2013

# Policy Guide For Municipal Leaders and Legislators

Piscataqua Region Estuaries Partnership

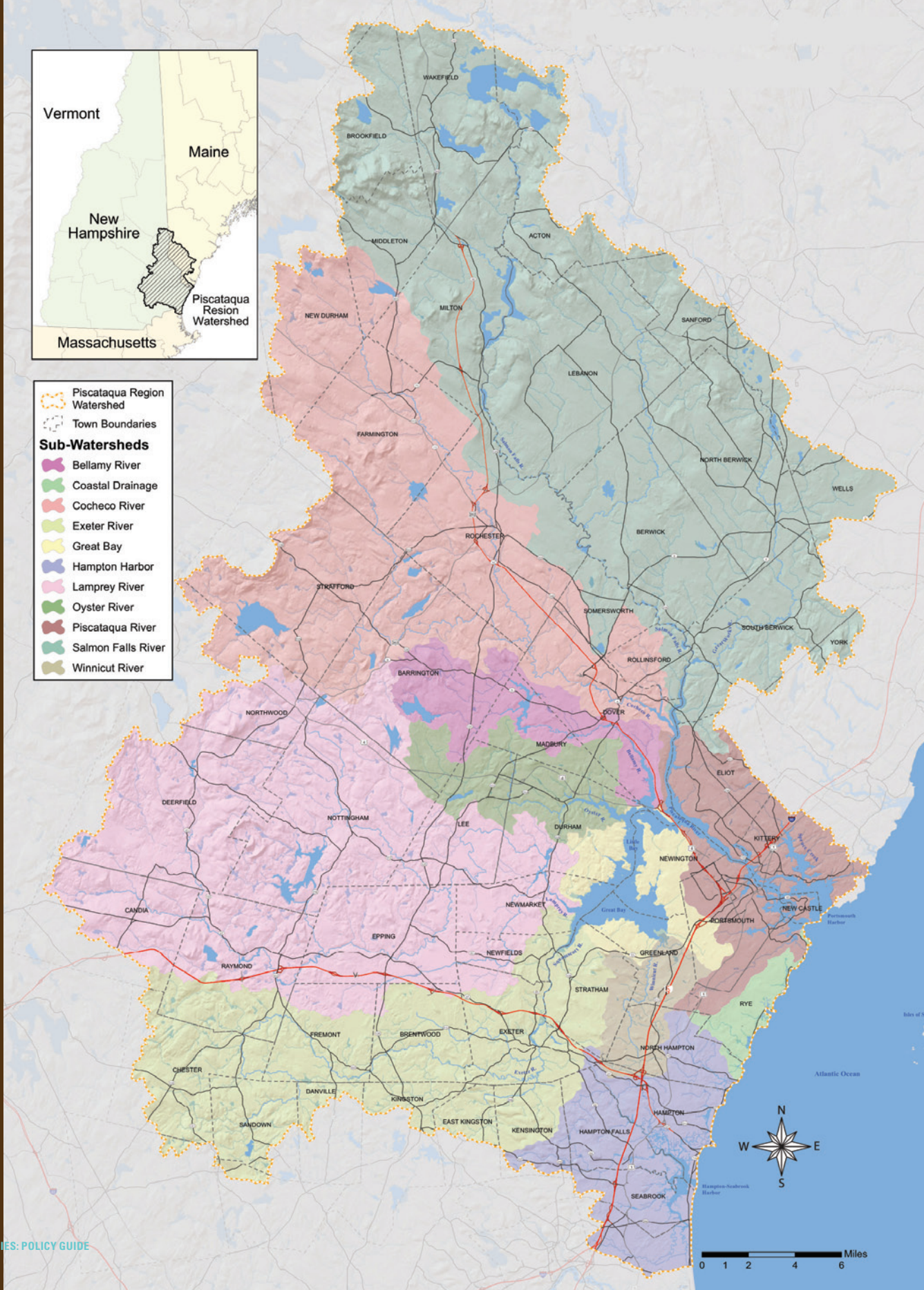
# POLICY

GUIDE FOR
MUNICIPAL LEADERS
AND LEGISLATORS

PREP
Piscataqua Region Estuaries Partnership

## PISCATAQUA REGION WATERSHED

Rivers flowing from 52 communities in New Hampshire and Maine converge with the waters of the Atlantic Ocean to form the Great Bay and Hampton-Seabrook estuaries. The watershed covers 1086 square miles. These bays provide critical wildlife habitat, nurseries for seafood production, buffering from coastal flooding, recreational enjoyment, and safe harbor for marine commerce. Our estuaries are part of the National Estuary Program, and recognized broadly as exceptional natural areas in need of focused study and protection.



