

Introduction

In the spring of 2008, the town of East Montpelier became concerned about a proposal to capture the water from a productive spring in the town for piping to a proposed bottling plant in Montpelier. In the months before that, reports from Randolph told of intrusive truck traffic from ClearSource (formerly the locally owned Vermont Pure), and reduced flow in a nearby stream. ClearSource is now in bankruptcy and looking for a buyer. This leaves the spring and bottling plant open to purchase by a large multinational company. These developments led the Central Vermont League to study how best groundwater resources might be protected locally.

International Trade in Water

GATS

While international trade in water may sound like an issue far from local concerns, it demonstrates clearly the need for carefully formulated regulations surrounding groundwater withdrawal.

The General Agreement on Trade in Services (GATS) is a relatively new agreement. It entered into force in January 1995 as a result of the Uruguay Round negotiations to provide for the extension of the multilateral trading system to services. With a view to achieving a progressively higher level of liberalization, pursuant to Article XIX of the GATS, WTO Members are committed to entering into further rounds of services negotiations. The first such Round started in January 2000.

All Members of the World Trade Organization are signatories to the GATS and have to assume the resulting obligations. So, regardless of their countries' policy stances, trade officials need to be familiar with this Agreement and its implications for trade and development. These implications may be far more significant than available trade data suggest.

The WTO-administered General Agreement on Trade in Services poses an increasingly serious threat to the sustainable and equitable management of scarce water resources globally. The GATS is the first ever multilateral, legally enforce-able set of rules to cover a wide variety of services, ranging from business related services to water supply and sanitation services.

Discussions on water within the GATS have so far focused on privatizing drinking water supply and opening the market to foreign investors. However, there are many other ways in which GATS can impact water resource use and management, including requests to open market access and investment in other water service sectors such as sanitation and sewage services, or water related services such as irrigation, environmental management and tourism development.

Indirectly GATS rules can make it easier for transnational service providers to have unlimited access to water to provide services related to energy production, agribusiness and manufacturing. Before making any new commitments, therefore, WTO members should first think about how foreign operations will impact their domestic water supplies, in terms of both quantity and quality. To extend the market penetration of transnational corporate service providers, WTO members are committed to entering negotiations on services. The negotiations can be bi- or multilateral. The goal of these rounds is “progressive liberalization in the services area through successive rounds of negotiations” that improve market access and extend national

treatment to foreign services and service suppliers across an increasing range of sectors, including public sector services.

The most important rules of GATS are:

Most Favored Nation, which requires a WTO member government to treat all other WTO members equally.

National Treatment, which means that foreign companies must be given the same treatment as domestic companies.

Market Access, which requires that a country not impose new restrictions on services providers.

Domestic Regulation, which requires that local and national regulations not be “more burdensome than necessary” to the provision of the service.

Compensation to other countries, if a country has revoked a commitment in a particular sector.

Prior to 2000, the provision of water supply and sanitation services, which are publicly provided in most countries, was not included in the GATS schedule of commitments. However, in 2000, the European Community proposed that these services be included in GATS under environmental services. This was not officially agreed to, but the EC followed this up by including water and sanitation services in 72 of their 109 bilateral requests. If granted, these requests would enable the European water multinational companies to not only invest in water supply systems around the world, but to have their investments protected. A strong and concerted public reaction against the inclusion of drinking water in the GATS led the EC to exclude water for human use in its most recent requests on environmental services. However, the February 2006 requests still included sanitation and sewer services which are normally provided with drinking water.

To analyze the impact of opening market access and investments in various service sectors on their national water resources, WTO members should look at specific ways a particular service might be traded. The “mode of supply” with the most impact on water resources is commercial presence (a service is provided within A by a locally-established affiliate, subsidiary or representative office of a foreign-owned and controlled company). GATS provides a framework for foreign direct investment either by establishing or acquiring a subsidiary in the target country.

When a corporation establishes commercial presence they can apply for the right to use the water like any domestic company, and they are granted rights to water, including the right to use it as a raw material, as a carrier of effluents, and are allowed to mine aquifers. Such investors may over-exploit the water resources or use it at the expense of local communities. Under GATS, however, if a country or a local government tries to limit a corporate service provider's access to water to ensure environmental protection, or to ensure access to water for local communities, the affected corporation can demand compensation, citing negative impact on their investment.

