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Tommy Wells Speech to the Allegheny County Bar Association

Although in many respects it is an abundant natural resource, water is very scarce where the demands of agriculture, energy and population growth collide. Over the next few minutes, I'll try to briefly set out the factual predicate for the importance in flexibility in water law, and I will also attempt to forecast where the law is headed when it comes to water rights.

If energy policy, climate change, and economic growth are each important issues going forward, then, from a legal perspective, water rights lies at the intersection of each.

For over 15 years, my home state of Alabama and the state of Florida have been involved in litigation against the Corps of Engineers and the State of Georgia regarding the water rights in two different watersheds—the Alabama/Coosa/Tallapoosa River basins and the Apalachicola/Chattahoochee/Flint River basins. The insatiable demand for water in Atlanta—a metropolitan area that has grown by 100% over the last 25 years—has triggered a fight for these water resources that

flow through population, recreational and delicate environmental locations in Alabama and the Florida panhandle. Alabama and Florida essentially seek equitable redistribution of the water assets, as much of the water withdrawn by the City of Atlanta from the ACT and ACF basins is consumed, treated and discharged into a completely different basin.

In 2007, the dispute became heated, as much of the Southeast was in a severe drought. The flood control and hydroelectric lake systems operated by the Corps of Engineers and the power companies in the Alabama/Coosa/Tallapoosa realized the lowest lake levels since they were built over 50 years ago. Endangered Species Act minimum river flow requirements many miles downstream exacerbated the effects of the drought, as water had to be drained from reservoirs to maintain the minimum flow. Luckily, recent rains have subsided immediate concerns, but authorities have to be concerned about the severity of the next drought and how best they can be prepared.

This is but one example of the types of disputes that arise when there are more demands on a water body than there is water to meet that demand. The interesting thing about this particular dispute is the geographic location—the Southeastern U.S. is one of the most water-rich areas of the whole nation.

A. Energy Policy, Climate Change and Water Consumption

Our nation has many challenges facing it in the areas of energy policy and climate change. Increasing demand for energy that may accompany economic growth will likely have to be tempered by the push to minimize carbon emissions. Regardless, we can expect increasing energy demand will likewise increase the demand for water resources.

1. Electricity

Increases in electricity demand and production will generally put more pressure on the nation's water resources. Over the coming decades, the United States will likely see substantial growth in electricity

needs. By 2030, the national electricity demand is projected to be more than 40% compared to current levels. In the days prior to the importance of climate change, the energy and power markets would satisfy the increased demand with the lowest-cost power alternatives. This usually meant that some type of fossil-fuel based system would be implemented—Coal and Natural Gas. However, with the rise of climate change and the looming regulation of carbon dioxide emissions—whether such takes the form of a cap-and-trade similar to the European Union or whether a technology-based standards are mandated—many utilities are shying-away from coal as the means by which to fuel new power plants.

Even if carbon sequestration becomes viable and necessary for new coal or natural gas generating units, one could reasonably anticipate that other types of fuels will become much more economical in comparison to coal and natural gas. Other competing technologies and fuel sources will simply be more attractive to the bottom line.

Before discussing what will likely be the best alternative to fossil fuels over the coming decades in light of carbon emissions and economics, I should at least pay some measure of attention to truly “green” or what some refer to as “renewable” sources of energy: Wind and Solar energy. First, Wind. The U.S. has seen a substantial amount of growth in the amount of electricity produced from wind over the last few years—according to the American Wind Energy Association, wind energy will provide about 1% of total electricity to the grid in 2008. That’s a 10-fold increase since 1999. Although difficult to harness, wind is abundant and does not impact or consume water resources. But, it is difficult to see how even more significant increases in wind power production will satisfy future energy demand growth.

Solar energy is often referred to by many as the panacea to the Country’s energy needs. However, this may be too optimistic. In 2006, solar energy provided only 0.01% of electricity to the grid. Even the Department of Energy is not that enthusiastic about the immediate future of solar energy—it projects that in 25 years, solar will only provide

between 2 and 3 percent of the nation's electricity needs. Thus, although promising, solar energy will not account for a significant portion of the nation's electricity needs for many years.

