

5-2010

## Shoreland Protection in Maine Communities of the Piscataqua River Estuary

Southern Maine Regional Planning Commission

Follow this and additional works at: <https://scholars.unh.edu/prep>



Part of the [Marine Biology Commons](#)

---

### Recommended Citation

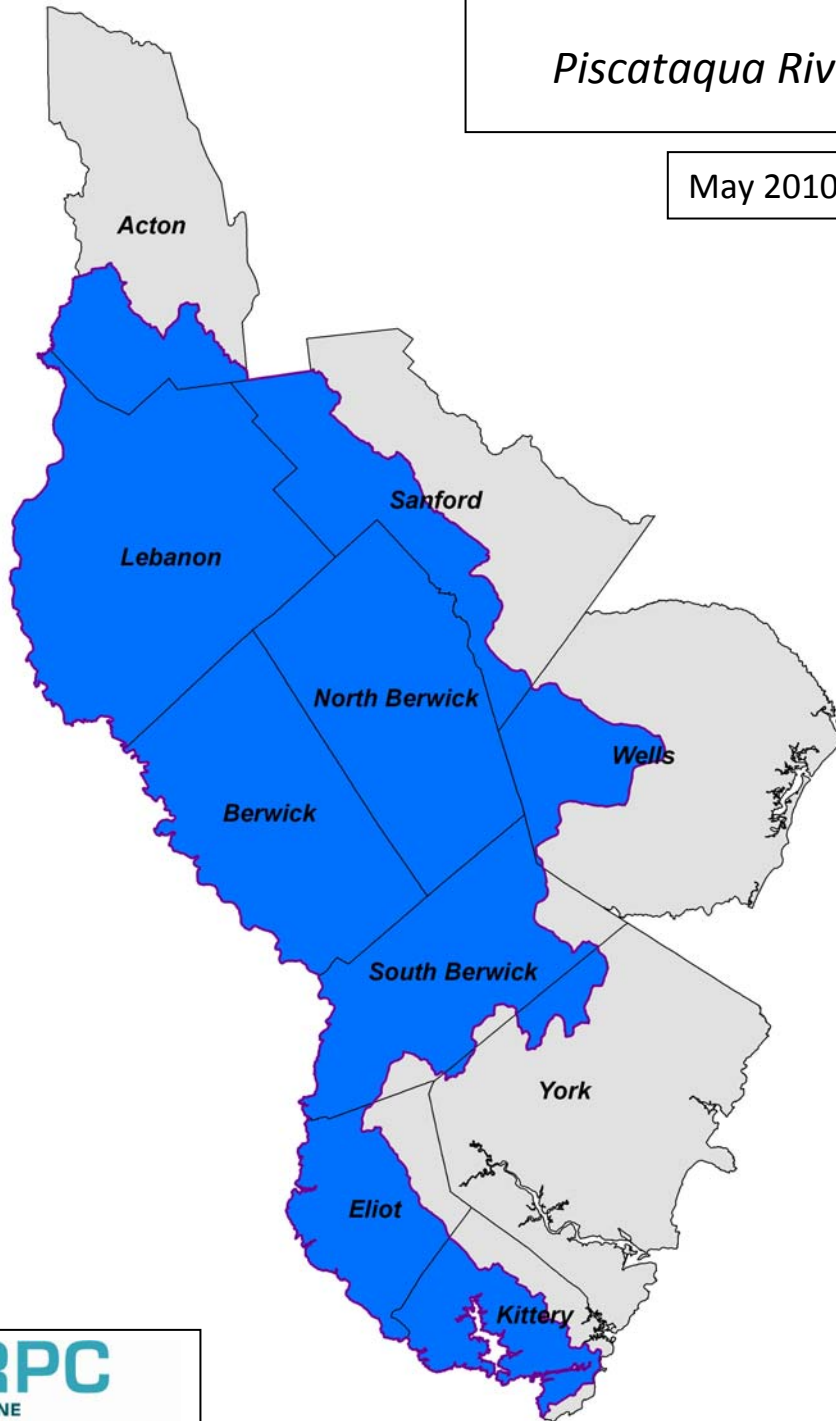
Southern Maine Regional Planning Commission, "Shoreland Protection in Maine Communities of the Piscataqua River Estuary" (2010). *PREP Reports & Publications*. 37.  
<https://scholars.unh.edu/prep/37>

This Report is brought to you for free and open access by the Institute for the Study of Earth, Oceans, and Space (EOS) at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in PREP Reports & Publications by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact [Scholarly.Communication@unh.edu](mailto:Scholarly.Communication@unh.edu).

