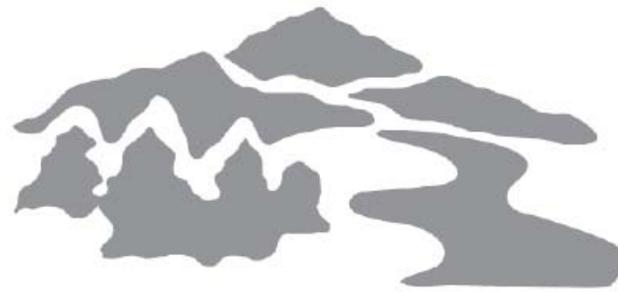


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# The WOPR: Old Growth and Climate Change

By Andrew Engel

## Background of the WOPR

The Western Oregon Plan Revisions, also known as “WOPR,” originated from a lawsuit brought by the American Forest Resource Council (“Council”). The Council is a lobby group for the logging and forest industry that among other activities, lobbied to pass the Healthy Forests initiative.<sup>1</sup> The Council filed suit in response to the Northwest Forest Plan, which sought, among other objectives, to set aside and restore old-growth forest areas. The Council claimed that the Northwest Forest Plan violated the Oregon & California Lands Act of 1937, which states that the land

“shall be managed...for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principal of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities.”<sup>2</sup>

The Bush Administration settled the case in 2003. The settlement forced the Bureau of Land Management to revise the Resource Management Plans for a number of western Oregon districts by the end of 2008.<sup>3</sup> The Bureau of Land Management (“BLM”) originally developed these Resource

Management Plans in response to the passage of the Northwest Forest Plan. According to the settlement, these revisions must consider at least one alternative that will not create any forest reserves, except as required by the Endangered Species Act.<sup>4</sup> The BLM began the revision process in September 2005. By August 2007, they released a draft Environmental Impact Statement (“EIS”) containing the details for four alternative management plans. While the WOPR contains a “no action alternative,” which purports to retain the management plans set by the Northwest Forest Plan, the BLM’s preferred alternative, “Alternative 2,” would only protect 57% of stands greater than 200 years old.<sup>5</sup> While this Alternative protects over half the old-growth areas in the districts, it would actually result in a 700% increase in the logging of these old stands.<sup>6</sup>

## Old Growth and Carbon Sequestration

Since the August release of the draft EIS, the WOPR has been met with a wide range of criticism. The National Oceanic and Atmospheric Administration’s Fisheries Service has told the BLM that the WOPR has a poor strategy for conserving salmon and steelhead. The Environmental Protection Agency also sent a letter to the BLM indicating concern for drinking water and fish habitat, which would result from the BLM’s decision to scrap the Northwest Forest Plan’s watershed protections.<sup>7</sup> There has also been criticism of the science

underlying the Bush Administration’s draft recovery plan for spotted owls, potentially allowing for increased logging of old-growth areas. However, another issue that must be addressed is the role old-growth forests play regarding climate change.



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Forests are an important part of the cycle of carbon on Earth. Through photosynthesis, trees sequester carbon and then release it through respiration. However, some of this carbon is stored long-term in both the woody debris and soil of a tree. As a result, when forests are logged, some of this carbon ends up remaining sequestered in the later wood products. However, about one third of the carbon sequestered in a tree will be released back into the atmosphere over the course of the next

five years after logging.<sup>8</sup> Normally this is not a big issue for properly managed timber production. Because while some of the sequestered carbon is released during harvest, the trees that are restored before the next harvest will sequester more carbon in turn. The problem that becomes apparent with the WOPR is that the BLM's preferred alternative calls for the rotation age for regeneration harvesting (a euphemism for clear cutting) to be approximately 80 to 100 years. Even at the high end of that range we are looking at foregoing at least 100 years worth of carbon sequestration per old growth tree harvested.

Many believe old growth forests have reached a point where they are no longer a net accumulator of carbon, known as a carbon sink. Whereas young trees sequester more carbon than they respire back into the atmosphere, it has long been assumed that as trees age they sequester less and less carbon until they reach equilibrium. Recent studies, however, have indicated that the models leading to this assumption may not be completely accurate.<sup>9</sup> Further, a study released in December 2006, by Chinese researchers, showed results that could completely reverse this current understanding. In the 2006 study, researchers analyzed forest soils from preserved old-growth forests in southern China from 1979 to 2003. Over that 24-year period, they found a 68% increase in carbon stored within the soil.<sup>10</sup> While more studies will need to be done to verify the phenomenon, it's possible that old growth forests are not only already massive carbon pools, but are continuing to store even more carbon as time goes by. In short, old growth forests could be a more important tool in the battle to curb climate change

than we originally thought.

## Where We Stand and What Comes Next

After receiving around 29,000 comments, the public comment period for the WOPR ended January 11. The entire decision-making process is taking place within the framework set out by the National Environmental Policy Act of 1969.<sup>11</sup> Therefore, the BLM's next step is to go through the comments and respond to them in any number of ways including: modifying alternatives, developing and evaluating alternatives not previously given consideration, modifying its analyses, making factual corrections, or explaining why comments do not warrant further response.<sup>12</sup> This process should be complete by September 2008, when the proposed resource management plan and a final EIS will be released and made available for a 30-day protest period. After this step a record of decision will be prepared along with approved resource management plans, which may be modified in response to protests. It remains to be seen what will happen after that.

For more information on the WOPR, including the draft EIS: <http://www.blm.gov/or/plans/wopr/index.php>

For more background on the original lawsuit and settlement see the 2006 issue of WELU: <http://www.pielc.org/WELU2006.pdf>

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<sup>1</sup>SourceWatch, *American Forest Resource Council*, [http://www.sourcewatch.org/index.php?title=American\\_Forest\\_](http://www.sourcewatch.org/index.php?title=American_Forest_)

Resource\_Council (last updated May 3, 2007).

<sup>2</sup>43 U.S.C.A. §1181a (Westlaw current through P.L. 110-180 (excluding 110-161 and 110-172) approved 1-8-08).

<sup>3</sup>U.S. Department of the Interior Bureau of Land Management, *Western Oregon Plan Revisions, Settlement Documents, 3.0 Agreements*, <http://www.blm.gov/or/plans/wopr/settlement/settlement3.php> (last accessed January 25, 2008).

<sup>4</sup>U.S. Department of the Interior Bureau of Land Management, *Western Oregon Plan Revisions, Settlement Documents, 3.0 Agreements, 3.5*, <http://www.blm.gov/or/plans/wopr/settlement/settlement3.php> (last accessed January 25, 2008).

<sup>5</sup>U.S. Department of the Interior Bureau of Land Management, *Western Oregon Plan Revisions News, Newsletter Issue No. 8 3*, <http://www.blm.gov/or/plans/wopr/files/Newsletter8.pdf> (December 2007).

<sup>6</sup>The Oregonian, *BLM proposes major upswing in logging*, <http://www.oregonlive.com/news/oregonian/index.ssf?base/news/1186718127273540.xml&coll=7&thispage=1> (August 10, 2007).

<sup>7</sup>Associated Press, *Agency finds BLM logging plan for Western Oregon bad for salmon*, [http://www.examiner.com/a-1165150~Agency\\_finds\\_BLM\\_logging\\_plan\\_for\\_Western\\_Oregon\\_bad\\_for\\_salmon.html](http://www.examiner.com/a-1165150~Agency_finds_BLM_logging_plan_for_Western_Oregon_bad_for_salmon.html) (January 17, 2008).

<sup>8</sup>Union of Concerned Scientists, *Recognizing Forests' Role in Climate Change*, [http://www.ucsusa.org/global\\_warming/solutions/recognizing-forests-role-in-climate-change.html](http://www.ucsusa.org/global_warming/solutions/recognizing-forests-role-in-climate-change.html) (last updated August 27, 2007).

<sup>9</sup>Carey, Eileen V., "Are old forests underestimated as global carbon sinks?" *Global Change Biology* 7.4 (2001): 339-344.

<sup>10</sup>Zhou, Guoyi and Shuguang Liu, "Old-Growth Forests Can Accumulate Carbon in Soils." *Science* 314.5804 (2006): 1417.

<sup>11</sup>42 U.S.C.A. § 4321 (Westlaw current through P.L. 110-180 (excluding P.L. 110-161 and 110-172) approved 1-8-08).

<sup>12</sup>40 C.F.R. § 1503.4(a) (Westlaw current through Jan. 24, 2008).

