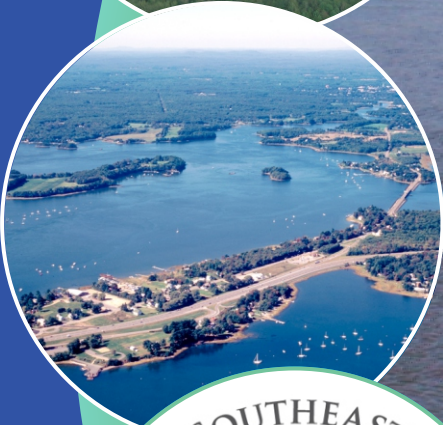


November 2013

2
0
1
3

ANNUAL REPORT



Pease Tradeport | P.O. Box 22122 | Portsmouth, NH 03802

2013 ANNUAL REPORT
SOUTHEAST WATERSHED ALLIANCE
November 1, 2013

To: Senate President
Speaker of the House of Representatives
Senate Energy, Environment and Economic Development Committee
House Resources, Recreation and Development Committee

From: **Southeast Watershed Alliance**
P.O. Box 22122
Pease Tradeport
Portsmouth, NH 03802



Regarding: Annual Report pursuant to RSA 485-E:12

I. GENERAL

The Southeast Watershed Alliance (Alliance) was established by the New Hampshire Legislature in 2009 pursuant to RSA 485-E:5. The Alliance represents 42 communities in the NH Coastal Watershed. To date, 28 of those communities have officially designated representatives to the Alliance and those representatives actively participate in Alliance activities. Many of the remaining communities have been closely following the activities of the Alliance and attending meetings. The representatives from the participating communities have been working together to accomplish the tasks set forth in RSA 485-E:5 II. The Alliance has been conducting outreach to those communities that have not yet officially designated a representative to foster their participation and encourage them to join. We are optimistic that more communities will join the Alliance in the coming year. The Alliance is also conducting outreach to other groups and organizations within the watershed such as local river advisory committees, county planning commissions, the Piscataqua Region Estuaries Partnership (PREP) and many others to actively engage those groups in helping the Alliance to achieve its goals.

II. MISSION STATEMENT

The mission of the Southeast Watershed Alliance is to establish a regional framework for Piscataqua coastal watershed communities, regional planning commissions, the State and other stakeholders to collaborate on planning and implementation measures to improve and protect water quality and more effectively address the challenges of meeting clean water standards.

III. BOARD OF DIRECTORS

The Board of Directors of the Alliance consists of eleven (11) Representatives that are elected by a majority vote of all Representatives in attendance at the Annual Meeting. The Board of Directors meets regularly on the first Wednesday of every month at 3:00 P.M. with additional meetings scheduled as needed. Meetings of the full Alliance membership are held quarterly with additional meetings scheduled as needed. Quarterly meetings during 2013 were held on February 6, May 8 and September 11.

At the quarterly Alliance Meeting held on February 6, 2013, a three member Nominating Committee was established to present three (3) candidates to the Board of Directors to replace the three members of the Board whose term had expired. All three members were re-elected to the Board of Directors by Alliance Representatives at the quarterly Alliance meeting held on May 8, 2013 in Newfields, NH. The current Board of directors consists of the following members:

<u>MUNICIPALITY</u>	<u>REPRESENTATIVE</u>	<u>TERM EXPIRES</u>
Town of Newmarket	William Arcieri	2015
Town of Hampton Falls	Candace Dolan	2016
Town of Danville	Walter Fries	2015
Town of Northwood	Shelley Frost	2015
City of Portsmouth	Brian Goetz	2014
Town of Stratham	Michael Perfit	2016
City of Dover	Dean Peschel	2014
Town of Durham	George Rief	2015
Town of Candia	Richard Snow	2014
Town of Chester	Michael Trainque	2016
Town of Newfields	Alison Watts	2014

At the Board of Directors meeting held on June 5, 2013, the Board of Directors nominated and formally elected the following officers for a one-year term:

Chairman	Michael Trainque
Vice Chairman	Walter Fries
Treasurer	Richard Snow
Secretary	Shelley Frost
Project Coordinator	Alison Watts
Education and Outreach	Candace Dolan

IV. EDUCATION AND OUTREACH

Education and outreach to municipal governing boards, land use boards, stakeholders, and the general population within the communities are core functions of the Alliance and are critical to achieving the goals of the Alliance. This outreach is an extensive undertaking and will require more resources than currently available to the Alliance. Thus far, the NHDES Coastal Program section, Piscataqua Region Estuaries Partnership (PREP), and the regional planning commissions have provided technical advice within the scope of their respective expertise. They have been the primary resources available to the Alliance. The education and outreach activities during 2013 were largely the result of volunteer efforts within the Alliance. Looking forward, we are seeking grants and other funding from different sources will enable the Alliance to continue and expand its education and outreach efforts.

