



PREP

Piscataqua Region Estuaries Partnership

Piscataqua Region Environmental Planning Assessment (PREPA)

Where does your community fit?

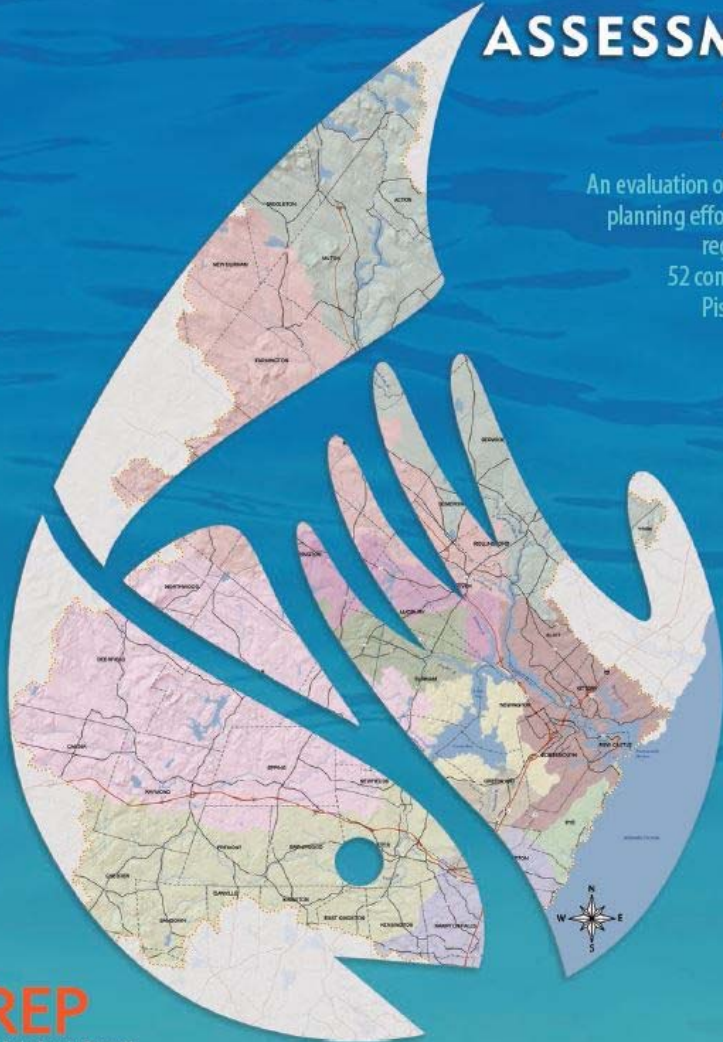
**Abigail Gronberg, Project Assistant
Technical Assistance Program Manager**

March 18, 2016



PISCATAQUA REGION ENVIRONMENTAL PLANNING ASSESSMENT 2015

An evaluation of environmental
planning efforts and land use
regulations for the
52 communities in the
Piscataqua Region.



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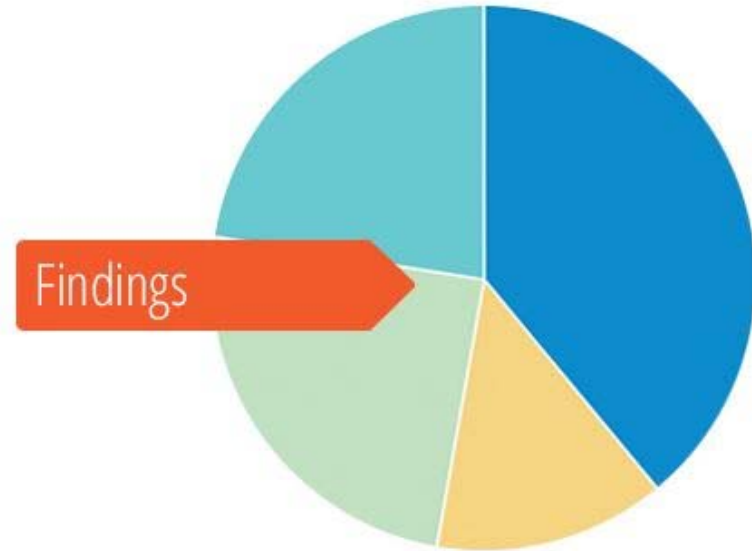
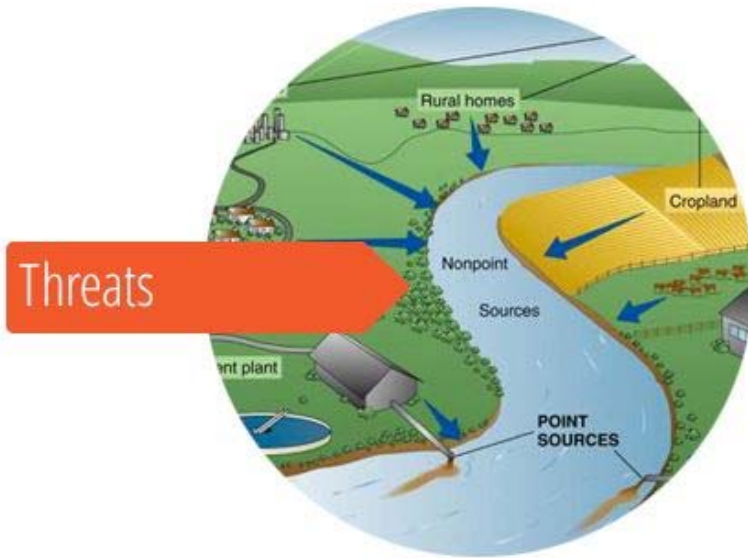


