

June 20, 2011

Mr. C. Wayne Ives
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

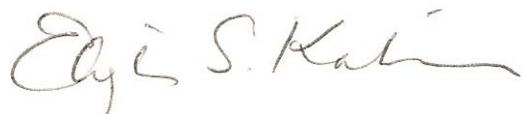
Dear Mr. Ives:

Over the years I've been very impressed with the quality of the reports, plans, fact sheets, and other documents produced by the NH Department of Environmental Services. As a NH resident, I have also been proud of the effectiveness of DES's programs and the dedication and professionalism of the staff who carry them out. Therefore, I have high expectations for what the instream flow program needs to accomplish and want to know that the science and planning methodology used by DES are the best possible, not only for the Lamprey River but also for the other designated rivers in New Hampshire that will have instream flow plans developed for them by DES.

Attached are my comments regarding the DRAFT Lamprey River Water Management Plan Report (NH DES-R-WD-11-9) dated April 11, 2011. Unfortunately I consider this plan to be far from adequate. There is a tremendous amount at stake here for the Lamprey River, the 14 municipalities in the watershed, and the two recreational lakes in Nottingham and Barrington that are targeted to support downstream water users and anadromous fish habitat.

Thank you very much for considering my comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Elizabeth S. Kotowski".

Elizabeth S. Kotowski
Nottingham

My husband and I first visited Pawtuckaway Lake in 1992. After that we came every September to camp, orienteer, and canoe with friends. Finally, in 2006, we bought a year-round log home on the lake. Although we still work full-time, our life on Pawtuckaway has been a joy. We listen to loons as we fall asleep; we watch a variety of other birds, including eagles, pileated woodpeckers, and great blue herons; and we love to get up in the morning and slip our kayaks in the water to explore the lake. We also enjoy the fact that half of Pawtuckaway's shoreline and most of the islands are part of a state park that's visited by thousands of families every year. The state also owns a public boat launch on the north end of the lake. On an average weekend day, even as early as May, hundreds of people are out enjoying the lake... paddling canoes, fishing for bass, swimming, jumping into the water from boulders, laughing as they're pulled behind motor boats, camping on the shore, and just plain relaxing.

Pawtuckaway Lake exists as it is today because of the creation of the state park. It is not a drinking water reservoir, although its level is controlled by a dam that was once used to power industries downstream. Sometime around 1955, hydropower was abandoned on the lake and the New Hampshire Electric Company approached the NH Water Resources Board to see if the Board would accept the lake and 800 acres of adjacent land. The Board agreed and also accepted responsibility for its dams for the benefit of present and future users of the lake shores. In 1957 the Legislature directed the State Planning and Development Commission to study how the property could be turned into a state park that would protect the lake and forest resources, benefit the public for recreation, and enhance the local economy.

From that point forward, a plan was set in motion that included acquiring more land, constructing recreational facilities, enhancing scenic beauty, promoting home development on part of the lake to generate tax revenue for the Town of Nottingham, developing a public boat launch, and creating of a town beach at the northern end of the lake for the residents of Nottingham.

When Governor King dedicated Pawtuckaway Lake State Park in 1966, he said in his speech, "We set aside natural resources like these and keep them as nature created them for our rest and relaxation.... Let all of you who have worked so hard to make today a reality take satisfaction not in anything I might say but rather in the solid knowledge that what you have done here will serve generations yet unborn.... that what you have done here will last forever."

The State of New Hampshire considers Pawtuckaway Lake State Park to be one of its flagship parks. It brings in an enormous number of visitors and significant revenue, some of which has been reinvested in its campground, beach and boating facilities, picnic area, new cabins, and educational programs. Although the park now includes 5500 acres and attracts hikers, mountain bikers, snowmobilers, and climbers, the lake is still the magnet that draws people to Pawtuckaway State Park. For that reason and because the lake is so important to the regional and local economy, the current and future use of Pawtuckaway Lake must be an important consideration in any water management or instream flow plan for the Lamprey River.

