

Approved
MEETING MINUTES
NEW HAMPSHIRE WATER SUSTAINABILITY COMMISSION
January 17, 2012
N.H. Fish & Game Department

Commissioners in attendance:

John Gilbert, Chair
Martha Lyman, Vice Chair
Dave Allen
Virginia Battles-Raffa
Kris Blomback
Thomas Burack
Denise Hart
Mike Licata
Amy Manzelli
Glenn Normandeau
Cliff Sinnott
Chuck Souther
Alison Watts

Commissioners not in attendance:

Robert Beaurivage

Public in attendance:

George Dana Bisbee, Devine Millimet
Ira Leighton, USEPA
Carl DeLeoi, USEPA
Danny Rodriguez, USEPA
David Bernier; No. Conway Water, SB 60,
GSRWA
John Boisvert, Pennichuck Water
Alice Chamberlin, attorney
Kenny Daher, UNH TIDES
Ted Diers, NHDES
Bill Hounsell, CDM Smith
Chris Kessler, Pelletieri Associates
Bob Morency, RCAP
Gil Rogers, consultant
Jim Ryan, Fish & Game Commission
Sarah Pillsbury, NHDES
Paul Susca, NHDES
Jeremy Tomkiewicz, UNH

Chairman John Gilbert called the meeting to order at 2:12 PM

I. December 13th Meeting Minutes

With reference to Mark Green's presentation, there was some discussion as to why Hubbard Brook Experimental Forest does not monitor the effects of common forestry practices in addition to relatively extreme practices.

The minutes were accepted without changes.

II. Updates

John Gilbert distributed a flier provided by Bob Morency regarding a webinar focusing on a Memorandum of Agreement between USDA and USEPA to promote the sustainability of rural water and wastewater systems. The webinar will be held on January 23, 2012. Contact: Anita.OBrien@wdc.usda.gov

Funding: Martha Lyman reported that N.H. Charitable Foundation has awarded the Commission a \$15,000 grant; much or all of which will be allocated to N.H. Listens. She expects to hear from the Bean Foundation in February; that grant would provide the rest of what we need for N.H.

Listens. N.H. Rivers Council will be the fiscal sponsor for the grants. Martha will also submit a funding request to the Davis Foundation, with a decision expected in May or June.

NH Listens: Denise Hart reported that she met with Bruce Mallory of NH Listens. An advisory group will be formed to develop the framing question(s) for the public engagement sessions in April-May. There will be five or six sessions, assuming that complete funding is obtained. The Commission gave its approval for Denise to proceed with plans to work with NH Listens.

Talking points: Denise reminded commissioners that their water stories are needed in order to help develop the talking points requested by the Governor's office. The stories should exemplify the value of water or demonstrate the need for sustainable management, or both.

Leadership New Hampshire: Tom Burack, Dana Bisbee, Denise Hart, and John Gilbert will be among the speakers at the Leadership NH workshop on Environment, Sustainability, and Tourism on January 19th.

Legislative Breakfast: Amy Manzelli reported that, after months of planning, the Governor's office has reported that he will not be able to speak at the NH Water Pollution Control Association's Legislative Breakfast on February 15th. Consequently, she is also concerned about whether the Governor will participate in the public engagement sessions. John Gilbert will follow up with the Governor's office.

Implementation Committee: Virginia Battles-Raffa reported that the group met and worked on the matrix; she will send out a revised version. The goal is to identify five or six categories of issues for the Commission to address, along with major issues in each category. John Gilbert noted that the Commission will devote the February meeting to the major categories, areas of focus, and key actions. Virginia noted that the Implementation Committee will meet again on January 24th to narrow down the number of categories; she asked members of the Implementation Committee to look at the list and respond to her if they are not able to attend the January 24th meeting.

III. N.H. Water Rights and Access Law – George Dana Bisbee

Dana Bisbee is the head of the Environmental Practice Group at Devine Millimet, served as Assistant Commissioner of the New Hampshire Department of Environmental Services (DES) for seven years, including 18 months as Acting Commissioner. Before that, he was with the New Hampshire Attorney General's office for 14 years, including five years as the state's Deputy Attorney General and eight years in the Environmental Protection Bureau, including two years as the Bureau Chief. The following is a summary of his talk; there were no handouts or slides.