# Shoreland Protection in Maine Communities

*Piscataqua River Estuary*

May 2010



**SMRPC**  
SOUTHERN MAINE  
REGIONAL PLANNING COMMISSION  
Serving the Municipalities of Southwestern Maine

## SHORELAND PROTECTION IN MAINE COMMUNITIES OF THE PISCATAQUA RIVER ESTUARY

The Management Plan for the Piscataqua River Estuary Program's (PREP) includes several action plans to improve municipal regulatory protections for stream and wetland buffers. This project objective was to identify and prioritize appropriate shoreland areas for protection within Maine towns that are within the PREP region, and inform municipalities and land trusts about these areas, and the importance for protecting them. Below is an overview of the process, analysis and policy considerations.

### PROCESS

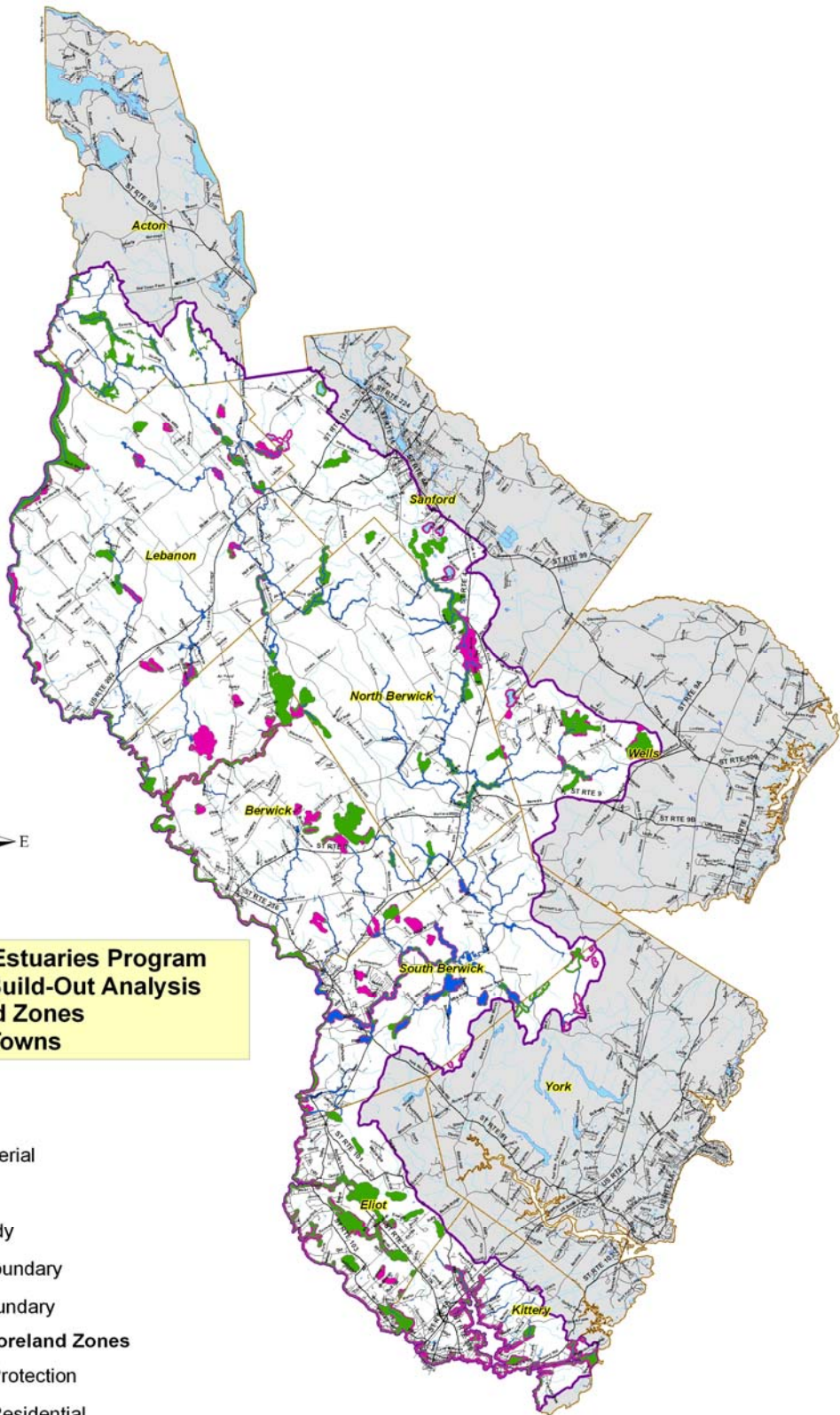
The first step in the process was to map existing development within the shoreland zones that are within the PREP area. Aerial photography or existing data sources (Sanford and York) were used to map the location of existing development.

