’s powers are limited by the proviso that “[n]o person’s beneficial use of the quantitative waters of the state shall be restricted by the Office of Water Resources or the Water Resources Commission” except in the case of capacity stress areas.<sup>91</sup>

Alabama’s means of “permitting” water use in the state is through the requirement that any public water system; any person diverting, withdrawing, or consuming more than 100,000 gallons of water per day; or any person with the capacity to use 100,000 gallons per day or more for irrigation submit a Declaration of Beneficial Use (“Declaration”).<sup>92</sup> The Declaration must contain certain information with regard to each withdrawal facility, including:

- (a) water source;
- (b) primary uses of the water;

- (c) geographic location of the points of diversion and points of return of water;
- (d) estimated or actual quantity of water, in gallons, diverted and estimated or actual quantity of water, in gallons, to be returned;
- (e) estimated maximum potential quantity of water, in gallons, which could be diverted and estimated potential quantity of water, in gallons, which would be returned;
- (f) method or means of measuring, estimating, or controlling the water diverted.
- (g) statement regarding the navigability of the water source; and
- (h) basis of legal right to use the water to be diverted.<sup>93</sup>

Additionally, the Declaration must certify that the water diversion is “consistent with the objectives of the Act,” which the regulations define as meaning that the use of water is:

1. a lawful, reasonable and beneficial use of water;
2. consistent with the public interest;
3. does not interfere with any legal use of water existing at the time of the application; and
4. complies with the provisions of the Act and these Rules.<sup>94</sup>

Upon receiving a Declaration, the Office “shall issue a certificate of use” to the applicant in question.<sup>95</sup> That is, the Office has no discretion *not* to issue the Certificate unless the Office finds that the water use interferes with “any presently known legal use.”<sup>96</sup> The Certificate will note the estimated amount of water used on an average daily basis; the estimated maximum amount of water that the Certificate holder potentially could withdraw or divert on a single day; the duration of the Certificate; and the frequency with which the Certificate holder must report water use.<sup>97</sup> Additionally, the Certificate specifically must state: “THIS CERTIFICATE OF USE SHALL NOT CONFER OR MODIFY ANY PERMANENT INTERESTS OR RIGHTS IN THE HOLDER THEREOF TO THE CONTINUED USE OF THE WATERS OF THE STATE OF ALABAMA.”<sup>98</sup>

The Certificate lasts a minimum of five years and a maximum of ten.<sup>99</sup> During the term of the Certificate, AWRA requires that the Certificate holder submit annual reports to the Office, “indicating the amount of water, in gallons, diverted, withdrawn, or consumed on a monthly basis by such person and such other information required under regulations promulgated by the commission.”<sup>100</sup> If the Office notices discrepancies between the Certificate and an annual report, the Office may order a modification to the Declaration.<sup>101</sup>

The third major component of AWRA is that the Office may conduct a “critical use study” to determine whether certain areas should be designated as “capacity stress areas.”<sup>102</sup> Upon the designation of such an area, the Water Resources Commission immediately will “initiate rule-making procedures to consider appropriate conditions or limitations applicable to all certificates of use within such area.”<sup>103</sup> To date, no capacity stress area exists or has existed in Alabama.

## 2. Shortcomings

Overall, though Alabama technically manages water rights in a regulated riparian regime, it does so only in the barest sense of the term. As noted above, AWRA expressly notes at the outset that it is not intended to “change or modify existing common or statutory law with respect to the rights of existing or future riparian owners concerning the use of the waters of the state.”<sup>104</sup> Furthermore, the only instance in which the Office may restrict any person’s “beneficial use of the quantitative waters of the state” is where a capacity stress area has been designated—an action which has yet to occur in AWRA’s fifteen-year history. As one commentator notably has remarked, “the statute is a very incomplete form of a regulated riparian statute that places very few restrictions on common law rights and leaves far more questions unresolved than resolved.”<sup>105</sup>

Accordingly, in evaluating the effectiveness of Alabama’s regulated riparian regime, it is easier to say what Alabama has than what it needs. What Alabama has is a scant certification requirement with no reasonable use balancing, an annual reporting requirement, and the yet-to-be-used ability of the

Office to establish capacity stress areas. Thus, in the discussion below of what elements Georgia and Alabama must add to perfect their water use management programs, the general assumption should be that Alabama will have to take more steps than Georgia in order to add such elements.

### III. Analyzing Systems of Water Management for Georgia and Alabama

State systems of water management generally address three broad goals: (1) the ability to accommodate diverse uses and users; (2) long-term planning and response to water shortages; and (3) the protection of public interest values, such as adequate drinking water or ecological functions. With respect to all of these goals, a regulated riparianism approach does a far better job than a market-based system.

#### A. Accommodating Diverse Uses and Users

As to the first goal, the ability to accommodate diverse uses and users, regulated riparianism is a fitting system. The regulated riparian approach is built on the principle of reasonable use. That is, in issuing permits, the regulated riparian system approaches water uses on a case-by-case basis, weighing the use against multiple other uses of the water in question and performing a reasonable use balancing test. In Georgia, for example, EPD considers a variety of factors, including unreasonably adverse effects upon other water uses in the area; the importance of the use; and the use's injury to public health, safety, or welfare.<sup>106</sup> Even in Alabama, which possesses a minimal regulated riparian regime, a Declaration of Beneficial Use must make a showing that the use in question:

1. is a lawful, reasonable and beneficial use of water;
2. is consistent with the public interest;
3. does not interfere with any legal use of water existing at the time of the application; and
4. complies with the provisions of the Act and these Rules.<sup>107</sup>

Relatedly, the consideration of “public interest” in Alabama and Georgia law ostensibly allows the water management agencies to consider non-human uses of

water (support of ecological values, maintenance of instream flow, etc.) alongside typical human uses in their reasonable use analyses.

As a further matter, the accommodation of multiple and diverse uses and users inevitably will run into uncertainties, externalities, and outright unknowns, and the water management system in question will need to address those less-than-certain factors in some way. A case-by-case permitting system employing the reasonable use analysis is also a good approach for taking such factors into account, particularly if the system also has mechanisms for the continual gathering of information and the ability to modify the conditions of permits based on new information. In this way, by granting a permit based on what is known and projected, continually gathering information, and modifying the permit depending on the content of such information, such a regulated riparian permitting system is able to account for less-than-certain factors.

Under a market-based system of water management, however, there is no guarantee that multiple uses will be properly accommodated, even in times of shortage. Market-based systems do not make judgments based on other uses, reasonable use, or any similar calculations. Rather, unless the state has a heavy hand in the market, water-use decisions are made on the basis of first-come-first-served and money.<sup>108</sup> Basically, whoever is able to pay the highest price for the water in question will get it, and other uses—no matter how important or vital to the public interest—must play by these same rules, which apply in times of plenty and times of shortage.<sup>109</sup> To take this point to the logical extreme, it is not unthinkable that a market system will foster the transfer of large amounts of water usage to the wealthiest users in Alabama and Georgia—e.g., large utilities—without any thought to the needs of other users in the states.

With respect to the less-than-certain factors in water management, market-based systems generally do not do a good job of assessing those factors, to which financial valuations are difficult to assign.<sup>110</sup> And, unlike regulated riparian regimes, there is no allowance for permit modification in a market-based system. Accordingly, once a permit has been transferred, even

if under assumptions based on bad information or unknown factors, the permit will remain in the hands of the transferee.

Consequently, in accommodating multiple uses and users, the regulated riparian system is much more suitable than a market-based system. While the market-based system may be attractive in its simplicity, it is the wrong system for accommodating the multiple uses and users of a limited public resource.

#### B. Long-Term Planning for and Response to Water Shortages

In light of past and recent water shortages in Georgia and Alabama, it is vital that any system for managing water uses in the states be able to perform effective long-term planning for and adequately respond to any such shortages in the future. Again, regulated riparian management of water is far better equipped than a market-based system for such planning and response.

As a basic matter, planning and rapid response are much easier under a regulated riparian regime, given that water is held as a public resource managed by the state.<sup>111</sup> From this starting point, regulatory mechanisms and abilities can be put in place to allow the state regulatory agencies to perform the tasks necessary for both long-term planning and emergency response.<sup>112</sup> These tasks include gathering necessary water resource information, reviewing and modifying permits, and limiting water consumption in times of shortage. While neither Georgia nor Alabama has all the right mechanisms or abilities to perform these tasks adequately, both states are in a good position to add such tools to their existing regimes.

Markets, on the other hand, are ill-equipped to make decisions for long-term planning and response to shortages. Once a market-based system is introduced, the inevitable first step is the transfer of water rights away from full public management and into private hands.<sup>113</sup> At that point, the resource is decentralized, making cohesive management difficult, with water managed, if at all, for financial gain rather than societal benefits.<sup>114</sup> In a market-based system, water also becomes subject to a “Tragedy of the Commons”-type situation where private users will be encouraged to

withdraw and consume as much as they can, especially in times of shortage when water use should be limited. Furthermore, markets are often subject to vague financial forces, which can be difficult to predict, and which certainly will not always link up with the most prudent decisions for planning and response based on the natural system.

Markets also lack any mechanism for centralized information gathering. This may pose a problem particularly for Georgia, given the issue of unquantified water rights and “sleeper permits.”<sup>115</sup> In Georgia, all farm permits issued prior to July 1, 1991, have had their permitted amounts set at the pump capacity as of July 1, 1988, rather than any reasonable use calculation.<sup>116</sup> As noted above, the current regime is slowly introducing metering requirements to gather more information as to the amount of water actually used by these agricultural permittees.<sup>117</sup> While metering eventually will give the state a better idea of the actual demand placed on the state’s water supply, in order that the state may plan accordingly, this is precisely the sort of information that a market-based system would exploit. That is, markets would introduce monetary incentives for the agricultural holders of these “sleeper permits” to sell their unused capacity, thereby resulting in potentially dramatic increases on water withdrawal, diversion, and consumption without the actual issuance of more permits.<sup>118</sup> As a side note, the potential for “sleeper permits” also exists in the current Georgia framework, albeit on a smaller scale: since farm use permittees may transfer their permits through land sales, there remains the possibility that the buyer of the land will use more water under the permit (which, as noted above, is based on pump capacity rather than actual use) than the seller previously used.<sup>119</sup>

In this way, markets not only will not adequately plan for or respond to future water shortages, but they most likely will do much to thwart—whether intentionally or not—such planning and response efforts on the part of the state.