# Can Indian Tribes Help Stop Global Warming? :

## How Tribes Can Implement Their Key Knowledge of the Environment Through Enforcement of the Clean Air Act

By: Monica Kerslake

Indian tribes' long and intimate relationship with the natural environment leaves little doubt that global warming will have a significant impact on their lives. Water will become scarce. Fish runs will be depleted. Wildlife and plant communities will be disrupted, thereby affecting tribes' subsistence and economies, and fires will destroy tribal lands and sacred sites. These are just a few – of many – ways in which global warming will affect tribes. Yet, indigenous people are uniquely able to compare what is happening today, with experiences spanning generations of understanding natural cycles and resources. With such key knowledge of the environment, is there anything a tribe can do to help stem the enormous amount of air pollution that is dumped into the atmosphere every day? The Clean Air Act may provide an answer.

### Tribes' Treatment as States Under the Clean Air Act

The Clean Air Act (“CAA”) is a critical environmental statute that essentially sets limits on the amount of air pollutants that can be emitted into the atmosphere. These limits are established by the National Ambient Air Quality (pollution) Standards (“NAAQS”).<sup>1</sup> The NAAQS are enforced through state implementation plans, which embody the CAA's underlying philosophy that “air pollution prevention and air pollution control at its source is the primary responsibility of States and local

governments . . . .”<sup>2</sup>

In 1990, Congress added two provisions to the CAA that broadly authorized tribes to be treated like states under the Act. First, Congress added Section 301(d), the Treatment as States provision, which authorizes the Administrator of the Environmental

“Enforcing tribal environmental standards outside of reservation boundaries has proved effective in the past.”

Protection Agency (“EPA”) “to treat Indian tribes as States.”<sup>3</sup> Second, Congress added Section 110(o), authorizing tribes to create their own Tribal Implementation Plans (“TIPs”).<sup>4</sup> The Title V operating permit program was also added to the CAA as part of the 1990 amendments. Title V imposes a requirement that all “major stationary sources” obtain operating permits to begin or continue operation. Eligible tribes may, but are not required to, obtain approval to implement and enforce an operating permit program governing sources “within the exterior boundaries of the [tribe's] reservation or other areas within the tribe's jurisdiction.”<sup>5</sup>

### Enforcement of Tribal Air Standards

Once a tribe has achieved Treatment as a State status, the CAA authorizes that tribe to create its own TIP.<sup>6</sup> TIPs may contain pollution requirements that are more stringent

than EPA standards.<sup>7</sup> If and when the plan is approved and becomes effective, it becomes applicable to all areas located within the exterior boundaries of the reservation, notwithstanding the issuance of any patent and including rights-of-way running through the reservation.<sup>8</sup> Tribal air quality standards are also

enforceable against nonmember owned fee lands within the exterior boundaries of a reservation.<sup>9</sup>

If a tribe develops and implements strict air quality standards in its TIP, it may of course enforce those standards within the reservation boundaries. The power to regulate pollution sources within a reservation provides tribes a helpful tool in the regulation of reservation air. However, while strict regulation of sources within the reservation may alleviate *some* air pollution within the reservation, it by no means will alleviate harm caused by polluting sources directly off the reservation boundaries.

No court, to date, has ruled on the issue of whether a tribe can enforce its air quality standards outside of reservation boundaries. In fact, no tribe before October 30, 2007, had any air quality standards of their own to enforce.<sup>10</sup> Such a litigation strategy, however, could provide a powerful tool for tribes eager to

reduce air pollution originating from neighboring states that contribute to the deterioration of the air on reservations.

Enforcing tribal environmental standards outside of reservation boundaries has proved effective in the past. For example, under the Clean Water Act's ("CWA") TAS provision, courts have recognized that the grant of TAS status may confer the power to require off-reservation dischargers to comply with tribal water quality standards.<sup>11</sup> The same type of rule – enforcing a tribe's environmental statutes against "upstream" users – may also prove useful and effective under the CAA. If the CWA's precedent was applied to the CAA, tribes would be empowered to enforce their air quality standards outside of the reservation when "upwind" users contaminated the downwind tribe's air.

However, in order for a tribe to achieve such a goal, it must first implement its own air quality standards. Those standards may be more strict, but no less strict, than EPA standards.<sup>12</sup> Once a tribe has established and implemented its standards, it must then enforce those standards against off-reservation polluters contaminating the tribe's air. Any "upwind" or outside reservation polluter that negatively impacts the tribe - by preventing the tribe from attaining its air quality standards – must be forced to comply with the tribe's air quality standards and alter its behavior so as to refrain from harming the tribe.

## Conclusion

Ultimately, as tribes continue to struggle with a polluted and

warming planet, they must look for new ways to regulate the air both in and surrounding their reservations. Tribes should look to the authority granted to them in the CAA to achieve such regulation. The CAA expressly allows tribes to regulate the air within their reservation boundaries. To achieve such regulation power, a tribe must apply for and achieve Treatment as a State, as well as receive EPA approval of a TIP.

Moreover, with recent Supreme Court cases such as *Massachusetts v. EPA* setting the stage for the regulation of greenhouse gases, and the strong precedent set by the CWA allowing tribes to enforce water quality standards outside of their reservations, *all* tribes should surely try to use their authority in the CAA to force upwind polluters to conform to tribal air quality standards. The accomplishment of such a feat would surely better the planet for all of us.



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<sup>1</sup>42 U.S.C. § 7409 (2000).

<sup>2</sup>42 U.S.C. § 7401(a)(3) (2000).

<sup>3</sup>42 U.S.C. § 7401(a)(3).

<sup>4</sup>42 U.S.C. § 7410(o) (2000).

<sup>5</sup>See 42 U.S.C. § 7601(d)(2)(B).

<sup>6</sup>42 U.S.C. § 7410.

<sup>7</sup>*California v. Dept. of Navy*, 431 F. Supp.

1271 (D. Cal. 1977), *aff'd*, 642 F.2d 885 (9th Cir. 1980).

<sup>8</sup>42 U.S.C. § 7410(o).

<sup>9</sup>See *Arizona Pub. Serv. Co. v. EPA*, 211 F.3d 1280 (D.C. Cir. 2000).

<sup>10</sup>See Environmental Protection Agency, *EPA Approves First Ever Clean Air Act Plan for Reducing Air Pollution Developed by a Tribe; Saint Regis Mohawk Tribe Emerges as Environmental Leader*, <http://epa.gov> (search "first ever clean air act plan"; then follow hyperlink).

<sup>11</sup>See, e.g. *City of Albuquerque v. Browner*, 97 F.3d 415, 424 (10th Cir. 1996) ("[u]nder [the CWA], the EPA has the authority to require upstream NPDES dischargers, such as Albuquerque, to comply with downstream tribal standards."); *Wisconsin v. EPA*, 266 F.3d 741, 748 (7th Cir. 2001) ("[o]nce a tribe is given [TAS] status under the [CWA], it has the power to require upstream off-reservation dischargers, conducting activities that may be economically valuable to the state ... to make sure that their activities do not result in contamination of the down stream on-reservation waters.").

<sup>12</sup>*California v. Dept. of Navy*, 431 F. Supp. 1271 (D. Cal. 1977), *aff'd*, 642 F.2d 885 (9th Cir. 1980).

# Encouraging Wave Energy:

## How FERC and Oregon are detangling the permitting and siting process for wave energy conversion projects

By Alison Torbitt

On December 20, 2007, the Federal Energy Regulatory Commission (FERC) issued its first-ever hydrokinetic license to allow Finavera, a private Irish renewable energy company, to move forward with their wave energy conversion project in Makah Bay, Washington.<sup>1</sup> Wave energy conversion (WEC) is the term for the complex process of turning the mechanical energy of waves into usable electrical power. Finavera's pilot plan consists of four wave-energy buoys, made of mainly metal and rubber, anchored 1.9 miles offshore, which will operate by using the bobbing of the waves to compress seawater, which will result in the turning of turbines, and then generating of electricity. Four miles of underwater cable will transport this electricity onshore to a land station, which will then connect into the grid. The Makah Tribal Council, who owns and uses the shore and fishing grounds that will be affected, is supporting the project. Finavera reports that this pilot plan hopes to generate enough electricity to supply 150 homes/year. The Electric Power Research Institute has estimated that the waves off of Washington, Oregon, and California combined have the potential to produce 250-500 million megawatt hours of electricity per year; 6-12% of the total electricity used in the U.S.<sup>2</sup>

Companies who wish to enter the blossoming wave energy market face an upward battle of permitting and siting, and with the conditional FERC permit, Finavera has just successfully completed their first

hurdle. There are a myriad of federal Acts that a wave energy project must comply with, none of which were written or passed with ocean energy in mind. These include everything from the Federal Power Act, which gave FERC jurisdiction over WEC projects within 3 miles of the coast, to the Coastal Zone Management Act to the Marine Mammal Protection



Act. Many of these Acts have given rise to lengthy and time consuming permitting processes that any new project must first complete before starting construction. However, due to the immediate public demand for clean, renewable energy, the federal legislature and various state legislatures have been trying to find ways to give companies an opportunity to demonstrate and test their innovative oceanic structures sooner rather than later.