Pawtuckaway Lake is located in the middle of the 214-square-mile Lamprey River Watershed. As of June 7, 2011, when Governor John Lynch signed HB 149, most of the Lamprey River Watershed is now designated for river protection under the NH Rivers Management and Protection Program. The addition of 87.7 river miles to the original 12 miles in Lee and Durham extends the designated river out to Great Bay and protects the five main tributaries. This expansion means that watershed planning -- including instream flow planning -- must be handled in a new and much more comprehensive way.

The current draft Lamprey River Water Management Plan Report (NH DES-R-WD-11-9) is incapable of protecting the river resources of the Lamprey Watershed because it was always designed to manage instream flows for the narrow 12-mile corridor in Lee and Durham that was designated in 1990. Now, more than ever, the report should be shelved so that a more realistic, durable, and comprehensive instream flow plan can be developed that takes into consideration land management actions in addition to dam management, water use, and water conservation. It also need to consider all of the inputs and withdrawals to the river, with an eye toward not only protecting instream flow and water quality in the Lee-Durham stretch but all the way to Great Bay.

To rush this plan through with only part of the information necessary to put a meaningful plan in place would be very unfortunate. This is exactly the kind of decision making that William Odum described in his 1982 article titled "Environmental Degradation and the Tyranny of Small Decisions" in *BioScience* (vol. 32, no 9) in which he talked about the cumulative impacts of many individual decisions that affect the environment. He describes how the ecological integrity of the Florida Everglades was compromised in this way, as well as the destruction of the coastal marshland in Connecticut and Massachusetts between 1950 and 1970. Great Bay provides a more local example of how no one intended to cause such damage to the estuaries but it happened because of a lack of holistic planning. We have an opportunity to do better with the Lamprey now that the watershed has been designated.

It's understandable that with all the effort that has gone into the current water management plan, the authors would want to see it go forward. The plan is not adequate, however, even for the 12-mile stretch that it was intended to cover. Outside of the need for a better, more comprehensive plan that looks at all the water resources in the Lamprey, there are a number of reasons why this plan misses the mark. Some of those reasons are because of flaws in the design of the instream flow program more than 10 years ago. Others are because of budget constraints.

The bottom line, however, is that this plan serves the needs of the University/Durham Water System (UDWS) more than it does the river or its resources. No one on Pawtuckaway Lake or Mendums Pond even realized until last month that this effort to protect instream flows in the Lamprey was going to result in releases from their lakes for downstream uses. Even the final public hearing notice never mentioned its impact on lakes, which kept the level of comment down while the planning process proceeded quietly.

Deficiencies in the plan:

1. The scope is too narrow: It focuses on registered (large quantity permitted water users) and dam owners with little or no information about small water withdrawals on the river or information about wetlands retention. It also looks only at recreation, habitat, water quality and resources on the designated river, ignoring the lakes and tributaries. It never mentions the existence of Pawtuckaway State Park. It also never even mentions Great Bay, although protecting the bay was a major reason for the designation in the first place.
2. The water conservation plans and water use plans are too similar and redundant. They are also vague and unenforceable. The draft 2008 water conservation plan submitted by the UDWS when it submitted its preliminary permit for a second groundwater source is much more detailed.

3. The report is out of date and incomplete. It doesn't mention the expected expansion of the designated river to include almost 90 more miles of corridor. It doesn't mention the removal of Bunker Pond Dam in West Epping (which has already begun and will affect flow in the river downstream). It contains no information on impervious cover for seacoast communities, projected population growth by town, university expansion plans, stormwater management, or best management plans for recharge of aquifers and streams. It doesn't describe the ongoing anadromous fish restoration programs or the planned fish ladder for Wiswall Dam.