- First PREPA in 2010
- Update initiated in early 2014
- Assessment forms developed with partners
- Sent out to 52 towns with RPC help
- Interview town officials & data input

Piscataqua Region Environmental Planning Assessment (PREPA) Form

Municipality Name: Berwick, ME		Regional Planning Commission for municipality: SMPDC		
Name of person completing form: Dave Carpenter				
Ordinances, regulations, reports reviewed as part of assessment (provide a reference number for each document, and write this number in the "Doc. Ref #" column to cite the source of information used to answer each applicable question): Land Use Ordinance 01-001 Comprehensive Plan 01-002 Subdivision Regulations 01-003				
Name(s) of municipal contacts (i.e. code enforcement officer, Cons. Com. Chair, Planning Board Chair, etc.) interviewed: Planner: John Stoll				
Name(s) of municipal staff (if any) that help the municipality with environmental planning issues. Please note the percent (%) of time that their position allows them to work specifically on environmental planning. Planner: John Stoll @ 20%				
Directions: Fill out one data form per municipality. Fill out the form electronically - no handwritten forms please. For yes or no questions, please check one answer. For blanks without a yes or no, write in the appropriate date, distance, checkmark, or narrative description as prompted by the question. Most questions apply to municipalities in both Maine (ME) and New Hampshire (NH). Questions that only apply to one state are flagged with a (ME) or (NH). Each grey box corresponds to an area that can be checked or can have a narrative answer typed into it.				
Conservation Fundamentals				
	Check One (yes or no)		Doc.Ref. #	Document URL or Additional Comments:
Does the municipality have a Conservation Commission?	yes <input type="checkbox"/>	no <input checked="" type="checkbox"/>		
Does the municipality have a Code Enforcement Officer?	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	01-001	www.berwickmaine.org
Does the municipality have a completed Natural Resource Inventory (NRI) as part of its Comprehensive or Master Plan?	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	01-002	
Year Adopted:				
Natural Resource Chapter in Master Plan (NH)?	yes <input type="checkbox"/>	no <input type="checkbox"/>		
Year Adopted:				
Comprehensive Plan locally approved (ME)?	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>	01-002	
Year Approved:	1999			
Comprehensive Plan has state consistency approval (ME)?	yes <input checked="" type="checkbox"/>	no <input type="checkbox"/>		
Year Approved:	1999			

Three Sections

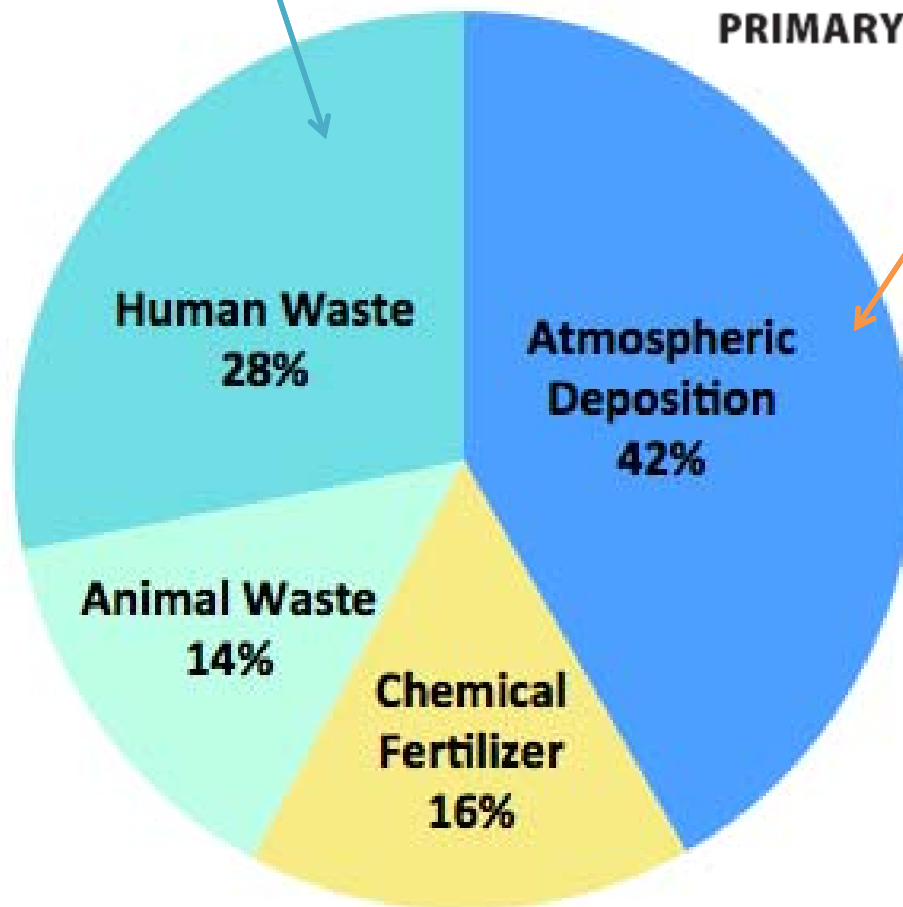


THREATS: NITROGEN LOADING

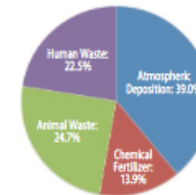
Non-Point Sources

SECOND CONTRIBUTOR: **HUMAN WASTE**

PRIMARY CONTRIBUTOR: **ATMOSPHERIC DEPOSITION**

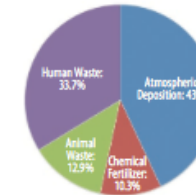


THREATS: NITROGEN LOADING



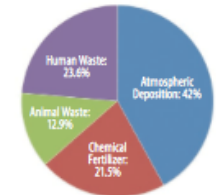
OYSTER & BELLAMY RIVERS WATERSHEDS

Figure 1.1 Breakdown of nitrogen inputs to the Oyster/Bellamy River Watersheds.