Mr. Bisbee began his talk with an overview: there is a hierarchy of government authorities juxtaposed with water rights: federal, state, county, municipal, and private. The types of laws that affect water include federal and state constitutions, federal and state statutes, and local ordinances.

Private water rights come from common law, going back to the British monarchy. Riparian (land along streams and rivers) and littoral (land along ponds and tidal waters)

rights are associated with ownership of land adjacent to surface waters. These give the owner the right to a wide range of beneficial uses (which may change over time) and the right to prevent other riparian/littoral owners from using the waters in a way that interferes with one's own right to reasonable use. What is considered reasonable is adjudicated by the courts.

Private rights with respect to groundwater are a little different; they are not the same but are comparable to riparian/littoral rights. The concepts of reasonable use and not being able to interfere with another person's right to reasonable use apply.

The government can not take the above rights without just compensation.

Private water rights in the eastern states are generally based on riparian rights, while water rights in western states are generally based on prior appropriation, i.e., whoever began using the water first has primacy on claims.

Municipalities have interests in water, as well. They can adopt ordinances to protect water quality, such as aquifer protection and hazardous materials ordinances. They can purchase rights to protect water. They offer water supply and wastewater services. Note that Article 28A of the N.H. Constitution prevents the State from imposing new requirements on municipalities that the State does not pay for.

State regulatory and other programs related to water are numerous; see Appendix B to the N.H. Water Resources Primer, for example. These programs have been adopted under the State's "police power," which is a reference to the State's authority under Article 5 of the N.H. Constitution to adopt "all manner of wholesome and reasonable orders, laws, statutes, ordinances, directions, and instructions." Most of what the State does to protect water is under its police power.

Under the public trust doctrine (common law rights that came to the State from the British monarchy), the State holds certain rights and responsibilities for the benefit of the public. The public trust doctrine is a two-edged sword.

State law pre-empts local law in some areas; the State can reserve some areas of law where municipalities cannot exercise authority. For example, RSA 485-C:20 in the Groundwater Protection Act, pre-empts municipalities from regulating groundwater withdrawals. Similarly, municipalities can not regulate certain aspects of landfill siting.

Pre-emption is an important concept. The U.S. Constitution's "Supremacy Clause" declares federal law as the supreme law of the land. The Federal government can delegate its authority to states in many areas, such as the permitting of pollutant discharges under the Clean Water Act; however, this is an area where New Hampshire has never requested delegation because of the cost of running the program. In some areas (e.g. wetlands and point discharges of pollutants), both a state permit and a federal permit are required.

Hypothetical example: UNH needs a large expansion of the Durham-UNH public water system, and wants to increase its withdrawals from the Lamprey River. What prevents

them from sucking the river dry? Regulations under the State's police power protect water quality. (The State Attorney General's Office might also invoke the public trust doctrine, but this probably wouldn't be necessary in light of the ability of the regulations to prevent unreasonable impact.) The in-stream flow rules (police power) that apply to the Lamprey River in the State's pilot in-stream flow program to establish and protect minimum flows would also come into play.

A discussion of the in-stream flow program ensued. A question came up about a hierarchy of water uses. The Groundwater Commission looked into this extensively; their work is summarized in Attachment D to their final report, which can be viewed at http://nhgroundwater.com/yahoo_site_admin/assets/docs/Final_Report.30491045.pdf. The point was made that protecting stream flows can conflict with protecting lake levels. Mr. Bisbee discussed the complexity of how in-stream flows might be protected.

New Hampshire's program for regulating large groundwater withdrawals (under police power) is very elaborate and well-developed and probably one of the best in the country. In order to obtain a permit, a great deal of study is required to show that unacceptable impacts will be avoided, and to detect and mitigate impacts. DES has authority to require curtailment of withdrawals and require mitigation, if impact occurs.

Martha Lyman posed the question: Where are the gaps, inadequacies, and weaknesses in our laws that we need to address?

In partial answer to the question, Mr. Bisbee moved to another example: in addition to allocating withdrawals, we also need to allocate pollutant loads, such as in the case of Great Bay. At issue is whether the discharge limits need to be as low as EPA has set them, and how best should money be allocated to achieve the needed pollutant reductions? In other words, are such strict effluent limits needed and are they the most efficient way to achieve pollutant reductions, or would it be better to have a watershed-wide permitting or pollutant trading program?