#### C. Protecting the Public Interest

Regulated riparianism is far more adept than a market-based system at taking public-interest factors of water management into consideration. As a foundational

matter, regulated riparianism is based on the public ownership of waters of the state, thereby making consideration of the public interest a natural requirement of the system.<sup>120</sup> For example, under Georgia's reasonable use analysis, EPD must consider factors relevant to the public interest such as: the necessity of the various other uses on the water source in question; any physical or chemical impairment the permitted use will have on the water source; any injury to public health, safety, or welfare resulting from such impairment; any injury or detriment caused or expected to be caused to other water uses; and any reduction in flows in other watercourses.<sup>121</sup>

Furthermore, both Georgia and Alabama recognize that certain uses, even if not of the highest financial value, are particularly important to the public interest, and elevate such uses accordingly.<sup>122</sup>

Two central features of regulated riparian systems are vital to achieving this level of protection of the public interest. First, regulated riparian systems operate on the basis that the waters of the state are a public resource managed by the state.<sup>123</sup> By managing water as a public resource, the state is able to implement the second central feature: the requirement that no withdrawal occur—with certain exceptions, examples of which in Georgia and Alabama were described above—without first obtaining a permit from the state.<sup>124</sup> It is by operating such a permitting system that the state is able to exact certain protections and requirements for the waters—for example, that permitted uses are contingent upon the interests of other entitled persons and consistent with public interest values, such as minimum instream flow.<sup>125</sup>

Markets, on the other hand, are necessarily structured on a certain degree of private ownership of water rights, and accordingly are unable—or unwilling—to provide for protections of the public interest. On this basis, one of the core benefits of markets is their efficiency, as markets are “flexible, voluntary, and free from politics.”<sup>126</sup> However, in operating with this transactional efficiency, markets often result in externalities and negative consequences with respect to the public interest.<sup>127</sup> An “efficient” transfer for transacting parties may result in negative impacts for

downstream users, whose input is not taken into account and whose detriments are not factored into the transfer price.<sup>128</sup> Simply, unchecked market-based “efficiency” increases the benefits to the transacting parties at the expense of other users and the public.<sup>129</sup> The main way to head off such negative consequences would be for the state to impose proper limitations protecting other users and the public interest. These limitations, however, necessarily “detract from the efficient benefits that a market purports to bring to the system.”<sup>130</sup>

Another reason that markets do a poor job of protecting the public interest is that markets do not—and likely cannot—do a good job of valuing anything other than the financial benefits of the water resources in question.<sup>131</sup> But the “value” of a scarce public resource such as water is clearly much broader than the monetary benefits it will bring to the transacting parties. While the transacting parties' financial valuation can take account of benefits such as agricultural uses, industrial uses, and municipal uses, other important benefits—environmental, ecological, and aesthetic benefits, for example—are much less tangible and are accordingly difficult to value.<sup>132</sup>

A counterpoint that has been raised by market proponents in Georgia is that the market system would equally allow those who value public interest benefits such as instream flows, for example, to buy the necessary water supply from other users.<sup>133</sup> However, as one commentator notes, the proposition that public-interest environmental groups would be able to generate the level of funds necessary to outbid large water users such as industry, agriculture, and power companies is simply laughable.<sup>134</sup> As a further matter, the proponents' scheme also raises the simple question: why should public interest groups even have to raise these funds? That is, why should public interest groups—and the broader public—pay for what they already have and what they already are guaranteed under the current system?

Essentially, without using so many words, the point market proponents are making is that, under a market-based system, not only will there be no guarantees for the protection of the public interest, but, if the public

does desire such guarantees, it would have to pay for them on a piece-by-piece basis, one transaction at a time. Another way of looking at the market proponents' scheme is that it is a tangible representation of the externalities that come with it; and the public will pay the cost of these externalities either in diminished protection of the public interest or, simply, in money.

#### D. What Georgia and Alabama Need to Meet Water Management Goals

While Georgia's and Alabama's regulated riparian systems are much better equipped than market-based systems to address the goals above, they are far from perfect. In order to manage their water uses and supplies effectively in the future, especially against further droughts, increasing demand, and interstate water conflicts, there are several steps Georgia and Alabama must take to improve their current systems of management.

##### 1. Implement a Comprehensive Permitting Program

First and foremost, Georgia and Alabama must ensure that their permitting programs are comprehensive. A truly comprehensive program must include periodic review of a permittee's water use, nonuse, and impacts on ecological functions, instream flow, and surrounding users; judicious employment of the power, in appropriate situations, to modify, revoke, and decline renewal of permits; and full application of the system to all users.

In Georgia, the primary step to achieve this goal is to remove the "near complete exemption of farm uses from the regulatory oversight of EPD."<sup>135</sup> As discussed in some detail above, the main exemptions with respect to farm uses are that their permits are for an unlimited term (as opposed to ten to fifty years for all other permits); their permits may not be revoked or suspended for nonuse of water; and, for permits issued prior to July 1, 1991, their permitted quantity of water is based on pump capacity rather than any reasonable use calculation.<sup>136</sup> In order to employ a comprehensive water management system, Georgia must do away with all of these exemptions. Indeed, failing to close this

gap effectively abdicates EPD's management responsibility for the vast majority of withdrawal permits and the largest consumptive use of water in the state.<sup>137</sup>

In Alabama, the road to a comprehensive permitting regime is much longer, as Alabama currently has a threadbare water management system. For the time being, Alabama must establish certain foundational requirements of an adequate regulated riparian system. First, Alabama must institute a proper permitting system, complete with a full reasonable use analysis, as well as giving discretion to the Office as to whether to issue a certification to those submitting a complete declaration. Furthermore, Alabama must amend AWRA to allow the Office to limit or modify uses where necessary to prevent unreasonable impacts on surrounding users and the public interest. References within AWRA to the continuing applicability and primacy of the common law are confusing and should be clarified or removed.

##### 2. Improve Information-Gathering Mechanisms

A second component of an adequate regulated riparian system is the implementation of information-gathering mechanisms. Specifically, the state should keep track of the amount of water a user withdraws, diverts, or consumes versus the amount of water the permit allows. This will allow the state to make accurate long-term decisions both with respect to planning for the future and modifying, revoking, and reallocating permits where necessary. As a further matter, the state should concurrently monitor streams and other waters for background data, thereby allowing the state to adjust its judgments based on stream flows and ecological needs.

In Georgia, one of the primary gaps in the information-gathering system is with respect to agricultural uses, though this should be changing in the next few years. As discussed above, recent legislation requires the installation of meters for all new farm uses upon the issuance of a permit, and for all existing farm uses by July 1, 2009.<sup>138</sup> Directly related to agricultural uses is the question of whether a use is consumptive or non-consumptive. While metering is a positive

development, the gathering of more detailed information with respect to water consumption and the development of scientific techniques to do so will allow the state to get a better measurement of the impact of different water uses on downstream users and the environment.<sup>139</sup> One final area for improvement for Georgia's information-gathering mechanisms is with respect to those users that consume less than 100,000 gallons of water per day. Even if Georgia chooses not to require permitting for such users, information with respect to their cumulative impact is vital to long-term planning for the future.

The situation in Alabama is less clear. AWRA does require that all users possessing certificates of beneficial use submit annual water use reports detailing the estimated amount of water withdrawn, diverted, or consumed in gallons, tabulated for average daily use per month.<sup>140</sup> Other than for those using less than 100,000 gallons of water per day (and who are thus not required to submit a Declaration of Beneficial Use), there do not appear to be any exemptions to this requirement. Neither the regulations nor the statute provide any elaboration as to what the Office is to do or actually does with this information in terms of long-term planning or otherwise. As noted above, the information cannot be used to modify permits, given AWRA's prohibition that "[n]o person's beneficial use of the quantitative waters of the state shall be restricted by the Office."<sup>141</sup> Presumably, the information may play a role in the Office's designation of a capacity stress area, but, as noted above, the Office has yet to designate such an area.

### 3. Improve Mechanisms for Managing Crises

Another important component of an adequate water management system is the state's ability to respond to water crises. Given the recent history of droughts, water conflicts, and increasing demands, this component will be of great importance for the future of water management in Georgia and Alabama.

Georgia's mechanism for managing crises appears to be more or less adequate.<sup>142</sup> EPD has emergency modification powers, under which it may issue an emergency order for shortages of surface water or

groundwater. For surface water, EPD may issue an emergency order where shortages "place in jeopardy the health or safety of the citizens of such area or...threaten serious harm to the water resources."<sup>143</sup> For groundwater, the relevant standard for an emergency order is in a "situation requiring immediate action to protect the public health or welfare."<sup>144</sup> No use is exempt from such orders, although for surface water emergency orders, the EPD director may not issue an order until five days following the date of mailing the relevant notice.<sup>145</sup> If a farm user appeals the order, the user need not comply with the order during the appeal process.<sup>146</sup> During emergencies, the statutes provide that EPD "give first priority to providing water for human consumption and second priority to farm use."<sup>147</sup>

In Alabama, AWRA provides the Office with the ability to handle crises through the designation of "capacity stress areas," which may be designated where existing or foreseeable water uses in such area exceed or will exceed the water availability.<sup>148</sup> As noted above, the Office has yet to designate a single capacity stress area since AWRA's enactment in 1993.<sup>149</sup> Once a capacity stress area has been designated, the Water Resources Commission ("Commission") has a great deal of latitude in "the implementation of a use restriction alternative," although it may only do so through rulemaking procedures, rather than through orders, as in Georgia.<sup>150</sup> Furthermore, any limitations designated by the Commission "shall be confined to matters necessary for the protection of the beneficial use of the waters of the state," rather than, for example, the protection of in-stream flow or environmental values.<sup>151</sup> Like Georgia's statutes, AWRA declares that human consumption of water is a priority of the state, and that no limitation shall be placed on such consumption except in times of emergency.<sup>152</sup> Unlike Georgia, however, AWRA does not contain any preference for agricultural uses.<sup>153</sup>

### 4. Guaranteed Conservation Measures and Protection of Public Interest Values

Finally, a good water management system should attempt to guarantee certain conservation measures for its waters—particularly instream flow. Georgia's

current statutory regime does a better job than Alabama's in this regard. As noted above, Georgia's reasonable use analysis takes into consideration a variety of factors, including any physical or chemical impairment the permitted use will have on the water source and any reduction in flows in other watercourses.<sup>154</sup> Furthermore, EPD may issue an emergency order for surface water where a shortage "threaten[s] serious harm to the water resources."<sup>155</sup>

Alabama law, on the other hand, seems almost hostile to the protection of values other than human welfare and beneficial uses. While the Declaration of Beneficial Use must demonstrate that the use will be consistent with the public interest, it is difficult to say how this requirement squares with AWRA's requirement that "[n]o person's beneficial use of the quantitative waters of the state shall be restricted by the Office except via the designation of a capacity stress area."<sup>156</sup> As noted above, the designation of capacity stress areas hinges solely on the question of availability of water for uses.<sup>157</sup> And furthermore, any limitations imposed by the Commission in such areas must pertain only to "matters necessary for the protection of the beneficial use of the waters of the state."<sup>158</sup> Accordingly, in the application of conservation measures, Alabama has much room for improvement.

#### IV. Conclusion

Over the past decade, Georgia and Alabama have faced a variety of physical and political pressures affecting water use and supply in the region. From the perspective of 2008, it is unlikely that such pressures will subside any time soon. Accordingly, Georgia and Alabama must begin working now to address current and inevitable future challenges with respect to water use and supply. The solution to these challenges, however, is not the implementation of water markets in Georgia and Alabama. Water markets not only will fail to manage limited water supplies for increasing uses, but they likely will serve to exacerbate the problems.

The proper answer to Georgia's and Alabama's challenges with respect to water use and supply is to continue with the states' current regulated riparian regimes, with added elements that will improve and

strengthen water management. Although the states are likely to face significant pressure in maintaining and strengthening their regimes of regulated riparianism, it is only under improved regulated riparian regimes that Georgia and Alabama will be able to achieve effective management of water use and supply for the future of their citizens and waters.

#### Endnotes

<sup>1</sup> See e.g., Shaila Dewan & Brenda Goodman, *New to Being Dry, the South Struggles to Adapt*, N.Y. TIMES, Oct. 23, 2007, available at <http://www.nytimes.com/2007/10/23/us/23drought.html> (last visited Nov. 13, 2008); Wilson G. Barmeyer, Note, *The Problem of Reallocation in a Regulated Riparian System: Examining the Law in Georgia*, 40 GA. L. REV. 207, 210 (2005).

<sup>2</sup> See e.g., *Price v. High Shoals Mfg. Co.*, 132 Ga. 246 (1909) (concerning conflict between neighbors over upstream construction of reservoir on shared surface water); *St. Amand v. Lehman*, 120 Ga. 253 (1904) (concerning conflict over digging of wells on adjacent property affecting shared underground stream).

<sup>3</sup> See Part II.A. – B., *infra*.

<sup>4</sup> See, e.g., *City of Atlanta v. Hudgins*, 193 Ga. 618 (1942) (concerning drainage of petitioner's wells allegedly by city's installation of sewers); *Sloss-Sheffield Steel & Iron Co. v. Wilkes*, 231 Ala. 511, 518, 165 So. 764, 770 (1936) (concerning drainage of plaintiff's groundwater allegedly due to neighboring defendant's mining activity).

<sup>5</sup> FRANK HOBBS & NICOLE STOOPS, U.S. CENSUS BUREAU, DEMOGRAPHIC TRENDS IN THE 20TH CENTURY A-1, Tbl. 1 (2002), available at <http://www.census.gov/prod/2002pubs/censr-4.pdf> (last visited Nov. 13, 2008).