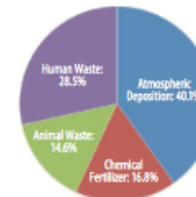
LAMPREY RIVER WATERSHED

Figure 1.3 Breakdown of nitrogen inputs to the Lamprey River Watershed.



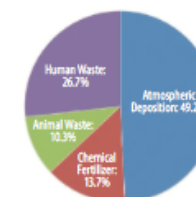
WINNICUT & COASTAL WATERSHED

Figure 1.7 Breakdown of nitrogen inputs to the Winnicut/Coastal Watershed.



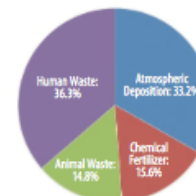
COCHECO RIVER WATERSHED

Figure 1.2 Breakdown of nitrogen inputs to the Cocheco River Watershed.



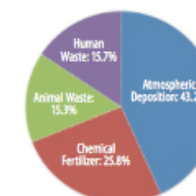
SALMON FALLS RIVER WATERSHED

Figure 1.5 Breakdown of nitrogen inputs to the Salmon Falls River Watershed.



EXETER & SQUAMSCOTT RIVERS WATERSHED

Figure 1.4 Breakdown of nitrogen inputs to the Exeter/Squamscott River Watershed.



HAMPTON-SEABROOK WATERSHED

Figure 1.6 Breakdown of nitrogen inputs to the Hampton-Seabrook Watershed.

“The purpose of the study was to “open up the box” and estimate both from where and from what activities does the 70% non-point source nitrogen originate. The intended use of this study is for planning purposes. The results of the model may be useful for towns or watershed groups for prioritizing nitrogen reduction efforts or as a starting point for more detailed studies of non-point sources. So far, I am quite pleased by how the report has been received and used. It is generating the conversation that we hoped it would.”

Ted Olsen, Watershed Management Bureau
NH Department of Environmental Services

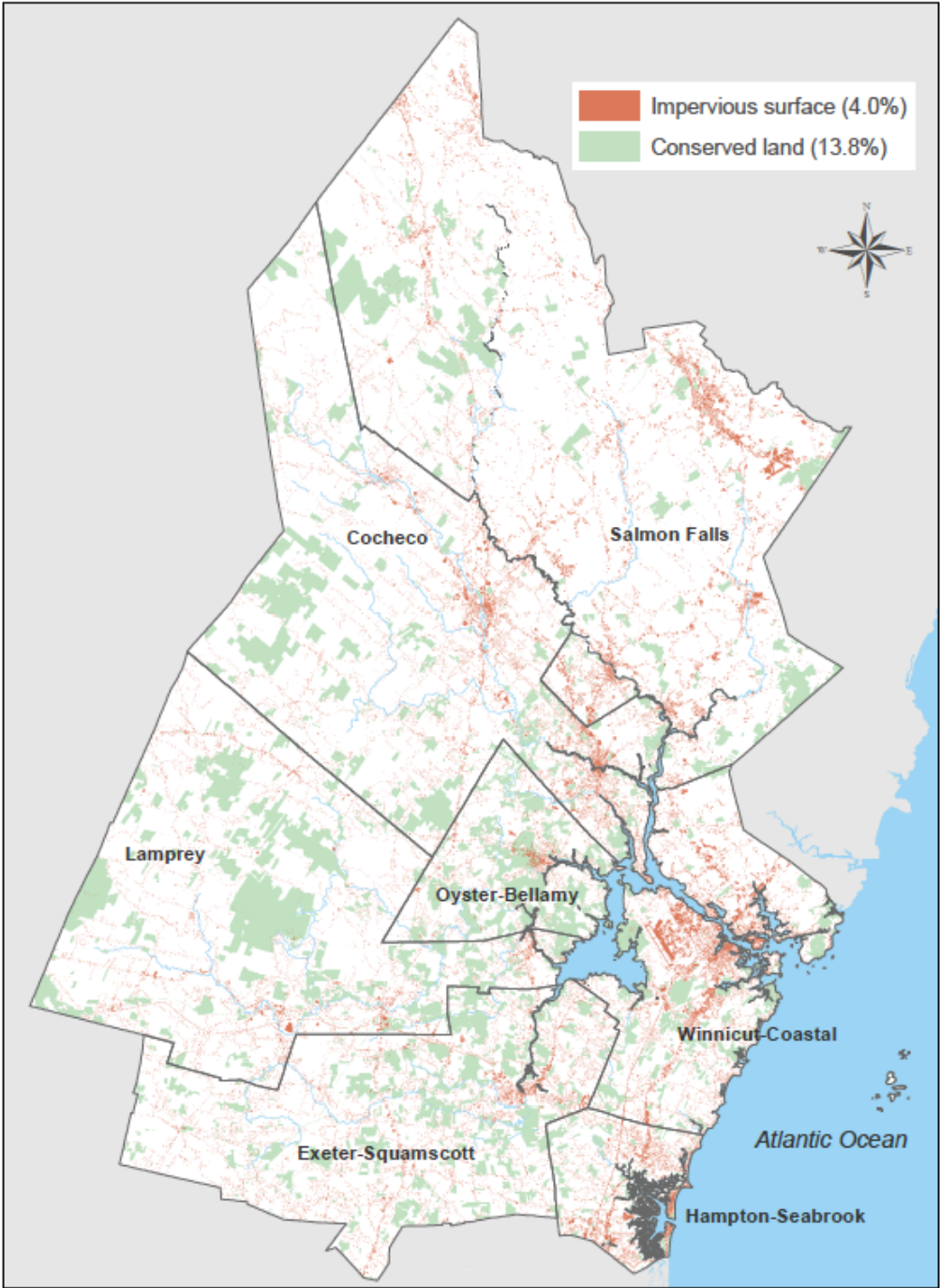


Data source: MDI's Great Bay Nitrogen Non-Point Source Study, 2014.
Nitrogen measured in pounds per year.