A. SYMPOSIA

The Alliance did not conduct any symposia during 2013; however, guest speakers were featured at the quarterly meetings to present information to Alliance members on topics of relevance to the coastal watershed communities. These presentations included:

- Intermunicipal Wastewater Planning in Exeter and Stratham New Hampshire.

- Durham/Oyster River Integrated Watershed Plan.
- Nitrogen Removal Technologies for On-Site Wastewater Disposal (Septic) Systems
- Providing better protection lake water by implementing septic system inspections (and required replacements) for near-shore properties, Meredith, NH.

Subsequent symposia are likely to focus on septic system operation and maintenance; nitrogen reducing septic system technologies; non-point source pollutant monitoring and control; stormwater education and outreach pursuant to the MS4 NPDES permit; stormwater management standards; stormwater Best Management Practices (BMP's) case studies; or other aspects of the *Watershed Management and Restoration Plan* being developed by the Alliance.

B. ONGOING EDUCATION AND OUTREACH

The Alliance has had discussions with member communities to assist them with the education and outreach that will be required pursuant to the EPA's Municipal Separate Storm Sewer System (MS4) permit under the National Pollutant Discharge Elimination System (NPDES) when it becomes final. A second draft of the pending MS4 permit was issued for the 61 New Hampshire MS4 communities in February 2013. The Alliance can assist the coastal watershed MS4 communities by being the entity through which the education and outreach efforts are conducted thereby resulting in economies of scale, minimizing duplication of efforts by individual communities, and effectively crossing municipal boundaries with the education and outreach efforts.

The Alliance continues its ongoing education and outreach efforts by fostering communication, cooperation and collaboration with the 42 communities within the watershed as well as with stakeholders, the regional planning commissions, PREP, the local river advisory committees, the NHDES, EPA and others. It will be essential for the Alliance to achieve consensus and buy-in from the member communities to develop and implement the goals of the Alliance. The education and outreach efforts will require resources, such as labor, funding and other needs, not yet available to the Alliance in order to adapt information and present it in an effective manner to the various and diverse audiences with their differing needs for information.

V. FUNDING

GRANTS

A. Grant Number 2

The UNH Stormwater Center, in conjunction with the Alliance, jointly applied for and received a Watershed Assistance Grant with funding from the New Hampshire Department of Environmental Services (NHDES). This project includes developing a *Great Bay Municipal Bioretention Program* to assist coastal watershed communities in implementing strategies for watershed nutrient reduction. Thus far, as part of this project, stormwater treatment devices/technologies have been installed in three communities – Stratham, Durham and Newington. A fourth installation will occur in Epping in the Spring of 2014. The Alliance is providing signage, hosting a website



Bioretention system in Stratham constructed under the Biopalooza grant.

(<http://southeastwatershedalliance.org/biopalooza>), and conducting outreach to communities about the benefits of improved stormwater management.

B. Grant Number 3

The University of New Hampshire, in conjunction with the Southeast Watershed Alliance, the Rockingham Planning Commission, the National Estuarine Research Reserve and Antioch University has been awarded funding pursuant to a proposal for *Green Infrastructure for Sustainable Coastal Communities* to build municipal capacity in coastal watershed communities for green infrastructure by engaging local and regional stakeholders in a planning and implementation process that is supported by technical resources and current relevant information. The goal of creating a collaborative process is to build community resilience and improve capacity for managing water resources and related ecosystem services. Funding for this grant is from the National Oceanic and Atmospheric Administration (NOAA) and comes through the National Estuarine Research Reserve (NERR) Science Collaborative.



Residents installing a rain garden in Exeter under the Green Infrastructure grant.