You might ask, "What are the problems with technologies like wind or solar?" The answer is that their energy *density* cannot compete with other fuels. This makes them greatly less efficient and, therefore, much more costly than other sources. The scale of our energy supply needs simply far outweigh what wind and solar can provide over foreseeable future. There are other warts, too. For example, manufacturing of solar panels often require use of rare, precious and toxic metals such as iridium, silver and cadmium. I don't mean to be pessimistic about alternatives to traditional energy sources; I'm just stating the facts.

That leads me to what is likely to be the most important source of electricity growth going forward from both a production and water supply perspective—nuclear energy. Aside from concerns over the safety of reactor operation and disposal of wastes, nuclear power has

almost all the features that one would want in a future energy source: nuclear reactors are already competitive economically compared to fossil fuel-created electricity and, maybe more importantly with respect to climate change, carbon dioxide emissions are not associated with nuclear power generation.

In fact, some expect there to be at least 30 new nuclear power plants built over next 20 years. But, these additional nuclear plants—as well as other new coal or natural gas plants—will require the use and consumption of substantial water resources in order to operate. This will increase the scarcity of water in the arid regions west of the Mississippi River and make periods of drought east of it more painful. More available power generation simply means more demands on water resources.

2. Current Climate Change Policy and Automotive Fuels

Emphasis on climate change has already had a significant impact on water resources in the heartland. We've all heard much about the role of "biofuels" and corn-based ethanol revolution as the means by

which the U.S. can kick the “oil habit.” Some would have you believe that ethanol is the green fuel that can displace gasoline as the liquid automotive fuel for the future. Without addressing the merits of ethanol as a fuel compared to gasoline (ethanol has a lower energy density—it contains less energy per gallon), there are a number *environmental* reasons why ethanol may be inferior to petrol fuels. First, with regard to climate change, the benefits of corn ethanol are dubious. Some studies show that the fossil fuel energy required to plant, harvest and refine corn crops and refine it into ethanol are about as much as the displaced petrol fuels. In other words, use of ethanol as a motor fuel does not materially decrease carbon emissions. Furthermore, recent studies that have considered the unintended consequences of a worldwide movement towards increasing crop production of biofuels estimate that carbon emissions could double over a period of 30 years as a result of changes and alterations in land uses. Increasing demand for fuel crops leads to deforestation and, therefore secondarily, climate change.

Corn-based ethanol is also potentially damaging to water quality—increases in corn plantings (the 2007 corn crop of 89 million acres planted was the highest since 1946) results in increasing fertilizer runoff from into the nation's waters, namely the Mississippi River Valley. Some say that this could result in exacerbation of the Gulf of Mexico's Dead Zone, an area of limited aquatic life caused by depleted dissolved oxygen levels.

And, I don't believe I even need to mention the affect that increased biofuel crop demand has socially—food prices for the world's poorest have increased substantially over the past few years. This has already resulted in social unrest.

Finally, and more important to the topic of water, consumption associated with irrigation is linked directly to the amount of corn—or other biofuel crops--planted. Crop irrigation is by far the largest consumptive use of water—80% of water consumed in the U.S. goes to irrigation. Thus, new plantings will greatly affect the demand for water—much more so than that of increasing power generation

discussed a few minutes earlier. There may be other biofuel crops, such as switchgrass, that reduce the amount of irrigation required, but turning such plant material into fuel has not yet been perfected.

There is another water scarcity issue associated with corn-based ethanol. Because much of the country's corn is grown in the high plains, much of the irrigation for such corn is derived from the Ogallala Aquifer. The Ogallala Aquifer is an important resource that extends all the way from South Dakota south to the Texas panhandle. The Ogallala is being depleted at a rate that far exceeds its being recharged. If the demand for biofuel crops continues, additional pressure will likely be placed on the Ogallala and all those that depend on it for drinking water.

As the leading world consumer of energy in the world, the U.S. must think hard about the unintended consequences of energy and climate change policies. One of the most important and underappreciated resources impacted by such policies is water. I submit to you that we must have honest discussion and debate about the merits and impacts of any future energy proposals. I believe that the Bar must

play an integral role in insuring that water resources are considered in that debate.

B. Growth and Disputes Over Water

Any energy and environmental policy, in order to be politically viable, must allow for economic expansion and the movement of the population. The growth of the “Sun Belt” regions—Florida, north to the Carolinas and west to California—are a perfect example of how populations migrate. And as these populations transition to warmer, more arid regions, we can expect water rights to be important issues as these areas continue to rapidly grow. Furthermore—given that some of these high-growth areas are already water poor—we should expect significant disputes to arise in the future.