www.preestuaries.org/prepa

THREATS: IMPERVIOUS COVER

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



Note: High resolution impervious surface mapping was not available for Brookfield and Wakefield, New Hampshire and communities in Maine. Lower resolution impervious surface mapping was used for these communities.

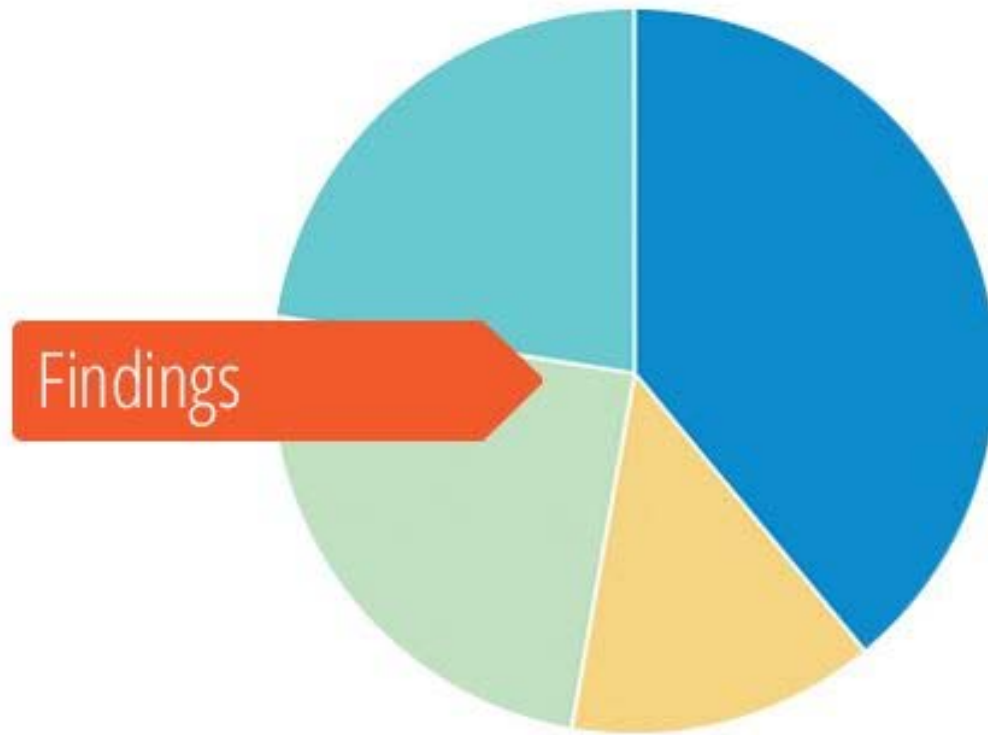
THREATS: CLIMATE CHANGE

Climate change impacts are likely to contribute additional stress to coastal habitats that we are working to conserve and restore.

PREDICTED IMPACTS	
Precipitation (Frequency and Intensity)	↑
Snowmelt	↑
Snow accumulation	↓
Coastal flooding (frequency and intensity)	↑
Sea Level Rise	↑



King Tide Photo 2014 by Ron Sher



Report cards calculated based on the responses to the assessment questions regarding the **4 topics** and what percentage attain the **minimum protective standards** suggested by NHDES or PREP.