IV. Water Rights and Laws – Ira Leighton, USEPA Region I – New England

Ira Leighton has been the Deputy Regional Administrator of EPA New England since 2000. With over 30 years of experience in the environmental field, he has served in numerous technical and management positions at EPA after starting his career at the state of Massachusetts, Department of Environmental Protection (MassDEP). Prior to becoming the DRA, Mr. Leighton directed EPA New England's Office of Environmental Stewardship, which houses the region's enforcement, compliance assistance and pollution prevention programs, and has managed several key positions in the office of Site Remediation and Restoration. The outline of the slides from Mr. Leighton's talk is attached.

When speaking of the infrastructure aging/funding issue, every state is grappling with this issue. Mr. Leighton recommends looking at the recent report of the Massachusetts Water Infrastructure Finance Commission.

NHDES has recently hired an asset management person to help water systems to deal with this issue. The cost of investing in infrastructure is less than the cost of dealing with catastrophic failures.

Mr. Leighton believes that the environment-economy connection (the fact that they are mutually reinforcing rather than in conflict) is stronger in New England than elsewhere.

The capacity to deal with interstate issues is also strong in New England due to organizations such as New England Interstate Water Pollution Control Commission; he discussed the example of Rhode Island's Narragansett Bay, whose watershed is mostly in Massachusetts.

Mr. Leighton touched on the fact that EPA Region I's Research and Development work is shifting from science to applications and solutions; he suggested thinking about where there might be possibilities to tap into R&D to solve environmental problems.

Other potential opportunities he suggested considering:

Leveraging public-private investment. He cited the example of the 2010 flooding of water supply and wastewater infrastructure in Rhode Island, which presented the opportunity to rebuild water facilities such that they became much more energy efficient. He also suggested thinking about leveraging private investment to make bond interest rates more attractive to investors.

Connecting water resources challenges to communities by building a "future generation" way of thinking. For example, start early in the education system by offering drinking water operator curricula in technical high schools and piloting volunteer programs for students in the summer.

Transforming environmental programs – could mean investing in improving the running of state programs such as DES is doing with LEAN to improve transparency in regulatory programs while at the same time improving the state's economic competitiveness.

Influencing national strategies and rulemaking, such as by advocating performance standards for stormwater permits, integrating municipal stormwater and wastewater planning, and addressing extreme weather events.

Leveraging SRF money: Private investors are very interested in investing in bonds for municipal infrastructure. Many states use their SRF to leverage additional loan dollars and N.H. may want to consider such practices

Leveraging requirements for federal facilities, such as the requirement for certain federal projects to use LEED/green infrastructure.

Leveraging other agencies' money – for example, directing HUD money to redeveloping brownfield sites.

Taking a long-term view, the states of Connecticut and Massachusetts, at the urging of business, industry, and municipal interests, are issuing bonds to invest in infrastructure.

Discussion

Great Bay came up as an example of the challenge of devising the right mix of legal authorities and revenue-generating strategies to deal with all aspects of a problem, as did the use of models to explore the effects of various management strategies on various values/issues (water quality, recreation) in estuaries such as in Narragansett Bay.

V. Public Comments

Bill Hounsell asked where the Southeast Watershed Alliance could look for federal money to move ahead with planning. Ira Leighton responded that the trick is to not wait for money to fall from the sky; instead, maintain momentum until opportunities arise.

Meeting adjourned at 5:00 PM.

The next Commission meeting is scheduled for Tuesday, February 14, 2012 from 2:00 p.m. to 5:00 p.m. at NHHEAF, 4 Barrell Court, Concord, NH.

Appendix A -Ira Leighton, USEPA Region 1- Presentation Outline

1. Introduction:

I want to thank John, Dana and Tom for the opportunity to participate in today's discussion. The Governor has given the Commission an important charge, namely to identify strategies and management measures for ensuring that the quality and quantity of NH's water resources in 25 years are as good or better than they are today.

