

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

July 14, 2011

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Ariel Rios Building
Washington, D.C. 20004

H. Curtis Spaulding, Regional Administrator
U.S. EPA New England, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Subject: *Plan for Cooperative Restoration of the NH Coastal Watershed*

The purpose of this letter is to articulate the NH Southeast Watershed Alliance's (The Alliance) vision to restore the water quality and habitat in the New Hampshire coastal watershed. The Alliance believes that a watershed-wide approach that includes both point and non-point source reduction utilizing an adaptive management approach will be the most successful way to achieve the goal of restoring the watershed. The Alliance also believes that the adaptive management approach will achieve success in the shortest time and will be the most cost-effective approach.

The Alliance was established as a corporate body politic by the New Hampshire legislature last year in order to create a regional framework for forty two NH communities to work cooperatively and collaboratively with the regulatory agencies, regional planning commissions and other stakeholders. Several efforts have already been initiated to achieve the overall objectives of the legislation and others to identify the best courses of action. The recent science symposium sponsored by the Alliance with support of the New Hampshire Department of Environmental Services (NHDES) held on May 11, 2011 was the first in a planned series devoted to ensuring that the best available scientific information and judgment is brought to bear in understanding causes and developing corrective action plans for identified problems and issues of concern. It was clear from the data and the statements by the dozen scientists that actively participated in the symposium that wastewater treatment facilities represent at most less than a third of the problem and that a successful restoration plan will have to address other diverse causes and issues. The Alliance has recently initiated development of a watershed restoration plan and believes EPA participation would be an essential contribution to its success. This would require active collaboration between the communities, EPA, the NHDES and numerous other stakeholders.

The Alliance has taken note of the draft NPDES permit proposed for the Town of Exeter, New Hampshire which will limit nitrogen levels in the WWTF effluent discharge to 3mg/l, and subsequent communications from the Governor and members of the NH congressional delegation as well as the reaction of communities in a similar position to Exeter. The uppermost

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

concern to the Alliance is that time and resources will be wasted in litigious conflict that would be better deployed in pursuing a broad range of corrective actions, both on the part of the affected communities and EPA. A cooperative watershed approach has the likely outcome of achieving a better overall result in less time and at less cost. The Alliance believes it can be the vehicle for achieving a mutually satisfactory plan for harmoniously meeting the shared overall objectives for meeting water quality goals in the NH coastal watershed. EPA participation will ensure that critical elements are adequately addressed in the plan and bring to bear the resources necessary to their achievement gained from EPA's experience at other locations. The nascent relationship developed thus far with the EPA officials in the region gives promise of a fruitful working relationship that bodes well for a cooperative and collaborative team effort. The Alliance believes the breadth of knowledge, resources and experience within EPA gained from supporting similar efforts in other impaired watersheds throughout the United States will be a valuable asset in identifying and pursuing solutions to water quality impairments in the NH coastal watershed. As noted in EPA's Watershed Based NPDES Permitting Technical Guidance; *"the complex mix of remaining water quality problems and sources of pollution, including point and nonpoint sources, calls for an integrated environmental management approach that can provide creative, comprehensive solutions."* Through this partnership we look to go beyond the existing simple regulatory relationship and by doing so provide another tool for EPA to accomplish the legislative intent implicit in its existence.

The Alliance believes there is a unique opportunity before us to successfully implement a new model for watershed restoration. The following is a partial list of factors that suggest the NH coastal watershed can succeed using an alternative and holistic approach to addressing impairments and achieving water quality goals:

- There are only 42 New Hampshire communities and 10 Maine communities in the watershed.
- The watershed is relatively small in size; 1,023 square miles.
- The University of New Hampshire, located in the heart of the watershed, has numerous scientists performing research in the estuary and the tributary rivers.
- The general population is well educated and desires to maintain the exceptional quality of life offered in the watershed.
- Most of the sub-watersheds have active watershed associations working to preserve the tributary rivers.
- The Exeter, Oyster, Cocheco, Isinglass and Lamprey rivers, and associated tributaries, all within the coastal watershed, have protected status under the NH River Management and Protection Program.
- Three Regional Planning Commissions are very active in the watershed providing planning services to the communities in the watershed.
- There are numerous other organizations working within the watershed that all aspire to improve and preserve the environmental quality of the watershed

The Alliance welcomes the opportunity to share our ideas and visions with you and looks forward to an active and collaborative dialogue. Attached is a separate document we offer as a starting point for discussions in which to advance the Alliance's vision with EPA and the New

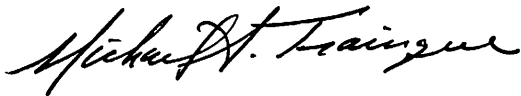
SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

Hampshire Department of Environmental Services as partners. We welcome and appreciate the opportunity to meet with representatives of EPA to discuss how we can jointly work together to restore the NH Coastal Watershed in a manner that is cost-effective, results in compliance with water quality goals, and reflects the true importance of this amazing environmental resource.