WATERSHED FINDINGS

Freshwater Wetlands

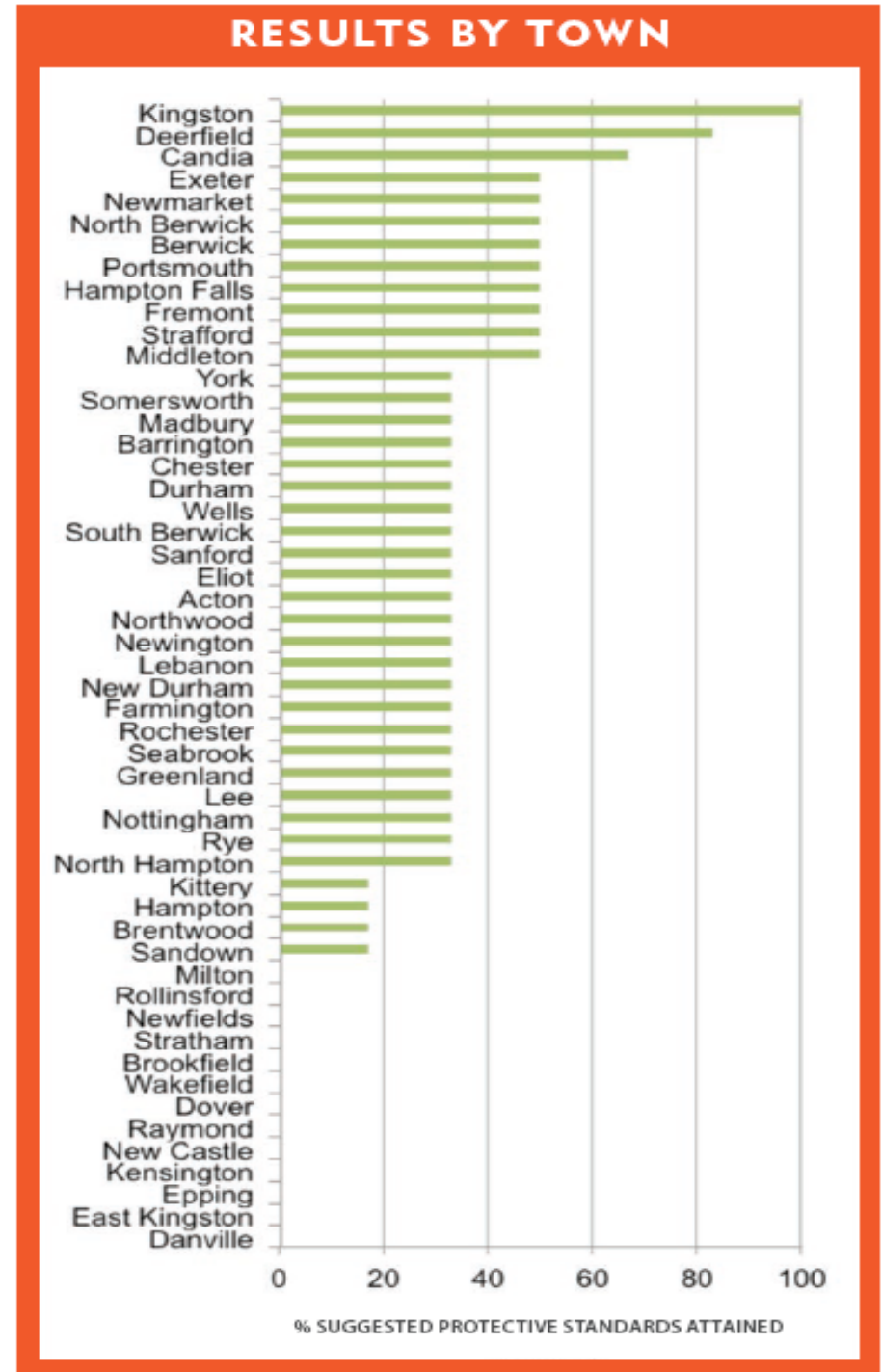
Shoreland Protection

Stormwater Management

Climate Change

Freshwater Wetlands

1. Does the municipality have designated “prime” wetlands (NH) or “significant” wetlands (ME), and adopted local regulations to protect these wetlands?
1. Do municipal regulations offer explicit protection of vernal pools?
1. Does the municipality have a No Soil Disturbance of No Vegetation Disturbance buffer requirement greater than or equal to 100’?
1. Does the municipality have a Septic Setback requirement greater than or equal to 100’?
1. Does the municipality have a Building Setback requirement greater than or equal to 100’?
1. Does the municipality have a Fertilizer Application Setback requirement greater than or equal to 100’?