Thus, FERC has adopted a new approach to wave energy to find

ways to shorten the regulatory process and speed development of these hydrokinetic projects. The FERC license issued to Finavera for the Makah Bay, Washington WEC project is a 5-year conditional approval to move ahead on all aspects of the project not requiring actual construction, such as environmental plans.<sup>1</sup> Finavera is still required to obtain all other

authorization required under state and federal law.<sup>1</sup> Joseph T. Kelliher, the chairman of FERC, states that this license "will provide Finavera the opportunity to test and demonstrate the economic and environmental benefits of an operating wave energy conversion power plant with minimal environmental impact."<sup>1</sup> Kelliher also assured environmentalists that this conditional permit in no way diminishes the authority of other federal agencies or states over this project.<sup>1</sup>

State legislatures have also been moving ahead with ideas on how to shorten the lengthy regulatory process, in hopes of capturing this lucrative market for their own state's renewable energy sector. The Oregon legislature, for example, has recently passed Senate Bill 875, amending ORS 469.185 to include "ocean wave energy" in the renewable energy resource definition, allowing WEC projects to qualify for tax incentives.<sup>3</sup> The Bill also allows the Department of State Lands to adopt new rules to accommodate wave energy facilities and devices directly.<sup>4</sup> This Bill adds to the power of House Bill 2925, signed on May 31, 2007, which exempted all wave energy projects generating five megawatts of electricity or less from Water Resources Department permitting requirements if permitting is not already required by the Federal Power Act, allowing for immediate construction and testing of small pilot projects off the Oregon coast.<sup>5</sup> This Act, supported by Governor

115 feet of water in October 2007 without any clear indication as to why.<sup>7</sup> Another emerging wave energy company, Ocean Power Technology (OPT), filed for a FERC permit for a wave park off the coast of Reedsport, Oregon in July, 2006, but has since been faced with fierce opposition from local crab and salmon fisherman. The fisherman are concerned that their traditional fishing grounds are being handed out for private firm gain, without thorough consideration to the salmon migration, Dungeness crab movement, and whale migration.<sup>8</sup> Despite these concerns as voiced by over one hundred fisherman who showed up to a meeting arranged by the Oregon International Port of Coos Bay on January 16, 2008, OPT still hopes to have one functional buoy off of Gardiner by Fall 2008, with the ultimate goal of anchoring nine additional buoys over the next several years.<sup>8</sup> A second project of twenty buoys sited off of North Spit, Oregon is also now in progress, and

noise generated on fish and wildlife in the area, the ability of the underwater cable to stay free of entanglement and floating debris, and others not yet articulated. The wave energy companies argue that they need to be allowed to continue testing in order to relieve many of these concerns. Their goal is to prove that the economic and environmental benefits of wave energy are possible with minimal environmental and visual impact. This innovative conditional permit by FERC is a large step in making this hope a reality. Hopefully, many additional permits for projects in Oregon will be issued in 2008, allowing the questions and concerns of possible environmental impact can be answered.

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*Special thanks to Dina Dubson and Maria Garcia for their help with ideas and research for this article.*

“Despite these initiatives . . . the Oregon WEC projects have been slow to progress.”

Kulongoski, was “necessary for the immediate preservation of the public peace, health and safety.”<sup>5</sup> Oregon lawmakers budgeted in 2007 \$28 million towards seven new industry initiatives under the 2007 Innovation Plan, listing wave energy as the sole proposal under the “emerging industry” category.<sup>6</sup>

Despite these initiatives set forth by Oregon legislatures, the Oregon WEC projects have been slow to progress. Finerva's test buoy anchored off central Oregon sank in

a whale migration study has begun in this location.<sup>8</sup>

With the potential of harnessing the force of currents, waves, and tides to create renewable clean energy also lies great hopes and fears voiced by federal and state legislatures, those who hope for financial gain, and those who fear for their livelihood and property values. In addition, many other concerns have yet to be answered: navigational safety concerns, the effect of the electromagnetic waves produced on marine mammals, the effect of the

<sup>1</sup>Item H-1, AquaEnergy Group Ltd. (Docket No. P-12751-000), Statement of Chairman Joseph T. Kelliher, Federal Energy Regulatory Commission, Open Commission Meeting.

<sup>2</sup>Tom Paulson, “Wave-power project is OK'd,” Seattle Post Intelligencer, December 20, 2007.

<sup>3</sup>Or. Sen. 875, 74th Leg., Reg. Sess., 2 (June 13, 2007).

<sup>4</sup>Or. Sen. 875, 74th Leg., Reg. Sess., 3 (June 13, 2007).

<sup>5</sup>Or. H. 2925, 74th Leg., Reg. Sess. 1 (May 31, 2007).

<sup>6</sup>“Governor Kulongoski Signs the 2007 Oregon Innovation Plan” State of Oregon Press Release, July 26, 2007.

<sup>7</sup>Tom Paulson, “Wave-power project is OK'd,” Seattle Post Intelligencer, December 20, 2007.

<sup>8</sup>Susan Chambers, “Fisherman Question Need For Buoys,” The World, Coos Bay, Oregon Edition, January 17, 2008.

# The Devil is in the Details: What Water Privatization Contracts Must Get Right Before They Can Ever Work

By Steffanie Foster

Since its founding America has relied on corporations to help build and maintain its infrastructure. Therefore it is not surprising that more and more cities are considering turning to the private sector to rescue them from the mounting costs related to operating and maintaining their public water services. In 1996, the Environmental Protection Agency (“EPA”) estimated that over 20 years \$140 billion dollars would have to be invested in the water service infrastructure in order to combat aging and meet current environmental standards.<sup>1</sup> Facing such a stark reality some cities have already found themselves parties in long-term contracts with private corporations. Whether a city has the legal authority to enter into a long-term privatization contract was a question that divided the courts for years.<sup>2</sup> Today many states have statutes that allow cities to enter into such contracts<sup>3</sup> and recent case law suggests that cities have the power even in the absence of a state statute.<sup>4</sup>

The two cities with the largest privatization contracts in America are Atlanta, GA and Stockton, CA. Their experiences with privatization were disastrous and opponents of privatization point to both cities as prime examples of why privatization does not work. Clearly both cities provide examples of what needs to be avoided in the future if a city is to ever successfully privatize their water services.

## Atlanta and Stockton

In 1998, Atlanta signed a 20-year contract with United Water in order to help repair their water service system, which officials estimated would cost the city \$800 million dollars over five years.<sup>5</sup> The deal later fell apart as both parties realized they signed the contract with unrealistic expectations. For example, United claimed Atlanta’s water service infrastructure was worse off than they were led to believe. As a result of the failed contract, Atlanta residents were forced to endure multiple water main breaks and sporadic “boil only” alerts, when brown water poured from their taps. In 2003, after four years of customer complaints, Atlanta ended the contract and began the process of returning their water service system back to a governmentally run system.<sup>6</sup>

Last year, Stockton, CA officially ended their four-year effort to privatize the city’s water when the city council voted to rescind the city’s contract with the London based OMI/Thames Corporation.<sup>7</sup> During the four years OMI/Thames operated Stockton’s water services, there were reports of sewage spills and complaints concerning a lack of transparency from both the city and OMI/Thames.<sup>8</sup> The 20-year \$600 million dollar contract, which gave OMI/Thames Water Stockton, Inc. control over the operation and maintenance of Stockton’s water, wastewater, and stormwater utilities, was controversial from the beginning. In 2003, Stockton’s city council approved the

contract two weeks before Stockton voters passed a ballot initiative, which required voter approval of any potential water privatization contract.<sup>9</sup> Many in the public viewed the contract’s approval as an evasion of the democratic process. In fact, its approval led a grassroots coalition spearheaded by the group Concerned Citizens Coalition of Stockton to file suit against the city. Ultimately, it was the city council’s decision to rush through the administrative process and its failure to perform an environmental impact report, which led a judge to invalidate the contract in 2003.<sup>10</sup> The trial judge held that the city council abused its discretion when it passed a resolution that categorically exempted its approval of the contract from review under the California Environmental Quality Act (“CEQA”).<sup>11</sup> This decision led to appeals and the final decision by the city in 2007 to dissolve the contract.