This project provides communities with the opportunity to identify and address stormwater related issues specific to their community. This project currently involves work in six New Hampshire communities – Exeter, Stratham, Portsmouth, Brentwood, Rochester and Durham, on a range of planning and installations including implementation of stormwater regulations developed by the Alliance (<http://southeastwatershedalliance.org/stormwater-initiative>), installation of stormwater treatment systems, neighborhood lawn care, and snowdump management. These projects are being tracked and publicized through the Alliance website.

C. Funding – General

Activities conducted by Alliance members to date have primarily been on a volunteer basis without compensation. In fact, cash outlays required for Alliance expenses, office space and meeting spaces have been donated by members and representatives of the Alliance as well as local private companies and member towns. Consistent sources of funding are essential to even modestly accomplish the goals and purpose of the Alliance. In this current time of economic stress and dwindling government funding, direct financial contribution by participating communities has been difficult at best because of timing due to municipal funding appropriation lead times and voter choice without extensive education (available through the Alliance). Planning to undertake the many tasks to achieve the purposes of the enabling legislation is ongoing but implementation of these tasks has been severely inhibited by the lack of available funding.

While related municipal efforts in the past were eligible for partial (20% to 30%) grant funding by the State under RSA 486-A for public wastewater and stormwater systems and RSA 486 for public water systems (e.g. SB60 – Commission to Study Water Infrastructure Sustainable Funding), no such funding has been made available to the Alliance to date nor is state or federal funding for a regional *Watershed Management and Restoration Plan* available at this time. The Alliance will continue to seek and apply for funding from any and all sources from which funding is or may be available including state and federal programs, charitable trusts and foundations and other sources.

The Alliance and its Board of Directors, with recommendations from its Program Development Committee, supports a legislative initiative to make watershed management and restoration plans eligible for funding under the State Aid Grant program.

VI. STRATEGIC PLAN

The Alliance finalized its *Strategic Plan* in December 2012, however, during 2013 there were discussions relative to updates of the *Strategic Plan*. The *Strategic Plan* sets forth goals and priority actions for the Alliance in furtherance of its mission to improve and protect water quality throughout the NH coastal watershed. Action priorities identified in the *Strategic Plan* include:

- Collaboration with various groups and stakeholders throughout the watershed.
- Provide outreach and education.
- Establish benchmarks and metrics for improving water quality.
- Foster inter-municipal cooperation.
- Address stormwater issues and implement stormwater Best Management Practices.
- Foster and promote Bio-Extraction and similar programs.
- Develop and implement drinking water protection measures.
- Support efforts to promote and implement land conservation.
- Secure funding assistance to fund the activities of the Alliance.
- Develop and implement long-term goals.

VII. WATERSHED MANAGEMENT AND RESTORATION PLAN

By far the most ambitious undertaking on which the Alliance is currently focused involves the development of a *Watershed Management and Restoration Plan*. The NH coastal watershed has been identified by State and Federal regulatory agencies as a water body under stress from nutrient enrichment and other sources of water quality impairments. Portions of the Great Bay estuary are in non-attainment of designated uses and in violation of established water quality criteria. Because nutrient enrichment and other adverse water quality impacts result from a variety of both point and non-point sources, the mitigation of these environmental stressors requires a new approach to identifying, controlling and reducing both point and non-point inputs.

Comprehensive watershed planning is a significant undertaking that will require extensive community engagement, pollutant load modeling and optimization, and remedial design, supported by extensive long-term monitoring. The Alliance will continue to work with its members and other groups to develop a conceptual framework for the *Watershed Management and Restoration Plan* but development and implementation of a detailed plan will require significant resources beyond what the Alliance currently has available. The key element that has been missing thus far is funding to help move the development of this plan forward.

Individual nutrient reduction sub-watershed plans are in development by several communities including the Towns of Durham, Exeter, Stratham and Newfields, but an overall watershed plan would ensure consistency across the watershed, conserve resources and meet broader scale objectives.

The objective of the *Watershed Management and Restoration Plan* is to take a broad holistic and more cost-effective approach to implementing water quality restoration and management measures that will achieve better overall results in improving water quality goals in less time and at less cost than the traditional regulate-react approach. The idea behind the *Plan* is for the Alliance and its 42

member communities to become proactive rather than reactive in restoring water quality within the watershed. A successful Plan will require extensive collaboration and cooperation between municipalities, agencies, and other watershed stakeholders.

