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Mark Zankel
The Nature Conservancy

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Land Conservation Plan for New Hampshire's Coastal Watersheds – Implementation & Outreach

A Final Report to
The New Hampshire Estuaries Project

Submitted by
Mark Zankel
The Nature Conservancy
Concord, NH

December 27, 2006

This project was funded in part by a grant from the New Hampshire Estuaries Project as authorized by the US Environmental Protection Agency's National Estuary Program.



The Nature Conservancy was awarded funding to complete activities to promote the Land Conservation Plan for New Hampshire's Coastal Watersheds in the fall of 2006. The Nature Conservancy and its partners, Society for the Protection of New Hampshire Forests, Rockingham Planning Commission, and Strafford Regional Planning Commission, conducted the following tasks to increase understanding and use of the plan by communities, land trusts and others interested in land protection.

Task 1. Regional Outreach Meetings

The partners organized and held two community outreach meetings on October 5, 2006 in Barrington and October 12, 2006 in Rye. Postcards were sent to Conservation Commission members, Planning Board members, Strafford Regional Planning Commissioners, and Rockingham Planning Commissioners. The meetings included a detailed presentation on the Conservation Plan, next steps, and implementation opportunities. About 40 people attended the two meetings.

Task 2. Watershed Conservation Weekend

The partners organized and held a successful Watershed Conservation Weekend on October 14 and 15, 2006. We engaged all of the local and regional land trusts operating in NH's coastal watersheds. A total of seven field trips were held around the watershed, serving more than 100 community members. Each trip included a 5-10 minute overview of the Coastal Plan, and how the field trip site fit into the overall plan. The table below lists field trips, participating organizations, and attendance figures.

Project Name	Town	Organization	Date	Time	Leader	# Attendees
Union Meadows – Barbour tract	Wakefield	Moose Mountains Regional Greenway	10/14	9-12	Cynthia Belowski, Matt Tarr	30
Hampton Salt Marsh	Hampton	NH Coastal Program, SPNHF, NH Audubon	10/14	10-12	Dan Sundquist, Ted Diers, Peter McKinley	10
Mulligan Forest	Nottingham	SPNHF	10/14	10-1	Dave Anderson, Chris Wells	26
Lamprey River Headlands	Deerfield	Bear-Paw Regional Greenways	10/14	10-12	Phil Auger, Theresa Walker	13
Piscassic Greenway	Newfields, Newmarket	SE Land Trust of NH	10/14	2-4:30	Phil Auger, Ellen Snyder	5
Mt. Teneriffe – Panish tract	Milton	Strafford Rivers Conservancy	10/15	1-3	Steve Panish, Cynthia Copeland	13
Lubberland Creek	Newmarket	TNC	10/15	1-3	Mark Zankel	12

Task 3. Pilot Community Implementation

1. Strafford Regional Planning Commission

a) Town of Lee:

- Extensive assistance was provided to the Town of Lee with their 2008 Coastal and Estuarine Land Conservation Program national application. If this funding is

received, the Town of Lee would be at 23 % conserved lands, 2% away from their Town goal.

b) Town of New Durham:

- The Town of New Durham has requested the assistance of Strafford Regional Planning Commission to implement the ideals outlined in the Land Conservation Plan for New Hampshire's Coastal Watersheds.
- Staff presented the Plan to the Planning Board at their November 21, 2006 meeting.
- As part of revising their ordinances and regulations in 2007, the Town hopes to adopt the Plan as part of its Master Plan and also to draft ordinances and regulations to implement the Plan.

2. Rockingham Planning Commission

Worked with two towns as pilot communities to implement Plan recommendations. The RPC communities selected were Hampton Falls and East Kingston, based on demonstrated interest and intent on implementation.

a) East Kingston:

- Met with Planning Board and Conservation Commission members in both communities to discuss the Plan in detail and develop next steps for Plan implementation.
- Met with Planning Board and made public presentation on the Plan and implementation recommendations.
- Due to a major village zoning proposal being proposed for the upcoming Town Meeting in March 2007, a zoning proposal regarding a variation of the LCPCW Conservation Overlay District will not be made until the 2008 Town Meeting.

b) Hampton Falls:

- Met with the Conservation Commission and Open Space committee to review implementation strategies regarding land protection; compared the Conservation Focus Area with existing local land conservation priorities.
- Utilized the Coastal Plan to assist the Town in establishing formal criteria for developing a local land conservation plan.
- RPC staff will continue working with the Town in 2007 toward development of a conservation overlay district.

3. Additional Implementation Activities

Presented the Plan to regional planning Commissioners and professional planners and municipal volunteers at the following meetings and regional conferences:

- The monthly RPC Commissioners meeting for September 2006, held in Hampton Falls (09-13-06);
- A planners meeting held at SRPC specifically to discuss the Conservation Plan (11-07-06);
- Strafford Regional Planning Commission co-sponsored and staff attended the Estate Planning for Family Lands held at the Madbury Town Hall (11/08/06);
- The Annual Meeting of the Northern New England Chapter of the American Planning Association in Meredith, NH (11-09-2006);
- The OEP Fall Conference in Waterville Valley, NH (10-28-2006);

- The I-93 Community Technical Assistance Program Planning Conference in Manchester, NH (12-05-2006); and,
- TNC staff presented the coastal plan to members of the Great Bay Resource Protection Partnership (12-05-06).

