

2012 ANNUAL REPORT SOUTHEAST WATERSHED ALLIANCE November 1, 2012

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:

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 second Monday of every month with additional meetings scheduled as

needed. Meetings of the full Alliance membership are held quarterly with additional meetings scheduled as needed.

At the quarterly Alliance Meeting held on May 9, 2012, a three member Nominating Committee was established to present four (4) candidates to the Board of Directors to replace the four members of the Board who either resigned or whose term had expired. The four new members of the Board of Directors were officially elected by Alliance Representatives at a special Alliance meeting held on June 19, 2012 in Portsmouth, NH. The current Board of directors consists of the following members:

MUNICIPALITYREPRESENTATIVETown of Hampton FallsCandace Dolan

Town of Danville Walter Fries (Re-elected 2012)
Town of Durham George Rief (New 2012)
Town of Newmarket William Arcieri (New 2012)

Town of Stratham Michael Perfit

Town of Northwood Shelley Frost (New 2012)

City of Dover Dean Peschel
City of Portsmouth Peter Rice
Town of Candia Richard Snow
Town of Newfields Alison Watts
Town of Chester Michael Trainque

At the Board of Directors meeting held on August 15, 2012, 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 Michael Perfit
Project Coordinator Alison Watts
Education and Outreach Candace Dolan

IV. EDUCATION AND OUTREACH

Education and outreach to 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 been generous with technical advice within the scope of their respective expertise. They have been the primary resources available to the Alliance. The NHDES, through a matching grant from the NH Coastal Program, has provided funding to enable the Alliance to further advance its ongoing education and outreach efforts during 2012.

A. SYMPOSIA

One key component of the Education and outreach activities is an ongoing series of symposia to be presented by the Alliance to address various topics and issues of concern relative to ongoing research and data gathering activities, watershed management and watershed restoration. The first symposium was held on May 11, 2011 at Great Bay Community College from 8:30 A.M. to 3:00 P.M. A panelist of 12 researchers presented overviews of their research work in the NH Coastal Watershed in the morning. A lively panel discussion followed during which audience members asked questions and the answers we provided by various panelists. That first symposium was a tremendous success.

Discussion of and planning for the next symposium has been an integral part of all of the monthly Board of Directors meetings and the quarterly Alliance meetings during 2012. Currently, effort is being directed to planning the next symposium which will be held in early 2013 and will focus on controlling nitrogen in stormwater. Subsequent symposia are likely to focus on stormwater management standards, stormwater Best Management Practices (BMP's) case studies, or some aspect of the *Watershed Management and Restoration Plan* being developed by the Alliance.

Board Chairman Michael Trainque will be participating in the 2012 New Hampshire Water Symposium cosponsored by the Business and Industry Association (BIA) and the New Hampshire Department of Environmental Services to be held on November 9, 2012 at the Radisson Hotel, Manchester, NH. The presentation by Mr. Trainque will provide an overview of the Southeast Watershed Alliance, provide perspectives, and describe the current and ongoing efforts of the Alliance to evaluate, protect and make improvements to water quality in the coastal watershed and Great Bay.

B. ONGOING EDUCATION AND OUTREACH

The Alliance will continue 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. <u>Funding</u>

GRANTS

A. Grant Number 1

During 2012, the Alliance was able to conduct activities funded by a grant from the New Hampshire Department of Environmental Services (NHDES) Coastal Program. The funding for this grant originated from the National Oceanic and Atmospheric Administration (NOAA). The grant award is for \$28,000 which requires a \$28,000 match by the Alliance of non-federal cash and in-kind services. The project for which this grant award was made includes the following two primary tasks:

TASK 1 – Support the Alliance in startup costs associated with the initial planning, organizational and implementation phase of the Alliance consistent with the planning and management activities for which the Alliance was established. Under this task, the Alliance was able to contract with an Administrative Assistant to conduct the administrative, organizational and outreach activities of the Alliance.

TASK 2 – Develop and promote consistent and effective stormwater management standards for NH coastal communities located within the jurisdiction of the Alliance and the NH coastal communities. The Alliance, with assistance from the Rockingham County Planning Commission and the UNH Stormwater Center has developed draft model regulations for stormwater management that are intended to be incorporated into the site plan and subdivision regulations of communities within the watershed. The draft stormwater regulations were presented to the full Alliance and interested general public at the Alliance quarterly meeting held on May 9, 2012 at the Newington Town Hall in Newington, NH.