Sincerely,

SOUTHEAST WATERSHED ALLIANCE



Michael A. Trainque, Chairman
SWA Board of Directors

Attachment: NH Coastal Watershed Restoration Initiative

cc: *Honorable Governor John Lynch*
Honorable Frank Guinta - US House of Representatives
Honorable Jeanne Shaheen - US Senate
Honorable Kelly Ayotte - US Senate
Thomas Burack, Commissioner - NHDES
Stephen Perkins - EPA Region 1
Harry Stewart - NHDES
Ted Diers - NHDES
Steve Couture - NHDES

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

New Hampshire Southeast Watershed Alliance NH Coastal Watershed Restoration Initiative

The NH Coastal Watershed, in southeastern New Hampshire and southern Maine has been identified by state and federal regulators as a water body under stress from nutrient enrichment. Areas in the NH Coastal have lost most of their shellfish population; lack sufficient dissolved oxygen and have suffered significant losses of eelgrass. Portions of the estuary are in non-attainment of their designated uses and are in violation of established water quality criteria. Because nutrient enrichment results from a variety of point and non-point sources, the mitigation of these environmental stressors will likely require a new approach to identifying, controlling and reducing point and non point source pollutant inputs.

The primary nutrient of concern as identified in various studies in the watershed is nitrogen. Nitrogen is likely one of several contributory factors affecting water quality; other factors include impervious cover, sediment deposition, atmospheric deposition, non-point sources and other factors. Nitrogen is the current focus of proposed water quality criteria and permit requirements. The sources of nitrogen are many and diverse, and include:

- Stormwater runoff.
- Underground waterborne sources, such as septic systems.
- Effluents from wastewater treatment plants.
- Atmospheric deposition.

The NH Coastal Watershed is comprised of 42 communities in New Hampshire (including three communities within the Hampton-Seabrook watershed) and 10 in Maine and has a total drainage area of 1,023 square miles. Land use, population density and percentage of pollutant input per community and sub-watershed varies considerably. An adaptive management approach that responds to specific watershed stresses has a higher capacity for success than a single criterion metric.

The excessive nitrogen, and resultant ecological degradation, is thought to be the result of population expansion and subsequent increase in impervious area and an increased loading of nitrogen from both point and non-point sources. The New Hampshire Department of Environmental Services indicates that nitrogen loadings to the estuary have steadily increased in recent years with the majority of nitrogen (more than 2/3) originating from non-point source inputs. This distribution of pollution sources again may render traditional “end-of-pipe” or a command and control approach focused on point source discharges ineffective in a watershed context and expensive without addressing the majority of the pollutant sources. This traditional approach to watershed pollution control is beginning to be initiated with stringent effluent nitrogen limits established in the draft NPDES discharge permit issued by USEPA for the Town of Exeter Wastewater Treatment Plant with effluent target levels of 3.0 mg/l total nitrogen.

A traditional regulatory approach to limiting discharges within the NH Coastal Watershed mirrors historical watershed efforts and seems to have this outline:

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

1. Very stringent permit limits (3 mg/l TN) are issued to the wastewater treatment plants (there are 18 in the watershed ranging in size from a flow of 0.08 MGD to 8.23 MGD);
2. Implementing, to a limited degree, non-numeric nitrogen controls through the municipal (MS4) storm water permit program (note approximately 40% of the communities in the NH Coastal Watershed are not in the MS4 program); and,
3. Attempt, with limited, if any, central coordination and therefore limited success, to control the diffuse non-point source inputs through voluntary measures.

It is possible that requiring stringent effluent limits at the watershed's wastewater treatment facilities may not necessarily be the best road to watershed restoration (the ultimate goal of the Clean Water Act), since it does not address the major contributory sources of nutrients. According to the *Great Bay Nitrogen Loading Analysis (NHDES -December 2010)*, the watershed will require a reduction of nitrogen from both point source discharges and non-point source pollutant loads. In the draft loading analysis, a reduction in effluent limits will be necessary for wastewater treatment plant (WWTP) discharges. These regulated point source discharges will have to be supplemented by a corresponding range of reductions in non-point sources that vary depending on location within the watershed. According to the NHDES report, the difference in cost between an 8 mg/l and 3 mg/l effluent criteria are significant and are on the order of \$156M capital and over \$8M in annual operation and maintenance costs. In the traditional regulatory scenario outlined above, the regulated communities with treatment plants could spend over \$300M in new capital improvements and, despite that expenditure, the proposed nutrient criteria in the Bay would still not be met in many areas (assuming limited voluntary action on the non-point source reduction side of the equation).

