HAMPTON-SEABROOK SUBWATERSHED

PISCATAQUA REGION ENVIRONMENTAL PLANNING ASSESSMENT 2015

Hampton-Seabrook Subwatershed, including: Hampton, Hampton Falls, Seabrook



www.prepestuaries.org

Hampton-Seabrook Subwatershed

INTRODUCTION

Hampton-Seabrook Harbor is a smaller barbuilt estuary situated behind barrier beaches and surrounded by over 5,000 acres of saltmarsh. The drainage area of the estuary is 46 square miles. There are six rivers that flow into the Hampton-Seabrook estuary including the Taylor River, Hampton Falls River, Browns River, Cains Brook/Mill Creek, Hunts Island Creek, and Blackwater River. The estuary itself is approximately 475 acres at high tide and has 72 miles of tidal shoreline. Hampton-Seabrook estuary has the last remaining sand dunes in coastal New Hampshire and the most productive clam flats in the state. With the region at or near complete buildout with impervious surfaces the challenges of managing stormwater are paramount. Impacts from sea level rise and increasing storm events are challenges the watershed will face as well.

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Balance is key. PREP recommends no more than 10% impervious cover and no less than 20% conservation land in a watershed.





Impervious Cover

An overall trend shows an increase in impervious cover for each of the three towns from 1990 to 2010. This trend is consistent with the remaining subwatersheds in the Great Bay Watershed. Currently all of the towns within the Hampton-Seabrook Watershed (Hampton, Hampton Falls, and Seabrook) exceed the NHDES 10% maximum for impervious cover: Seabrook (34.7%), Hampton (25.6%) and Hampton Falls (12%).

Nitrogen Loading

PRIMARY CONTRIBUTOR: ATMOSPHERIC DEPOSITION

contributes 38,361.5 pounds of nitrogen per year to the Hampton-Seabrook Watershed, and roughly 31 percent—or 12,115.1 pounds per year—is deposited on natural vegetation within the watershed. The remaining 69 percent is split between connected impervious areas, estuarine waters, disconnected impervious areas, residential lawns, lakes and rivers, agriculture, and golf courses, parks, and sports fields in descending order.

SECOND CONTRIBUTOR: CHEMICAL FERTILIZER

contributes 22,884.8 pounds of nitrogen per year to the Hampton-Seabrook Watershed, and nearly 50 percent—or 76,077.9 pounds per year—comes from residential lawns. The remaining 50 percent is split between agriculture and golf courses, parks, and sports fields in descending order.

For more info please visit www.PREPestuaries.org/PREPA



Report Cards

Freshwater Wetland Protection

- 1. Designated "prime" wetlands (NH) or "significant" wetlands (ME), and adopted local regulations to protect these wetlands?
- 2. Regulations that offer explicit protection of vernal pools?
- 3. No soil disturbance or No Vegetation Disturbance buffer requirement that is >= 100 feet?
- 4. Septic Setback requirement that is >= 100 feet?
- 5. Building Setback requirement that is >= 100 feet?
- 6. Fertilizer Application Setback requirement that is >= 100 feet?



Stormwater Management

- 1. Stormwater management regulations?
- 2. Less than or equal to 9% Impervious Cover?
- 3. Minimum area of soil disturbance that "triggers" application of the municipality's stormwater management regulations less than or equal to 20,000 sq. ft.?
- 4. Cap of 10% effective impervious cover (EIC) for new development in residentially zoned lots of 1 acre or more?
- 5. Existing regulations require the use of Low Impact Development (LID) techniques to the maximum extent practicable for new/re-development?
- 6. Stormwater management regulations reflect the minimum design criteria for water quality volume/ flow (WQV/WQF), groundwater recharge volume (GRV), and peak flow control defined in the NH Stormwater Management Volume 2?



Shoreland Buffers and Setbacks

2nd – 4th Order Streams and Lakes/Ponds

- 1. No Vegetation Disturbance or Managed buffer requirement that is >= 100 feet?
- 2. Septic Setback requirement that is >= 100 feet?
- 3. Building Setback requirement that is >= 100 feet?
- 4. Fertilizer Application Setback requirement that is >= 100 feet?

1st Order Streams

- 5. No Vegetation Disturbance or Managed buffer requirement that is >= 75 feet?
- 6. Septic Setback requirement that is >= 100 feet?
- 7. Building Setback requirement that is >= 100 feet?
- 8. Fertilizer Application Setback requirement that is >= 100 feet?



Climate Change

- 1. Has the municipality completed some form of climate change vulnerability assessment?
- 2. Has the municipality completed some form of climate change adaptation planning effort?
- 3. Has the municipality adopted regulatory changes intended to reduce the municipality's vulnerability to potential climate change impacts?



To explore specific data, please visit www.PREPestuaries.org/PREPA

Actions by Community

The 2015 PREPA provides a comprehensive review of the current state of municipal regulations in the 52 communities in the Piscataqua Region watershed. Although most communities haven taken some steps to protect their natural resources, more work is needed by **every community** in the Hampton-Seabrook Estuary.

Top Priority Action

Second Priority Action Third Priority Action Fourth Priority Action Community Summary For each of the communities in the Hampton-Seabrook Subwatershed, buffers should be the first priority. Hampton and Seabrook have existing buffers for 1st through 4th order streams, but should work to increase those buffers. All towns within the Hampton-Seabrook Subwatershed should work to increase setbacks for both septic and primary structures.

ΗΑΜΡΤΟΝ					
1 Increase buffers on 1st-4th order streams to 100'	2 Increase septic and structure setbacks to 100' on surface waters	3 Adopt fertilizer application setbacks for all water bodies	4 Adopt mandatory conservation subdivision regulations		
HAMPTON FALLS					
Adopt 100′ buffers on all waterbodies, including wetlands	2 Increase septic and structure setbacks to 100' on 1st and 2nd order streams	3 Adopt model stormwater regulations	4 Adopt mandatory conservation subdivision regulations		
1 Increase buffers to 100' for all waterbodies	2 Increase septic and structure setbacks to 100' for all waterbodies	3 Adopt fertilizer application setbacks for all water bodies	4 Adopt model stormwater management regulations		

Resources for implementing these actions can be found on the website www.PREPestuaries.org or contacting PREP at prep.assistance@unh.edu

RECOMMENDED ACTIONS

The actions table is not meant to be exhaustive but does reflect a menu of prioritized recommendations for communities. Actions are directly related to the questions found on the PREPA assessment forms and reflects both regulatory and non-regulatory actions. Due to impervious surface levels well in excess of 10%, it is recommended that each community require improved stormwater controls for reducing runoff for redevelopment projects or other significant construction, and for site improvements such as repaving or building renovations.



Coastal Sand Dune System at Seabrook Beach, Photo by Ben Kimball.



The full PREPA report features deeper explorations of the data region-wide and gives greater context to the issues.

TAKE ACTION

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