I hope to offer a few thoughts and observations on kinds of strategies and approaches that are under development at the national and regional level to shape the path forward in responding to the challenges highlighted in NH's Water Resources Primer. Specifically, the challenge of dealing with land development pressures, increasingly frequent extreme weather events, addressing infrastructure that is need of upgrade or replacement, and the information needs to make effective management decisions.

2. The New England Water Resource Challenge:

- a. Landscape Change and Increased Demand for Water Related to Economic and Population Growth
- b. Between 1990-2004, New Hampshire grew by 17.2 percent, which is twice the rate of New England. It is also projected that between 2005 and 2030 there will be 260,000 new residents in New Hampshire most of whom will live in southern New Hampshire.
- c. Increased Extreme Weather
 - i. New England is a coastal region, and it is a relatively wet region in terms of precipitation: of the 14.43 million residents in New England, 7.65 million of those (more than 50%) live in the coastal counties of our states. We also receive about 44 inches of precipitation each year. We have to pay very close attention to water: both water quality and water quantity, including when there is too much water such as the flooding that recently occurred in Vermont and Connecticut. In the 40 years that EPA has been operating, we have not seen as much devastation as we have in recent years, all due to extreme weather events. That is why water resource management, including drinking water protection, has been and will be a priority of our efforts at EPA New England.
 - ii. Projections for sea level rise are weighing heavily on our minds, particularly in light of a recent report from the Arctic Mapping and Assessment Program, which now predicts a rise of 3-5.3 feet above the 1990 level by 2100, with Arctic ice melting making a significant contribution.
 - iii. We have seen possible impacts from increasingly severe weather events. Intense storms have become more frequent, causing flooding and water quality problems. Over the past 60 years, large storms have increased faster in New England than the rest of the country and this trend is expected to continue. In fact New England has seen a 67% increase in extreme precipitation. Rhode Island tops the national list, with an 88% increase in such events, and New Hampshire is tied for a close second with Massachusetts at an 83% increase. With a growing urban population,

a large coastal population, it is tremendously important for New Englanders to prepare and adapt for a changing environment.

- d. Aging and Inadequate Water Infrastructure
 - i. Aging infrastructure across the country is in need of more intensive asset management attention and intensive repair and replacement efforts and this work doesn't account for the change in weather pattern concerns I just discussed. Planning and timing for investment is critical. The cost of replacement is always more than the cost of repair (the tradeoff of preventative maintenance vs. replacement at failure). DES has just hired someone to do asset management in DW. How can you help municipalities find the impetus to do it? Small-sized and mid-sized success stories are important Sommersworth, NH comes to mind. Beta testing, using interns, Hundreds are doing it.
 - ii. Mass. has created a financing committee that has emphasized asset management and sustainable user rates as a point of emphasis.

3. Framing the Approach:

Before I go into the details of examples of the strategies and approaches being considered I would like to offer my take on what success will look like for all of us. Around the country and in New England we hear a debate playing out between having a clean environment—clean air and water and a prospering economy.

In my opinion, New England is in a different place than many other parts of the country in how it is addressing this issue. Tom Burack as the president of ECOS is in a unique position to observe how this debate is playing out.

What makes New England different?

a. Capacity to deal with interstate issues:

New England has tight geography and strong interstate relationships. We have a history of looking at environmental and economic issues in a more holistic manner. We have the capacity to move interstate issues from a place where the focus on who should take the first step to a place where we can identify the need for incremental progress on everyone's part. For example, the issue of nitrogen in Narragansett Bay has been one where EPA and the states have invested significant time and effort to develop technical and scientific tools that will help us better understand the costs and benefits of different strategies. EPA's Research Office is committed to shifting their efforts to applied science and tools that help frame sustainable strategies and actions. New England is well positioned to take advantage of these opportunities.

b. Leveraging private and public investment:

We think New England has a great track record in doing this. Leveraging NOAA's investments in the NH stormwater center is one obvious example. But there are others, for example, the efforts to leverage DOE and FEMA actions in responding to flood risks and in responses to damage to water and waste water infrastructure.