Julie LaBranche of the Rockingham County Planning and Jamie Houle of the UNH Stormwater Center presented the latest draft of the Stormwater Standards for Coastal Watershed Communities. The latest draft is available on the Alliance website. As new drafts become available they will be posted on the Alliance website:

http://www.southeastwatershedalliance.org/stormwater.html

The framework for the stormwater standards consists of three implementation approaches. The first is zoning only. The second is a combination of zoning and regulations changes. The third consists of regulation changes only. It is up to each community to select the approach that best meets its needs. Zoning changes require a vote of the governing body of a community and may require a warrant article. Regulations can be passed by the Planning Board. Communities that are under the jurisdiction of the Federal Municipal Separate Storm Sewer (MS4) stormwater program that implement one of the approaches identified in the draft framework would fulfill some of the requirements of the National Pollutant Discharge Elimination System (NPDES) permits issued by the EPA to MS4 communities. Furthermore, if a critical mass of communities implement these standards, it should be possible to model the consequences of Low Impact Development and get credit for meeting these standards on a watershed wide basis. So far, the towns of East Kingston, Durham, and Newington have implemented stormwater standards that are consistent with these draft standards.

The latest draft of the stormwater management standards will be discussed at the upcoming quarterly full Alliance meeting on November 7, 2012. The grant contract and associated funding under this grant award expires on December 31, 2012.

B. 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 U.S. EPA. This project includes developing a Great Bay Municipal Bioretention Program to assist coastal watershed communities in

implementing strategies for watershed nutrient reduction. The project will be conducted in three phases.

Phase 1 includes performing a pollutant load analysis based on land use and impervious cover, refined to the local municipal level. Stormwater derived loadings will be modeled and classified by land use and proximity to identify target "hot spot" locations for retrofit and maximizing load reductions. This action is outlined in the PREP 2010 Comprehensive Conservation and Management Plan (CCMP), identified as an action with the highest priority, and is supported by the NHDES. Phase 2 of this project involves the development of a municipal web framework comprised of resources, from design to installation, to facilitate implementation of "green" infrastructure in communities located within the Great Bay watershed. Through collaboration with Low Impact Design (LID) experts, the Southeast Watershed Alliance, Regional Planning Commissions, municipalities, design firms, nurseries, and landscape professionals, a body of designs and resources will be developed and made available for future implementation. Phase 3 involves an outreach campaign, led by the Alliance, for the Stormwater Center to train communities how to use the impervious cover and land use analyses for targeted nonpoint source management. The training will link the resource framework to prioritized implementations in the respective communities.

C. 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.

This project will provide a wide range of resources and numerous models and examples of regulatory and technical approaches for the implementation of green infrastructure. This process will aid in the institutionalization of green infrastructure for coastal communities through the development of a framework of resources that benefit aquatic habitat and coastal water quality, provide training for climate adaptation strategies, and demonstrate the economic benefits resulting from an increased reliance on green infrastructure.

D. Funding – General

Any undertaking by the Alliance members has 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 contribution by participating communities is neither feasible nor practical in terms

of timing given both 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 are severely inhibited by the lack of available funds and the likelihood of any significant change in those prospects. While related efforts in the past were funded (e.g., SB-70), no such funding has been made available to the Alliance to date. 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.

VI. STRATEGIC PLAN

The Alliance continued working on the development and refinement of its *Strategic Plan* during 2012. The *Strategic Plan* sets forth goals and priority actions for the Alliance in furtherance of its mission to improve and protect the water quality throughout the NH coastal watershed. Action priorities identified in the draft *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.

The objective of the *Watershed Management and Restoration Plan* is to take a broad holistic and 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 members to become proactive rather reactive in restoring water quality within the watershed.

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 reestablish 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 2012 and look forward to further developing a working relationship with EPA during 2013 to help move the Alliance towards achieving its goals.

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.

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: <u>SoutheastWatershedAlliance.org</u>. The web site was expanded to include a wiki to provide a mechanism for updating information, displaying a diversity of data, interpretations and will allow experts in any given areas to make contributions in an orderly manner. We have been expanding the web site to include additional resources, such as the presentations from various symposia, meetings and workshops as well as 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. Meetings held by the Board of Directors and the full Alliance during 2012 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 (in progress);
- Identify "hot spots" (i.e. sources and land practices) that degrade water quality;
- Identify funding resources to enable prerequisite research and corrective actions to be undertaken (ongoing);
- Maintain and improve the web site (in progress/ongoing);
- Apply for funding (typically grants) to enable the Alliance to carry out activities (ongoing);
- Conduct land owner outreach and municipal involvement that addresses 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 (in planning).