(The preceding paragraphs were excerpted from an article by Shiney Varghese for the Institute for Agriculture and Trade Policy, Minneapolis, MN; www.iatp.org)

Privatization of Water

Maude Barlow, author of *Blue Gold, The Fight to stop Corporate Theft of the World's Water* and *Blue Covenant, The Global Water Crisis and the Coming Battle for the Right to Water*, has documented the world's dwindling supplies of fresh water and the trend toward privatization of water supplies.

In an interview with AlterNet (www.alternet.org), Barlow says, “We are massively polluting surface water, so that the water may be there, but we can't use it. And we are also mining groundwater faster than it can be replenished by nature...There are bore wells in the Lake Michigan shore that go as deep into the ground as Chicago skyscrapers go into the ground, and they are sucking groundwater that should be feeding the lake so hard that they are pulling up lake water now...” She goes on to tell us that no water was being exchanged on the Stock Exchange when *Blue Gold* came out (2002). At the time of her interview (Feb., 2008) there were over a dozen indexes for trading water. She argues that “there is a race going on over who's going to control water, whether it will be seen as a public commons, a public trust...or whether it will be controlled by private corporations...”

Barlow has described the ways in which water can be removed from watersheds – by tanker, pipeline, and through virtual water trade, where water is exported in the form of products or agriculture.

State Law

The following information is based on interviews with Vermont Natural Resources Counsel Jon Groveman and State Geologist Larry Becker.

Groundwater Mapping in Vermont

There has been no statewide mapping to date, due to lack of state funding and political will. There is some mapping at the town level. Towns also determine the uses for groundwater and make decisions about large withdrawals.

In 2007, the state appropriated \$350,000 to define high priority areas for mapping. “High priority” was defined as growth areas, where demand is the highest, targeting the largest industries, farms and withdrawals. The appropriation was to be used for collecting data on drilled wells. All drilled wells must be reported, and the report must include information about yield, soil, bedrock and location of the well. The state money was to be used to put that information into a database. People were hired to input the data, but Jon Groveman questions how accurate the data really is.

In addition to the statewide mapping, Vermont is using federal grant money from the US Geological Survey (a state-federal match with the state supplying “time” rather than additional funds) to undertake town planning-level mapping. The focus of this mapping is “areas where you could potentially find a higher yield.” A drill and pump test would be required to find out. This part of the process is usually cost-prohibitive. However, a high yield aquifer would make costly drilling worthwhile.

The mapping of one to two towns can be completed each funding cycle. The maps include geologic data, as well as groundwater resource and recharge data. The towns then decide what to do with this information.

Mapping at the planning level of effort is complete for Arlington, Manchester, Wallingford, Brandon, Woodstock, Williston and Dorset. The most complete set of planning tools developed to date is Woodstock’s. Rutland is underway. East Montpelier is currently considered the #3 priority for funding in the next fiscal cycle. However, usually only one or two mapping projects are funded per cycle.

The biggest barriers to mapping are the need for funding for geophysical equipment and expensive drilling. In addition, Vermont's biggest city, Burlington, sits on surface water, not groundwater. Groundwater mapping is more of a priority in New Hampshire, because the biggest city of the state sits on groundwater.

There are two types of aquifers in Vermont:

- Water-fractured bedrock: Most domestic wells tap into this type. This type can also be used by municipalities. You can find large amounts of groundwater via connected fractures, but these are hard to find.
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- Sand & gravel (interstitial, meaning in between the grains of sand and gravel): These are higher yield (e.g., 800 gallons per minute in Manchester) that can be used for municipal wells. This type does not pump all the time. It is pumped for 6-8 hours per day and stored.

Please note: Spring withdrawals and bulk water withdrawals do not require drilled wells. Those would not be represented in the mapping. However, they are covered under S.304 (now Act 199), the ground-water withdrawal regulation bill passed in 2008.