Task 4. Tailored Large Scale Mapping

TNC and SRPC staff developed and delivered a tailored map packet for each town in the coastal watershed. The map packet included the following large format maps:

- A watershed scale map of the Conservation Focus Areas
- A watershed scale map of the Resource Co-Occurrence Model
- A town scale map highlighting Conservation Focus Areas
- A town scale map highlighting important forest ecosystems
- A town scale map highlighting important freshwater systems
- A town scale map highlighting irreplaceable coastal resources (coastal towns only)
- A town scale map highlighting critical plant and wildlife habitat

Maps were distributed to the Chairs of the Conservation Commissions. In addition, SRPC sent large format tax parcel maps with focus areas to Chairs of the Conservation Commissions in the SRPC region.

Digital versions (pdf format) of the town scale maps highlighting the Conservation Focus Areas will be posted for viewing on the UNH GRANIT website.

Task 5. Coastal Watershed Poster

The Nature Conservancy developed a poster illustrating the purposes, methodology, and outcomes of the coastal watershed plan (see next page). The poster was presented at the 2006 State of the Estuaries Conference, and has also been displayed at other public and organizational meetings.

Task 6. Rapid Feasibility Assessment for Interactive Web Portal

The Nature Conservancy and UNH GRANIT discussed and evaluated the possibility of establishing a web-based, interactive map viewer to allow the public to access coastal watershed plan maps and associated data sets. [See Attachment 1: Conceptual Overview]. UNH Complex Systems estimates a start-up cost of approximately \$14,000 and an ongoing maintenance cost of approximately \$3,600, with both estimates being preliminary and subject to resolution of several outstanding questions. We would be happy to further discuss this idea with NHEP.

Task 7. Additional Activities

- Seventy five additional copies of the Land Conservation Plan for New Hampshire's Coastal Watersheds were printed and distributed to additional watershed groups, town planners/clerks, and libraries in SRPC and RPC member communities.
- Media contacts were cultivated to generate positive press about the Conservation Plan, with particular efforts around Coastal Watershed Weekend. Articles highlighting the Plan appeared in Fosters, Portsmouth Herald, Exeter Newsletter, and other area news outlets.

Attachment 1: Conceptual Overview

Developing a Web-Based Interactive Map Viewer for The Land Conservation Plan for New Hampshire's Coastal Watersheds

I. Concept

The Land Conservation Plan for New Hampshire's Coastal Watersheds (August 2006) prioritizes coastal watershed areas and offers regional strategies for maintaining diverse wildlife habitat, abundant wetlands, clean water, productive forests, and outstanding recreational opportunities into the future. The plan is intended to serve as a valuable guide, tool, and information resource for landowners, communities, land trusts, and public agencies that are interested in land conservation. We are interested in exploring the creation of a web-based, interactive map viewer that would provide easy access and use of the plan's key maps and data sets to anyone with a high-speed internet connection.

II. Draft Specifications

Target Audience: anyone interested in land conservation

User Requirements:

- High speed connection necessary
- No special software needed to view and use the site

Data:

- Primary geospatial data sets include: Conservation Focus Areas; Forest Ecosystem Model; High Quality Stream Watersheds; Stream Buffers; Important Stream Reaches; Irreplaceable Coastal Resources (all static); Critical Habitat; sub-watersheds (Exeter, Cocheco, Lamprey, etc)
- Background: roads, town boundaries, county boundaries, surface water, Conservation and Public Lands (updated ~2x/yr, or otherwise)
- Other desirable: source water protection zones, important ag lands, Wildlife Action Plan Highest Quality Habitat

Desired Functionality:

- Ability to click on and off data sets
- Ability to zoom in and out
- Ability to pan
- Ability to create legend
- Click on Conservation Focus Area and pull up attribute table (similar to what is in the hardcopy plan)
- Possibility of accessing attribute data for other geospatial data sets
- Click on Conservation Land and pull up name, protecting entity, protection type, and acres
- Ability to export map images

Hosting Needs/Wishes

- Host maintains the site
- Host fixes technical glitches
- Host responds to user queries
- Host tracks hits

The Land Conservation Plan For New Hampshire's Coastal Watersheds

The Nature Conservancy, Society for the Protection of New Hampshire Forests
Rockingham Planning Commission, Strafford Regional Planning Commission

Goal Statement:

To focus conservation on those lands and waters that are most important for conserving **living resources** - native plants, animals, and natural communities - and **water quality** in the coastal watersheds.



Purposes:

1. Identify and describe a **portfolio of areas** that represent the best remaining opportunities to **conserve the critical ecological, biological, and water resources** of New Hampshire's coastal watersheds.
2. Identify and describe a set of **voluntary and regulatory land conservation strategies** available for protecting the important areas.

Significant Natural Resources

Forest Ecosystems

Key Dataset: **Unfragmented forest blocks**

Forests are the dominant natural land cover in New Hampshire's coastal watersheds providing essential plant and wildlife habitat, filtering and purifying water, offering extensive recreational opportunities, and providing timber and other products.



