## WINNICUT-COASTAL SUBWATERSHED

### PISCATAQUA REGION ENVIRONMENTAL PLANNING ASSESSMENT 2015

**Winnicut-Coastal Subwatershed, including:** Eliot, Greenland, Kittery, New Castle, Newington, North Hampton, Portsmouth, Rye



www.prepestuaries.org

## Winnicut-Coastal Subwatershed

### INTRODUCTION

The Winnicut-Coastal subwatershed encompasses the Winnicut River, portions of the Great Bay Estuary, the confluence of the Piscatagua River and the Atlantic Ocean, and the coastal drainage area between the Great Bay Estuary and the Atlantic coast.

The region is home to a long list of cultural and natural resources that continue to attract an ever increasing population and the associated economic growth.

With increasing populations, communities are faced with continued development and increasing impervious cover. The watershed faces the challenge of managing impervious

surface levels and controlling stormwater pollution in populated centers like Kittery, ME, New Castle, and Portsmouth, NH. As well as, preparing and adapting to threats from climate change such as rising sea levels and increased flooding.

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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.





### Study, 2014. Nitrogen measured in pounds per year.

### **Impervious Cover**

An overall trend shows an increase in impervious cover for each of the eight towns from 1990 to 2010. This trend is consistent with the remaining subwatersheds in the Great Bay Watershed. Currently all towns within the Winnicut-Coastal Watershed exceed the NHDES 10% maximum for impervious cover.

## Nitrogen Loading

#### PRIMARY CONTRIBUTOR: ATMOSPHERIC DEPOSITION

contributes 119,448.1 pounds of nitrogen per year to the Winnicut & Coastal Watershed, and nearly 34 percent–or 40,429.6 pounds per year–is deposited on estuarine waters within the watershed. The remaining 66 percent is split between natural vegetation, connected impervious areas, disconnected impervious areas, lakes and rivers, residential lawns, agriculture, and golf courses, parks, and sports fields in descending order.

**SECOND CONTRIBUTOR: HUMAN WASTE** contributes 67,189.6 pounds of nitrogen per year to the Winnicut & Coastal Watershed, and nearly 75 percent–or 50,033.8 pounds per year–comes from septic systems located greater than 200 meters from a waterway. The remaining 25 percent comes from septic systems within 200 meters of a waterway.

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 have taken some steps to protect their natural resources, more work is needed by **every comunity** in the WinnicutCommunity Summary Adopting and/or increasing buffers and setbacks for septic, primary structures, and fertilizer application should be the priority of the communities within the Winnicut-Coastal Subwatershed.

Resources for implementing these actions can be found on the website

Coastal watersheds.

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. Top Priority Action
Second Priority Action
Third Priority Action
Fourth Priority Action



PISCATAQUA REGION ENVIRONMENTAL PLANNING ASSESSMENT



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

### TAKE ACTION

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



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