## Issues Involved with Privatization Contracts

While issues concerning effects on water quality and efficiency dominate the discussion regarding water privatization, there are many other issues that must be addressed by policymakers if they continue to pursue privatization.

First, as the Stockton experience makes clear, the decision and subsequent process in moving from a public to a privately run water

service must include the public. In order to avoid the appearance of impropriety, the public must be given time to comment on all major decisions before a city can act. There are various ways to include the public, ranging from a mandatory ballot vote to a statutorily required notice and comment period, similar to the process required under the National Environmental Policy Act.<sup>12</sup> Whatever role the public ultimately has in the decision-making process, it is crucial that the public have a formal role in the decision-making, not merely an informal role, which could be easily worked around. As both Stockton and Atlanta show, policymakers have incentives to fast track this process without taking the time to properly investigate reality or viable alternatives. Therefore, the public should also have a formal right to appeal the process and decision, if they have evidence the required procedures were not followed.

Second, all parts of the process as well as the final contract must be conducted with a high level of transparency and openness. Openness between the parties will not allow



unrealistic expectations to develop, as they did in Atlanta, and transparency, something missing in Stockton, will keep the public informed about what is happening with their water. The city and its residents must have access to the actual costs of the project as well as access to information detailing whether the contract's provisions are successfully being met.

Third, the provisions of the contract itself must address multiple issues. For example, the contract must ensure that everyone has continued access to water. Currently, if a corporation owns and operates a water service their service rates are subject, in all but five states, to public regulatory agency review.<sup>13</sup> Such review protects consumers. Yet many cities, like Stockton, retain their ownership of the water system and consequently a corporation's water rates are not subject to agency review.<sup>14</sup> In fact, many cities specifically exempt privatization contracts from state utility commission regulation.<sup>15</sup> Therefore, a privatization contract must ensure that a city closely supervise the corporation, to make sure water rates are reasonable. A related issue a privatization contract must also address is discrimination. A successful contract must contain anti-discriminatory provisions protecting lower income communities from falling victim to a corporation's bottom line.<sup>16</sup> Ideally such a provision should encourage participation from community members.

The contract must also contain stipulations addressing the natural environment, as well as water conservation. One way a contract could protect the existing environment is to include ongoing mandatory environmental performance standards.<sup>17</sup> Incentives should also be worked into a contract rewarding a corporation for establishing benefits

beyond what the contract required of it. For instance, if a corporation installs a more efficient water service infrastructure or creates a system of programs that encourage consumers to conserve, it should receive an extra tax break or a financial bonus from the city.<sup>18</sup> Finally, the contract should include stipulations mandating an annual independent review of the city and corporation compliance under the contract. The review must be made available to the public and penalties must be put in place and enforced if a party is noncompliant. In order to avoid being held hostage to an ineffective contract the contract must also allow a city to breach the contract, without cause.

## Conclusion

Undoubtedly, Atlanta and Stockton's experiences will turn many cities away from pursuing privatization and simultaneously provide others with the desire to try it differently and get it right. In short, if a city chooses to privatize, the public must be included in the decision-making process and protected by the contract itself. After all, water is a resource the government holds in trust for its citizens.

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<sup>1</sup>National Research Council, *PRIVATIZATION OF WATER SERVICES IN THE UNITED STATES: AN ASSESSMENT OF ISSUES AND EXPERIENCE* 18 (National Academy Press 2002).

<sup>2</sup>Arnold, Craig Anthony, *Privatization of Public Water Services: The States' Role in Ensuring Public Accountability*, 32 PEPP. L. REV. 561, 576 (2005).

<sup>3</sup>*Id.* at 575.

<sup>4</sup>*Boyle v. Mun. Auth. of Westmoreland County*, 796 A.2d 389, 394 (Pa. Commw. Ct. 2002).

<sup>5</sup>Jehl, Douglas. *As Cities Move to Privatize Water, Atlanta Steps Back*, N.Y. TIMES Feb. 10, 2003.

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

<sup>7</sup>Democracy Now, “Stockton, California City Council Reverses Water Privatization It Passed Over Widespread Local Opposition” (Aug. 1, 2007).

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

<sup>9</sup>Snitow, Alan ET AL., THIRST: FIGHTING THE CORPORATE THEFT OF OUR WATER 35 (Jossey-Bass 2007).

<sup>10</sup>*Concerned Citizens Coal. of Stockton v. City of Stockton*, No. CV 020397 (ruling

on petition for mandamus)(Cal. Super. Ct. County of San Joaquin Oct. 20, 2003).

Opinion available at <http://www.cccos.org/>.

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

<sup>12</sup>Arnold, *supra* note 2, at 583.

<sup>13</sup>*Id.* at 584.

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

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

<sup>16</sup>*Id.* at 597.

<sup>17</sup>*Id.* at 592.

<sup>18</sup>*Id.* at 593.

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# The Problem With Ethanol: The Hidden Environmental Costs of Corn-Based Biofuel

By Virginia Ryan

## Introduction

In the last few years, corn-based ethanol production has become a major industry in the United States, particularly in the Midwest.<sup>1</sup> Rising oil prices and increased demand for alternative fuels have created an explosive growth in the number and size of ethanol plants.<sup>2</sup> Ethanol has been heralded as a “green” fuel, key in reducing both greenhouse gas emissions and American dependence on foreign oil.<sup>3</sup> In the rush to tap this new resource, ethanol’s unpleasant environmental impacts have largely been ignored. The public needs to be aware of the hidden costs of ethanol production, so that communities may make informed decisions when a new ethanol facility is proposed for their area.

## The Ethanol Production Process

Nearly all new ethanol plants use a “dry mill” process, where corn is

ground to a fine flour, then mixed with water and enzymes to form slurry.<sup>4</sup> The slurry is held in liquefaction tanks while the enzymes break the corn starches into fermentable sugars.<sup>5</sup> Yeast is then added, and the mix is allowed to ferment for 50 hours, resulting in a mixture of alcohol and solids.<sup>6</sup> This mix is then pumped into distillation columns to be separated into ethanol and solid byproducts.<sup>7</sup> The ethanol is run through molecular sieves to remove residual water, and then stored until transported to a fuel terminal.<sup>8</sup> The leftover solids are centrifuged to remove liquid (which is returned to the slurry tanks), then dried to produce dried distiller’s grain (DDG) which can be used as an animal feed.<sup>9</sup>

## Power

The fermentation, distillation, and grain drying stages of this process all require the addition of heat.<sup>10</sup> Many ethanol plants use natural gas as an energy source, but because of rising natural gas prices the trend in new plants is toward burning coal, which produces much more carbon dioxide, particulate matter, mercury,

and sulfur oxides than natural gas.<sup>11</sup> A few ethanol production facilities are experimenting with innovative power sources: DDGs are being tested as a biomass supplement to coal, and a plant soon to open in Nebraska will use feedlot-produced methane as an energy source.<sup>12</sup>

## Water

### *Pollutants - Direct Discharges*

Although ethanol plants recycle most of their waste liquids, they discharge hundreds of thousands of gallons of wastewater daily.<sup>13</sup> These discharges contain dissolved residues, suspended solids, oil and grease, heavy metals, and oxidants.<sup>14</sup> In addition to toxic effects, the discharges may significantly alter the temperature, pH, clarity, and odor of the water bodies they enter.<sup>15</sup> Ethanol producing facilities discharge their wastewaters either directly to a ditch or stream, or into a municipal sewage facility, which may not have the capacity to deal with the amount or type of industrial wastewater these plants produce.<sup>16</sup>

Increased demand for ethanol has created a skyrocketing demand for corn.<sup>17</sup> Grain farmers in the Midwest and elsewhere are planting much more corn than usual, either on previously uncultivated ground or by planting less of another crop such as soybeans or alfalfa.<sup>18</sup> This is particularly troubling when the newly-planted acreage had formerly been withheld from cultivation in order to prevent soil and water damage, as in the case of riparian buffers and filter strips, or of highly-erodible lands being withdrawn from the Conservation Reserve Program (CRP).<sup>19</sup>