While somewhat oversimplifying the issue, regardless of the nutrient criteria limit at the WWTPs, a corresponding reduction of non-point source loads of around 20-40% or more will still be required to meet watershed needs for dissolved oxygen criteria. In reality, exact reductions of non-point source loadings are not possible. Non-point source reduction efforts are not at all the same process as point source effluent reductions. It makes more fiscal sense and is more prudent to establish a watershed-based approach which coordinates both point source and non-point source loading reductions and allows flexibility to provide meaningful and cost-effective improvements.

This type of approach is consistent with the latest regulatory guidance at a national level. A recent report by the National Research Council indicates that regulatory agencies must re-establish permit requirements on a watershed basis to "*ensure progress and provide meaningful regulation*". The National Research Council report indicates that EPA's current regulatory approach is unlikely to produce a sustainable administrative framework for long-term management as traditional stormwater and wastewater permits often require separate permits and with different departments or agencies thereby minimizing collaboration and effective regional watershed oversight.

The report recommended that EPA should:

- Adopt a watershed-based permitting system that would encompass all discharges, including stormwater and wastewater, which could impact waterways in a particular watershed, rather than having many individual permits.

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

- Establish responsibility and authority for implementing watershed-based permits through centralized entities that would work in partnership with municipalities. In addition, lead municipalities or entities should receive enhanced funding to compensate for increased responsibility.

The lessons of other estuarine programs in New England and other parts of the country point towards this need for a comprehensive, coordinated, innovative and holistic approach to solving these types of problems. Many of the elements of a new approach are presented in the recently published “*2010 Comprehensive Conservation and Management Plan*” produced by the Piscataqua Region Estuaries Partnership. Specifically, the plan recommends “... *inter-municipal coordination and interstate cooperation to find and implement effective solutions for reducing nutrient or pollutant loads throughout the Great Bay Estuary watershed.*” It is the Alliance’s assertion that this organizational structure will be necessary to establish the basis for a coordinated and integrated regional management approach and is to some degree already underway in the watershed with the formation of the Alliance.

The Alliance understands that this type of management/permitting framework would have to be based on realistic implementation strategies, quantifiable milestones, a legal financing program and a reasonable assurance of success for it to appeal to the USEPA and the NHDES. The Alliance seeks to develop an Ecosystem Based Management (EBM) approach, in collaboration with EPA and the NHDES.

An EMB approach could include the following elements¹:

- An effective stakeholder engagement process in order to produce a consensus vision of issues and ecosystem goals. This will improve the chances that plans are implemented and local partners get involved.
- An integrated and comprehensive monitoring program to track progress and gauge the effectiveness of remedial actions.
- Inclusion of the scientific community and diverse user groups will help to ensure that the plan’s ecological integrity is solid.
- As a science based document, an EBM plan must be iterative and adaptive. It should be revised as further information becomes available or conditions change.
- A commitment to adequate funding for implementation is critical for progress and continued trust with stakeholders and it helps to realize tangible results.
- EBM requires taking a long term view. Actions will need to take place over the long term with a commitment of governmental and non-governmental plans.
- The program will incorporate an implementation schedule and specific attainment milestones to ensure accountability.

The development of an effective, engaged management plan will be a long term process, but the Alliance understands that the communities in the NH Coastal Watershed must move forward immediately to reduce non-point nitrogen loading to the watershed. The Alliance, with input from our member communities and steering committee, has identified a series of actions that are “low cost, impact oriented projects that demonstrate immediate results”. The first of these actions, Consistent Stormwater Regulations, will be promoted under a project partially funded by the NHDES in the fall of 2011. Additional action items include landowner outreach on lawn

SOUTHEAST WATERSHED ALLIANCE

P.O. Box 22122, Pease Tradeport, Portsmouth, NH 03801

care, septic system maintenance, general water quality public education, and identification of “hot spots” within the watershed.

This initial proposal only outlines a conceptual approach for effective watershed planning and does not address other efforts that may be needed. Instead, the initial approach is intended to outline a watershed management framework that can be innovative, legally-viable, and enables a greater understanding of what combination of implementation actions can be made in the most cost-effective way to achieve nutrient reductions necessary to restore and conserve the NH Coastal Watershed.

¹ Concepts adapted from: *Our Waters, Our Communities, Our Future*, The New York Ocean and Great Lakes Ecosystem Conservation Council. 2009.

http://www.nyoglecc.org/media/Final_New_York_Ocean_and_Great_Lakes_Report_April_2009.pdf