This type of approach is consistent with the latest regulatory guidance at the national level. A recent report by the National Research Council (NRC) indicates that regulatory agencies must re-establish permit requirements on a watershed basis to “*ensure progress and provide meaningful regulation*”. The NRC report indicates that EPA’s current regulatory approach is unlikely to produce a sustainable administrative framework for long-term management as traditional wastewater and stormwater permits often require separate permits with different departments or agencies thereby minimizing collaboration and effective regional watershed oversight. This traditional diversified approach also minimizes the opportunities for creative, innovative, centralized and multi-pronged approaches to achieving water quality goals.

To this end, the Alliance believes that EPA participation and collaboration with the Alliance would be an essential contribution to the successful development of an effective *Watershed Management and Restoration Plan*. The EPA has a wealth of institutional knowledge gained from working on watershed management and restoration efforts in diverse watersheds across the country. On July 14, 2011, the Alliance sent a letter to EPA Administrator Lisa Jackson and EPA Region 1 (New England) Administrator Curtis Spaulding inviting the EPA to work in partnership with the Alliance in formulating a *Watershed Management and Restoration Plan* for the NH Coastal Watershed that is cost-effective, innovative and will result in compliance with water quality goals. In a response letter dated August 3, 2011, the EPA indicated its concurrence that a plan addressing both point sources and non-point sources of pollution is “*necessary to reach our shared goals of restoring and maintaining the integrity of the Great Bay watershed*”. EPA expressed willingness to work cooperatively and in collaboration with the Alliance as we move forward in developing a *Watershed Management and Restoration Plan*. We have had further discussions with representatives of EPA Region 1 in this regard during 2013 and look forward to further developing a working relationship with EPA during 2014 to help move the Alliance towards achieving its goals.

VIII. WEB SITE

The Southeast Watershed Alliance (Alliance) maintains a web site dedicated exclusively to its purposes. All meeting notices, agendas, minutes and other general information are posted there. The URL for the web site is: ***SoutheastWatershedAlliance.org***. During 2013 significant strides were made in expanding the web site to include additional resources, reorganizing the website, changing the appearance of the website and adding links to other information sources in an effort to improve education and outreach and provide resources to the various members, groups and stakeholders.

IX. ONGOING ACTIVITIES

In 2010 the Alliance identified several priority tasks on which attention needed to be focused. Meetings held by the Board of Directors and the full Alliance during 2013 included ongoing discussion and refinement of these priorities. Certain short term tasks were identified that need to be given priority relative to improving water quality in the NH Coastal Watershed. Emphasis is given to tasks that are both practicable and capable of implementation in the near term without new large capital or infrastructure outlays. Such tasks include:

Develop consistent storm water regulations and Best Management Practices.

Model stormwater standards were developed in 2012 under a grant from the NHDES. To date two municipalities, Newfields and North Hampton, have adopted these Standards and several other communities have requested implementation assistance from the Green Infrastructure Project. The Green Infrastructure Project will also hold a workshop on how and why communities should adopt these standards in the Spring of 2014.

Identify “hot spots” (i.e. sources and land practices) that degrade water quality.

The Municipal Bioretention Program developed GIS-Based load maps for the four participating communities. Additional communities may be included in this mapping project in 2014, depending upon the level of interest.

Maintain and improve the web site.

The website has been significantly updated and provides examples and resources to assist communities with stormwater related issues. At this time we have not received funding to support development of web resources on other water related issues.

Identify priorities for water quality monitoring.

A regional monitoring plan, funded by shared resources and conducted by UNH has been proposed by the NHDES. Administering this program and soliciting community input would be an ideal role for the Alliance, but is not possible without staff and other resources.

Additional priorities include:

- Identify funding resources to enable prerequisite research and corrective actions to be undertaken;
- Maintain and improve the web site (ongoing);
- Apply for funding (typically grants) to enable the Alliance to carry out activities;
- Conduct land owner outreach and municipal involvement that address various water quality issues. Examples of this include: benefit of routine septic system maintenance; proper use of fertilizers and low impact landscaping; incorporating Low Impact Development (LID) requirements into existing site and subdivision regulations to address stormwater management; develop design standards for onsite septic systems to reduce nitrogen.