Jon Groveman believes that mapping is useful. Knowing how much water there is, where it is and what is being withdrawn helps towns plan for growth. Right now towns are operating with so many unanswered questions.

Former U.S. Sen. Jim Jeffords pursued funding for a state-federal match for state-wide mapping, but there is no congressional champion for this issue at this time. The state cannot fund this project without federal dollars.

Groundwater Withdrawal Regulations in New England

Every New England state has a program to deal with groundwater withdrawal. All of the states define "large withdrawal" slightly differently, and all have reporting requirements and regulations for large withdrawals. Each state defines "public trust" slightly differently, as well. However, all of the states' permitting processes are basically the same. Here are some of the states' unique program features:

Connecticut and **Massachusetts** have the oldest programs.

New Hampshire, Vermont and **Rhode Island** have newer programs that were established with water bottling in mind.

Connecticut's large withdrawals are primarily for drinking water, golf courses and agriculture.

Massachusetts' large withdrawals are primarily for agriculture, specifically cranberry bogs.

New Hampshire and **Vermont** treat groundwater as a public trust. In Vermont, that means that groundwater is a public resource, whereby you must have a license to use it. The license can be revoked if it's not being used for the public good, and citizens can go to court to sue for adverse effects if large withdrawals are contrary to the public good.

Massachusetts and **Connecticut** treat all natural resources as a public trust.

In **Rhode Island**, groundwater is not a public trust.

In **Maine**, groundwater is permitted and regulated as surface water under the federal Clean Water Act. The longstanding presence of Poland Springs makes Maine unique. However, Maine is now considering its own groundwater control program, and law-makers are debating the “public trust” issue, as well as taxation on withdrawal (similar to oil severance taxes in Alaska) to generate state revenues.

Surface water was declared a public trust at the federal level.

Here are the thresholds that trigger permitting for the states:

Vermont – 57,600 gallons per day for new or in-creased groundwater withdrawal for commercial or industrial uses, beginning July 1, 2010 (with exemptions for fire suppression, domestic/residential use, farming, dairy processing, public water systems and non-extractive geothermal heat pumps). Vermont set this threshold as a starting point, with the knowledge that it can be revised, if necessary. Beginning September 1, 2009, a person who withdraws more than 20,000 gallons per day will have to report that to the Agency of Natural Resources, with exceptions for fire suppression or instances where reporting is required already under other statutes or regulations.

New Hampshire – 50,000 gallons per day.

Connecticut – 100,000 gallons per day.

Massachusetts – 250,000 gallon per day.

Rhode Island – 35,000 gallons per day.

S.304

[Vermont S.304](#), a bill to establish a groundwater withdrawal permit program, was signed by Gov. Douglas on June 9, 2008, and became Act No. 199, effective immediately. The law subjects large withdrawals to the public notice, hearing and permitting process. Unlike other permitting processes (such as wastewater discharges), large withdrawals would trigger a preliminary community informational hearing.

The question remains: Will state law preempt town/local laws, especially in the case of East Montpelier, which has set a three-year moratorium on large withdrawals? Towns are not really capable of regulating large withdrawals (it’s too technical a process), but they could try to use zoning and revision of their town plan to make something happen.

The rules, which must be established pursuant to S.304, will set down criteria and conditions to be met if a permit is granted, and the public will be allowed to appeal a permitting decision. The rules will also address the length of permits, the process of renewing permits, and revocation or alteration of permits, if circumstances change.

Draft rules are expected to be released soon. The formal rule-making process was to begin by February 2009, since the final rules must be in place by January 2010, and it takes 10 months to complete the rule-making process.

The parties that will likely weigh-in on the rules are the same “cast of characters” that were heavily involved when S.304 was making its way through the legislative process. They are:

Vermont Natural Resources Council (VNRC);
Andy MacLean; of [MacLean, Meehan & Rice](#), representing the [Northeast Bottled Water Assoc.](#)
East Montpelier activists;
Nestle;
Coca-Cola;
Pepsi;
European bottlers.

A sticky part of the rule development will be defining and setting a formula for “safe yield.” Other large policy issues are likely to resurface, such as water rights/water justice issues (e.g., treating water as a commodity and the concept of water ownership) and property rights issues vs. public trust).