It also doesn't mention Durham's well-documented plans to withdraw ever-increasing amounts of water from the Lamprey River, including a recent 401 Water Quality Certification amendment that will allow Durham to draw down the Wiswall Reservoir by a total of 18" (from a previous 6" max) and allow the maximum daily drawdown to be increased from 0.5" to 1". Public documents also say that " The amendment allows for more than 35 to 40 days of continuous use of the reservoir during extreme low flow conditions." How does this fit in with the Lamprey instream flow plan? And how does the UDWS proposal to withdraw water from the Lamprey to artificially recharge a proposed groundwater source in the Spruce Hole Aquifer fit in with the instream flow plan. It's hard to understand why these issues were left out because they are all relevant and will affect the amount of water needed to maintain instream flow in the future. The shortcoming here is that the plan included information selectively and looks backward far more than it looks ahead.

4. The report appears to have been prepared in a vacuum. The composition of the advisory committee leans toward water suppliers and Durham town officials. Also, the report doesn't reference or attempt to integrate with other research and plans being developed by seacoast regional environmental groups, such as the Southeast Watershed Alliance, the Piscataqua Region Estuaries Partnership or UNH's excellent Water Resource Research Center, which includes scientists and grad students who are studying the Lamprey Watershed as part of its Lamprey Hydrology Observatory, which organizes an annual Lamprey River Symposium.

5. The report is poorly organized and incomprehensible to most readers. It bogs down in technical jargon and details about clupeid bioperiods. It includes scores of acronyms and doesn't include a glossary. It's hard to imagine how this will be received by the NH Legislature, which is composed of everyday citizens serving the state.

In the end, I see this as a report that provides some good information but needs much more content and true planning to be of value to the Lamprey River. I urge the Commissioner to reread his own 2010 - 2015 Strategic Plan and realize that the Lamprey River Water Management Plan is not consistent with his vision. DES needs to consider the big picture for the river, the lakes, and the watershed communities.

One thing I didn't mention, but which needs to be addressed, is the UNH water conservation information on pages 38 and 114 of the plan (pages 50 and 126 of the file). The UNH Sustainability Program links on those pages no longer work. Also, if you go to their "Sustainability Academy" webpage at <http://www.sustainableunh.unh.edu> it's hard to find anything about water conservation. On <http://www.sustainableunh.unh.edu/susttips>, for example, neither the Water Conservation link or the UNH Facilities link go anywhere. This means that the information the plan says is posted there isn't.

Through a Google search I finally found this page:

<http://www.sustainableunh.unh.edu/water> which has a little bit of info on it, especially about their water bottle initiative. I couldn't figure out how to get to this page from the UNH website itself, but at least it provides some info. It seems that without more visibility for water conservation campus wide, it's going to be hard to get students to report leaky faucets and start taking 5-minute showers instead of 20-minute showers, etc.

As DES has probably discussed internally, what UNH really needs to do is a full water audit and water efficiency/water reuse plan so they can implement significant savings in terms of water and \$\$\$. Several other universities have done that. For example, here's a link to Stanford's water conservation plan: http://lbre.stanford.edu/sem/sites/all/lbre-shared/files/docs_public/FINALStanfordConservation_Recommended_Plan10_16_033%5B1%5D.pdf and here's a link to info about UCONN's water reuse plan: <http://www.hazenandsawyer.com/work/projects/uconn-wastewater-reuse-project/>

Developing and implementing plans like these at UNH would show that they're serious about water conservation. More emphasis on water conservation at UNH would also help the university save more money in the long run and would give greater assurance to the public that the university is using the water it has wisely.

Another source of info that might be helpful is the Mass Water Resource Authority's website, where they describe many institutional, industrial, and commercial case studies: <http://www.mwra.state.ma.us/comsupport/waterconservationmain.htm> (scroll down the page).

There are other points I had planned to mention in more detail but family medical issues took up most of the time I had set aside for writing my comments this weekend. I will say that several parts of the Lamprey plan were well done but the shortcomings made it very hard for me to grasp the game plan and DES's justification for proposed actions. In addition, mixed units of measure, moving targets on the amount of water to be released from Pawtuckaway, and the lack of a good bathymetric study for computing lake volume were major red flags for many people.

Although a lot of negative comments were submitted by me and other Pawtuckaway residents, I hope they help DES produce a better product that balances all concerns.