Shoreland zones were mapped for each of the towns within the PREP region. Recognizing that all towns are subject to Maine Department of Environmental Protection, Chapter 1000 Shoreland Zoning Guidelines, each town has their own unique shoreland zones and shoreland zone buffers. In order to compile a regional shoreland zoning map, the unique zones within each town were grouped into three broader categories set forth in the MDEP Chapter 1000 Guidelines: Stream Protection, Resource Protection, and Limited Residential (see Map 1).

The next step in the process was to create a developable lands map to show all land not constrained by physical limitations or conserved land with development restrictions (see Developable Lands Map). Developable lands include all lands that are not in areas where development is restricted by any of the following constraints (see Map 2):

- Existing development
- 100-year floodplains
- Wetlands
- Rivers
- Ponds
- Streams
- Steep slopes
- Conservation restrictions
- Publicly owned lands.

The build-out model, using ArcGIS in conjunction with CommunityViz software, assumed a 2-acre minimum lot size for each potential future dwelling unit. Additionally, future development was only modeled on developable land within the Limited Residential shoreland zone since that is the only shoreland zone where additional development is likely to occur (development within

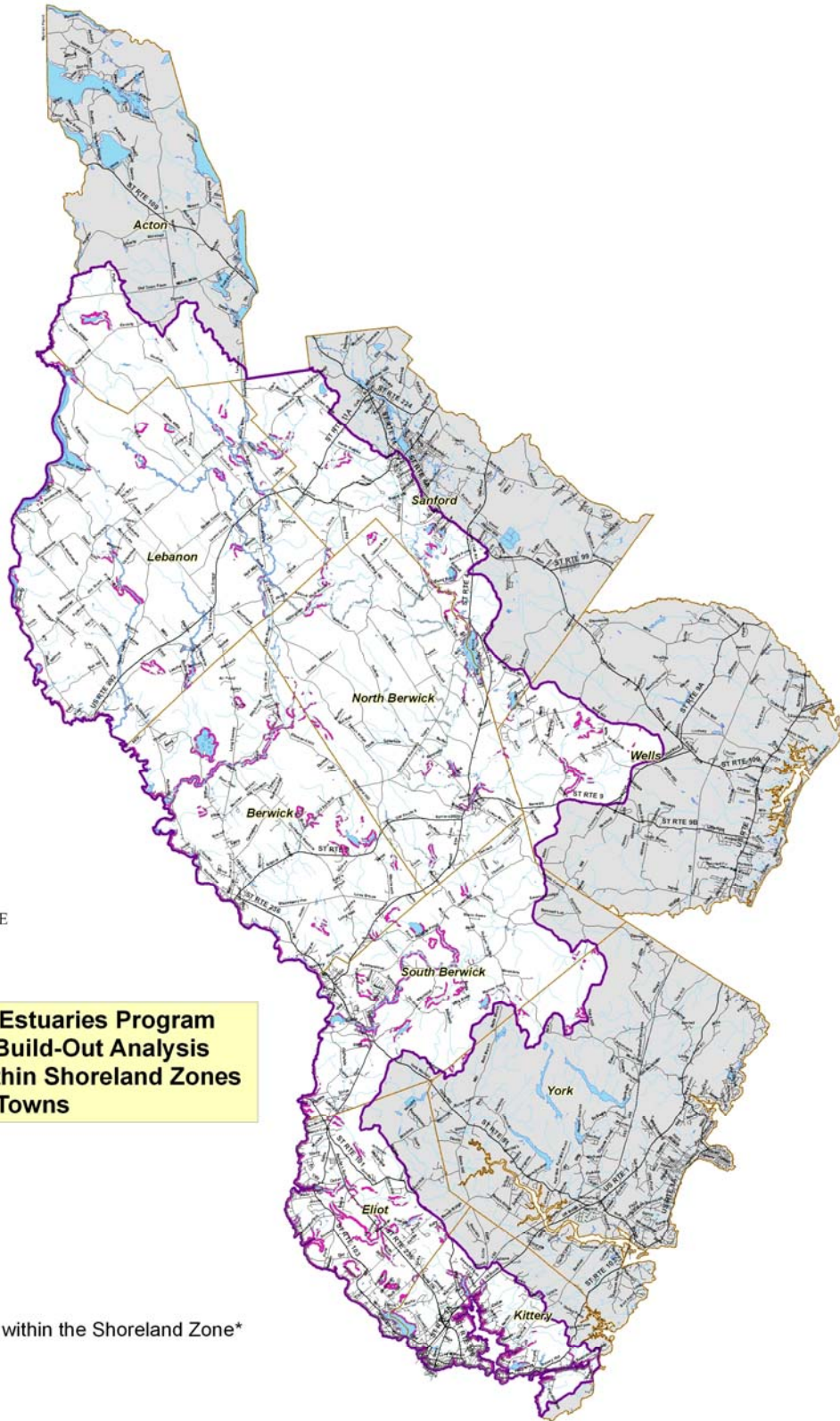


**Piscataqua Region Estuaries Program  
Shoreland Zoning Build-Out Analysis  
Shoreland Zones  
Maine Towns**








- Road
- Major Arterial
- Stream
- Waterbody
- PREP Boundary
- Town Boundary
- Generalized Shoreland Zones**
- Stream Protection
- Limited Residential
- Resource Protection



Map 1



**Piscataqua Region Estuaries Program  
Shoreland Zoning Build-Out Analysis  
Developable Land Within Shoreland Zones  
Maine Towns**

-  Road
-  Major Arterial
-  Stream
-  Waterbody
-  Developable land within the Shoreland Zone\*
-  PREP Boundary
-  Town Boundary

\* Developable land excludes land that is within: roadways, ponds, rivers, streams, 100-year floodplain, steep slopes, wetlands, within a 50 ft. radius surrounding existing structures; or land that is publicly owned or has conservation restrictions.



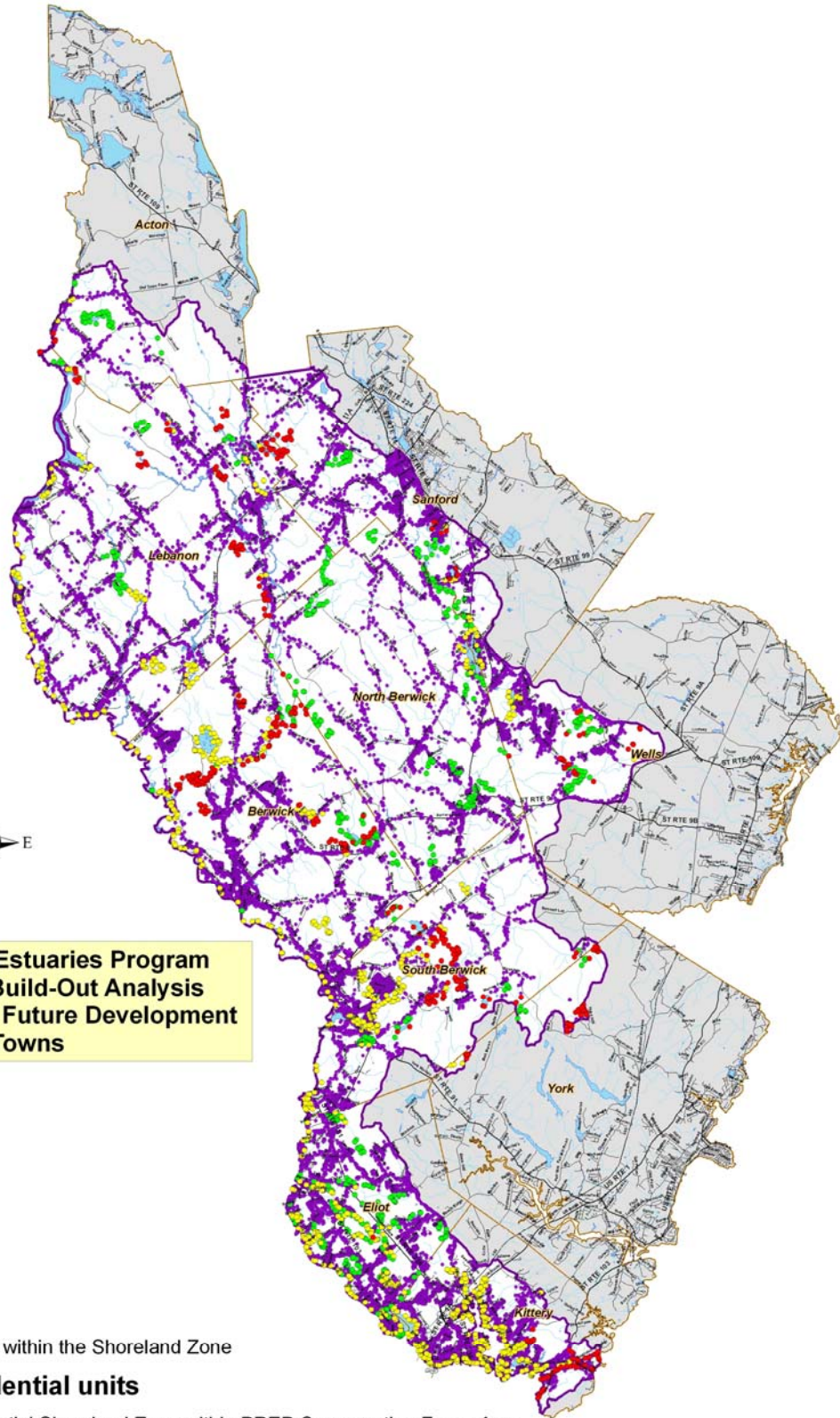
the Stream Protection and Resource Protection zones is allowed in some towns, but only as a special exception or an approved variance).