The additional corn planting results in increased runoff of oxygen-depleting pollutants into waterways.<sup>20</sup> Unable to absorb nitrogen from the atmosphere, corn is a needy plant, requiring an average application of 156 pounds of nitrogen and 80 pounds of phosphorus per acre.<sup>21</sup> Because corn requires more fertilizer than crops such as soybeans or alfalfa, the shift towards greater corn production is resulting in accelerated eutrophication of water bodies as far downstream as the Gulf of Mexico.<sup>22</sup>

Eutrophication occurs when nitrates and phosphates run off corn fields into lakes and streams, causing an explosive growth of algae.<sup>23</sup> As they grow, these algae create a state called “hypoxia” by using up the oxygen available in the water.<sup>24</sup> Very few aquatic organisms can survive in hypoxic waters; the result is a “dead zone,” i.e. an area of water where fish, invertebrates, and other aquatic organisms cannot survive.<sup>25</sup> In waterways that provide drinking water, algae can clog water intakes, and may harbor toxic cyanobacteria.<sup>26</sup>

Quantitative water rights, long hotly contested in the arid West, are becoming more important in Midwestern states as droughts lengthen and municipal, agricultural, and industrial water uses continue to expand. Only in the past hundred years have we begun to understand the complex systems of groundwater movement and aquifer recharge. One important lesson is that once an aquifer is damaged or drained, it may take centuries to recover.<sup>27</sup>

Older ethanol plants use as much as 15 gallons of water for each gallon of ethanol they produce.<sup>28</sup> The average for newer plants is 4.7 gallons of water per gallon of ethanol.<sup>29</sup> A plant that produces 100 million gallons of ethanol per year may use as much as 1.3 million gallons of water per day, and discharge 400,000 gallons of wastewater daily.<sup>30</sup> Most plants use well water drawn from local aquifers, and nearby domestic well users have already begun to feel the impact.<sup>31</sup>

When a water user withdraws groundwater faster than the aquifer refills (the “recharge rate”) the level of the water table begins to drop.<sup>32</sup> This causes shallower wells to run dry as the water table sinks.<sup>33</sup> Both residential and municipal wells may be adversely affected by the lowered water table.<sup>34</sup> In addition, local water bodies that are fed by groundwater, including streams, springs, pools, and rivers, may run dry.

Even when the recharge rate of an aquifer is sufficient to supply a user’s need, high-volume wells can still cause problems for neighboring groundwater users. When a high-volume well begins pumping, it creates a cone of depression in the local water table.<sup>35</sup> Although the overall level of the water table does

not drop, shallow wells within the cone of depression will run dry.<sup>36</sup>

Many ethanol plants in the Midwest draw their water from aquifers with limited recharge rates.<sup>37</sup> In some areas, nearby domestic wells have already begun to run dry.<sup>38</sup> As more ethanol plants are built, siting decision-makers and community governments need to consider seriously the potential impacts on local water resources.

## **Air Emissions**

Ethanol plants emit a variety of air pollutants including particulate matter, sulfur oxides, volatile organic compounds (VOCs), carbon monoxide, nitrous oxides, formaldehyde, methanol, acetaldehyde, and acrolein.<sup>39</sup> All of these pollutants are known to have significant human health risks, including cancer, birth defects, brain and nerve damage and long term injury to the lungs<sup>40</sup>.

In addition to the health threat, the strong, unpleasant odors emitted by these plants significantly decrease the quality of life for nearby residents. Ethanol plants release strong odors that have been characterized by nearby residents as “overpowering”, “nauseating”, “sickeningly sweet”, and “like stale beer”.<sup>41</sup> Individuals living as far as three miles from an ethanol plant have reported that they are no longer able to enjoy being outdoors on their property, and are forced to keep their windows shut year round because of the overpowering odors produced by the plant.<sup>42</sup> Property values of residences affected by ethanol plant odors have decreased by as much as 50%.<sup>43</sup>

## Relaxed CAA Standards

On April 12, 2007, the EPA issued a new rule changing the status of fuel-ethanol plants. Formerly, these plants were subject to the rule under which any facility capable of emitting annually more than 100 tons of any pollutant listed in the Clean Air Act is considered a “major source” and is subject to technology and emissions regulations. Expanding a narrow exception that formerly applied only to facilities producing grain alcohol for human consumption, the new rule allows any ethanol producing facility to emit up to 250 tons of pollutants per year before being subject to “major source” regulations.<sup>44</sup>

As a result, many ethanol plants will no longer be required to install control equipment that can reduce emissions up to 95%. In addition, ethanol plants are no longer required to count emissions that do not come from stacks or vents, i.e. emissions of hydrogen sulfide from piles of rotting waste solids.<sup>45</sup>

For communities near ethanol plants, the new rule means more hazardous air pollution, more odors, and less access to regulatory relief. Ethanol plants can now be bigger, dirtier, and less accountable to their

neighbors. The smells emitted from these loosely regulated plants may be many times stronger than those operating under the old rule. Many newly constructed plants will now use coal rather than clean-burning natural gas as an energy source, dramatically impacting the air quality of the surrounding areas. Communities near new ethanol plants should expect skyrocketing asthma rates and a general increase in respiratory illness, as well as increasingly intense odors.

## Conclusion

There has been much debate regarding whether corn-based ethanol produces more energy than is required to create it, and to what extent ethanol production is linked to rising food costs. Unfortunately, the debate has largely ignored the tangible collateral effects of bioethanol production. It has become clear to many that ethanol is not as “green” as its proponents would have us believe. Setting aside the issues of efficiency and food supply, the verified costs to aquatic ecosystems, groundwater reserves, air quality, and human health indicate that ethanol has serious disadvantages as an alternative fuel.

Mill Ethanol Process, *supra* note 1.

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

<sup>7</sup>*Id.*

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

<sup>9</sup>*Id.*

<sup>10</sup>Renewable Fuels Association, How Ethanol is Made, *supra* note 1.

<sup>11</sup>Mark Clayton, *Carbon cloud over a green fuel*, THE CHRISTIAN SCIENCE MONITOR, March 23, 2006; Energy Information Administration, *Natural Gas 1998: Issues and Trends*, 58 (April 1999) available at [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/analysis\\_publications/natural\\_gas\\_1998\\_issues\\_and\\_trends/it98.html](http://www.eia.doe.gov/oil_gas/natural_gas/analysis_publications/natural_gas_1998_issues_and_trends/it98.html).

<sup>12</sup>*Carmel Company Helps Produce New Farm Pellet*, INSIDE INDIANA BUSINESS, April 2, 7 2007, available at <http://www.insideindianabusiness.com/newsitem.asp?ID=23046#middle>; Bill Hord, *Bullish on corn based ethanol: E3 Biofuels boss sees a growth opportunity*, OMAHA WORLD-HERALD (Nebraska) February 7, 2007.

<sup>13</sup>Bill Lambrecht, *A hidden cost of ethanol: it's in the water*, ST. LOUIS POST-DISPATCH, April 15, 2007.

<sup>14</sup>Ohio Environmental Protection Agency, *Summit Ethanol, LLC NPDES permit effective January 2, 2007* available at [http://www.epa.state.oh.us/dsw/permits/Minors\\_districts/NWDOminor/2IF00023.pdf](http://www.epa.state.oh.us/dsw/permits/Minors_districts/NWDOminor/2IF00023.pdf)

<sup>15</sup>*Supra* note 13.

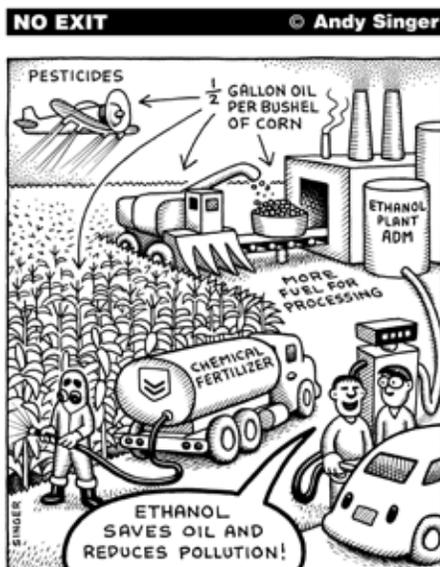
<sup>16</sup>Merrick & Co., *Wastewater Treatment Options for the Biomass-to-Ethanol Process*, Report to the National Renewable Energy Laboratory, October 22, 1998 available at <http://www.p2pays.org/ref/22/21201.pdf>

<sup>17</sup>Bill Lambrecht, *More ethanol means more corn – and more water pollution*, ST. LOUIS POST-DISPATCH, June 10, 2007.