<sup>6</sup> *Id.*

<sup>7</sup> U.S. Census Bureau, State Interim Population Projections by Age and Sex: 2004–2030, Tbl. 6, <http://www.census.gov/population/projections/PressTab6.xls> (last visited Nov. 13, 2008).

<sup>8</sup> Dewan & Goodman, *supra* note 1.

<sup>9</sup> Barmeyer, *supra* note 1, at 209; ENVTL. PROT. DIV., GEORGIA DEP'T NATURAL RES., GEORGIA'S ENVIRONMENT 8-9 (2003), available at [http://www.gaepd.org/Files\\_PDF/gaenviron/annualreport/gaenv02\\_03.pdf](http://www.gaepd.org/Files_PDF/gaenviron/annualreport/gaenv02_03.pdf) (last visited Nov. 13, 2008).

<sup>10</sup> Dewan & Goodman, *supra* note 1.

<sup>11</sup> *Id.*; Harris Blackwood, *Georgia moves from exceptional to extreme drought*, GAINESVILLE TIMES (Georgia), Mar. 26, 2008, available at <http://www.gainesvilletimes.com/news/article/4444/> (last visited Nov. 13, 2008); see also U.S. Drought Monitor, <http://www.drought.unl.edu/DM/monitor.html> (last visited Nov. 13, 2008).

<sup>12</sup> See U.S. Drought Monitor, State Drought Monitor, Alabama (Nov. 11, 2008), [http://drought.unl.edu/dm/DM\\_state.htm?AL,SE](http://drought.unl.edu/dm/DM_state.htm?AL,SE) (last visited Nov. 13, 2008) (on file with authors).

<sup>13</sup> See U.S. Drought Monitor, State Drought Monitor, Georgia (Nov. 11, 2008), [http://drought.unl.edu/dm/DM\\_state.htm?GA,SE](http://drought.unl.edu/dm/DM_state.htm?GA,SE) (last visited Nov. 13, 2008) (on file with authors); see also Greg Bluestein, *Drought saps lakes, tightens grip on north Georgia*, ATLANTA J.-CONST., Nov. 14, 2008, available at [http://www.ajc.com/metro/content/metro/stories/2008/11/14/georgia\\_drought\\_tightens\\_grip.html](http://www.ajc.com/metro/content/metro/stories/2008/11/14/georgia_drought_tightens_grip.html) (last visited Nov. 14, 2008) (noting that twelve percent of Georgia is now classified as “exceptional”).

<sup>14</sup> Climate Prediction Ctr., Nat’l Weather Serv., U.S. Seasonal Drought Outlook (Nov. 6, 2008), [http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html) (last visited Nov. 13, 2008) (on file with authors); see also Stacy Shelton, *Georgia drought persists, but not panic*, ATLANTA J.-CONST., Oct. 3, 2008, available at [http://www.ajc.com/metro/content/metro/stories/2008/10/03/georgia\\_drought.html](http://www.ajc.com/metro/content/metro/stories/2008/10/03/georgia_drought.html) (last visited Nov. 13, 2008).

<sup>15</sup> See C. Hansell Watt IV, Comment, *Who Gets the Hooch?: Georgia, Florida, and Alabama Battle for Water From the Apalachicola-Chattahoochee-Flint River Basin*, 55 MERCER L. REV. 1453, 1460 (2004).

<sup>16</sup> Ben Evans, *Tri-state water war to heat up with federal intervention*, ATLANTA J.-CONST., Mar. 9, 2008, available at [http://www.ajc.com/metro/content/metro/stories/2008/03/08/apdrought\\_0309.html](http://www.ajc.com/metro/content/metro/stories/2008/03/08/apdrought_0309.html) (last visited Nov. 13, 2008); *Southeastern Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008) (reversing district court’s approval of settlement between power utility and Georgia water supply providers.); Harris Blackwood, *Federal court tosses out Lanier water agreement*, Gainesville Times (Georgia), Feb. 5, 2008, available at <http://www.gainesvilletimes.com/news/archive/3202/> (last visited Nov. 13, 2008). As a further matter, and coming as a blow to Georgia’s position in the water war, U.S. District Judge Paul A. Magnuson recently ruled that, prior to reaching any substantive questions in the case, it must be decided as a preliminary matter whether Atlanta has any rights to use Lake Lanier – which was originally built for hydropower – as its main water source. A decision on this issue in the negative would effectively render the case obsolete. See Stacy Shelton, *WATER WAR: Court rulings crucial to state: U.S. Supreme Court and a federal judge look at the big question: Does Georgia have the right to tap Lake Lanier?*, ATLANTA J.-CONST., Aug. 17, 2008, available at <http://www.ajc.com/shopping/content/metro/stories/2008/08/17/water.html> (last visited Nov. 13, 2008); *Water feud rests on Lanier: Atlanta region’s right to use lake must be decided first, judge rules*, AUGUSTA CHRON., Aug. 13, 2008, available at [http://chronicle.augusta.com/stories/081308/met\\_469320.shtml](http://chronicle.augusta.com/stories/081308/met_469320.shtml) (last visited Nov. 13, 2008).

<sup>17</sup> Dave Flessner et al., *High hurdles with latest water bid*, CHATTANOOGA TIMES FREE PRESS, Mar. 28, 2008, available at <http://www.timesfreepress.com/news/2008/mar/28/high-hurdles-latest-water-bid/> (last visited Nov. 13, 2008).

<sup>18</sup> See Flint River Drought Protection Act, §§ 12-5-540–12-5-550 (2007); ENVTL. PROT. DIV., *supra* note 9, at 8-9; Barmeyer, *supra* note 1, at 209.

<sup>19</sup> See GA. CODE ANN. §§ 12-5-31(n) (2007).

<sup>20</sup> See GEORGIA WATER COUNCIL, GEORGIA COMPREHENSIVE STATE-WIDE WATER MANAGEMENT PLAN (2008) (publication of water plan as approved by Georgia Water Council), available at [http://www.georgiawatercouncil.org/Files\\_PDF/ater\\_plan\\_20080109.pdf](http://www.georgiawatercouncil.org/Files_PDF/ater_plan_20080109.pdf) (last visited Nov. 13, 2008); see also Barmeyer, *supra* note 1, at 217-18.

<sup>21</sup> See e.g., H.B. 709, 2005 Reg. Sess. (Ala. 2005) (prohibiting the transfer of water from the Tennessee River Basin within Marshall County under certain conditions), available at <http://www.legislature.state.al.us/searchableinstruments/2005RS/Bills/HB709.htm> (last visited Nov. 13, 2008). The legislation, which applied solely to Marshall County, passed in 2005; “nearly identical bills” passed for Jackson, Madison, Morgan, Lawrence, Limestone, Colbert, and Lauderdale in the following years, thereby banning interbasin transfers “in all 8 counties that the Tennessee [River] flows through in Alabama.” *Tapping Into the Tennessee*, LIFE ON THE WATER, <http://208.251.149.78/DNN/home/Content/NewsOnTheWater/TappingintotheTennessee/tabid/2842/Default.aspx> (last visited Nov. 13, 2008).

<sup>22</sup> See Barmeyer, *supra* note 1, at 209-11, 229; JOSEPH W. DELLAPENNA, WATER MARKETS AND MISINFORMATION: AN ANALYSIS OF A GEORGIA PUBLIC POLICY FOUNDATION PAPER, “WATER PERMIT TRANSFERS: BRIDGING THE MISINFORMATION GAP” 1-2 (2004) [hereinafter DELLAPENNA, WATER MARKETS].

<sup>23</sup> See Barmeyer, *supra* note 1, at 230-32.

<sup>24</sup> *Id.* at 229.

<sup>25</sup> *Id.* at 209, 229.

<sup>26</sup> See, e.g., DELLAPENNA, WATER MARKETS, *supra* note 21, at 1-2 (discussing Georgia Public Policy Foundation’s continuing advocacy for water markets).

<sup>27</sup> Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern States at the Opening of the Twenty-First Century*, 25 U. ARK. LITTLE ROCK L. REV. 9, 65 (2002) [herein after Dellapenna, *Water Allocation*].

<sup>28</sup> 132 Ga. 248-49 (1909).

<sup>29</sup> *Id.* at 249.

<sup>30</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 65.

<sup>31</sup> *Price*, 132 Ga. at 249.

<sup>32</sup> *But see* Pyle v. Gilbert, 245 Ga. 403, 410-11 (1980) (finding that “the right to the reasonable use of water in a nonnavigable watercourse on non-riparian land can be acquired by grant from a riparian owner.”); Dellapenna, *Water Allocation*, *supra* note 26, at 67.

<sup>33</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 65.

<sup>34</sup> GA. CODE ANN. §§ 51-9-7, 51-9-8 (2007).

<sup>35</sup> See *Saddler v. Lee*, 66 Ga. 45, 48-49 (1880).

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 48.

<sup>38</sup> *Stoner v. Patton*, 132 Ga. 178, 180 (1909).

<sup>39</sup> *St. Amand v. Lehman*, 120 Ga. 253, 256 (1904).

<sup>40</sup> *Stoner*, 132 Ga. at 180; see also *City of Atlanta v. Hudgins*, 193 Ga. 618 (1942) (rejecting petitioner’s claim because she failed to prove wells were fed by an underground stream).

<sup>41</sup> GA. CODE ANN. §§ 12-5-90 – 12-5-107 (2007).

<sup>42</sup> GA. CODE ANN. § 12-5-96(a)(1).

<sup>43</sup> GA. CODE ANN. § 12-5-96(a)(2).