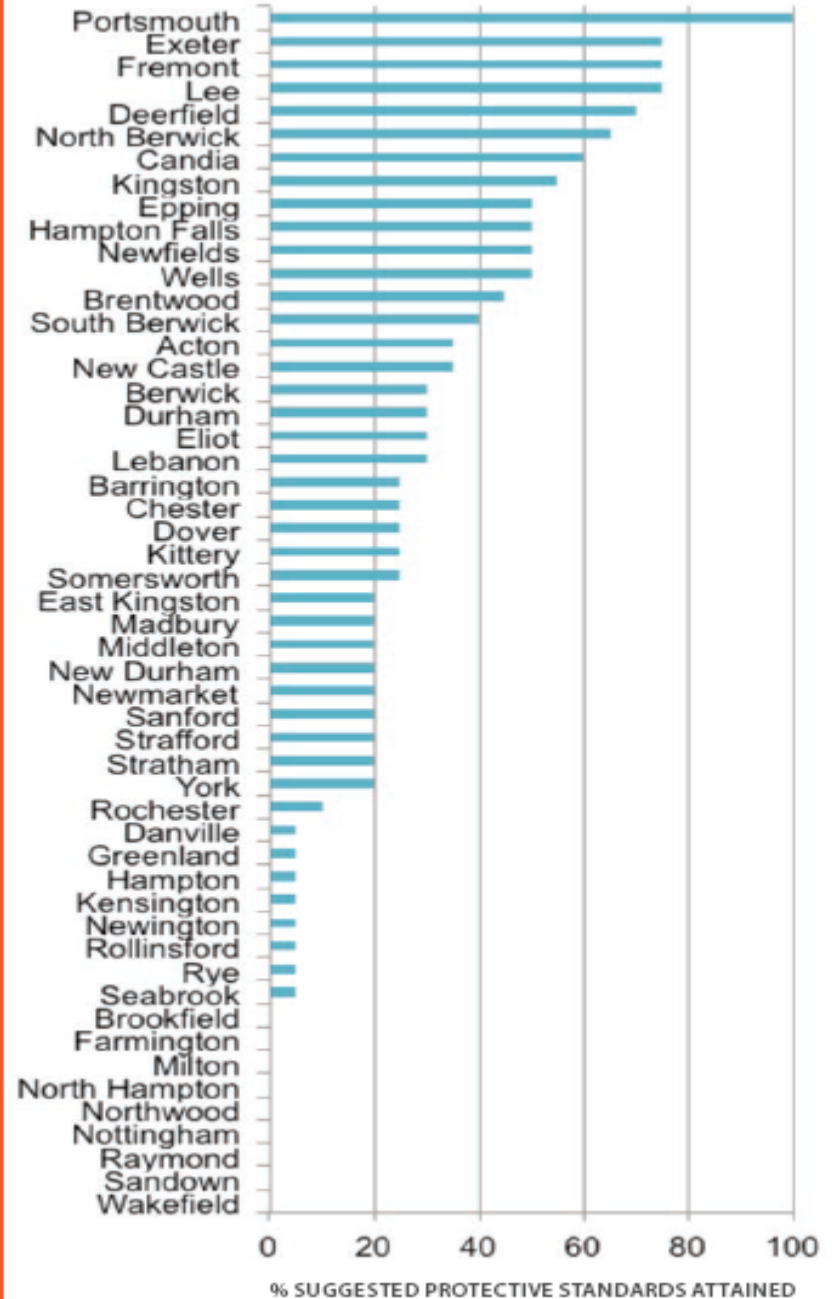


Shoreland Protection

For 1st -4th order streams, lakes, and ponds:

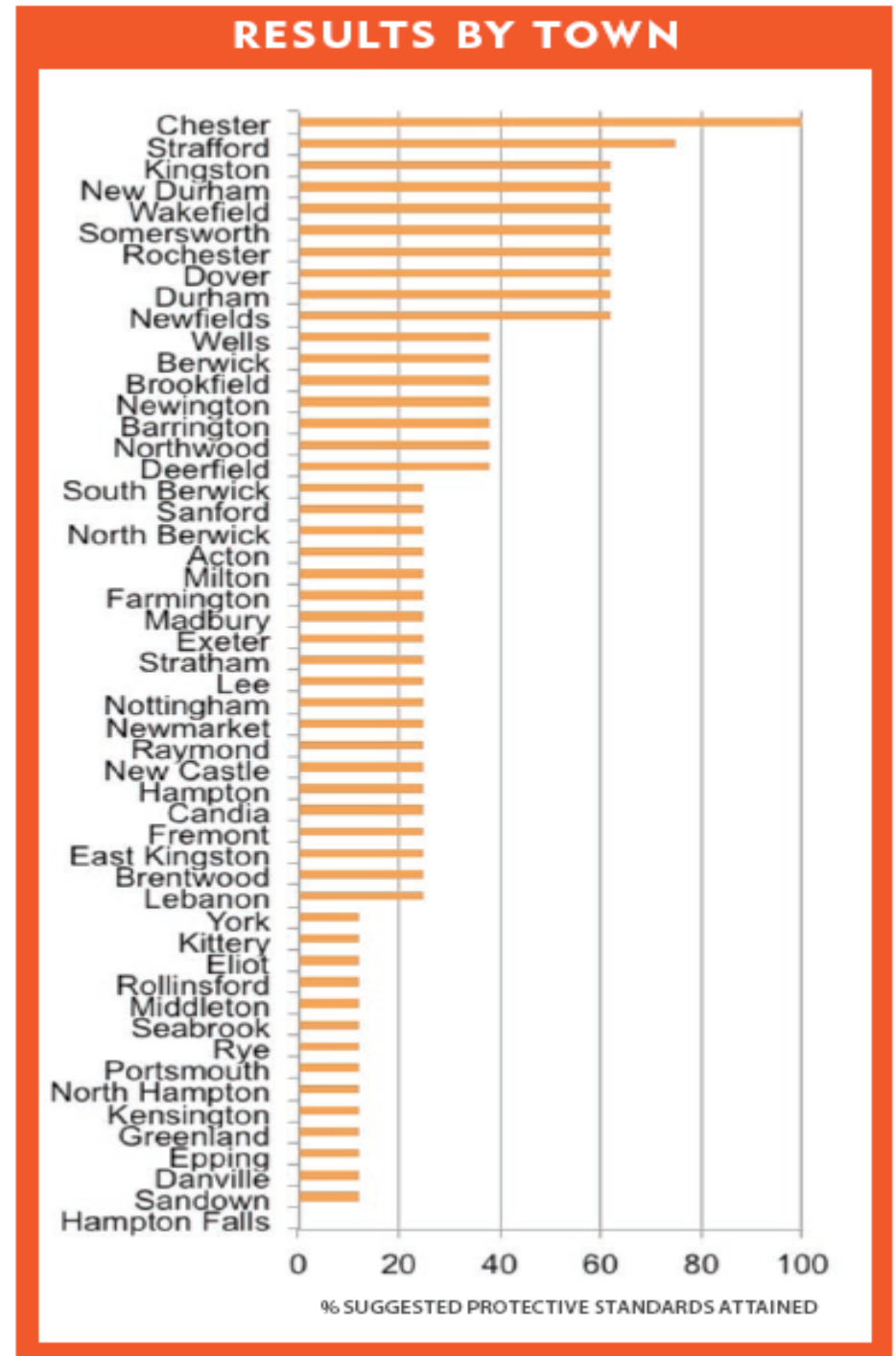
1. Does the municipality have a No Vegetation Disturbance or Managed Buffer requirement greater than or equal to 75'?
2. Does the municipality have a Septic Setback requirement greater than or equal to 100'?
3. Does the municipality have a Primary Structure Setback greater than or equal to 100'?
4. Does the municipality have a Fertilizer Application Setback requirement greater than or equal to 100'?