# About this Guide

We all benefit from keeping our estuaries healthy and clean. The Great Bay and Hampton-Seabrook estuaries are recognized as two premiere model systems in our nation for protection and study.

Every three years the Piscataqua Region Estuaries Partnership releases a condition and environmental trends report to provide communities, citizens and decision-makers with an informed and comprehensive evaluation of what is being observed in The Great Bay and Hampton-Seabrook estuaries. The conditions and trends documented in the *2013 State of Our Estuaries Report* emphasize the need for both more research and action.

This Guide for Municipal Leaders and Legislators, is a companion to the full *2013 State of Our Estuaries Report*, and focuses more specifically on what state and local leaders can do to improve environmental conditions in the estuaries. It provides a short list of priority policy options for decision-makers to consider, as well as model efforts from our own communities that can be replicated in support of our environmental health and economic vitality.

As a community of people who want to ensure a healthy environment and economy, we need to take action to:

- Expand the monitoring of our estuaries and fund additional research to address knowledge gaps.
- Protect important natural areas and waterways through land conservation and improved land use planning and development practices.
- Increase the pace and scale of restoration efforts for oysters, eelgrass, salt marsh, and migratory fish populations.
- Invest in clean water through appropriate infrastructure upgrades and reduce stormwater pollution from paved areas.

Moon Over The Great Bay

It is our hope that this Guide will prompt and inform important state and local discussions about what can be done at every level to address our shared challenge to improve conditions in our estuaries. For more information on the 2013 State of the Estuaries Report, please contact us or find the full report online at www.prep.unh.edu.

# 2013 State of Our Estuaries Environmental Indicators

The *2013 State of Our Estuaries Report* assessed 22 key indicators of the health and management of our bays: 15 of which are classified as having cautionary or negative conditions or trends, while 7 show positive conditions or trends. The overall assessment shows that there is reason to be concerned about the health of our estuaries, and that increased efforts to study and restore our estuaries are needed. It also shows that there are effective efforts that can be made now to begin to reverse trends of concern.

# High Priority Policy Options for Addressing Challenges in The Great Bay and Hampton-Seabrook Estuaries

## PRIORITY POLICY OPTIONS FOR 2013-2016

In light of the documented environmental challenges facing our estuaries, here are eight highest priority policy options that will help protect and restore the health of our rivers, lakes, bays, and communities. Each option directly impacts more than one key environmental indicator and more detailed information on resources and partners for implementation is also noted. Collaboration and shared purpose among municipalities and lawmakers will be required in order to implement the following improvements to existing local and state policies.

These criteria were used by a panel of state and local stakeholders for selecting the following high priority policy options to best address the challenges presented in the full *2013 State of Our Estuaries Report*.

Is the policy option:

- A pre-identified priority policy action in the 10-Year PREP Comprehensive Management Plan (CCMP), Piscataqua Region Environmental Planning Assessment (PREPA), NH Water Resources Primer (Primer), or New Hampshire Coastal Adaptation Workgroup (NHCAW)?
- Relevant over 2013-2016 time horizon?
- Related to one or more environmental indicators discussed in the full *2013 State of Our Estuaries Report*?
- Well timed for opportunity and action?
- Based on sound science to ensure that it will provide multiple benefits?

| Priority Policy Options | Primary Environmental Indicators Affected | Reference Document to Assist Implementation* |
|---|---|---|
| 1. Adopt consistent municipal and state regulations for pollution prevention and reduction across the coastal region with the following essential priorities:<br>a. protection of natural vegetation buffers along streams and wetlands<br>b. best available storm water management practices<br>c. best available erosion and sediment control practices | Impervious Cover, Bacteria, Nutrients, Dissolved Oxygen, Sediments, Toxics, Eelgrass, Fish | CCMP<br>PREPA<br>Primer |
| 2. Incentivize and require the adoption of "low impact development" practices to reduce pavement and ensure that new development does not worsen pollution problems. | Impervious Cover, Bacteria, Nutrients, Dissolved Oxygen, Sediments, Toxics | CCMP<br>PREPA<br>Primer |
| 3. Improve stormwater and wastewater treatment infrastructure by leveraging investment responsibility among all levels of government and developers. | Bacteria, Nutrients, Dissolved Oxygen, Sediments, Fish, Toxics, Eelgrass, Clams | CCMP<br>Primer |
| 4. Reduce fertilizer pollution of rivers and bays by requiring slow release nitrogen products, restricting application near waterbodies, and effective education of landscapers and homeowners. | Nutrients, Dissolved Oxygen, Eelgrass, Fish | CCMP<br>Primer |
| 5. Reduce pollution from septic systems by requiring that systems are working properly when property changes ownership and requiring best available pollutant treatment technology for new or replacement systems. | Bacteria, Nutrients, Dissolved Oxygen, Eelgrass, Fish | CCMP |
| 6. Require new culverts and bridges to be built to withstand more severe flood events and ensure unobstructed movement of fish and wildlife between the estuaries and coastal rivers. | Fish, Sediment | CCMP<br>NHCAW |
| 7. Protect river and bay habitats by minimizing artificial hardening of shorelines with riprap and seawalls. | Eelgrass, Oyster restoration, Fish, Clams | CCMP<br>NHCAW |
| 8. Utilize land conservation as a key tool to reduce/prevent stormwater pollution. | Land Conservation, Impervious Cover, Bacteria , Nutrients, Dissolved Oxygen, Sediments, Toxics | CCMP PREPA<br>PRIMER NHCAW |