<b>Town</b>	<b>Limited Residential</b>
Acton	Permitted
Berwick	Permitted
Eliot	CEO
Kittery	Permitted
Lebanon	CEO
North Berwick	Conditional Use
Sanford	Permitted
South Berwick	Minor Site Plan
Wells	Permitted
York	CEO

ANALYSIS

An analysis of the developable lands layer and the build-out model results reveals that there is considerable developable potential within the shoreland zone in the towns of Kittery, Eliot, South Berwick, Berwick, and Lebanon (see Map 3). The developable areas include the western borders of these towns which front along the Salmon Falls River, and within significant areas of internal wetlands, streams, and waterbodies.

<b>Town</b>	<b>Potential Additional Residential Units Within Limited Residential Shoreland Zone</b>	<b>Potential Additional Residential Units Within Limited Residential Shoreland Zone that is also within PREP Conservation Focus Areas</b>
Acton	10	6
Berwick	314	142
Eliot	158	1
Kittery	314	47
Lebanon	215	83
North Berwick	12	1
Sanford	55	24
South Berwick	248	90
York	40	37
Wells	33	25
Total	1,399	456



**Piscataqua Region Estuaries Program  
Shoreland Zoning Build-Out Analysis  
Existing and Potential Future Development  
Maine Towns**

- Road
- Major Arterial
- Stream
- Waterbody
- PREP Boundary
- Town Boundary
- Existing Development within the Shoreland Zone

**Potential future residential units**

- Within Limited Residential Shoreland Zone within PREP Conservation Focus Area
- Within Limited Residential Shoreland Zone
- Within Resource Protection Shoreland Zone



Map 3

When looking at the impact of future development within the shoreland zones that are within the PREP Conservation Focus Areas, Kittery, South Berwick, Lebanon, and York all have areas that are especially vulnerable to future development (see Map 4).