Thus far, the necessary financial resources required for the Alliance to make substantial progress in reaching its larger goals has not materialized though the Alliance continues to explore potential sources of funding. The Alliance is very much cognizant of the current economic stresses faced by local, state and federal governments and the difficulty its members face in committing resources for the furtherance of Alliance goals. Accordingly, the Alliance will focus its immediate efforts on those activities that can be implemented at low cost while yielding the maximum impact in terms of improving water quality (i.e. the “low hanging fruit”) while seeking the resources necessary to achieve its larger goals and objectives.

Innovative solutions to solve water quality and related issues will be a key priority for the Alliance. Extractive technologies (e.g., bivalve mollusk aquaculture and micro algal production) could and should be investigated as a possible means, among many, of meeting nutrient criteria goals for estuarine waters. State-of-the-art technologies for nitrogen reduction in onsite septic systems are being explored in Rhode Island and implementation of these technologies in the coastal watershed area of New Hampshire will be a high priority for the Alliance. However, these studies will require

financial resources as well as active participation of state and federal agencies in conjunction with local communities and potential business operators/investors. Regional economic benefit, as well as economic benefit to the State as a whole, could be a useful byproduct if this approach can be shown to be successful.

OTHER HIGHLIGHTS FROM 2013

- Alison Watts, representative for the Town of Newfields and member of the Alliance Board of Directors, completed her work as part of the Governor's Water Sustainability Commission as a representative for the Alliance on the Commission. The final report is available at: <http://www.nh.gov/water-sustainability/publications/index.htm>. Dr. Watts continues to serve on an advisory board which is identifying methods and sources of funding to implement the Commission's recommendations.
- Michael Trainque, representative for the Town of Chester and Chairman of the Alliance Board of Directors attended several meetings of the Piscataqua Region Estuaries Partnership (PREP) Management Committee representing the Alliance on the PREP Management Committee.

X. ACTIONS CURRENTLY PLANNED FOR 2014

The Alliance will continue to work with partners, member communities and stakeholders to further the goals and objectives listed below to the extent that resources and funding become available to the Alliance in furtherance of these goals and objectives.

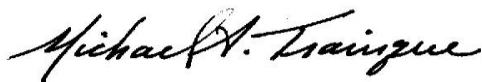
- Implement a range of stormwater management and mitigation solutions in communities throughout the NH coastal watershed in collaboration with project partners from UNH and the local regional planning commissions.
- Provide education and outreach related to stormwater management.
- Provide education and outreach related to septic system management.
- Further develop details of the *Watershed Management and Restoration Plan*.
- Improve and expand the web site to provide a resource for information and collaboration between communities and other stakeholders.
- Identify and actively pursue funding resources, including public and private grants, in-kind services and municipal contributions.
- Update the *Strategic Plan* if and as appropriate.
- Collaborate with other groups, agencies, and organizations such as the EPA, PREP, the Nature Conservancy, the National Estuarine Research Reserve, the Regional Planning Commissions, the Local River Advisory Committees (LRAC's), and others to assist the Alliance with development of the *Watershed Management and Restoration Plan* and furtherance of other Alliance activities.
- Further develop and implement the initial priority activities.

- Provide education and outreach related to wastewater collection, treatment and disposal.
- Engage with and support the activities of the various stakeholders and groups within the coastal watershed such as the Local River Advisory Committees (LRAC's).
- Conduct symposia on issues and topics of relevance to the seacoast watershed.
- Perform a broad range of education and outreach activities for the coastal watershed communities.
- Identify and develop additional priority activities, including long term planning and implementation actions.

ACKNOWLEDGEMENTS

The Alliance gratefully acknowledges the donation time by its members, the donation of computer equipment (three complete computer systems including laptops, printers, and peripherals) by ***Pfizer Corporation***; the donation of space, telephone and electricity by ***Hoyle, Tanner & Associates, Inc.*** in its Portsmouth office in the Pease International Tradeport (including the office space currently occupied by the Alliance as well as the use of the conference room for the monthly Board of Directors meetings) and printing (this report); the donation of time and money by ***Michael Perfit*** in setting up and managing the computer systems and the web site, including the payment of internet charges; and the donation of meeting space by various communities throughout the coastal watershed such as Newfields, Northfield, Newington, Dover, Portsmouth and Rochester.

Respectfully submitted,
SOUTHEAST WATERSHED ALLIANCE



Michael A. Trainque, P.E., Chairman
Board of Directors