* CCMP = 2010 Comprehensive Conservation Management Plan (PREP) PREPA = Piscataqua Region Environmental Planning Assessment (PREP)
PRIMER = NH Water Resources Primer (NHDES) NHCAW = New Hampshire Coastal Adaptation Workgroup

# What Can Cities and Towns Do to Protect Clean Water?

While there are many actions local communities can do to protect clean water, the following policies and practices are likely to have the greatest benefit:

**1) Support permanent land conservation in your town**

- Use existing land conservation plans to help you identify top priority areas. *
- Partner with local and national land trust experts to help you conserve special places in your town.
- Utilize Land Use Change Tax or other revenues to support a Conservation Fund in your town. A small amount of local funding can leverage much greater external funds to complete land protection efforts in your town.

## Why This Matters:

**Our region is under pressure from rapid population growth and land development. Conserving a network of undeveloped natural lands in our region is critical in order to maintain clean water, support healthy wildlife populations, minimize flood damages, and provide quality recreational opportunities.**

**2) Protect natural areas of vegetation along waterways and wetlands**

- To keep local streams, rivers, and lakes clean it is recommended that your municipality enact local regulations that protect a minimum of 100' wide buffers of undisturbed natural vegetation along all currently undeveloped shoreland areas.
- Wetlands in your town serve as free natural pollution filters. Local development policies should protect this service by keeping natural vegetation buffers around them.

## Why This Matters:

**The simplest and most effective way to protect clean water in streams, rivers, lakes, and estuaries is to leave an area of undisturbed native vegetation adjacent to the waterway. These natural areas filter pollution before it reaches our waterways, and are also essential places for wildlife.**

**3) Update your local development policies to require Low Impact Development (LID) practices that minimize stormwater pollution.**

- Every town can update their existing zoning ordinances, site plan regulations, and subdivision regulations to require smarter development practices.
- Improved policies should specifically include the latest guidance on proper stormwater management and erosion and sediment control requirements. Guidance on these issues is available at: http://des.nh.gov/organization/divisions/water/stormwater/manual.htm
- Technical assistance is readily available in our region to help with these improvements. Contact the regional planning commission active in your region for support.

## Why This Matters:

**Polluted run-off from developed areas is one of the largest contributors to the pollution that increasingly threatens the Seacoast region's rivers and bays. Requiring that all new development follow Low Impact Development (LID) practices will minimize the creation of polluted water. LID practices better protect natural features on a site that filter water, encourage water to filter through soils at the site, and ensure that the development causes no harm to the amount and cleanliness of the water leaving the development site.**

* *The Land Conservation Plan for New Hampshire's Coastal Watersheds* and the *Land Conservation Plan for Maine's Piscataqua Region Watersheds*

# Model Efforts in Our Communities to Improve Environmental Conditions

**SOMERSWORTH, NH: WORKING TOGETHER WITH BUSINESSES TO HAVE A LOW IMPACT ON OUR WATERWAYS**

Thanks to efforts from the Somersworth Planning Board and Dave Sharples, Director of Planning and Community Development, low impact development (LID) provisions were integrated recently into the City of Somersworth's site plan policies. LID techniques help to reduce pollutants carried into surface waters by runoff when it rains. Breaking from familiar development approaches can be challenging as it often requires different materials like porous pavement, and different maintenance practices. But there are benefits that far outweigh the initial hurdles. One benefit of LID is increased aesthetics as LID buildings generally incorporate attractive design features like rain gardens.