In March of 2010, 5-10 inches of heavy rainfall lead to flooding over a 12ft berm and completely inundating and shutting down an 8 mgd WWTP in Warwick, RI. The region provided resources to get the plant partially operating within a few days, but the longer view is more important here. Energy upgrades were being made simultaneously that led to a 30% energy savings or \$167,000/ year.

c. Connecting Communities and People:

Our waste cleanup programs are cleaning up and reusing waste sites just like other parts of the country, but New England has truly taken advantage of the resources available to assess and evaluate contaminated Brownfields. New England is one of ten regions in the country and historically we've been able to land better than 15% of the national assessment, cleanup and training dollars. This and other small amounts of are helping us leverage resources where clean water is essential to economic and social prosperity.

For example:

- i. Along the Connecticut River from Hartford to Springfield we are partnering with HUD and DOT in a consortium 38 organizations toward sustainable community development and create more livable communities for the corridor's 1.6 million residents.
- ii. We developed a Drinking Water Operator's Curriculum for Technical High School and Community College teachers.
- iii. Initiated a pilot summer student volunteer program with Boston SummerWorks Program to introduce youth to green jobs at EPA, including the Drinking Water Program.
- iv. We've sponsored Water Boot Camps in New Haven, CT and Fitchburg that have generated real excitement among youth to pursue future water related careers.
- v. We're training individuals in green landscaping design techniques to help manage stormwater run-off.

d. Transforming Environmental Programs:

New England States are showing national leadership in responding to the difficult budget challenges at the state and local level. They are demonstrating how efficiency, effectiveness, transparency and competitiveness are connected. CT and MA have worked with their Economic Development Agencies to recognize that difficult times can be the "moments of important opportunity." They have joined forces with business and industry in these times of difficult budgets to develop capital investments in IT infrastructure, E-reporting, use of Lean, advancing the use of remote sensing to develop a transformation that will advance efforts to efficiently implement their programs and to provide certainty and efficiency for the regulated community.

4. National and regional regulatory strategies

- a. The Agency has begun a national rulemaking that is considering a number of regulatory changes to its existing storm water program. The original goal was to promulgate regulations by the end of 2012, but that schedule has slipped.
- b. Among the proposals being considered is the development of performance standards for development and redevelopment to protect water bodies from post construction discharges from developed sites.
- c. Rule may establish a volume retention standard; permitting authorities may impose additional requirements on dischargers, if needed, to meet wasteload allocations in a TMDL. The rule would be implemented through the current MS4 permit program that applies to municipal storm water systems.
- d. Discharges from newly developed sites would require retention of a certain percentile of a storm; would recognize site constraints and may include off-site mitigation, payment in lieu, or treat and release provisions.
 - i. Discharges for redeveloped sites would: recognize site constraints; encourage redevelopment to revitalize urban communities; and would provide incentives for smart growth and Brownfield development.
 - ii. The Agency is also developing Construction and Development effluent guidelines that would apply through the national Construction General Permit.
 - iii. On Oct 27th the Agency issued a joint memo from the enforcement office and water program on achieving water quality through integrated municipal stormwater and wastewater planning. The memo highlights the importance of maximizing infrastructure improvement benefits by the appropriate sequencing of work. EPA is developing a national framework to advance this idea. The Commission could be helpful in framing the plan for NH. The guidance creates a strong case for employing green infrastructure as part of the solution to water resource challenges. Benefits include: opportunities for greenways, multi use recreation, improving property values, saving energy and creating jobs. It is the first time the Agency has specifically framed a broader set of values as part of our regulatory agenda.

5. Strategies and approaches for addressing changes in extreme weather

- a. In 2009, President Obama convened a Climate Adaptation Task Force. From that, the Council on Environmental Quality has tasked all Federal Agencies with writing Climate Adaptation Plans that are due this coming summer. These plans will integrate Climate Adaptation activities into our every day work. In Fact, EPA will be considering Climate Adaptation projects in all of our grant reviews.
- b. In New England we are working on an adaptation plan that will address issues like flooding, sea level rise and drought. As we look at these things we are also working them into other big sustainable initiatives happening in the region.