<sup>18</sup>*Id.*

<sup>19</sup>Silvia Secchi and Bruce A. Babcock, Iowa State University Center for Agricultural and Rural Development, *Impact of High Corn Prices on Conservation Reserve Program Acreage*, IOWA AG REVIEW ONLINE Vol. 13 No. 2 (Spring 2007) available at [http://www.card.iastate.edu/iowa\\_ag\\_review/spring\\_07/article2.aspx](http://www.card.iastate.edu/iowa_ag_review/spring_07/article2.aspx) (predicting that nearly a million acres of Iowa land will be removed from the CRP, over 460,000 acres of which is designated highly erodible).

<sup>20</sup>*Id.*



<sup>1</sup>Jason L. Jenkins, *Missouri ethanol production to have billion-dollar impact*, DELTA FARM PRESS, March 23, 2007.

<sup>2</sup>Tom Webb, *Ethanol: The shakeout*, PIONEER PRESS (St. Paul, Minnesota), July 1, 2007.

<sup>3</sup>*The Great Corn Rush*, STAR TRIBUNE (Minneapolis, Minnesota), September 24, 2006.

<sup>4</sup>American Coalition for Ethanol, *The Dry Mill Ethanol Process: A Step-by-Step Interactive Tour*, <http://www.ethanol.org/index.php?id=73&parentid=73>; Renewable Fuels Association, *How Ethanol is Made*, <http://www.ethanolrfa.org/resource/made/>.

<sup>5</sup>American Coalition for Ethanol, *The Dry*

<sup>21</sup>*Supra* note 17.

<sup>22</sup>Jason Hill *et al*, *Environmental, economic and energetic costs and benefits of biodiesel and ethanol biofuels*, PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES Vol. 103 No. 30 (July 25, 2006) available at <http://www.pnas.org/cgi/content/short/103/30/11206>.

<sup>23</sup>United States Geological Survey Toxic Substances Hydrology Program, *Eutrophication* (December 14, 2006), <http://toxics.usgs.gov/definitions/eutrophication.html>.

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

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

<sup>26</sup>Dr. Robert Magnien, National Oceanographic and Atmospheric Administration, *Harmful Algal Blooms and Hypoxia in the Great Lakes Region*, [http://www.cop.noaa.gov/stressors/extremeevents/hab/habhrc/GL\\_fact\\_09-06.pdf](http://www.cop.noaa.gov/stressors/extremeevents/hab/habhrc/GL_fact_09-06.pdf)

<sup>27</sup>U.S. Geological Survey, *Ground-Water Depletion Across the Nation*, U.S. Geological Survey Fact Sheet 103-03 (November, 2003) available at <http://pubs.usgs.gov/fs/fs-103-03/>.

<sup>28</sup>Illinois Farm Bureau, *Ethanol Update*, (October 30, 2006) <http://www.ilfb.org/viewdocument>.

[asp?did=12458&r=0.7678797](http://www.stlouispostdispatch.com/asp?did=12458&r=0.7678797)

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

<sup>30</sup>Bill Lambrecht, *Ethanol plants come with hidden cost: Water*, ST. LOUIS POST-DISPATCH, April 15 2007.

<sup>31</sup>*States across the Midwest brace for water-guzzling ethanol plants*, ST. LOUIS POST-DISPATCH, April 15 2007.

<sup>32</sup>United States Geological Survey, *Ground-Water Development, Sustainability, and Water Budgets*, [http://pubs.usgs.gov/circ/circ1186/html/gw\\_dev.html#hypo](http://pubs.usgs.gov/circ/circ1186/html/gw_dev.html#hypo); *Aquifer Recharge*, in 1 Encyclopedia of Water Science No. 1 (2005), <http://www.dekker.com/sdek/abstract~db=enc~content=a713541875>.

<sup>33</sup><http://www.waterencyclopedia.com/Ge-Hy/Groundwater.html> (scroll down to "Pumping and Overpumping").

<sup>34</sup>Elsa Brenner, *When New Building Dries Up Resources*, N.Y. TIMES, June 15, 2007, §11, at 7.

<sup>35</sup>*Supra* note 33.

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

<sup>37</sup>*Supra* notes 30, 31.

<sup>38</sup>*Supra* note 31.

<sup>39</sup>U.S. Department of Energy, *Design and Construction of a Proposed Ethanol Fuel Plant, Jasper County, Indiana* (2005) available at <http://www.go.doe.gov/PDFs/>

[ReadingRoom/Iroquois/Iroquois\\_EA.pdf](#)

<sup>40</sup>Testimony before the Illinois Environmental Protection Agency in the matter of Public Hearing and Comment Period for Adkins Energy, LLC in Lena, December 18th, 2003, available at [http://yosemite.epa.gov/r5/il\\_permt.nsf/133e3c6aefald1638625666a00563357/5e23e0beaef87e685256dd60073e4cc/\\$FILE/AdkinsHearingTranscript.pdf](http://yosemite.epa.gov/r5/il_permt.nsf/133e3c6aefald1638625666a00563357/5e23e0beaef87e685256dd60073e4cc/$FILE/AdkinsHearingTranscript.pdf)

<sup>41</sup>Eric Fleischauer, *Is the plant worth the stink?*, THE DECATUR DAILY, August 13 2006; Linda DeVore, *Ethanol proposal fails smell test*, THE FAYETTEVILLE OBSERVER, March 19 2007.

<sup>42</sup>*Supra* note 4.

<sup>43</sup>*Id.*

<sup>44</sup>EPA Newsroom, *EPA Provides Equal Treatment for Ethanol Production Plants* (April 12 2007), <http://yosemite.epa.gov/opa/admpress.nsf/70e8171872128a58852572a000658eea/448f63e9be072e31852572bb0063d189!OpenDocument>

<sup>45</sup>*Supra* note 44.

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## Tribal Sovereign Immunity Issues in the Growing Conservation Trust Movement

By Matthew Rykels

The great conservation opportunities of the next century will be on privately owned land and conservation easements are the most effective ways to protect those lands. Landowners like conservation easements because they are a refreshing alternative to governmental regulation; they are voluntary, local and respect private property rights. For the many people who love their land, it is the best way to ensure that it will be preserved for all time.

Rand Wentworth, president, Land Trust Alliance

The traditional command and control regulatory model has proved largely ineffective to protect environmental resources. State and Federal governments continue to issue permits and pass regulations that degrade lands and waters. Consequently, a new mode of environmental protection has emerged. The private conservation movement puts willing landowners and environmental groups together to protect environmental assets from development and encroachment in perpetuity. By using a conservation easement, landowners and environmental organizations can narrowly tailor an agreement to

protect the environment and allow sufficient flexibility for future needs. This model is especially adaptable to Indian tribes that are interested in reacquiring aboriginal lands. The conservation easement can return traditional access and cultural use to lands that have fallen out of tribal control.

The Conservation Easement is a valuable alternative for Indian tribes to acquire lands in fee simple. Among other things, the conservation easement enables tribes to protect culturally important lands and resources for a percentage of the total value when the land cannot be fully purchased. An Indian tribe can be the

holder of a conservation easement, the owner of land encumbered by an easement, or benefit from an easement that is held separately from the tribe and tribal land. A conservation easement is a valuable alternative for the tribes to traditional environmental regulation because it is essentially a contract between private parties who can write as much protection and access into the agreement as the land requires.

## **Tribal Sovereign Immunity**

Tribal sovereign immunity protects a tribe from suit without the consent of the tribe or Congress.<sup>1</sup> Tribal sovereign immunity extends to off-reservation activities and applies to both governmental and commercial activities.<sup>2</sup>

If a conservation easement agreement does not address tribal sovereign immunity it can become a problem for the tribe, the easement holder, and all other parties involved in the conservation agreement. An easement contract should consider who holds the conversation easement, who enforces the easement, and who owns the encumbered land, keeping in mind the concept of tribal sovereign immunity.

## **Tribal Sovereign Immunity Issues in the Conservation Agreement**

Where the tribe holds a conservation easement on private land or acquires fee title to land already encumbered by a conservation easement, or the tribe holds title to a conservation easement the question of tribal sovereign immunity is raised because the tribe is directly or

indirectly a contracting party in the easement agreement. For a more thorough discussion of this issue see Mary Christina Wood & Zach Welcker, *“Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement,”*

“If a conservation easement agreement does not address tribal sovereign immunity it can become a problem for the tribe, the easement holder, and all other parties involved in the conservation agreement.”

publication forthcoming.