RESULTS BY TOWN



Stormwater Management

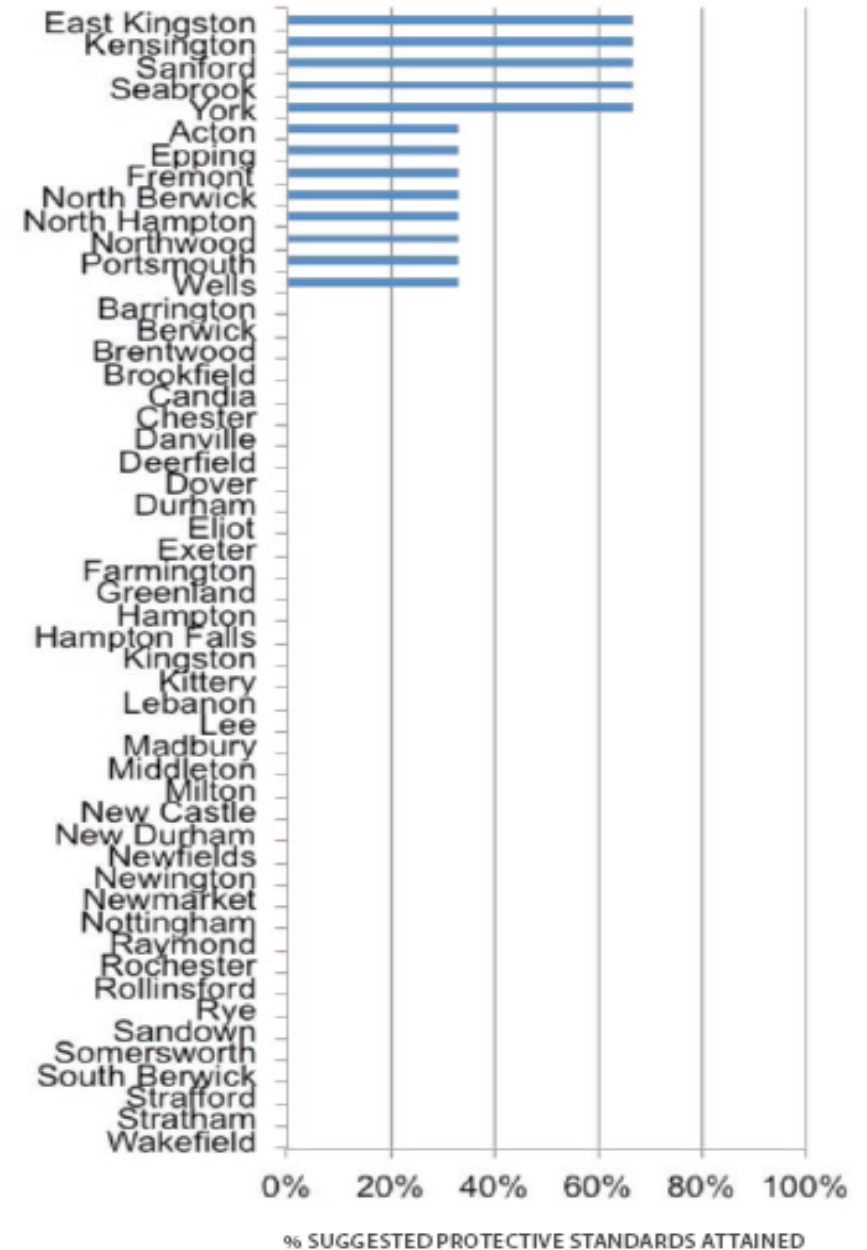
1. Does the municipality have stormwater management regulations?
2. Does the municipality have less than or equal to 9% impervious cover?
3. Is the minimum area of soil disturbance that “triggers” application of the municipality’s stormwater management regulations less than or equal to 20,000 sq. ft.?
4. Does the municipality have a cap of 10% effective impervious cover (EIC) for new development in residentially zoned lots of 1 acre or more?
5. Do the municipality’s existing regulations require the use of Low Impact Development (LID) techniques to the maximum extent practicable for new development and re-development?
6. Do the municipality’s 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?



Climate Change

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

RESULTS BY TOWN

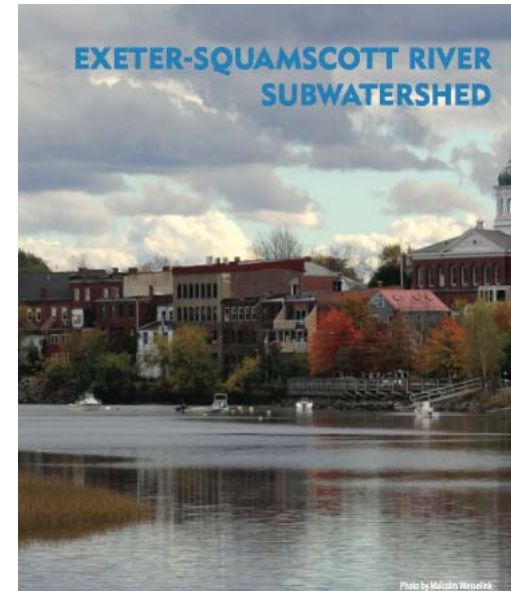


Actions



WATERSHED ACTIONS

- Increase naturally vegetated buffers
- Increase setback requirements
- Adopt regulations for fertilizer application
- Adopt model stormwater regulations
- Conduct a climate vulnerability assessment
- Increase land conservation efforts



PISCATAQUA REGION
ENVIRONMENTAL PLANNING
ASSESSMENT 2015

Exeter-Squamscott River Subwatershed, including:
Brentwood, Chester, Danville, East Kingston, Exeter, Fremont,
Kensington, Kingston, Newfields, Sandown, Stratham



STRATHAM			
1 Increase buffers to 100' for tidal wetlands	2 Increase septic and structure setbacks to 100' for freshwater wetlands	3 Adopt fertilizer application setbacks for all water bodies	4 Adopt model stormwater management regulations