The Department of the Interior projects that over the next 25 years portions of the West will have a significant potential for conflict over water supplies. Denver, Sante Fe, Salt Lake City, Reno, Las Vegas, Sacramento—each are on that list.

But, as I mentioned earlier in the reference to the Alabama/Florida/Georgia litigation, water conflict is not limited to arid regions of the West. An example of another dispute in-the-making is that of the Georgia and Tennessee state lines. Georgia has taken the position that the state line is the 35th parallel, but due to surveying limitations of the early 19th Century, the original state line was mistakenly drawn 1 mile south the 35th parallel and of a bend in the Tennessee River.

I could go on, listing a number of other “hotbed” areas for water disputes—such as Las Vegas and its lease of oil shale water rights from ChevronTexaco. But, you get the picture—if your region has not recently experienced disputes over water rights—it likely will soon.

C. What Next?

So, I’ve presented you with a set of very complex problems, so what can we can or should we expect as members of society and the Bar in the future in the area of water conservation and rights? First, I think that you’ll see a real push towards residential conservation. Residential

households represent roughly 7.5% of consumptive water uses. The “low hanging fruit” in this may be a mandated use of grey water for residential irrigation purposes given that much of residential water consumption is a result of lawn and garden watering. I also think that we’ll see more desalination plants built in coastal areas. Although desalination is energy intensive, it is difficult to see how many high-population density coastal areas—such as Florida—sustain much more growth without fresh water availability becoming a limiting factor.

From a legal standpoint, we are likely on the cusp of some change in water law in this part of the County. Most of the eastern U.S. adopted at common-law the riparian rights doctrine to water law. For those of you that may not be familiar with (or have forgotten), a person who owns land adjacent to a watercourse has a right to a reasonable use of that watercourse. Any water use that causes an unreasonable interference with a downstream user was actionable at common law. That is not the case in the West, where most of the states adopted the doctrine of prior appropriation. The prior appropriation doctrine, in

contrast, creates an actual property right in the water—it can be bought, leased or secured in a fashion similar to other types of property.

One could see a situation in which water scarcity issues force states east of the Mississippi River to address the water supply problems in novel ways. I could see many of these states moving from a riparian rights model to that of a prior appropriation. In fact, although it is moving a rather glacial pace, we are already seeing such movement in Alabama with greater scrutiny placed on certificates of beneficial use. This type of regulatory activity could easily lead down the path to a de facto prior appropriation system managed by the State.

In closing, I think that members of the Bar, whether representing clients in disputes or in transactions, or whether acting as members of legislative and policy-making bodies, will play an important role in the future of course of water rights in the U.S. We must consider the impacts of energy and climate change policy decisions on water resources, and we should prepare ourselves for an increase in the frequency and importance of disputes over water rights. As so

eloquently said by Mark Twain: “Whiskey is for Drinking, and Water is For Fighting.”

Thank you for your time.

SHAWN
KEN

Thank you, David (Smiga), for fitting me into your busy agenda. Thank you, all, for being here.

ED
Dave Blawie

I have my work cut out for me as I prepare to lead the ABA starting in August. Our practice sections, committees, and other groups cover just about every area of the law.

In fact, we have more than 100 entities within the ABA—and those are only the

ones that deal with environmental law! I am active in the Section of Litigation's Environmental Law committee, and we also have a section that's devoted solely to environmental law. Our Standing Committee on Environmental Law coordinates all the ABA's activities in this area.

As a national organization—and the world's largest voluntary professional

association—we bring together bar associations and individual lawyers from across the country—and around the world—to share best practices, to network, and to strengthen our national voice for the profession.

As I prepare for my leadership year, one principle guides me: As much as our diverse viewpoints in the bar give us strength and credibility, we need to stay

As lawyers—whatever area of the law or area of the country we practice in—we must answer our shared calling—to stand up, speak out, and work together on our common core values—not to make a dollar, but to make a difference.

Membership: Of course, the ABA does so many things for the profession and its members on a national scale—including our environmental law activities. If

**you're a member, thank you! If you
know any lawyers who aren't members,
please encourage them to join so we can
continue serving as the national voice for
the legal profession. I have membership
brochures if you're interested.**

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