Ideally, the tribe will expressly agree to waive its sovereign immunity, either as the holder of the easement or as the owner of the land encumbered by a conservation easement. In fact, this is what the tribe may have to do. An express waiver of sovereign immunity sends the signal to surrounding landowners and the conservation community at large that the tribe is serious about conserving and protecting lands and can be held accountable if it does not. Secondly, a waiver of sovereign immunity may be the only way that a conservation easement can be enforced on tribal land or against the tribe as the holder.

### **i. The Tribe Acquires Land Encumbered by a Conservation Easement**

It is possible for the tribe to acquire title to land that is already encumbered by a conservation easement. For example, the Trust for Public Lands (TPL) or other conservation organization that owns a piece of property negotiates an

agreement for an easement with a federal or state agency. Then, the owner (TPL) sells this property, for a price reduced by the value of the easement restrictions, to the local tribe.<sup>3</sup> In this model, the easement might be held by a federal or state

agency or local land trust. There are specific issues of tribal sovereign immunity that should be addressed.

First, federal agencies have a trust duty to the tribe.<sup>4</sup> Consequently, in situations of negligible violation the agency may choose not to enforce the conditions of the easement because of its trust duty. Second, the parties must address what happens to the conservation easement if the tribe transfers its interest in the encumbered land to the Bureau of Indian Affairs (BIA). A tribe will often transfer its interest in land to the BIA to hold in trust. When land is held in trust, the tribe does not have to pay taxes on the land. Practically, it is unlikely that one federal agency will enforce the terms of the easement against another federal agency. If possible, the easement agreement should address whether the tribe can transfer its interest to BIA Trusteeship. However, a federally recognized tribe may not be able to contract away its right to transfer its interest in land to the BIA.

Additionally, the easement should specify a third-party right of enforcement. A third-party right of enforcement allows a party who is

not the holder of the conservation easement to enforce its terms.<sup>5</sup> Agencies are overworked and understaffed; a third-party enforcer can aid the agency that is low on funds for monitoring and enforcing easements. The easement gives the third-party the right to enforce the easement with the primary holder or alone if the primary holder does not enforce.<sup>6</sup> This can be especially advantageous if the tribe does choose to transfer its interest in the land to the BIA.

If the parties are particularly worried that the primary holder cannot enforce the easement then they can specify a secondary easement holder. A secondary easement holder can usually take over an easement if the original holder cannot manage it.<sup>7</sup> The original holder maintains the primary responsibility for holding and monitoring the easement but the backup may keep a second set of documentation related to the easement, so that it is prepared to act if the primary holder can no longer manage and defend the easement.<sup>8</sup>

## ii. The Tribe as the Easement Holder

If a tribe enforces an easement as the holder, a private landowner cannot litigate its rights against the tribe without a waiver of sovereign immunity. Consequently, where the tribe itself holds the conservation easement on private land, a landowner will not likely be willing to enter into the agreement unless the tribe agrees to waive its sovereign immunity. Additionally, unlike purely economic contracts, the agreement to place private land under control for perpetuity involves a lot of trust and partnership. These deals

are often done in small communities where landowners know each other. If the tribe is not forthcoming about its sovereign immunity, it is not likely that it will be able to execute more agreements once the issue does arise.

## Conclusion

Tribes are posed to take a unique role in the growing private conservation movement. As traditional stewards of the land, tribes can offer experience, expertise, and manpower that may not be available through more traditional outlets. Additionally, by using conservation easements and other private conservation models tribes can benefit by gaining access to culturally important aboriginal areas that have fallen out of tribal control. In addition to tribal sovereign immunity there are other unique cultural issues that may arise during the negotiation of these agreements. However, provided that they are addressed, tribes and environmental organizations can form beneficial partnerships. The growing conservation trust movement

provides a valuable alternative to the traditional environmental model, which has largely failed tribes.

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<sup>1</sup>Felix S. Cohen, *Handbook of Federal Indian Law* § 21.02[¶2] (West 2005).

<sup>2</sup>*Id.*, e.g. *Kiowa Tribe v. Mfg. Technologies, Inc.*, 523 U.S. 751 (1998); see also *Okla. Tax Comm'n v. Citizen Band Potawatomi Indian Tribe of Okla.* 498 U.S. 505 at 511 (1991).

<sup>3</sup>See Wood & Welcker, *supra*.

<sup>4</sup>See *United States v. Cherokee Nation of Oklahoma*, 480 U.S. 700, 707 (1987); *United State v. Mitchell*, 463 U.S. 206, 225 (1983); *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942) (as a fiduciary, the United States and all its agencies owe a trust duty to the federally recognized tribes).

<sup>5</sup>See Unif. Conserv. Easement Act § 1(3) (1981).

<sup>6</sup>Elizabeth Byers & Karin Marchetti Ponte, *The Conservation Easement Handbook* 172 (2d rev. ed., Land Trust Alliance, Trust for Pub. Land 2005).

<sup>7</sup>*Id.* at 170.

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



# A Stranglehold on Green Land Use Planning: Measure 37 as a Regulatory Taking

By Megan Miskill

The global community faces an imminent threat from massive increases of greenhouse gasses trapped in the atmosphere. The resulting global warming is adversely affecting the environment and the lives of United States citizens. As a result, many states, counties, and cities adopt proactive growth and regulation plans that take into account the effects of climate change and attempt to reduce greenhouse gas emissions through “green-friendly” land use regulations and urban growth restrictions. In 1993 Portland became the first United States city to adopt a plan to reduce carbon dioxide emissions, and Multnomah County joined these efforts in 2001, identifying climate change as a “key element” in its overall sustainability initiative.<sup>1</sup> Multnomah County was one of the first counties in the U.S. to identify climate change as a key element in its overall sustainability initiative. Perhaps most progressive is Multnomah County’s goal to reduce total emissions of greenhouse gasses by ten percent by 2010. However, this recent push for climate change awareness competes with the even more recent push for governmental regulatory takings reform.

Oregon Ballot Measure 37 is a controversial land use ballot initiative that passed in the State of Oregon in 2004 and requires state and local governments to compensate private property owners when land use regulations reduce the fair market value of the property.<sup>2</sup> As an alternative, the state may choose to “modify, remove or not

... apply the land use regulation or land use regulations” to the property.<sup>3</sup> If the government fails to either compensate a claimant or otherwise address the issue within two years of the claim, the law allows the claimant to use the property pursuant only to the regulations in place at the time the claimant purchased the property.<sup>4</sup> Measure 37 results in a governmental refusal to allow Multnomah County to enforce urban growth plans that attempt to reduce the effect of climate change. This constitutes a taking under Article I, section 18 of the Oregon Constitution, as well as under the Fifth Amendment, as applied to the states through the Fourteenth Amendment, of the United States Constitution. Multnomah County could bring a takings claim against the state of Oregon alleging that Measure 37 constitutes a regulatory taking and request that the state modify the language to provide an exception for land use regulations enacted to meliorate the causes and effects of climate change.

While the purpose of Measure 37 is to serve the public good and provide a solution for governmental regulatory takings, the realistic effects of Measure 37 are to stifle government regulation and prevent property owners from “influencing the growth and character of their neighborhoods . . .”<sup>5</sup> In Oregon, the Department of Land Conservation is required to waive a Measure 37 claim in favor of the landowner unless the legislature has enacted legislation that provides funds for the claim being brought. Therefore, since the measure was enacted, the state has waived almost all claims.<sup>6</sup> If the state continues to waive most Measure

37 claims, the resulting unregulated land use will essentially negate most of the progressive land use planning in Multnomah County. The landowners of Multnomah County should bring a claim against the State of Oregon alleging that Measure 37 is a violation of Article 1, section 18, of the Oregon Constitution and the Fifth Amendment to the United States Constitution, and should ask the state to amend the measure to provide an exception for land use regulations and moratorium attempting to minimize the impact of climate change.

Unless Measure 37 is amended to provide an exemption for green-friendly land use regulations, it will ultimately benefit few and harm many. The measure effectively dismantles public participation in Oregon’s land use system. The prior land use process allowed competing views to be heard and evaluated before decisions were made. The process under Measure 37 includes no due process requirement that potentially affected neighbors of claimants receive notice of compensation claims or zoning waiver requests. Thus, landowners will have no opportunity to weigh in on whether a town or county should pay compensation or grant a waiver to allow an incompatible, and potentially harmful, land use. Measure 37 also has a chilling effect on future planning laws and regulations. Any land use regulation enacted to decrease carbon output or protect natural resources, open spaces, and scenic areas will result in a flurry of Measure 37 claims.