Current Interest in VT Groundwater

It’s been hard to get information about the status of Vermont Pure/ClearSource (Randolph), but it was sold at auction in September, 2008, according to an article in the *Randolph Herald*. Jon Groveman said that it will be sold to a big company interested in expansion of the Randolph facility. In the meantime, Rutland Town is seeking a bottler for one of its groundwater sources, according to the Rutland Herald. According to Town Administrator Joe Zingale, the Town is in talks with two potential bottlers. The revenues would be split between the town and the landowner, Mark Foley, Sr. The town has also been approached by a hotel in Las Vegas, but the town is more interested in the prospect of bottling, and has even located a potential bottling facility site 100 feet from the groundwater source.

We also need to consider the potential for withdrawals from across our borders. For example, a large NH bottler is currently drawing its water solely from Stockbridge, VT.

State vs. Federal Law

There is no federal law that governs groundwater. The Clean Water Act governs surface water only. Groveman would like to see a federal law on groundwater, and Congressman Dennis Kucinich is trying to make that case in Congress. However, this is not likely to happen anytime soon.

Jon Groveman believes that international trade compacts, such as [NAFTA](#), [CAFTA](#) and other world trade organizations, are a big concern. That is partly why the passage of S.304 was so important. With no laws on the books, international companies can invest in a project without a permit.

Local Action

At the local level, a range of responses to the commercial use of water have been demonstrated.

Barnstead, NH

Barnstead, NH, passed an ordinance forbidding any corporate water withdrawal in the Town. They based their new law on state and federal constitutional grounds that government is institute for the common benefit and

consent of the people, and the UN Covenant on Economic, Social and Cultural Rights, which states that “the human right to drinking water is fundamental to life and health,” and that “Sufficient and safe drinking water is a precondition to the realization of human rights.”

Shapleigh, ME

In September, 2008, Shapleigh, ME voted for a six-month moratorium on water extraction to halt Nestle's water mining activities until the town could enact a comprehensive water protection ordinance regulating water testing and large-scale pumping. They have since drafted a quite restrictive ordinance, still to be adopted by Town Meeting, which regulates “Large-Scale Waer Extraction Activities, and defines “Large-Scale” as 5,000 or more gallons/day. There are exemptions for agricultural activities, domestic and drinking water, use by public facilities, use in support of public safety or fire suppression, and existing uses within the town, as of the date of adoption of the ordinance.

East Montpelier, VT

East Montpelier has added language to their land use regulations to address water withdrawal, in accord with Act 199. Community members are asking the town Planning Commission to include such language in the Town Plan, which is important with regard to Act 250. There are ten Act 250 criteria, one of which is "Is in conformance with any local or regional plan ... " If a project is not in conformance with the Town Plan, it is unlikely to get an Act 250 permit.

Rutland Town, VT

At the other end of the spectrum, Rutland Town is negotiating with a couple of entities regarding starting a water bottling company using water from a local privately-owned well. Town Administrator Joe Zingale tells us that according to their hydrology experts, the well could produce up to half a million gallons/day (160 million gal/year) for “as far as the eye can see.” Zingale says that town monitoring in 1994 showed that withdrawal from that well did not have any impact on wells that were within a few hundred feet of the source. Rutland Town does not have any local water withdrawal regulations.

Bottled Water

This study was prompted by a local proposal to withdraw spring water for bottling. After a decade of enormous growth, opposition to bottled water is growing.

Yee Huang, of the Center for Progressive Reform (CPR), writes of legal challenges to the bottled water industry (posted on the AlterNet website).

Huang writes that new regulations can respond to the wastefulness of bottled water, but he cites CPR member Christine Klein, who proposes that elements of state water law can help “ensure that the allocation of water rights for bottling purposes keeps pace with evolving cultural norms that lead away from the bottle and back to the tap.” Klein tells us that water laws have been based on reasonable use, beneficial use, preferred uses and public interest.