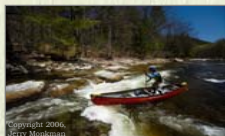
Freshwater Systems

Key Datasets: **High-quality stream catchments**

Important stream reaches

Riparian zones

Maintaining the health of our freshwater ecosystems is critical for water quality within the watershed and the marine environment as well as aquatic biodiversity.



Coastal and Estuarine Resources

Key Datasets: **Undeveloped shoreland**

Estuarine riparian zones

Tidal wetlands

Large forest blocks w/in tidal areas

The coastal region supports a complex system of productive estuaries, tidal rivers and streams, salt marshes, rocky and sandy shorelines, and adjacent uplands. However, that landscape is highly developed, leaving irreplaceable refuges for many wildlife species and human recreation.



Critical Plant and Wildlife Habitat

Key Datasets: **Wildlife Action Plan habitat models**

Supporting natural habitat for rare plants and exemplary natural communities

The coastal watersheds harbor some of New Hampshire's most dense concentrations of rare or otherwise exceptional plant, animal, natural community and wildlife habitat features.



Additional Reference Data

Key Datasets: **Landscape Connectivity**

Agricultural Resources

Important Water Supply Resources

Although these resources were not primary targets of this conservation plan, they do represent information that is important and useful to many stakeholders.

Delineating Conservation Focus Areas

Conservation Focus Area (CFA): Each CFA is a priority for the protection of living resources and water quality in the coastal watersheds.

Core Area: Each CFA is comprised of a **Core Area** which contains the essential natural resources for which the focus area was identified.

Supporting Natural Landscape: Natural lands which buffer and sometimes link core areas and help to maintain habitat and ecological processes.

This series of maps illustrates the CFA delineation process.

The Saddleback Mountain area (right) is an example of a locale where we delineated a Conservation Focus Area based on the significant natural resources located there.



The **co-occurrence model** (left) identifies areas where many natural resources coincide. We analyzed this model to isolate the highest value areas, shown here as a black, dashed line. This **high-value threshold** formed the basis for delineating Conservation Focus Areas.

In this locale, we delineated the supporting natural landscape (yellow outline, right) along the boundary of the **large forest block** surrounding Saddleback Mountain.



The basis of the core area (left) began with the cluster of **high-quality stream watersheds** and **riparian corridor** network in the landscape.

To complete the delineation of the core area, we reviewed the **wildlife habitat models** and **supporting plant habitat** and extended the core area to include the plant habitat to the north west (magenta hatching, right).

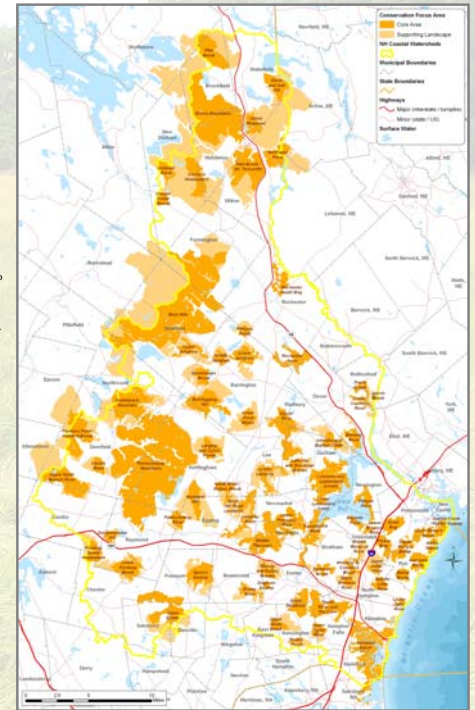


The map to the left shows the final delineation in the context of the surrounding Conservation Focus Areas.

Conservation Focus Areas

This map shows the **seventy-five (75) Conservation Focus Areas** delineated as part of the plan.

Collectively, these areas comprise approximately 190,300 acres, or 36% of the coastal watersheds. They range from landscape-scale areas that span several communities in the northern and western portion of the planning area, to a mosaic of small but extremely high-value open space remnants near the coast.



Implementation Strategies

Of the 190,300 acres in the Conservation Focus Areas, **only 41,400 acres (or about 22%) are currently protected**, leaving approximately 150,000 acres for which some form of protection is still needed. This immense task will require strategic thinking, outlined here in three parts.

Adopt and Use The Land Conservation Plan for New Hampshire's Coastal Watersheds and its Policies

- at all appropriate levels of government (state, regional, local)
- use it to establish the policy framework for land conservation

Pursue land protection

- through acquisition of conservation easements or fee simple ownership
- primarily within Core Areas identified within the Conservation Focus Areas

Regulate development within Conservation Focus Areas

• Adopt the model ordinance *Coastal Watersheds Land Conservation Overlay District (COD)* to help guide development in Conservation Focus Areas

Further Reading

The full plan may be downloaded from the resources section of the **New Hampshire Estuaries Project website: www.nhep.unh.edu**

For **printed copies**, contact **The Nature Conservancy** at (603) 224-5853

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