For this claim, Measure 37

acts primarily as a regulatory taking because there is no actual physical taking of any property from the landowners. The Oregon cases interpreting Article I, section 18 have recognized that a “classic” taking occurs when the government physically occupies or appropriates property. They have also recognized, however, that Article I, section 18, is not limited to classic takings; it applies as well to actions that are equivalent to a taking. The Oregon Supreme Court held that government takes property when it intentionally floods private property<sup>7</sup>, and when government-authorized overflights deny an owner the use and enjoyment of his or her property, even in the absence of a trespass.<sup>8</sup> Additionally, the court has recognized that regulations that deny an owner the ability to put his or her property to any economically viable use will result in a taking and entitle the owner to compensation.<sup>9</sup>

A court might find that the property owners have been denied all economically viable or productive use of the land, pursuant to the *Lucas* total diminution test. The courts have not established that “total diminution” means an absolute total. Rather, total diminution implies that the landowner has essentially been deprived of all economic value of his land. Here, while the landowners in Multnomah County have not suffered a loss of total diminution of the land, the risk of flooding or other damage due to rising sea levels, as well as other significant adverse economic impacts on the land as a result of increased climate change arguably deprives them of essentially all economic value. The state has systematically waived or exempted almost all of the Measure 37 claims brought against the government since 2004. Multnomah County could show that this deregulation

will result in physical impacts on private property within the county, as well as economic and human harm, leaving them with very little productive use of the land. Arguably, depending on the individual property, Multnomah County could argue total diminution for the landowners whose property is likely to be the most detrimentally affected by climate change. The properties at risk for complete destruction by fire, drought, or excessive pollution would be able to show a loss of all economic use of the property as a result of government deregulation.

A court would likely find that there is partial diminution under the *Penn Central* test. Under the first prong, the private property in Multnomah County is subject to the harmful or beneficial character of the governmental (de)regulation failing to take into account the effects of climate change. By waiving or exempting regulation for most landowners, the government preempts the ability of Multnomah County to regulate greenhouse gas emissions and excessive “big business” development within the county, as well as the county’s power to implement urban growth plans designed to minimize the effects of climate change. Arguably, the character of Measure 37 is providing a benefit to the public because the purpose is to protect the landowners from governmental regulatory takings. However, the waived enforcement of land use regulation and resulting deregulation of urban planning does not benefit the public.

Under the second prong, the private property in Multnomah County declines in value as a result of governmental deregulation. By stripping the county of any power to enforce proactive land use regulations or urban growth plans, the government

ensures that the well-documented effects of climate change will continue to decrease the value of property until there is no economically viable use left. While the court may be reluctant to find Measure 37 to be a taking under the *Lucas* test because it leaves the affected landowners with an economically viable use of the land, albeit somewhat diminished, the court would be much more likely to agree with Multnomah County that there is and will continue to be partial diminution in value.

Under the third prong, Measure 37 interferes with the landowners’ RIBE because the economic viability of the land is diminished when the state modifies, changes, or abrogates the “green” land use regulations in favor of the landowners claiming Measure 37 takings. Preventative zoning and land use regulation is necessary to avoid disproportionate levels of unwanted uses in certain communities. Regulatory takings measures such as Measure 37 reduce the benefits that preventative zoning typically offers in its moderation of highly disparate land uses. Substantially disparate uses are likely to affect land values throughout a neighborhood or county. These interdependent property values are especially noticeable when nonresidential uses, such as industry, exist near residential areas. When state governments waive or exempt Measure 37 claimants, landowners who purchased private property in reliance on certain existing zoning or land use regulations suffer a diminished economic viability of their land.

Additionally, Measure 37 has affected landowners’ ability to participate in planning decisions for residential areas. Before 2004, changes to Multnomah County required public participation or proof that a land change met a minimum

standard, usually consistent with statewide planning goals or urban growth designs. With the enactment of Measure 37, governments can now waive regulations with any public input – a process that Professor Keith Aoki describes as the “private veto power” of the government.<sup>10</sup> This private veto power wielded by the government has a substantially detrimental effect on the economic value of private property; the value of the land decreases as the landowners’ inability to influence neighboring land uses increases.

This claim is novel for two main reasons: first, climate change litigation is still very new and courts are just starting to address takings and tort claims brought to remedy injuries resulting from climate change impacts; second, Measure 37 is relatively new legislation and courts have dealt primarily with claims brought by private landowners seeking remedies granted by Measure 37. The claim is potentially a strong one because Multnomah County has been so successful in adopting climate change mitigation goals. Considering that Multnomah County is the leading urban area in energy-efficient initiatives and transportation reductions, it is reasonable to argue that the governmental response to Measure 37 claims will effectively eradicate many of these sustainability goals. A typical Multnomah County household generates 45,000 pounds of carbon dioxide annually; most, if not all, of the recent land use regulations and urban growth plans take this into account and provide comprehensive goals to reduce total Multnomah emissions by ten percent by 2010. The effects of Measure 37 make these goals unattainable and potentially increase the total emissions as a result of increased commercial, industrial, and private development on land

that is not currently zoned for such development.

One potentially significant weakness of this claim is the newly enacted Measure 49, which now supersedes Measure 37. Measure 49 makes it easier to gain approval for home sites previously allowed on private properties, provides certainty for claimants who gain approval for home sites, ensures that large claims document a loss in value that justifies the number of requested new home sites, preserves farmlands and forests for agriculture and forestry, and protects scarce groundwater supplies.<sup>11</sup> Most significantly, Measure 49 prohibits Measure 37 claims from overriding zoning regulations for commercial or industrial projects.<sup>12</sup> Measure 49 limits the scope of Multnomah County’s suit but does not preclude it entirely. Although the new measure prevents large commercial development expansion in urban areas, it does still allow private property owners to bring takings claims against the state when land use regulations prevent them from building on their property. In this regard, Multnomah County could argue that claims brought under Measure 49—pending claims brought under Measure 37 will now be assessed under Measure 49—that result in the state waiving or exempting the regulations in favor of the claimant landowners constitute takings.

The other main weakness of this claim is that Measure 37 arguably advances a public policy. The Supreme Court has held that as long as the property retains some economically viable use, there is no taking where the regulation advances a public policy. Land use and zoning regulations do result in uneven burdens for some property owners. Farmers, especially, rely directly on the use of their land but face conservation measures or

similar regulations that severely limit its use. However, widespread waiver or exemption of Measure 37 claimants will eventually result in increased climate change effects such as drought or flooding that will decrease the value of the farmlands more so than conservationist land use regulations.

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<sup>1</sup>City of Portland and Multnomah County 2001 Local Action Plan on Global Warming, *available at* <http://www.navigatingourfuture.org/global-warming-forum/city-of-portland-and-multnomah-county-2001-local-action-plan-on-global-wa.html?Itemid=10004>.

<sup>2</sup>ORS 197.352.

<sup>3</sup>ORS 197.352(8).

<sup>4</sup>ORS 197.352.

<sup>5</sup>Jacobs, Hannah, *Searching for Balance in the Aftermath of the 2006 Takings Initiatives*, 116 YALE L.J. 1518, 1521 (2007).

<sup>6</sup>As of May 2007, Oregon state and local governments had received more than 6700 claims requesting \$19.3 billion in compensation; governments have waived nearly all of these claims due to lack of funding. Wiseman, *supra* note 17.

<sup>7</sup>Morrison v. Clackamas County, 18 P.2d 814 (1933).

<sup>8</sup>Thornburg v. Port of Portland, 376 P.2d 100 (1962).

<sup>9</sup>Boise Cascade Corp. v. Board of Forestry, 935 P.2d 411 (1997); *see* Dodd v. Hood River County, 855 P.2d 608 (1993) (phrasing test as whether property retains “some substantial beneficial use”).

<sup>10</sup>Keith Aoki et al., *Trading Spaces: Measure 37, MacPherson v. Department of Administrative Services, and Transferable Development Rights as a Path out of Deadlock*, 20 J. Envtl. L. & Litig. 273, 296 (2005).

<sup>11</sup>2007 Ballot Measure 49 Section by Section Summary, [www.aocweb.org/aoc/Portals/0/Content\\_Managers/Whitman%20Materials%2012-12-07.pdf](http://www.aocweb.org/aoc/Portals/0/Content_Managers/Whitman%20Materials%2012-12-07.pdf). Measure 49 will be codified in ORS 195.

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

# Western Environmental Law Update

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