The Alliance is very much cognizant of the current economic stresses faced by local, state and federal governments and the difficulty its members may face in committing resources for the furtherance of Alliance goals. Accordingly, the Alliance has been focusing its immediate efforts on those activities that can be implemented at low cost while yielding the maximum impact in terms of improving water quality. Coupled with this approach is the need to ensure that decision making is solidly science-based and will produce quantifiable and measurable results rather than simply arising from unsupported opinion, conjecture or popular false belief.

Innovative solutions to solve water quality and related issues are being explored. Extractive technologies (e.g., bivalve mollusk aquaculture and micro algal production) are being investigated as possible means of meeting nutrient criteria goals for estuarine waters. These studies will require active participation of state and federal agencies in conjunction with local communities and potential business operators/investors. Regional economic benefit could be a useful byproduct if this approach can be shown to be successful.

OTHER HIGHLIGHTS FROM 2012

•Alison Watts, representative for the Town of Newfields and member of the Alliance Board of Directors, continued her work as part of the Governor's Water Sustainability Commission as a representative for the Alliance on the Commission. The Water Sustainability Commission was established by Executive Order 2011-2 on April 22, 2011. The Commission is working to identify strategies and management measures for ensuring that the quality and quantity of New Hampshire's water resources in 25 years are as good as or better than they are today. The Commission is currently reviewing existing information on the status of NH's water resources, and will provide opportunity for public input during its study, including at least one public session in each of the Executive Council Districts. Among the matters to be considered by the Commission are evaluating existing and future needs for water supply, wastewater disposal and storm water management in order to make recommendations concerning the infrastructure, investment and other measures necessary for the continued availability of clean water supplies for businesses, individuals, and communities.

- Alison Watts, representative for the Town of Newfields and member of the Alliance Board of Directors and Julie LaBranche of the Rockingham County Planning Commission made a joint presentation at the 2012 NH Water & Watershed Conference held on March 23, 2012 at Plymouth State University. The theme of the presentation was Integrating Water Resource Management in the Great Bay Watershed. The presentation focused on integrated water resource management to promote coordinated development and management of water, land, and related resources in order to maximize the resultant economic and social welfare without compromising the sustainability of vital ecosystems Global Water Partnership, 2009.
- Dean Peschel, representative for the City of Dover and member of the Alliance Board of Directors, gave a presentation and served as a panelist at the "Paying for Municipal Stormwater Programs: Confronting Challenges, Recognizing Opportunities and Building Community Consensus" workshop sponsored by EPA Region 1 and held at the Hugh Gregg Coastal Conservation Center in Greenland, NH on October 18, 2012.
- Michael Trainque, representative for the Town of Chester and Chairman of the Alliance Board of Directors, was appointed to the Management Committee of the Piscataqua Region Estuaries Partnership (PREP).
- Board Chairman Michael Trainque will be participating in the 2012 New Hampshire Water Symposium cosponsored by the Business and Industry Association (BIA) and the New Hampshire Department of Environmental Services to be held on November 9, 2012 at the Radisson Hotel, Manchester, NH. The presentation by Mr. Trainque will provide an overview of the Southeast Watershed Alliance, provide perspectives, and describe the current and ongoing efforts of the Alliance to evaluate, protect and make improvements to water quality in the coastal watershed and Great Bay.

X. ACTIONS CURRENTLY PLANNED FOR 2013

- Finalize the Strategic Plan based on comments and feedback from members and stakeholders.
- Further develop details of the Watershed Management and Restoration Plan.
- 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.
- Improve and expand the web site to provide a resource for information and collaboration between communities and other stakeholders.
- 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)
- Identify and actively pursue funding resources, including public and private grants, in-kind services and municipal contributions.

- Conduct science and other symposia.
- 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.

Five of the communities within the NH Coastal Watershed that own and operate public municipal wastewater treatment facilities formed the *Great Bay Municipal Coalition*, an organization that exists and operates entirely independently of the Alliance. The Coalition includes Dover, Exeter, Newmarket, Portsmouth and Rochester. The *Great Bay Municipal Coalition* has proposed to undertake, independent of the Alliance, an Interim Program for Water Quality Improvements that includes wastewater treatment facility upgrades, Best Management Practices (BMP's) for stormwater management and completion of additional studies.