- <sup>44</sup> GA. CODE ANN. § 12-5-96(a)(3).
- <sup>45</sup> GA. CODE ANN. § 12-5-96(d).
- <sup>46</sup> GA. CODE ANN. § 12-5-96(c)(4).
- <sup>47</sup> GA. CODE ANN. § 12-5-97(a), (c), (d) (2007).
- <sup>48</sup> GA. CODE ANN. §§ 12-5-96(1), 12-5-96(3), 12-5-97(e).
- <sup>49</sup> GA. CODE ANN. § 12-5-102(a) (2007).
- <sup>50</sup> *Id.*
- <sup>51</sup> GA. CODE ANN. § 12-5-102(a), (b).
- <sup>52</sup> GA. CODE ANN. § 12-5-102(c).
- <sup>53</sup> GA. CODE ANN. § 12-5-31 (2007).
- <sup>54</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 68-69; Barmeyer, *supra* note 1, at 215; GA. CODE ANN. § 12-5-31(a)(1).
- <sup>55</sup> GA. CODE ANN. § 12-5-31(e), (g).
- <sup>56</sup> GA. CODE ANN. § 12-5-31(f).
- <sup>57</sup> GA. CODE ANN. § 12-5-31(n).
- <sup>58</sup> GA. CODE ANN. § 12-5-31(n)(1).
- <sup>59</sup> GA. CODE ANN. § 12-5-31(n)(2).
- <sup>60</sup> GA. CODE ANN. § 12-5-31(k).
- <sup>61</sup> GA. CODE ANN. § 12-5-31(k)(1)-(4), (6), (7), (8).
- <sup>62</sup> GA. CODE ANN. § 12-5-31(l)(1) (2007).
- <sup>63</sup> *Id.*
- <sup>64</sup> GA. CODE ANN. §§ 12-5-31(l)(3).
- <sup>65</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 72; Barmeyer, *supra* note 1, at 216.
- <sup>66</sup> Barmeyer, *supra* note 1, at 216-17; Georgia Water Science Ctr., U.S. Geological Survey, *Water Use in Georgia, 2000*; and Trends, 1950–2000, <http://ga.water.usgs.gov/projects/project/wateruse.html> (last visited Nov. 13, 2008).
- <sup>67</sup> See DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 3.
- <sup>68</sup> GA. CODE ANN. §§ 12-5-31(b)(3) (noting, however, that that the irrigation of recreational turf is not considered a farm use “in the Chattahoochee River watershed upstream from Peachtree Creek”), 12-5-92(5.1) (2007) (noting, however, that the irrigation of recreational turf is not considered a farm use in Chatham, Effingham, Bryan, and Glynn counties).
- <sup>69</sup> GA. CODE ANN. §§ 12-5-31(a)(3), 12-5-105(a) (2007).
- <sup>70</sup> GA. CODE ANN. §§ 12-5-31(a)(3), 12-5-105(a).
- <sup>71</sup> GA. CODE ANN. §§ 12-5-31(a)(3), 12-5-105(a).
- <sup>72</sup> GA. CODE ANN. §§ 12-5-31(a)(3), 12-5-105(a).
- <sup>73</sup> GA. CODE ANN. §§ 12-5-31(a)(3), (h), 12-5-97(a), 12-5-105(b)(1) (2007).
- <sup>74</sup> GA. CODE ANN. §§ 12-5-31(a)(3), (7), 12-5-97(c), 12-5-105(b)(1).
- <sup>75</sup> GA. CODE ANN. §§ 12-5-31(k)(4), 12-5-105(b)(2).
- <sup>76</sup> GA. CODE ANN. §§ 12-5-31(k)(6), (7), 12-5-105(b)(3); see also Dellapenna, *Water Allocation*, *supra* note 26, at 72; Barmeyer, *supra* note 1, at 216.
- <sup>77</sup> GA. CODE ANN. §§ 12-5-31(m.1), 12-5-105(b.1).
- <sup>78</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 47; North Alabama C.I. & Ry. Co. v. Jones, 156 Ala. 360, 366-67, 47 So. 144, 146 (1908) (“The law is well settled...that every riparian proprietor has an equal right to have the stream flow through his lands in its natural state, without material diminution in quantity or alteration in quality. But this rule is qualified by the limitation...that each of said proprietors are entitled to a reasonable use of the water for domestic, agricultural, and manufacturing purposes.”); *Ulbricht v. Eufaula Water Co.*, 86 Ala. 587, 590, 6 So. 78, 79 (1888) (“There is no principle of law better recognized, than that every riparian owner of lands, through which streams of water flow, has a right to the reasonable use of the running water, which is a private right of property.”);
- <sup>79</sup> See, e.g., *Williams v. Gibson*, 84 Ala. 228, 234-35, 4 So. 350, 354 (1887) (applying reasonable use to actions of mine owner); *Sloss-Sheffield Steel & Iron Co. v. Wilkes*, 231 Ala. 511, 518, 165 So. 764, 770 (1936) (allowing for draining of groundwater, no matter the effects on neighboring property owners, so long as there is a “reasonable need to do so” and waters are not “willfully or negligently wasted”); *Henderson v. Wade Sand & Gravel Co.*, 388 So. 2d 900, 903 (Ala. 1980) (overruling *Sloss* and applying nuisance law in cases where “plaintiff’s use of groundwater ... is interfered with by defendant’s diversion of that water, incidental to some use of his own land.”).
- <sup>80</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 48.
- <sup>81</sup> 553 So. 2d 89, 91 (Ala. 1989).
- <sup>82</sup> *Id.* at 92.
- <sup>83</sup> *Id.*; Dellapenna, *Water Allocation*, *supra* note 26, at 48.
- <sup>84</sup> Dellapenna, *Water Allocation*, *supra* note 26, at 48; *Adams*, 553 So. 2d at 91-92; *Henderson*, 388 So. 2d at 902-03.
- <sup>85</sup> *Martin v. City of Linden*, 667 So. 2d 732, 734 (Ala. 1995); Dellapenna, *Water Allocation*, *supra* note 26, at 48.
- <sup>86</sup> *Martin*, 667 So. 2d at 738.
- <sup>87</sup> ALA. CODE § 9-10B-1 - -30 (2007).
- <sup>88</sup> ALA. CODE § 9-10B-27 (2007).
- <sup>89</sup> ALA. CODE §§ 9-10B-2(5) (establishing governmental bodies), 9-10B-20(a), (b) (requiring Declaration of Beneficial Use), 9-10B-6, 9-10B-22 (setting out Office’s powers with regard to capacity stress areas).
- <sup>90</sup> ALA. CODE §§ 9-10B-5, -20.
- <sup>91</sup> ALA. CODE § 9-10B-2(6).
- <sup>92</sup> ALA. CODE § 9-10B-20(a), (b), (d).
- <sup>93</sup> ALA. ADMIN. CODE r. 305-7-10-.02(1) (2007).
- <sup>94</sup> ALA. ADMIN. CODE r. 305-7-10-.02(2)(b).
- <sup>95</sup> ALA. CODE § 9-10B-20(e); ALA. ADMIN. CODE 305-7-10-.05 (2007).
- <sup>96</sup> ALA. CODE § 9-10B-20(e); Dellapenna, *Water Allocation*, *supra* note 29, at 50.
- <sup>97</sup> ALA. ADMIN. CODE r. 305-7-11-.01 (2007).
- <sup>98</sup> *Id.* (capitalization in original).
- <sup>99</sup> ALA. ADMIN. CODE r. 305-7-11-.02 (2007).
- <sup>100</sup> ALA. CODE § 9-10B-20(f).
- <sup>101</sup> ALA. ADMIN. CODE r. 305-7-10-.03(2) (2007).
- <sup>102</sup> ALA. CODE § 9-10B-21 (2007).
- <sup>103</sup> ALA. CODE § 9-10B-22 (2007).
- <sup>104</sup> ALA. CODE § 9-10B-27 (2007).
- <sup>105</sup> Dellapenna, *Water Allocation*, *supra* note 29, at 52.
- <sup>106</sup> GA. CODE ANN. § 12-5-31(e), (g) (2007).
- <sup>107</sup> ALA. ADMIN. CODE r. 305-7-10-.02(2)(b) (2007).
- <sup>108</sup> Barmeyer, *supra* note 1, at 210, 225-27.
- <sup>109</sup> *Id.* at 228.

<sup>110</sup> See DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 12-13; *see also* Part IV.A.3., *infra*.

<sup>111</sup> See Joseph W. Dellapenna, *Practical Challenges in Water Withdrawal Permit Transfers: A Rejoinder*, STATE BAR OF GEORGIA ENVTL. L. SECTION, Spring 2006, at 6 [hereinafter Dellapenna, *Practical Challenges*].

<sup>112</sup> *Id.* (discussing the ability to plan for the long term as “[o]ne of the major purposes of regulated riparian statutes,” and the broad discretion of administering agencies to plan for and deal with extreme shortages).

<sup>113</sup> See DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 14.

<sup>114</sup> See Barmeyer, *supra* note 1, at 226-28.

<sup>115</sup> *Id.* at 232-33.

<sup>116</sup> *Id.*

<sup>117</sup> See GA. CODE ANN. §§ 12-5-31(m.1), 12-5-105(b.1) (2007).

<sup>118</sup> Barmeyer, *supra* note 1, at 232-33; DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 15.

<sup>119</sup> See GA. CODE ANN. § 12-5-31(a)(3) (allowing for transfer of permit with transfer of land).

<sup>120</sup> Dellapenna, *Practical Challenges*, *supra* note 108, at 3, 6.

<sup>121</sup> GA. CODE ANN. § 12-5-31(e)(1), (3), (5), (7), (8).

<sup>122</sup> See GA. CODE ANN. §§ 12-5-31(l)(3), 12-5-102(c) (prioritizing in times of emergency, first, water for human consumption and, second, water for farm use); DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 22 (discussing Georgia’s prioritizations in emergency); Ala. Code § 9-10B-2(2) (recognizing human consumption as “a priority use of the state”); Dellapenna, *Water Allocation*, *supra* note 29, at 51 (discussing Alabama’s prioritizations).

<sup>123</sup> See JOSEPH W. DELLAPENNA & STEPHEN E. DRAPER, *WATER ISSUES WHITE PAPER: PROPERTY IN WATER IN GEORGIA 1* (2002); Dellapenna, *Practical Challenges*, *supra* note 109, at 3, 6.

<sup>124</sup> Dellapenna, *Practical Challenges*, *supra* note 109, at 6.

<sup>125</sup> *Id.*

<sup>126</sup> Barmeyer, *supra* note 1, at 225-26.

<sup>127</sup> *Id.* at 225.

<sup>128</sup> *Id.* at 227-28.

<sup>129</sup> *Id.* at 228.

<sup>130</sup> *Id.* at 226.

<sup>131</sup> DELLAPENNA, *WATER MARKETS*, *supra* note 21, at 12-13.

<sup>132</sup> *Id.*

<sup>133</sup> Dellapenna, *Practical Challenges*, *supra* note 109, at 6.

<sup>134</sup> *Id.*

<sup>135</sup> Barmeyer, *supra* note 1, at 216.

<sup>136</sup> See GA. CODE ANN. §§ 12-5-31(a)(3), (h), (k)(4), (k)(6), 12-5-97(a), (c) (2007).

<sup>137</sup> Barmeyer, *supra* note 1, at 216-17.

<sup>138</sup> GA. CODE ANN. §§ 12-5-31 (m.1), 12-5-105(b.1) (2007).

<sup>139</sup> Barmeyer, *supra* note 1, at 213.

<sup>140</sup> ALA. ADMIN. CODE r. 305-7-12-.02 (2007).

<sup>141</sup> ALA. CODE § 9-10B-2(6).

<sup>142</sup> Dellapenna, *Water Allocation*, *supra* note 29, at 71.

<sup>143</sup> GA. CODE ANN. § 12-5-31(l)(1).

<sup>144</sup> GA. CODE ANN. § 12-5-102 (2007).

<sup>145</sup> GA. CODE ANN. § 12-5-31(l)(1).

<sup>146</sup> GA. CODE ANN. § 12-5-31(l)(2).

<sup>147</sup> GA. CODE ANN. §§ 12-5-31(l)(3), 12-5-102(c).

<sup>148</sup> ALA. CODE §§ 9-10B-2(2), -21 (2007).

<sup>149</sup> ALA. CODE § 9-10B-2(2); Dellapenna, *Water Allocation*, *supra* note 29, at 51.

<sup>150</sup> ALA. CODE § 9-10B-22(a) (2007).

<sup>151</sup> *Id.*; ALA. CODE §§ 9-10B-3(3) (2007) (defining “beneficial use” as “[t]he diversion, withdrawal, or consumption of the waters of the state in such quantity as is necessary for economic and efficient utilization consistent with the interests of this state.”).

<sup>152</sup> ALA. CODE § 9-10B-2(2).

<sup>153</sup> Dellapenna, *Water Allocation*, *supra* note 29, at 51.



<sup>154</sup> GA. CODE ANN. § 12-5-31(e)(1), (8).

<sup>155</sup> GA. CODE ANN. § 12-5-31(l)(1).

<sup>156</sup> ALA. ADMIN. CODE r. 305-7-10-.02(2)(b) (2007); ALA. CODE § 9-10B-2(6).

<sup>157</sup> ALA. CODE § 9-10B-21 (2007).

<sup>158</sup> ALA. CODE § 9-10B-22(a).

**LIKE TO WRITE?**

The Water Resources Committee welcomes the participation of members who are interested in preparing this newsletter.

If you would like to lend a hand by writing, editing, identifying authors, or identifying issues please contact Jeff B. Kray at [jkray@martenlaw.com](mailto:jkray@martenlaw.com).

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**WATER LAW REFORM IN  
SOUTH CAROLINA  
2008 Eastern Water Resources Conference  
Charlotte, NC  
May 1-2, 2008**

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**M. McMullen Taylor  
McAngus Goudelock & Courie  
Columbia, South Carolina**

Surface water comprises one percent of South Carolina's total water resources, yet South Carolina relies extensively on surface water to supply its water needs. In South Carolina, approximately 2.8 million people out of a total population of 4.2 million rely on surface water for drinking and other uses.<sup>1</sup> In 2006, 16.3 trillion gallons, or approximately 99.3% of total water use, were withdrawn from surface water to accommodate power generation, water supply, agricultural operations, golf course irrigation, industrial operations, and mining.<sup>2</sup> About 98% of South Carolina's surface water is used for power generation.<sup>3</sup> Nine power utilities operate in South Carolina, with 51 power plants containing 206 generators at a total rating capacity of 18,827.4 megawatts.<sup>4</sup> Excluding power generation, the remaining water use categories and amount of surface water withdrawn in 2006 is shown in Figure 1.