- c. For example, we are working on initiatives to soften our watersheds and prepare our coastal ecosystems. Our ecosystems need to be able to hold excess amounts of water. We will do this by using green infrastructure to restore the natural water cycle, and reduce flooding while replenishing groundwater supplies at the same time.
- d. These practices can also address local water quality problems such as stormwater runoff.
- e. We are working with municipalities to update and prepare their water treatment and wastewater treatment facilities for a shifting climate. This means reducing their energy use. Water utilities account for approximately 3-4 percent of electric energy use in the US. They add about 45 million tons of greenhouse gas emissions annually and their energy costs are estimated at about \$4 billion annually. When I talked earlier about thinking sustainably—you can see that upgrading water treatment systems with greener infrastructure to reduce energy costs and lower emissions is a positive investment. It is also one that can be used to adapt to a shifting climate and prepare for increasing storms.
- f. At the national level, EPA has worked to develop the Climate Ready Water Utilities Initiative. This will provide needed tools and resources for the water sector to adapt to climate change. It also encourages the consideration of integrated water resources management planning. This sort of planning includes encouraging redundancy in supplies and incorporating adaptation planning in future facility designs.
- g. Some of the important national tools that you may be interested in include software packages which evaluate a water system's vulnerability to weather impacts and compute economic impacts and recovery costs based on a number of threats. Speaking of funding, EPA is working on rolling out a new national website tool which will spell out all federal funding opportunities available for water utilities that become damaged by various disasters.
- h. As you may know, for more than ten years, EPA New England has been actively involved with the New England states, the water associations and the water sector to prepare and respond to water emergencies. We are proud of the work that has already been accomplished in New England to plan for and mitigate impacts from water security breaches; pandemics; and natural disasters.
- i. Adaptation is just one more chapter in an all-hazards-approach. EPA New England will continue to make water emergency response a high priority, including new tools such as a Water Sampling Guide and a Flood Mitigation Fact Sheet.
- j. One effort that EPA will continue to support is working with the NE states to identify the drinking water and wastewater assets and communities at risk of flooding. Plotting those assets on a GIS map along with information on the status

of available generators provides an important tool for prioritizing planning and response work. While these maps do not provide locations of vulnerable private wells, they do identify communities at risk and in need of planning assistance. We hope to complete these GIS maps in at least 4 states by the end of the fiscal year.

6. Leveraging requirements for Federal Agencies

- a. The Energy Independence and Security Act of 2007 established strict storm water runoff requirements for federal development and redevelopment projects. It requires that federal agencies develop and redevelop facilities (with a footprint that exceeds 5,000 square feet) in a manner that maintains or restores the pre-development site hydrology to the maximum extent technically feasible.
- b. Under an Executive Order from President Obama, EPA developed a technical guidance document to assist federal agencies in implementing these requirements. The technical assistance document is available on EPA's stormwater website.
- c. Federal agencies will likely use green infrastructure or low impact development management approaches and technologies that enhance or mimic the natural hydrologic cycle through infiltration, evapotranspiration water reuse, and practices to reduce building footprints by building up instead of out. More specifically, agencies are anticipated to use: rain gardens, bioretention, and infiltration planters; porous pavement; vegetated swales; green roofs (and we have one of those at our Boston office in Post Office Square); trees and tree boxes; pocket wetlands; reforestation/revegetation; and rainwater harvesting.

Wrap up:

So what do I hope you will consider as result of my comments?

1. You are in a unique position to develop strategies that demonstrate why maintaining environmental quality and economic competitiveness are not at odds with one another. I was in NYC last week and had the opportunity to observe how business and industry react to a degraded environment and how the business risks associated with these conditions are impacting their investment choices and business strategies.
2. There are a number of national and regional regulatory and policy developments which the Commission can use to frame a direction that will leverage the experience and unique leadership capacity that exists in New England.
3. I encourage you to take the long term view of your task. Recognizing that a long term solution may require transformation and short term investment in capacity building in order to develop a sustainable future.

In closing, I think I would be remiss to mention Great Bay, which is a New Hampshire estuary where all of these challenges are coming together to test our ability to work together at all levels to achieve a solution that works for New Hampshire.

As you probably know, EPA has a major role in NH regulating point sources (treatment plants and MS4 storm water) in NH. The state and local governments and private interests have an equally important role in deciding how and where development will occur and, maybe most importantly, figuring out how to pay for needed improvements. Over the next several years we have an opportunity to work together to get this right and lead the way in water resource management.