XI. <u>Future Legislation</u>

Other than the need for funding, it is premature for the Alliance to offer any clear recommendations for future legislation at this time.

ACKNOWLEDGEMENTS

The Alliance gratefully acknowledges 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), 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 Brentwood, Newington, Dover, Portsmouth and Rochester.

Respectfully submitted,

SOUTHEAST WATERSHED ALLIANCE

Michael A. Trainque, P.E., Chairman

Michael Trainque

Board of Directors

Attachment: SWA Stormwater Management Initiative Flyer

Southeast Watershed Alliance

Stormwater Management Initiative

To reduce non-source point pollution and support MS4 permit compliance

THE INITIATIVE To encourage the adoption of stormwater management standards to provide a consistent level of stormwater management and water quality protection within the 42 communities in NH's coastal watershed. The model stormwater management draft standards are available on the website of the Southeast Watershed Alliance (SWA) at www.southeastwatershedalliance.org.

THE ISSUES

NH communities are confronted by a challenging land use and environmental concerns stemming from growth and development. At the same time changes in our regional climate - particularly annual precipitation patterns and increases in the frequency and intensity of storm events - are placing increased stress on available resources and infrastructure.

THE IMPACTS

These pressures have resulted in increased stormwater runoff, declines in water quality, widespread flood damage to private and public property, and increased risk and vulnerability of certain populations and critical infrastructure.

THE GOALS

The purpose of consistent stormwater management in the 42 communities comprising New Hampshire's Coastal Watershed is to effectively and efficiently:

- ☐ Control non-point source pollution from future development and land conversion.
- Mitigate and reduce runoff and non-point sources of pollution from existing development through redevelopment guidelines.
- ☐ Manage the quality and quantity of water resources.



To comment on the model stormwater standards or learn more about the Model Stormwater Initiative:

Julie LaBranche Rockingham Planning Commission (603) 778-0885 ilabranche@rpc-nh.org

Helen Perivier Southeast Watershed Alliance (603) 275-7014 hperivier@southeastwatershedalliance.org

To talk with planners about how municipal stormwater standards have benefited their communities:

David CedarholmTown of Durham(603) 868-5578Dcedarholm@ci.durham.nh.usBob CraycraftTown of New Durham(603) 859-2866Bob.Craycraft@unh.eduTom MorganTown of Newington(603) 436-1252newington@ttlc.net

THE CRITICAL CORE ELEMENTS OF THE MODEL STANDARDS

As either a zoning ordinance and/or land development regulation, municipal stormwater management standards should include the minimum "critical core elements" for communities to reduce storm water runoff in our communities and to support MS4 permit compliance. These minimum "critical core elements" of stormwater management are:

Applicable Land Uses	Minimum Trigger Conditions	Best Management Practices
Site Redevelopment	Maintenance Criteria	Inspection of Infrastructure

THE BENEFITS TO COMMUNITIES

- ✓ Cost effective and efficient tool for stormwater infrastructure and water resources management.
- ✓ Provides a regulatory framework that helps meet federal and state requirements
- ✓ Helps track changes in pollutant loading, sources and reductions
- ✓ Anticipates projected *changes in climate* in stormwater infrastructure investments
- ✓ Implements an *adaptive water resource management* strategy
- ✓ Protects ecosystem services that humans rely on

THE MUNICIPAL ADOPTION AND IMPLEMENTATION PROCESS

Option A

Zoning Ordinance

Zoning only approach

- Create an Overlay District (limited geographic area)
- Implement through Conditional Use Permit from Planning Board, including approval for deviations from requirements (no application to Zoning Board of Adjustment)
- All standards contained in zoning

Option B

Zoning + Regulations

Combination approach

- Create an Overlay District (limited geographic area; execute through Conditional Use Permit)
- Require compliance with minimum criteria for ALL development within the Overlay District (or with exemptions for some types/scale)
- All stormwater standards contained in Site Plan Review and Subdivision Regulations

Option C

Regulations

Regulations only approach

- Standards apply to certain types and thresholds of development/disturbance
- All standards contained in Site Plan Review and Subdivision Regulations
- · Deviations from standards by request for waiver from Planning Board