With droughts seemingly becoming a common occurrence in the Southeast, and population growth booming in the region as well, Southeastern states can no longer take for granted an unlimited supply of water. During the 1990s, South Carolina's overall population grew by 15% with growth occurring mostly along the coast and in metropolitan areas.<sup>5</sup> During this same time period, water consumption in South Carolina rose by 20%.<sup>6</sup> According to the United States Geological Survey, South Carolina leads the Southeast in the intensity of water withdrawals, consuming from 220,000 to 300,000 million gallons per day per square mile.<sup>7</sup> South Carolina is expected to experience a 15% increase in population by 2025.<sup>8</sup> South Carolina must manage its water more efficiently in order to meet the challenges that population growth and climate change may bring in the future.

South Carolina has adopted several statutes concerning surface water quantity.<sup>9</sup> In 1967, the S.C. Water Resources Planning and Coordination Act was enacted, charging the State's natural resource agency with developing water policy and creating a State Water Plan.<sup>10</sup> Since 1982, a Surface Water Surface Water Withdrawal and Reporting Act has required surface water withdrawals exceeding three million gallons a month to report such use.<sup>11</sup> In 1985, South Carolina enacted its Interbasin Transfer Act,<sup>12</sup> and the South Carolina Drought Response Act.<sup>13</sup> These statutes leave intact South Carolina's common law governing water allocation.<sup>14</sup> To understand the need for a surface water permitting scheme in South Carolina, a look at South Carolina's riparian common law provides useful context.

#### 1. Riparian Common Law in South Carolina

The basic law governing natural watercourses in South Carolina is the common law riparian doctrine. Riparian litigation in South Carolina reached its pinnacle during the advent of the industrial age, when upstate mills and cotton manufacturing plants turned to rivers and streams for energy supply.<sup>15</sup> Since the 1920s, riparian law has lain dormant except for sporadic disputes concerning related littoral rights. Because South Carolina case law concerning riparian rights is relatively sparse, many riparian questions remain unanswered by South Carolina courts.

A person who owns property contiguous to a natural watercourse is a riparian. A natural water course is a stream or river flowing in a definite channel and discharges into some other stream or water body.<sup>16</sup>

Under riparian law, a riparian owner has a property right to the access and use of the stream flow running through his/her property. A riparian owner does not have a claim of ownership of the water itself.<sup>17</sup> The nature of the right is a right of use only. The riparian right to use water is automatically conveyed in the transfer of title to riparian land.<sup>18</sup> Whether water is used or not does not alter a riparian right, nor extinguish it.<sup>19</sup> Whether a watercourse is navigable has no bearing on the determination of a riparian right.<sup>20</sup> Each riparian owner has an equal right of use, subject to the corresponding rights of others.<sup>21</sup>

<b>Year 2006</b>	<b>Surface Water Withdrawn (million gallons)</b>	<b>% of Surface Water Use</b>
Aquaculture	171.87	.05%
Golf Courses	9,275.15	2.68%
Industrial	138,188.07	40.0%
Irrigation	11,176.64	3.24%
Mining	498.44	.14%
Water Supply	186,149.20	53.88%
<b>TOTAL:</b>	<b>345,459.37</b>	<b>100%</b>

(Data Source: SCDHEC, Bureau of Water, S.C. Water Use Report: 2006 Annual Summary).

**Figure 1**

A riparian may make beneficial use of water accessible from his or her property. The traditional riparian right of use includes the right to use water for domestic, agricultural and recreational purposes, to use the shoreline or bank for access to water, and to construct a dock or pier.<sup>22</sup> Further, a riparian owner has a right to detain water temporarily by means of a dam so long as it is reasonable and used for rightful purposes.<sup>23</sup> South Carolina courts have not given preference to one particular type of use over others.

There are limitations to the riparian right of use. First, a riparian owner may use water only for the benefit of his or her riparian land.<sup>24</sup> This limitation primarily affects water utilities who, by their very nature, distribute water off of riparian land to its customers. Although South Carolina courts have not addressed this limitation, a majority of states hold that diversion of water by a riparian public water utility for distribution to its non-riparian customers is not considered to be a valid riparian use.<sup>25</sup> “It has been held with practical unanimity that a municipal corporation, in its construction and operation of a water supply system, by which it impounds the water of a stream and distributes such water to its inhabitants, receiving compensation therefore, is not in the exercise of the traditional right of a riparian owner ....”<sup>26</sup> Such use is

deemed extraordinary and unreasonable, subjecting a municipality to liability.<sup>27</sup>

Second, the use of water must be reasonable. In *White v. Whitney Manufacturing Company*, the South Carolina Supreme Court established the riparian rule of reasonableness, stating that “[e]ach proprietor is entitled to such use of the stream, so far as it is reasonable ... and not inconsistent with a likewise reasonable use by the other proprietors of land on the same stream above and below.”<sup>28</sup> The amount of water that a riparian owner may need does not necessarily equate to reasonable use.<sup>29</sup> If a riparian owner needs more water for his business than he is entitled to, then he must pay for it.<sup>30</sup> What is deemed reasonable use depends upon the particular circumstances at hand.<sup>31</sup> South Carolina courts have identified the width, depth and capacity of a stream, the volume of water, and common usage within the community, as factors to consider in determining reasonable use.<sup>32</sup> In South Carolina, increased turbidity of a river caused by mining upstream, which damaged a boiler, was found to be unreasonable.<sup>33</sup> A cotton mill’s flooding of a downstream riparian by retention of water, then release of water in a volume that exceeded the stream capacity, was found to be unreasonable.<sup>34</sup> An upstream riparian dumping raw sewage into a river was found to

be unreasonable.<sup>35</sup> For a use to be unreasonable, the use must cause “appreciable damage.”<sup>36</sup> Whether a use is reasonable is a fact dependent inquiry for a jury to decide.<sup>37</sup> No recent South Carolina cases exist that indicate what may be considered unreasonable in modern times.

Third, riparian use is limited by the State’s exercise of police power. “Each state ... is authorized to delineate the extent of riparian rights appurtenant to property within its borders.”<sup>38</sup> And fourth, navigable watercourses are subject to a navigational servitude. The State controls water below the ordinary high water mark of navigable streams.<sup>39</sup> Such property is held by the State in public trust for public use. Watercourses impressed with the public trust confer to the public a right of access for travel, recreation and navigational purposes.<sup>40</sup> A riparian owner cannot prevent public use of navigable waters.<sup>41</sup>

The problems of riparian common law have been well dissected by legal scholars and will only be briefly identified here.<sup>42</sup> Because what is considered reasonable water use changes over time, riparian owners lack certainty that the quantity of their use would survive challenge in the future.<sup>43</sup> Furthermore, riparian common law does not adequately take into account the public interest in water use.<sup>44</sup> And the question of allocation in times of drought is largely unanswered under riparian law.<sup>45</sup> Droughts in the early 1950s and from 1980-1982 caused South Carolina to re-examine its riparian law and the recent droughts are prompting the same assessment.

## 2. Impetus for Change

The adage that crisis brings about opportunity is certainly true in the context of water resource management. Recent droughts that have ravaged South Carolina and other southeastern states brought water resource planning and protection into sharp focus among South Carolina policy makers and water managers. The Southeast experienced one of the worst droughts on record from 1998-2002.<sup>46</sup> In South Carolina, stream flows reached historic flows, causing saltwater to push inland from coastal plain rivers and threaten public water supply intakes.<sup>47</sup> Lake Thurmond

on the Savannah River almost exhausted its storage for downstream flow requirements.<sup>48</sup> Reservoirs on the Yadkin-Pee Dee, a river basin shared by North Carolina and South Carolina, were almost drained to meet water demands downstream and to prevent saltwater contamination of water supply intakes in the Myrtle Beach area.<sup>49</sup>

In response to the 1998-2002 drought, Governor Sanford appointed a Water Law Review Committee to “advise the Governor about initiatives needed to preserve, maintain, and manage the water resources of [South Carolina] to ensure available and affordable quantities and qualities of water for present and future multiple uses.”<sup>50</sup> This Committee highlighted the inadequacies of riparian common law. It called attention to the problem that “the cumulative effect of all riparian owners ... withdrawing water may be reasonable as to each other, but fails to account for what is reasonable for protection of the entire river system as a public resource.”<sup>51</sup> Further, the Committee pointed out the inherent uncertainties in the lawfulness of a water withdrawal under riparian law.<sup>52</sup>

The Committee also focused attention on the need for proactive efforts to manage interstate rivers with our neighboring states of Georgia and North Carolina with the goal of negotiating interstate water compacts that allocate waters between the states.<sup>53</sup> In order to successfully negotiate and enforce interstate water compacts, the Committee concluded that the State needed to enact a surface water permitting system so that a compact may be enforceable.<sup>54</sup> To address the issues of both intrastate and interstate water resource management, the Committee urged South Carolina legislators to enact a comprehensive surface water permitting scheme.<sup>55</sup>

In 2004, the Governors of South Carolina and Georgia each appointed Savannah River Committees to establish communication between the States and work together to solve issues of mutual concern affecting the Savannah.<sup>56</sup> Among these issues was apportionment of the Savannah River’s waters. Foreseeing the possibility of Georgia solving its dire water supply problems through interbasin transfers from the Savannah, the Committee sought to initiate negotiation of an interstate

allocation of the Savannah River in order to prevent the type of intractable water conflict seen among Georgia and its other neighboring states. The South Carolina Savannah River Committee advocated for a surface water permitting bill so that interstate allocation could be definable and accountable.

Also in 2004, a bi-state commission was created by the state legislatures of both South Carolina and North Carolina to provide an advisory forum for integrated management of the Catawba-Wateree and Yadkin-Pee Dee River Basins.<sup>57</sup> In 2006 and 2007, the relationship between North Carolina and South Carolina became strained over a highly emotional and controversial request for an interbasin transfer in North Carolina from the Catawba-Wateree River.<sup>58</sup> As the downstream State, South Carolina complained that North Carolina's interbasin transfer would harm South Carolina during drought conditions.<sup>59</sup> Ultimately, the Attorney General of South Carolina brought suit against North Carolina in the United States Supreme Court, seeking an equitable apportionment of the Catawba-Wateree River.<sup>60</sup> This experience subtly shaped support for a surface water permitting bill in South Carolina by soothing fears, real or imagined, that water was escaping from the State's grasp.

In 2006, a surface water permitting bill was introduced in the South Carolina Senate, and referred to the Senate Agriculture and Natural Resources Committee.<sup>61</sup> The bill was swiftly killed in Committee by industry groups who strongly opposed state regulation of their water withdrawals. In 2007, the need to adopt a surface water permitting bill took on more urgency in the face of the current devastating drought afflicting the southeastern states.

### 3. The Current Surface Water Permitting Bill

During the 2007-2008 Legislative Session, another effort was made to pass a surface water permitting bill. Senate Bill 428 and House Bill 3578 (hereinafter referred to as "Bill"), drafted by the South Carolina Department of Health and Environmental Control ("SCDHEC"), was introduced and read for the first time in February 2007, and referred to the Senate and House Agriculture and Natural Resources Committees.