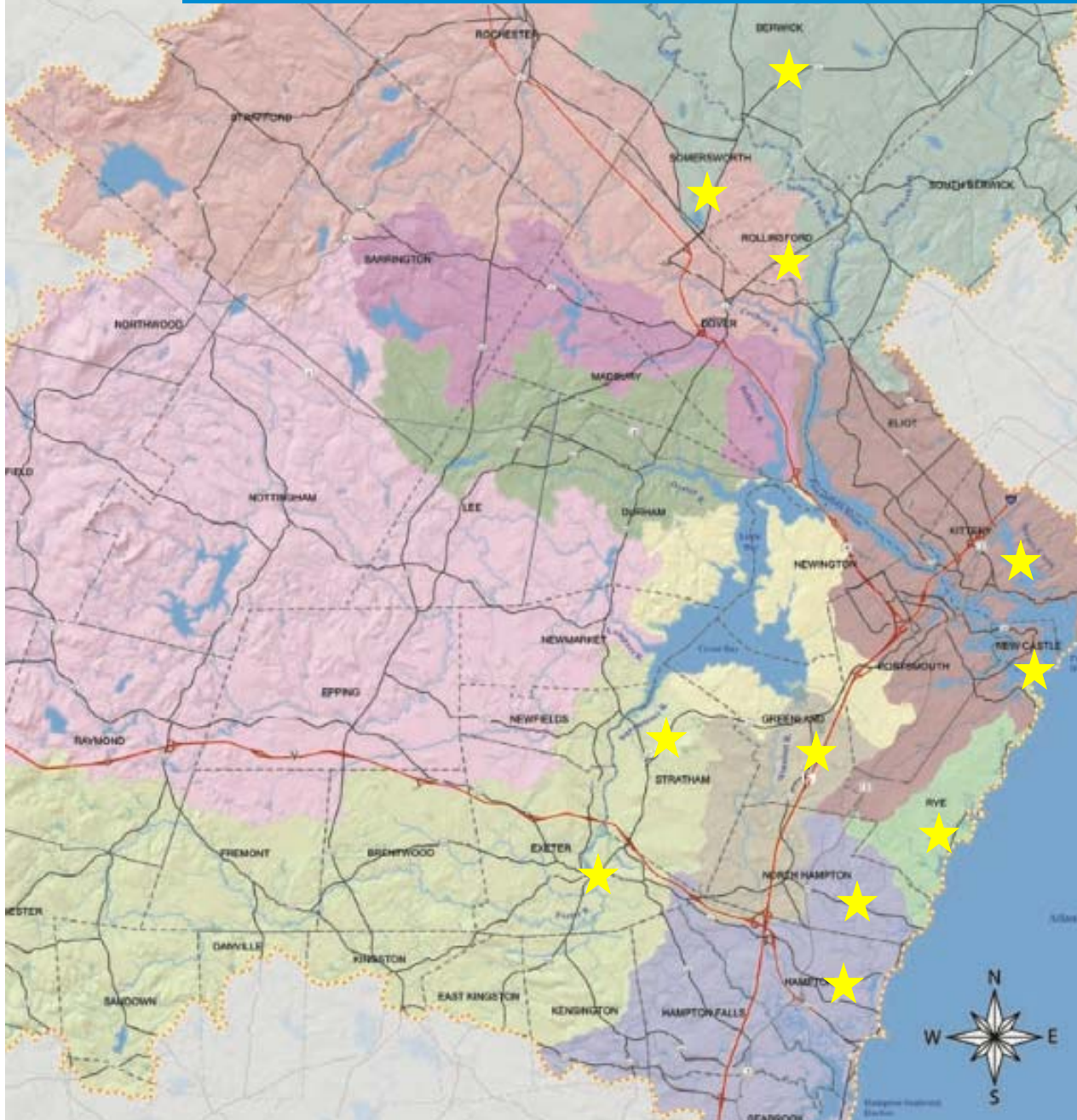
KEY RESOURCES FOR ACTION

**Southeast Watershed Alliance's Model
Stormwater Ordinance**

**Land Conservation Plans for
New Hampshire and Maine**

**New Hampshire Coastal Adaptation Workgroup
Resources**

2015 PREPA LOCAL GRANTS PROGRAM



- Berwick, ME
- Exeter, NH
- Greenland, NH
- Hampton, NH
- Kittery, ME
- New Castle, NH
- North Hampton, NH
- Rollinsford, NH
- Rye, NH
- Somersworth, NH
- Stratham, NH

www.PREPEstuarines.org/PREPA



PREP

Piscataqua Region Estuaries Partnership

The Community for Clean Water working to protect & preserve the Seacoast's rivers, lakes, marshes, Great Bay & Hampton Seabrook Estuaries for all who live, work & play here.

JOIN OUR EMAIL LIST

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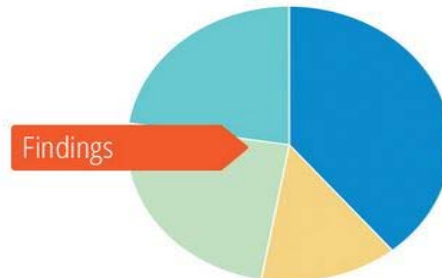
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PREPA

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Threats

- OVERVIEW
- Nitrogen Loading
- Impervious Cover
- Climate Change

Findings

- OVERVIEW
- Freshwater Wetlands
- Shoreland Protection
- Stormwater Management
- Climate Change
- Additional Assessment Data

Actions

- OVERVIEW



PREP

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Estuaries Partnership

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Join the Community for Clean Water  @PREPCommunity  /PREPCommunity