In the east, states permit water withdrawals based on reasonable use, meaning the use is evaluated based on purpose, the amount of use and the place of use. Klein tells us of a recent study by the Pacific Institute,

published in the journal Environmental Research Letters, which found that it takes up to 2000 times more energy to produce bottled water per liter than tap water. Therefore, the energy required to produce bottled water may make the use of water for bottling unreasonable under state law. The question could also be, is bottling water beneficial if it proves to be an inefficient method of accomplishing its intended purpose, quenching thirst.

With regard to preferred use, Huang's article explains, "During times of shortage or drought, many states satisfy preferred uses such as domestic and household consumption before allocating water to so-called artificial uses. As one court declared, artificial uses are those that 'merely increase one's comfort and prosperity and do not rank as essential to [one's] existence.' In Michigan, an appeals court determined that bottled water is an artificial use that ranks behind even other artificial uses."

And lastly, Huang tells us that, "In Florida, the public interest test considers impacts of the use on the natural environment and harm to existing uses, both human and environmental. Bottled water operations can cause significant localized reductions in stream flows and aquifer levels, leading to erosion of riverbanks or saltwater intrusion of aquifers. The energy use and waste associated with bottled water constitute environmental harms that may be contrary to an expanded interpretation of the public interest."

Consensus

Consensus Question

On March 16, League members met to discuss the information provided, much of which appears in this report. They then discussed the issues presented, focussing on the question:

What can/should local communities do to keep water supplies sustainable? Consider: reasonable use; beneficial use; preferred use; and public interest,

and arrived at the following advocacy position:

LWV of Central Vermont Position on Groundwater Protection

The League of Women Voters of Central Vermont (LWVCEN) adopts the following position on the protection of groundwater resources at the local level. this position provides local guidance for applying the Natural Resources positions of the LWVUS.

The LWVCEN supports:

Municipalities developing their own local groundwater withdrawal regulations, not less restrictive than the state law.

Encouraging public participation through well-publicized official informational meetings early in the permitting process, as well as informal community meetings.

Local officials taking the following into consideration when formulating groundwater withdrawal regulations:

Reasonable or Beneficial Use, meaning the use is evaluated based on purpose, the amount of use and the place of use.

A recent study by the Pacific Institute published in the journal Environmental Research Letters, which found that it takes up to 2000 times more energy per liter to produce bottled water than tap water. Therefore, the energy required to produce bottled water may make the use of water for bottling unreasonable under state law. The question could also be, is bottling water beneficial if it proves to be an inefficient method of accomplishing its intended purpose, quenching thirst

Preferred Use, meaning that during times of shortage or drought, domestic and household consumption would take precedence over so-called artificial uses.

In Michigan, an appeals court determined that bottled water is an artificial use that ranks behind even other artificial uses.

Public Interest

The public interest criterion might consider the impacts of groundwater withdrawal on the natural environment and harm to existing uses, both human and environmental. In the case of bottling water, wider ramifications could be considered, such as the environmental impact of long-distance transport of bottled water, the solid waste represented by nonrecycled plastic bottles, etc.

Glossary

GATS: The General Agreement on Trade in Services. It is the first multilateral trade agreement to cover trade in services. Its creation was one of the major achievements of the Uruguay Round of trade negotiations, from 1986 to 1993. This was almost a half-century after the entry into force of the General Agreement on Tariffs and Trade (GATT) of 1947, the GATS' counterpart in merchandise trade.

Groundwater: Water below the land surface, including springs (as defined in S.304/Act199).

Groundwater Recharge: The process by which groundwater is replenished. A recharge area is where water from precipitation is transmitted downward to an aquifer. Most areas, unless composed of solid rock or covered by development, allow a certain percentage of total precipitation to reach the water table. However, in some areas more precipitation will infiltrate than in others. Areas which transmit the most precipitation are often referred to as "high" or "critical" recharge areas.

Public Trust: A public resource for the benefit of all Vermonters. S304/Act 199 declared it the policy of the state that "the groundwater resources of the state are held in trust for the public...for the benefit of citizens who hold and share rights in such waters."

Watershed: The area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater.

Zone of Influence: The area surrounding a pumping well within which there are or will be physical changes in the water table due to groundwater relocation, extraction or withdrawal or the interruption of groundwater recharge conditions.

Sources

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