The bill as originally drafted was largely drawn from South Carolina's existing Interbasin Transfer Act and the Regulated Riparian Model Water Code.<sup>62</sup> It was intended to serve merely as a placeholder until the important aspects of permitting could be negotiated among water users and environmental groups. Learning its lesson from last session, SCDHEC organized a group of water users to work on a draft bill to replace the filed bill and received input from the SC Catawba-Wateree Advisory Commission. This version seemed to fall by the wayside in light of the efforts by the Chairman of the Senate Agricultural and Natural Resources Committee to craft a new bill that could be supported by industrial waters, municipal water suppliers, and environmental groups. At the same time, the South Carolina Chamber of Commerce worked on its own version of a surface water permitting bill. Both the Committee version and the S.C. Chamber of Commerce version were heavily influenced by fears from industrial water users, farmers, and power utilities that a surface water permitting scheme would upset their water use expectations. As a result, the bill at the time of this writing confers considerable protection to existing water users. However, it is important to note that the Bill analyzed for purposes of this paper may change as it moves through the legislative process. As of April 3, 2008, the Bill was reported from the Senate Agriculture and Natural Resources Committee to the full Senate, with a majority of the Committee recommending approval and a minority recommending disapproval.<sup>63</sup>

The Bill requires intrabasin surface water withdrawers to apply to SCDHEC for a surface water withdrawal permit.<sup>64</sup> Interbasin transfers remain subject to the S.C. Interbasin Transfer Act.<sup>65</sup> A "surface water withdrawer" is defined as "a person withdrawing surface water for any purpose, other than an interbasin transfer ... in excess of three million gallons during any one month from a single intake or multiple intakes under common ownership within a one-mile radius from any one existing or proposed intake."<sup>66</sup> "Withdrawal" is defined as "to remove or divert, water from its natural course or location regardless of whether the water is returned to its waters of origin, consumed, or discharged elsewhere but does not include interbasin transfers."<sup>67</sup> Thus, a person making

intrabasin withdrawals from a stream, river, pond, lake or reservoir in quantities greater than three million gallons during any one month are subject to the requirements of the Act as opposed to the rules of riparian common law.

Exempt from the permit requirements of the Act, and thus still operate under riparian common law, are 1) withdrawals associated with active instream dredging or sand mining operations or other non-consumptive instream mining operations; 2) emergency withdrawals; 3) agricultural uses from a farm pond owned by the person making the withdrawal or situated on two or more separately owned parcels; 4) withdrawals from a pond completely situated on private property and fed from diffuse surface water or springs located entirely on that private property; and 5) withdrawals, use or discharges for the purpose of wildlife management.<sup>68</sup> Withdrawals for non-consumptive flow-through hydropower generation is exempt from all requirements of the Bill except for reporting of amounts of water withdrawn.<sup>69</sup>

To address the reality of public water providers transporting surface water from riparian land for use by non-riparians, the Act abrogates riparian common law by expressly stating that use of water on non-riparian land is lawful and shall be treated the same as use of water on riparian land in an administrative or judicial proceeding relating to allocation, withdrawal, or use of water.<sup>70</sup> As a result, public water providers are given protection from claims of unlawful use under riparian common law.

A surface water withdrawal permit “confers a right upon the permittee to withdraw and use surface water pursuant to the terms and conditions of the permit.”<sup>71</sup> SCDHEC must issue a permit if the proposed use is reasonable.<sup>72</sup> In its determination of reasonableness, DHEC must first determine the minimum instream flow or minimum water level for the water source at issue and then consider the following criteria.<sup>73</sup>

- (1) the minimum instream flow or minimum water level and the safe yield for the surface water at the location of the proposed surface water withdrawal;
- (2) the anticipated effect of the applicant’s

proposed use on existing users of the same surface water, including, but not limited to present agricultural, municipal, industrial, electrical generation and instream users;

- (3) the reasonably foreseeable future water need for the surface water, including, but not limited to reasonably foreseeable agricultural, municipal, industrial, electrical generation, and instream uses;
- (4) the applicant’s reasonably foreseeable future water needs from that surface water;
- (5) the beneficial impact on the State and its political subdivisions from a proposed withdrawal;
- (6) the impact of the applicable industry standard on the efficient use of water, if followed by the applicant;
- (7) the anticipated effect of the applicant’s proposed use on:
  - a. interstate and intrastate water use if the permit is granted;
  - b. likelihood of significant detrimental impact of a proposed withdrawal on navigation, fish and wildlife habitat, or recreation;
  - c. public health and welfare; and
  - d. economic development and the economy of the State.
- (8) applicable federal laws and interstate agreements and compacts; and
- (9) any other reasonable criteria that DHEC promulgates by regulation that it considers necessary to make a final determination.<sup>74</sup>

Permit issuance based upon a determination of reasonableness resolves the common law riparian problem of uncertainty over whether a certain use is reasonable. The Bill’s criteria for reasonableness also provides security to existing users by giving preference to existing surface water withdrawers over future surface water withdrawers.<sup>75</sup>

The Bill also injects public interest considerations in the calculus of reasonableness. The reasonableness criteria include the public interest in navigation, fish and wildlife habitat, recreation, public health and welfare, conservation, and economic development.<sup>76</sup> However,

SCDHEC's consideration of navigation, fish and wildlife habitat, and recreation are constrained to whether the withdrawal may have the likelihood of *significant detrimental* impact upon these interests.<sup>77</sup> Furthermore, consideration of conservation measures are limited to industry standards for efficient use of water, if the applicant uses such standards.<sup>78</sup> The Bill does not define what is considered to be an acceptable industry standard. Overall, the public interest factors are a welcome addition to the determination of reasonableness even though the narrowness of the public interest factors does not encourage applicants to conserve water. In an interstate water dispute, the paucity of conservation requirements may weigh against South Carolina.<sup>79</sup>

The scant attention to conservation in the determination of reasonableness is mitigated somewhat by the Bill's requirement that every permittee prepare an operational and contingency plan for low flow events.<sup>80</sup> As part of the permit, the permittee must develop and implement a contingency plan for circumstances during which the actual flow of surface water is less than the established minimum instream flow for the water body from which the withdrawal is made.<sup>81</sup> This plan must implement a strategy to respond to low flow conditions such as conservation, alternative water supplies, off-stream water storage, seasonal flow variations and reduced downstream releases from hydroelectric operations.<sup>82</sup> In the event that low flow is caused by drought, actions taken pursuant to the South Carolina Drought Response Act take precedence over any conflicting provisions of the Bill.<sup>83</sup>

All surface water withdrawals approved by SCDHEC are presumed to be reasonable.<sup>84</sup> It is unclear whether this presumption is rebuttable. Surface water withdrawers are immune from any private cause of action for damages so long as they comply with applicable requirements of the Bill.<sup>85</sup> Because the Bill's immunity provision refers only to damages, injunctive relief appears to be available to a downstream riparian owner.

The Bill charges SCDHEC with establishing minimum flows for every surface water segment or minimum level in an impoundment from which a

withdrawal is to be made.<sup>86</sup> At the outset, the Bill creates a special rule pertaining to surface water withdrawals located on a water segment downstream from a flow-controlled impoundment.<sup>87</sup> In this situation, the Bill prohibits SCDHEC from establishing a minimum instream flow for a withdrawal downstream from and influenced by an impoundment that is "less than the lowest flow specified by the appropriate regulatory authority pursuant to controlling law in effect at the time of the permit, as may be amended or superceded."<sup>88</sup> The downstream applicant is afforded an opportunity to present a different instream flow for SCDHEC's consideration, which SCDHEC may accept if certain conditions are met.<sup>89</sup>

The issue of how other minimum instream flows are established has become the most controversial aspect of the Bill. SCDHEC is empowered to promulgate regulations necessary to establish minimum instream flows for surface water not influenced by an impoundment.<sup>90</sup> In the Senate Agriculture and Natural Resources Committee, business interests lobbied for the Bill to establish the minimum flow at "7Q1 0," the annual minimum seven-day average flow rate that occurs with an average frequency of once in ten years. 7Q10 is essentially a drought level of flow. State environmental agencies and environmental groups strenuously opposed this effort. After a contentious Committee meeting, the Committee directed all stakeholders to work out a compromise. The S.C. Chamber of Commerce proposed an amendment that established the minimum instream flow at 20% of mean annual daily flow. Environmental groups argued that 20% of mean annual daily flow was still too low, and artificially "flat-lined" rivers by maintaining 20% mean annual daily flow year-round instead of reflecting seasonal variations in stream flow.<sup>91</sup> Each interest group stood firm on their respective positions, and the Senate Committee was deadlocked. On March 26, 2008, the Senate Committee adopted the Bill with its own crafted compromise. In lieu of establishing minimum flows in the Bill, the Committee chose to include language that created an advisory committee to recommend minimum flows to SCDHEC.<sup>92</sup>

The issue of equitable treatment among water users may become the subject of some controversy. Certain water uses are treated differently than others. Some differential treatment is justified, such as the Bill's lesser standards for non-consumptive uses. Under the Bill, surface water released from a reservoir for hydropower purposes is only required to be reported.<sup>93</sup> Hydropower operations are generally instream, non-consumptive uses, which typically do not raise concerns outside of a hydropower licensing process. Similarly, any non-consumptive withdrawals are only required to report the amount of water withdrawn.<sup>94</sup> Non-consumptive uses are defined as a "use of surface water withdrawn in such a manner that it is returned to its waters of origin at or near its point of withdrawal with no or minimal changes in water quantity."<sup>95</sup> DHEC must issue a permit for non-consumptive uses so long as the withdrawal will result in no or minimal changes in water quantity at the point of withdrawal.<sup>96</sup> Because non-consumptive uses put water back into the river or reservoir, the Bill's lenient treatment for this category of uses is not objectionable; however, one shortcoming in the Bill's treatment of non-consumptive users is that they are not required to prepare an operational and contingency plan for low flow conditions.

Treatment of other uses may not be so justifiable. The Bill does not require agricultural users to obtain a permit.<sup>97</sup> Instead, the Bill creates a separate category—a registered surface water withdrawer—for agricultural users, which requires only that they report their surface water withdrawals.<sup>98</sup> An existing agricultural withdrawer is entitled to maintain its reported level of surface water without any consideration of minimum instream flows, or whether the withdrawal amount is reasonable.<sup>99</sup> New agricultural water users need only register their withdrawals as well, but cannot begin surface water withdrawals unless SCDHEC determines that the proposed quantity is within the safe yield for that water source.<sup>100</sup> This differential treatment between existing agricultural users and new agricultural users provides an advantage to existing agricultural users. If South Carolina's agricultural use of surface water was significantly higher than its current amount of 3.24% of all surface water use (excluding power

production), then the Bill's de facto exemption of existing agricultural users and minimal regulation of new agricultural users could lessen the effectiveness of the Bill. In any event, the degree of protection afforded to agricultural users raises issues of fairness, especially in light of the fact that a registered agricultural user is immune from a private cause of action for damages arising directly from the user's withdrawals unless the plaintiff can show a violation of the user's registration.<sup>101</sup>

Although the State must offer some special protections for vested water withdrawers, the Bill's treatment of all other vested surface water withdrawers serves to entrench these users. An existing surface water withdrawer is defined as "a surface water withdrawer withdrawing surface water as of the effective date of this chapter or a proposed surface water withdrawer with its intakes under construction before the effective date of this chapter or with an intake permit application filed before January 1, 2008."<sup>102</sup> For existing water users (aside from hydropower, non-consumptive, and agriculture uses), DHEC must issue an initial permit without consideration of reasonableness of the withdrawal amount, nor consideration of minimum instream flows.<sup>103</sup> The initial permit must authorize a withdrawal amount equal to its documented historical water use, capacity of a pending intake permit application, or an amount necessary to recover indebtedness from an outstanding revenue bond, whichever is greater.<sup>104</sup> Additionally, for existing water users, the operation and contingency plan for low flow conditions must "only address appropriate industry standards for water conservation."<sup>105</sup> An existing water user's initial permit must be issued for a term of thirty years, or up to forty years if SCDHEC finds a longer period to be reasonable given the particular facts and circumstances of the withdrawal.<sup>106</sup> Existing water users are immune from a private cause of action for damages arising directly from the user's withdrawals unless the plaintiff can show a violation of the user's permit.<sup>107</sup>

New water users must undergo DHEC's evaluation of reasonableness and all other permit requirements.<sup>108</sup> A new surface water withdrawer

may receive a permit for a term of twenty years, or up to forty years if SCDHEC finds a longer period to be reasonable given the particular facts and circumstances of the withdrawal.<sup>109</sup> Governmental entities may receive a permit for any period of time necessary, not exceed fifty years, in order to recover indebtedness from outstanding water revenue bonds.<sup>110</sup>

SCDHEC may modify, suspend, or revoke a permit if a permittee fails to comply with the terms of the permit, obtains a permit through misrepresentation or failure to disclose a material fact in the application, or ceases to withdraw water for at least 36 consecutive months.<sup>111</sup> Additionally, SCDHEC may modify, suspend or revoke a permit if “a change in circumstances results in a permitted activity endangering human health or the environment and can only be prevented by a temporary or permanent modification or termination.”<sup>112</sup>

A permittee may apply for a modification of permitted withdrawal amounts.<sup>113</sup> If the requested increase in withdrawal is significant, then the request must be evaluated for reasonableness.<sup>114</sup>

Surface water permits shall not be transferred without prior written consent from SCDHEC.<sup>115</sup>

#### 4. Concluding Thoughts

The double whammy of two severe droughts occurring in the Southeast over the past decade has motivated South Carolina to take stock of its water assets and re-evaluate its water management policies and practices. The droughts caused South Carolina to look both inward and outward. Water supply shortages within South Carolina forced water managers to assess the State’s performance in responding to drought, taking a critical look at South Carolina’s water law. Looking beyond its boundaries, South Carolina’s attention was riveted by the drought’s devastating impact on its neighboring states. Amid speculation of the City of Atlanta turning to the Savannah River as its solution to its water problems, South Carolina began taking

a defensive posture. Similarly, North Carolina’s approval of an interbasin transfer from the Catawba-Wateree River sparked a firestorm of opposition in South Carolina, which culminated in an original suit brought by the South Carolina Attorney General against the State of North Carolina in the United States Supreme Court. Fortifying South Carolina’s water laws was seen as essential to protecting its share of interstate water resources.