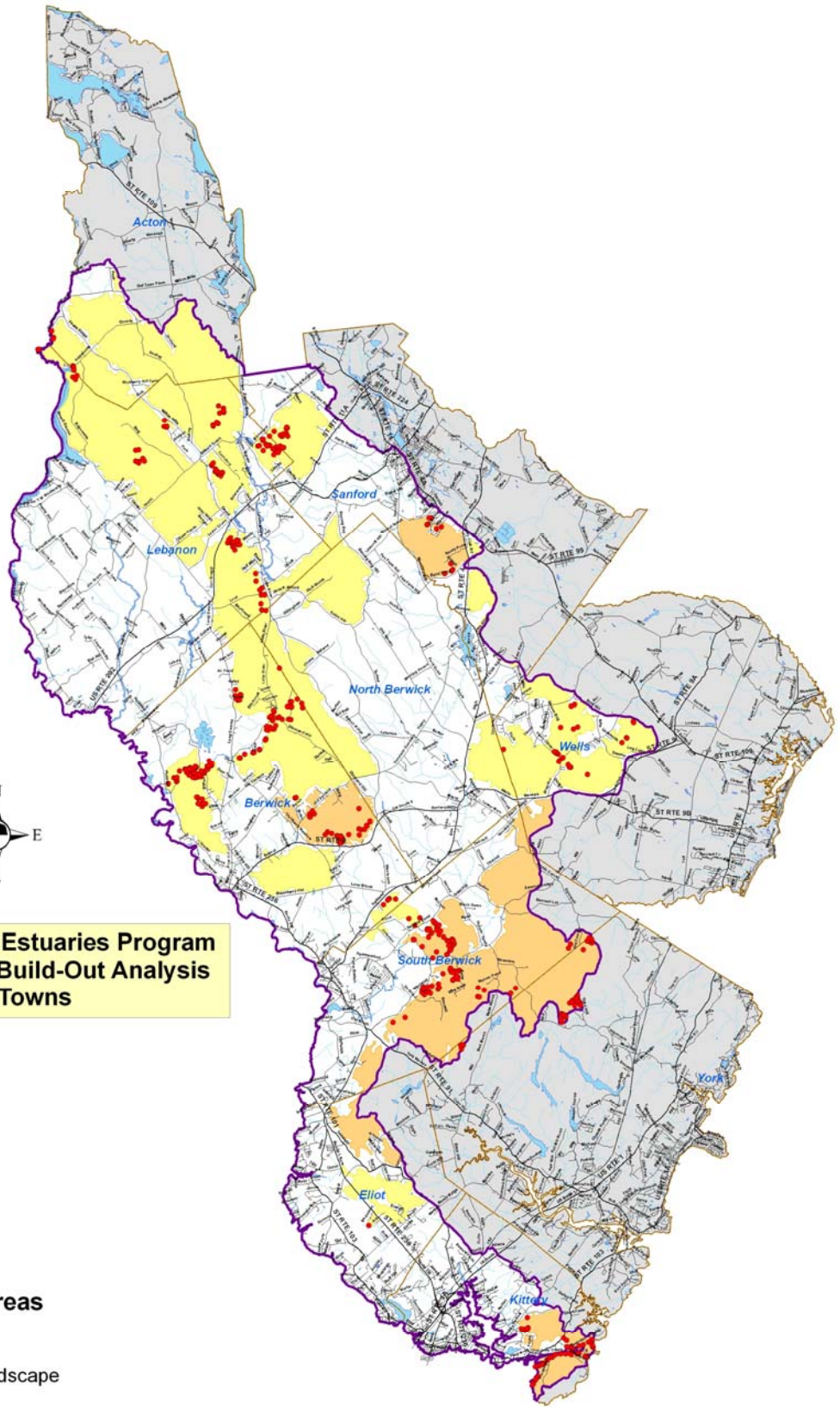
**POLICY CONSIDERATIONS**

Towns may want to consider strengthening their shoreland zone regulations by adopting standards that go beyond MDEP minimum guidelines to further protect resources, particularly those areas that are within the shoreland zone and are within the PREP Conservation Focus Areas. Different considerations could include increasing setback distances, increasing lot sizes and road and/or shoreline frontage requirements. Towns could also consider increasing their oversight of development within the Limited Residential zone as they differ from one town to another (see table below)

<b>Town</b>	<b>Limited Residential Building Permit Requirement</b>
Acton	Permitted
Berwick	Permitted
Eliot	CEO
Kittery	Permitted
Lebanon	CEO
North Berwick	Conditional Use
Sanford	Permitted
South Berwick	Minor Site Plan
York	CEO
Wells	Permitted

Additionally, towns could provide educational opportunities, working with homeowners’ associations and land trusts, and creating awareness of threats to natural resources (i.e., erosion, environmental hazards, septic discharges, etc.)





**Piscataqua Region Estuaries Program  
Shoreland Zoning Build-Out Analysis  
Maine Towns**

- Road
- Major Arterial
- Stream
- Waterbody
- PREP Boundary
- Town Boundary

**PREP Conservation Areas**

- Tier 1 Core Area
- Tier 1 Supporting Landscape
- Tier 2 Core Area
- Tier 2 Supporting Landscape
- Potential Future Development in Limited Residential Shoreland Zone



Map 4