Once widespread support for using LID techniques existed, businesses and the town made their commitment official through new local ordinance and site regulations. Today, the business community continues to promote LID among themselves, rallying around reducing local impacts to clean water relied on by their friends, neighbors, and customers.

Dave Sharples is hopeful for the future of Great Bay. "Somersworth isn't the only community taking action on their commitment to reduce pollution and protect healthy drinking water. But there is much work to be done in encouraging similar efforts, and it's not always

Impervious surface runoff

Above: Before rain garden installation at Oyster River High School; Right: After rain garden installation

an easy sell", he said. "You can measure pollutants in stormwater with special scientific equipment, but the water running off the parking lot usually looks pretty clean; you can't see the high concentrations of nitrogen flowing into the river through a storm drain. So it takes sustained effort over time." As Dave put it, "We're making progress in addressing pollution in Great Bay and the watershed, but it's like turning around the world's largest oil tanker. The problems with pollution that we face in Great Bay are like an oil tanker, not a jet ski."

## DURHAM: WORKING TO MEASURE NITROGEN REDUCTIONS

Ask Town Engineer Dave Cedarholm and he will tell you the Department of Public Works crews and operators at the wastewater treatment plant in Durham, NH have a complex job dealing with local stormwater and wastewater from the town and nearby University of New Hampshire (UNH). Wastewater from the Town and UNH campus all goes through the Town's wastewater treatment plant, and plant operators work tirelessly to optimize the treatment process so that the treated effluent discharged into the Oyster River after the treatment process meets acceptable standards.

Recently, the Environmental Protection Agency (EPA) has been going through the process of issuing new wastewater permits for towns around Great Bay. These permits focus on upgrades to wastewater treatment plants so they can more effectively remove nitrogen from treated water. The Durham facility can already remove a significant amount of nitrogen, but nitrogen doesn't just come from treated wastewater also called as point sources. Much of it enters streams and rivers in the water running off impervious surfaces like parking lots and roofs, from septic systems, and from natural sources. These are called non-point sources.

The Town of Durham is looking at dedicating resources and efforts to reduce more non-point sources of nitrogen and other pollutants. Throughout the coming months Dave and his staff will be working with EPA, UNH, NH Department of Environmental Services and other watershed stakeholders to coordinate stormwater and wastewater management in the Oyster River Watershed and address nitrogen in a more comprehensive way. One of the approaches they are using to reduce pollutant runoff is the installation of rain gardens throughout the town. Rain gardens are constructed to drain and filter water more effectively that grassy areas.

## OYSTER FARMING: PRO BUSINESS AND PRO-ECONOMY

Oysters are a model for the importance of a healthy ecosystem that in turn supports a healthy economy. Just talk to Will Carey of The Little Bay Oyster Company and taste one of the oysters he grows in his "underwater vineyard" off of Fox Point in Newington, NH. Oysters take on a taste that's unique to the area where they grew up – our Great Bay oysters taste briny, yet sweet. A single, mature oyster also helps keep the water clean by filtering pollutants out of as many as 22 gallons of water each day.

But growing oysters is a not-so-ordinary source of income. It's a small business that's intimately connected to the local culture and relies on the health of the local waters. Enterprises like the Little Bay Oyster Co. represent an opportunity to reintroduce a natural resource as part of local business and stimulate the NH economy. But getting started in the business can mean going into debt, and dealing with a patchwork of rules and regulations from state and federal agencies. Today Little Bay Oyster Company is now one of about six commercial growers and part of a growing movement of local economies based on a healthy ecosystem, valuable natural resources and clean water.

Small residential rain garden in spring.

A recent legislative effort to support oyster farming by improving permitting was successful. Last year HB1392 was passed to allow oyster farmers to secure multi-year permits.

"I'm encouraged by the passing of this legislation because it's pro-environment and pro-business at the same time," said the bill's sponsor Rep. Adam Schroadter of Newmarket. The new law will provide an incentive for oyster farmers by giving them multi-year licenses from N.H. Fish and Game. Oyster farms were previously required to be re-licensed by Fish and Game each year, which was seen by many as a disincentive for startups that worried about being licensed one year but not the next.

Rep. Adam Schroadter from Newmarket at the press conference announcing the passage of HB1392

**LOOK FOR OUR OTHER PUBLICATIONS.**
Visit www.PREP.unh.edu to view and download.




The full 48-page Environmental Indicators and Conditions Report that has deeper explanations, tables, graphs & future priorities.


A short guide for citizens that has examples and tips on simple things everyone can do to help prevent pollution and protect the places we love.

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