Water users in South Carolina have mightily resisted efforts to establish a surface water permitting scheme. In 2007, business interests could no longer forestall a surface water permitting bill, so they drafted their own bill and successfully lobbied the Senate Agriculture and Natural Resources Committee to adopt its bill largely intact. As far as the bill’s chances of passage, it is too soon to tell. But at this point in time, the fear of scarcity may trump the fear of regulation. State Senator Chip Campsen may have summed it up the best, stating that a surface water permitting law is “not about shutting down industry,” but rather, “it’s about preserving a way of life.”<sup>116</sup>

#### Epilogue

Senate Bill 428 and corresponding House Bill 3578 died in Committee for lack of consensus on resolving the issue of minimum instream flows. The bill is expected to be refiled for the 2009-2010 Legislative Session. Environmental groups, as well as the South Carolina Savannah River Committee, will continue to advocate for passage of a surface water permitting bill. Meanwhile, extreme and severe drought conditions persist in South Carolina.

#### Endnotes

<sup>1</sup> S.C. Department of Health and Environmental Control, Bureau of Water, *South Carolina Water Use Report: 2006 Annual Summary*, 1 (July 2007) (available at: <http://www.scdhec.net/environment/water/capuse.htm/reports>.)

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* at 11.

<sup>5</sup> Urban Land Institute, *Growing by Choice or Chance: State Strategies for Quality Growth in South Carolina*, p. 8 (2003).

<sup>6</sup> Georgia Tech, Center for Quality Growth and Regional

Development, *Emerging MegaRegions: Studying the Southeastern United States*, p. 4 (Jan. 2006)(available at: [http://www.cqgrd.gatech.edu/PDFs/PAM\\_overview\\_1-30-06.pdf](http://www.cqgrd.gatech.edu/PDFs/PAM_overview_1-30-06.pdf)).

<sup>7</sup> Susan S. Hutson, Nancy L. Barber, Joan F. Kenny, Kristin S. Linsey, Deborah S. Lumia, and Molly A. Maupin, USGS, *Estimated Use of Water in the United States in 2000*, p. 12 (Rev. 2005) (available at: <http://pubs.usgs.gov/circ/2004/circ12681>).

<sup>8</sup> *Id.*

<sup>9</sup> Since 1990, South Carolina has regulated groundwater use. See S.C. Code Ann. § 49-5-10 *et seq.*

<sup>10</sup> S.C. Code Ann. § 49-3-10 *et seq.*

<sup>11</sup> S.C. Code Ann. § 49-4-10 *et seq.*

<sup>12</sup> S.C. Code Ann. § 49-21-10 *et seq.*

<sup>13</sup> S.C. Code Ann. § 49-23-10 *et seq.*

<sup>14</sup> See, e.g., the S.C. Interbasin Transfer Act, S.C. Code Ann. § 49-21-20(G) (“Any riparian landowner or person legally exercising rights to use water, suffering material injury for the loss of water rights as a consequence of an interbasin transfer shall have a cause of action against the water transferor in the court of common pleas of the county in which the water transfer originates to recover all provable damages for loss of riparian rights including increases in operating costs, lost production, or other damages directly caused him by the interbasin transfer ...”).

<sup>15</sup> William F. Steirer, Clemson University, *The Evolution of South Carolina Water Law 1783-1985*, p. 4 (WP0821 87 Clemson University, undated).

<sup>16</sup> *Lawton v. South Bound R.R.*, 39 S.E. 752, 753-754 (S.C. 1901).

<sup>17</sup> *White v. Whitney Mfg. Co.*, 38 S.E. 456, 460 (S.C. 1901).

<sup>18</sup> 78 AM. JUR.2d § 32.

<sup>19</sup> *Id.*

<sup>20</sup> 78 AM. JUR. 2d *Waters* § 32.

<sup>21</sup> *McMahan v. Walhalla Light & Power Co.*, 86 S.E. 194, 195 (S.C. 1915).

<sup>22</sup> 78 AM. JUR. 2d *Waters* § 35.

<sup>23</sup> 93 C.J.S. *Waters* § 25.

<sup>24</sup> Charles E. Hill, *Limitation on Diversion from the Watershed: Riparian Roadblock to Beneficial Use*, 23 S.C. L.REV. 43, 59 (1971).

<sup>25</sup> See 141 A.L.R. § 639 (the majority rule, that municipalities have no right to divert water off riparian land for water supply, is followed by Alabama, Connecticut, Georgia, Indiana, Kansas, Maine, Massachusetts, New Jersey, North Carolina, Pennsylvania, Rhode Island, South Dakota, Virginia and Washington).

<sup>26</sup> *Pernell v. City of Henderson*, 16 S.E.2d 451 (N.C. 1941); see also *Town of Purcellville v. Potts*, 19 S.E.2d 700, 703 (Va. 1942); *State of N. C. v. Hudson*, 665 F. Supp. 428, 447 (E.D. N.C. 1987); *Harrell v. City of Conway*, 271 S.W.2d 924, 927 (Ark. 1954).

<sup>27</sup> *Town of Purcellville v. Potts*, 19 S.E.2d 700, 702 (Va. 1942).

<sup>28</sup> *White v. Whitney Mfg. Co.*, 38 S.E. 456, 457 (S.C. 1901).

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 457.

<sup>33</sup> *Griffin v. Nat'l Light & Thorium Co.*, 60 S.E. 702, 703 (S.C. 1908).

<sup>34</sup> *Mason v. Apache Mills*, 62 S.E. 399, 400 (S.C. 1908).

<sup>35</sup> *Lowe v. Ottaray Mills*, 77 S.E. 135, 136 (S.C. 1913).

<sup>36</sup> *Chalk v. McAlily*, 45 S.C.L. (11 Rich.) 153, 162 (S.C. 1857).

<sup>37</sup> *White v. Whitney Mfg. Co.*, 38 S.E. 456, 458 (S.C. 1901).

<sup>38</sup> *Lowcountry Open Land Trust v. State*, 552 S.E.2d 778, 784 (S.C. Ct. App. 2001).

<sup>39</sup> *Sierra Club v. Kiawah Resort Ass'n*, 456 S.E.2d 397, 402 (S.C. 1995).

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> See, e.g., Richard C. Ausness, *Water Rights Legislation in the East: A Program for Reform*, 24 WM. & MARY L. REV. 547 (1983); Robert H. Abrams, *Replacing Riparianism in the Twenty-First Century*, 36 WAYNE L. REV. 93 (1989); Joseph W. Dellapenna, *Adopting Riparian Rights to the Twenty-First Century*, 106 W. VA. L. REV. 539 (2004).

<sup>43</sup> Joseph W. Dellapenna, *Adopting Riparian Rights to the Twenty-First Century*, 106 W. Va. L. Rev. 539, \*16 (2004).

<sup>44</sup> Richard C. Ausness, *Water Rights Legislation in the East: A Program for Reform*, 24 WM. & MARY L. REV. 554 (1983).

<sup>45</sup> Joseph W. Dellapenna, *The Law of Water Allocation in the Southeastern United States at the Opening of the Twenty-First Century*, 25 U. ARK. LITTLE ROCK L. REV. 9, \* 16 (2002).

<sup>46</sup> S.C. Dep't of Natural Resources, *South Carolina Water Plan*, p. iv (2nd ed. 2004) (available at: <http://www.dnr.sc.gov/water/admin/pubs/pdfs/SCWaterPlan2.pdf>).

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

<sup>50</sup> Governor Sanford Exec. Order 2003-16 (filed June 24, 2003) (available at: <http://www.scgovernor.com/uploads/executiveorders/2003-16%20Creating%20Water%20Law%20Review%20Committee.pdf>).

<sup>51</sup> Report of Governor Sanford's Water Law Review Committee, p. 13 (Jan. 2004)

<sup>52</sup> *Id.* at 9, 15.

<sup>53</sup> *Id.* at p. 19-25.

<sup>54</sup> *Id.* at 15.

<sup>55</sup> Governor Sanford's Water Law Review Committee, *Water Law Report*, p. 12-18 (Jan. 2004) (available at: [http://scwaterlaw.sc.gov/Governors%20W%20L%20R%20%20Report%20revised4\\_27.pdf](http://scwaterlaw.sc.gov/Governors%20W%20L%20R%20%20Report%20revised4_27.pdf)).

<sup>56</sup> Governor Sanford Exec. Order 2005-14 (filed June 21, 2005) (available at: <http://www.scgovernor.com/uploads/executiveorders/2005-14CreatingtheGovernorsSavannahRiverCommittee.pdf>); Governor Purdue Exec. Order (filed June 21, 2005) (available at: [http://www.gov.state.ga.us/ExOrders06\\_21\\_05\\_01.pdf](http://www.gov.state.ga.us/ExOrders06_21_05_01.pdf)).

<sup>57</sup> S.C. Code Ann. § 44-59-10 *et seq.* and N.C. Gen. Stat. § 77-110 *et seq.*

<sup>58</sup> See website of the Catawba Riverkeeper Foundation, <http://www.catawbariverkeeper.org>, to gain a sense of the organized and angry opposition to the transfer.

<sup>59</sup> S.C. Department of Natural Resources, *Summary of Catawba-Wateree Basin Natural Flows and the Impact of Water Transfers from that Basin in North Carolina* (May 31, 2007) (available at: <http://www.scattorneygeneral.com/currentcases/waterwar.html>).

<sup>60</sup> *South Carolina v. North Carolina*, No. 22O138 (United States Supreme Court) (filed June 8, 2007) (available at: <http://www.scattorneygeneral.com/currentcases/waterwar.html>).

<sup>61</sup> S.B. 1159, 2005-2006 Leg. 116th Sess. (S.C. 2006).

<sup>62</sup> American Society of Civil Engineers, Water Laws Committee, Joseph W. Dellapenna, ed., *The Regulated Riparian Model Water Code* (ASCE 1997).

<sup>63</sup> See history of legislative actions at [http://www.scstatehouse.net/sess117\\_2007-2008/bills/428.htm](http://www.scstatehouse.net/sess117_2007-2008/bills/428.htm).

<sup>64</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-25 (S.C. 2007).

<sup>65</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-20(26) (S.C. 2007). The Bill does, however, amend the Interbasin Transfer Act to require public hearings on applications for interbasin transfers, which is comparable to North Carolina's Interbasin Transfer Act, N.C.G.S.A. § 143-21 5.22L.

<sup>66</sup> *Id.* at (25).

<sup>67</sup> *Id.* at (26).

<sup>68</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-30(A) (S.C. 2007).

<sup>69</sup> *Id.* at (B).

<sup>70</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-60 (S.C. 2007).

<sup>71</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-110(A) (S.C. 2007).

<sup>72</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-90(E) (S.C. 2007).

<sup>73</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-90(B) (S.C. 2007).

<sup>74</sup> *Id.*

<sup>75</sup> *Id.* at (2) and (4).

<sup>76</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-90(B)(7) (S.C. 2007).

<sup>77</sup> *Id.* at (B)(7)(b).

<sup>78</sup> *Id.* at (6).

<sup>79</sup> See *Colorado v. New Mexico*, 467 U.S. 310, 320 (1984) (stating that a State's conservation measures is a factor in balancing the equities of water diversion).

<sup>80</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-170(A) (S.C. 2007).

<sup>81</sup> *Id.*

<sup>82</sup> *Id.*

<sup>83</sup> *Id.* at (B).

<sup>84</sup> S.B. 428, 2007-2008 Leg., 1 17th Sess. § 49-4-110(B) (S.C. 2007).

<sup>85</sup> *Id.*

<sup>86</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-150(A)(1) (S.C. 2007).

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

<sup>89</sup> *Id.* at (2) and (3).

<sup>90</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-180(A)(1) (S.C. 2007).

<sup>91</sup> Bo Petersen, *Another Skirmish on Tap in State's Water War*, The Post and Courier (March 13, 2008) (available at: [http://www.postandcourier.com/news/2008/mar/13/another\\_skirmish\\_on\\_tap\\_states\\_water\\_war33713/](http://www.postandcourier.com/news/2008/mar/13/another_skirmish_on_tap_states_water_war33713/)).

<sup>92</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-185(A) (S.C. 2007).

<sup>93</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-40(A)(2) (S.C. 2007).

<sup>94</sup> *Id.*

<sup>95</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-20(14) (S.C. 2007).

<sup>96</sup> *Id.*

<sup>97</sup> The Bill states that "nothing in this chapter prohibits a registered user from applying for and obtaining a surface water withdrawal permit." S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-35(G) (S.C. 2007).

<sup>98</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-35(A) (S.C. 2007).

<sup>99</sup> *Id.* at (B).

<sup>100</sup> *Id.* at (C).

<sup>101</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-110(B) (S.C. 2007).

<sup>102</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-20(9) (S.C. 2007).

<sup>103</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-70(b)(1) (S.C. 2007).

<sup>104</sup> *Id.*

<sup>105</sup> *Id.* at (B)(2).

<sup>106</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-100(B)(2) (S.C. 2007).

<sup>107</sup> *Id.* at (B).

<sup>108</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-70(A) (S.C. 2007).

<sup>109</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-100(B)(1) (S.C. 2007).

<sup>110</sup> *Id.* at (B)(3).

<sup>111</sup> S.B. 428, 2007-2008 Leg., 117th Sess. § 49-4-120(A)(1)-(3) (S.C. 2007).

<sup>112</sup> *Id.* at (4).

<sup>113</sup> *Id.* at (C)(2).

<sup>114</sup> *Id.*

<sup>115</sup> *Id.* at (B).

<sup>116</sup> Bo Petersen, *Senate Panel Considers Water Plan*, The Post and Courier (March 19, 2008) (available at: [http://www.charleston.net/news/2008/mar/19/senate\\_panel\\_considers\\_water\\_plan34252/](http://www.charleston.net/news/2008/mar/19/senate_panel_considers_water_plan34252/)).

**GREAT LAKES COMPACT APPROVED  
BY CONGRESS AND SIGNED  
BY THE PRESIDENT**

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**Noah Hall**  
**Wayne State University Law School**  
***nhall@wayne.edu***

**Sara Gosman**  
**National Wildlife Federation**  
***saragosman@gmail.com***

After a decade of discussion, negotiation, drafting, and legislative deliberation, the Great Lakes-St. Lawrence River Basin Water Resources Compact has been approved by Congress and signed by the president. The federal approval comes after all eight Great Lakes states (Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, and New York) ratified the compact in their respective legislatures. Under the compact and a companion agreement with the Canadian provinces of Ontario and Quebec, the world's largest freshwater resource will be protected and managed pursuant to minimum standards administered primarily under the authority of individual states and provinces. The Great Lakes compact prohibits most diversions of water out of the watershed. More significantly, it applies riparian water use rules and environmental protection standards to withdrawals for use within the watershed. The compact's standards represent numerous advances in the development of water use law in the region, including water conservation, return flow, prevention of environmental impacts, and uniform treatment for ground and surface water withdrawals.

In addition to ratifying the compact, several states have also passed important state-wide water law reforms in connection with the compact. This article briefly summarizes the state developments in Wisconsin, Michigan, and Ohio and the Congressional approval. For more resources on the Great Lakes compact, see the Great Lakes Environmental Law Center's Web site ([www.greatlakeslaw.org/glelc/great-lakes-compact.html](http://www.greatlakeslaw.org/glelc/great-lakes-compact.html)) and for a full analysis of the compact, see Noah D. Hall, *Toward A New Horizontal Federalism: Interstate Water Management in the Great Lakes Region*, 77 COLO. L. REV. 405 (2006).

## **Wisconsin**

The Wisconsin legislature used a special session to approve the Great Lakes compact and pass a major overhaul of the state's water law. Key provisions of Wisconsin's new water law include:

- Establishing a statewide water supply planning process for public water supply systems;
- Requiring all water withdrawals in the state over 100,000 gallons per day (gpd) to register and report water use;
- Creating a new permit system for water withdrawals over 100,000 gpd within the state's portion of the Great Lakes basin, with general permits for withdrawals under 1,000,000 gpd and individual permits required for withdrawals over 1,000,000 gpd; and
- Establishing a voluntary statewide water conservation and efficiency program with the state Department of Natural Resources promulgating rules specifying water conservation and efficiency measures (however, the Department of Natural Resources rules may not require retrofitting of existing fixtures, appliances, or equipment).

The entire legislative package was introduced as April 2008 Special Session Senate Bill 1, and signed as 2007 Wisconsin Act 227 (available at [www.legis.state.wi.us/2007/data/acts/07Act227.pdf](http://www.legis.state.wi.us/2007/data/acts/07Act227.pdf)). For more information, see the Wisconsin Legislative Council's 35-page analysis of the legislation, available online at [www.thewheelerreport.com/releases/May08/may13/0513legcouncilglcompact.pdf](http://www.thewheelerreport.com/releases/May08/may13/0513legcouncilglcompact.pdf).

## **Michigan**

Two years ago, Michigan enacted a new water management law that for the first time imposed permits and other regulatory requirements on large water withdrawals. Along with approving the Great Lakes compact during the 2008 legislative session, Michigan strengthened its water withdrawal statutes 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. See 2008 Public Act 179-190.

Key provisions of the Michigan law include:

- Requiring permits for all new or increased withdrawals over 2 million gpd from any source;
- Permitting these withdrawals only if they meet the compact standard and do not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties;
- Ensuring adequate public participation by providing public notification of any water withdrawal application and a public comment period of at least 45 days; and
- Continuing stronger regulatory protections for bottled water withdrawals and lowering the threshold for permits for bottled water withdrawals to 200,000 gpd.

The most significant advancement of the 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).

For each type of affected stream or river, withdrawals are divided into four zones (zones A through D). *See* MICH. COMP. LAWS § 324.32701(1)(TT)-(WW). Withdrawals in Zone D have such severe effects on the density or abundance of fish populations that they are likely to cause a prohibited impact. *See* MICH. COMP. LAWS §§ 324.32701(1)(a), 324.32701(1)(WW). Conversely, withdrawals in Zones A and B are afforded the rebuttable presumption that they are not likely to cause a prohibited impact. *See* MICH. COMP. LAWS § 324.32722(2). The assessment process was developed by the Michigan Groundwater Conservation Advisory Council pursuant to the 2006 legislation. While a permit is only required for withdrawals over 2 million gpd, by July 2009 all new proposed “large quantity withdrawals” (with exceptions for residential

properties) from streams, rivers, or groundwater must use the assessment model (it will be publicly available on the Michigan Department of Environmental Quality (MDEQ) Web site) to determine the zone of the withdrawal. *See* MICH. COMP. LAWS § 324.32706b(1). Once the water user enters data on the withdrawal—such as the capacity of the equipment, the location of the withdrawal, and the amount and rate of water to be withdrawn—the tool provides an immediate determination. *See* MICH. COMP. LAWS § 324.32706a(3)-(4).

For most withdrawals initially determined to be in Zones A and B, the water user may proceed immediately after registering the water withdrawal with the MDEQ. *See* MICH. COMP. LAWS § 324.32706b(3). However, withdrawals initially determined to be in Zones C and D must undergo a site-specific review by the MDEQ. *See* MICH. COMP. LAWS § 324.32706b(4). This second level of assessment, to be completed within ten working days, allows the MDEQ to consider additional information (such as return flow) that might alter the outcome of the model. *See* MICH. COMP. LAWS § 324.32706c(1)-(3). Depending on the size of the withdrawal and the final determination of the Zone, the water user may be required to obtain a permit even if the withdrawal is under 2 million gpd. *See* MICH. COMP. LAWS § 324.32706c(5)-(6). It should also be noted that the assessment tool does not apply to withdrawals from lakes or ponds, which are only subject to registration and reporting unless they are over 2 million gpd. *See* MICH. COMP. LAWS § 324.32705(1).

## Ohio

As noted above, one of the most important advances in the Great Lakes compact is the uniform treatment for ground and surface water withdrawals. However, in most states, the navigable surface waters are subject to the public trust doctrine, while groundwater is not. The Ohio Senate was concerned that a finding in the Great Lakes compact would expand the public trust doctrine to groundwater in contradiction to established Ohio law. To address this concern without amending the compact itself (which would necessitate new approvals from all other states), the Ohio legislature proposed a

constitutional amendment to protect private groundwater rights while still allowing state regulation of groundwater use. The amendment, approved in the Nov. 4, 2008 election, creates a new constitutional provision (article I, section 19b) as follows:

“A property owner has a property interest in the reasonable use of the ground water underlying the property owner’s land. . . . Ground water underlying privately owned land and nonnavigable waters located on or flowing through privately owned land shall not be held in trust by any governmental body. The state, and a political subdivision to the extent authorized by state law, may provide for the regulation of such waters.”

The constitutional amendment does not change Ohio law in any way. It merely takes the Ohio Supreme Court’s decision in *McNamara v. City of Rittman*, 107 Ohio St. 3d 243, 838 N.E.2d 640 (2005), and puts it in the state constitution. This is intended to prevent the public trust doctrine from expanding to cover groundwater in Ohio in the future based on a potential (but unlikely) interpretation of the Great Lakes compact.

### Approval of the Great Lakes Compact in Congress

The Great Lakes compact first passed the Senate through S.J. Res. 45, introduced by Sen. Carl Levin (D-MI) on July 23, 2008, and co-sponsored by every senator from the Great Lakes states. With this broad bipartisan support, it quickly passed out of the Senate Judiciary Committee and was unanimously approved by the full Senate a week after introduction. The House took up the compact after its August recess, and with the support of Congressional leaders such as John Conyers, Jr. (D-MI), James Oberstar (D-MN), Vernon Ehlers (R-MI) and Steven LaTourette (R-OH), it passed the House by a vote of 390 to 25 (with eighteen members not voting) on Sept. 23. As expected, President Bush signed it into law as Public Law No. 110-342 on Oct. 3, 2008.

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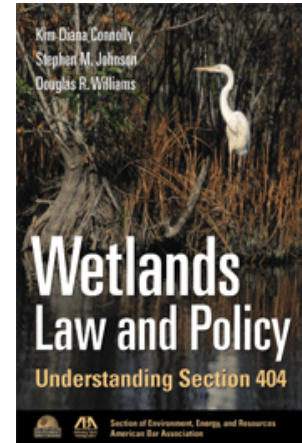
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