

Shoreland Buffer Protection Analysis and Implementation Along the Upper Merrimack River

2009 NH Joint Water and Watershed Conference

November 20, 2009

Upper Merrimack River Local Advisory Committee
Central New Hampshire Regional Planning Commission

2007 Upper Merrimack Management Plan

- The Plan is a new document based on an assessment of successes from the 1994 plan as well as needs and emerging issues
- Not a revision but a new plan
- It was developed by UMRLAC and VHB, Inc. using logic model principles that specifies goals, objectives, and management activities for...

2007 Upper Merrimack Management Plan

- Water resources
 - Water quality
 - Water quantity
 - Stream channel integrity
- Outstanding resources
 - Agriculture
 - Recreation
 - Wildlife
 - Historical and archeological
 - Geologic and natural features



2007 Upper Merrimack Management Plan

- Riparian lands
 - Vegetation
 - Buffers and setbacks
 - Land use and open space
 - Floodplains



2007 Upper Merrimack Management Plan

- The plan contains
 - 16 goals
 - 35 objectives
 - 122 activities
- More about the logic models

Project Overview

- Purpose:

- Determine if better levels of shoreland protection are needed along the Upper Merrimack River and its tributaries
- Plan focused on setbacks and maintenance of natural vegetative buffers

Project Overview

- Project Steps:
 - Regulatory audit
 - Mapping exercises
 - Existing land use interpretation
 - Policy recommendations

Regulatory Audit

- Reviewed land use regulations for six UMRLAC towns:
 - Franklin
 - Northfield
 - Canterbury
 - Boscawen
 - Concord
 - Bow
- Reviewed the Comprehensive Shoreland Protection Act (RSA 483-B)

Regulatory Audit

- Compared local regulations among towns and with CSPA requirements
- Looking at:
 - What buffer/setback requirements exist, if any (distance)
 - What standards are in place within the buffers (specific protection criteria)
 - What land uses are permitted in the vicinity of surface water resources, both inside and outside of any buffers

Mapping Exercises

- Goal was to graphically represent results of the regulatory audit
- Created a series of maps:
 - Local buffer and setback distances
 - CSPA protection buffers
 - 50' Waterfront buffer
 - 150' Natural woodland buffer
 - 250' Protected shoreland area
 - Overlay of floodplains and a 300' buffer from all rivers and streams

Upper Merrimack River Region Local Water and Wetland Regulations



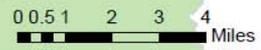
- Merrimack River Buffers and Setbacks**
- Bow**
- 75' Merrimack River Setback
 - 200' Merrimack River Setback
- Canterbury**
- 50' Bluff Setback
 - 150' Bluff Setback
 - 200' Merrimack River Setback
- Concord**
- 50' Bluff Setback
 - 75' Naturally Vegetated Buffer
 - 250' Merrimack River Setback
- Northfield**
- 100' Excavation Setback
 - 150' Naturally Vegetated Buffer
 - 250' Merrimack River Setback
- General Water/Wetland Buffers and Setbacks**
- Bow**
- 30' Wetland Buffer
 - 200' Wetland and Stream Buffer (USTs)
- Canterbury**
- 50' Excavation Setback
 - 125' Septic Setback
- Concord**
- 50' Wetland Buffer
 - 75' Stream Setback, Naturally Vegetated Buffer
 - 125' Septic Setback
 - 250' Excavation Setback
 - 50' Webster Lake District Setback
- Northfield**
- 50' Stream, Wetland, Excavation setback
 - 100' Excavation setback
 - 150' Naturally Vegetated Buffer
 - 250' Lake/Stream setback
 - 400' Knowles Pond setback
- Surface Waters**
- Lake/Pond/Reservoir
 - Wetland
 - River/Stream

Data sources: 1:24,000 source data from NH GRANIT; buffer data created by CNHRPC from survey of local land use regulations.

This map is for planning purposes only. Neither CNHRPC nor UMLAC make any representations of accuracy or validity of these data, and this map should not be used for regulatory or site specific determinations.



Funding provided by NH DES



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Upper Merrimack River Region Comprehensive Shoreland Protection Act Buffers

DRAFT WORK MAP

IMPORTANT: Water bodies protected under the Comprehensive Shoreland Protection Act are compiled in the Consolidated List of Water Bodies produced by the NH Department of Environmental Services. This map attempts to depict all listed water bodies, but discrepancies may exist. This is a draft working map only, and should not be used for regulatory determinations.

Surface Waters

-  Lake/Pond/Reservoir
-  Wetland
-  River/Stream

CSPA Buffers

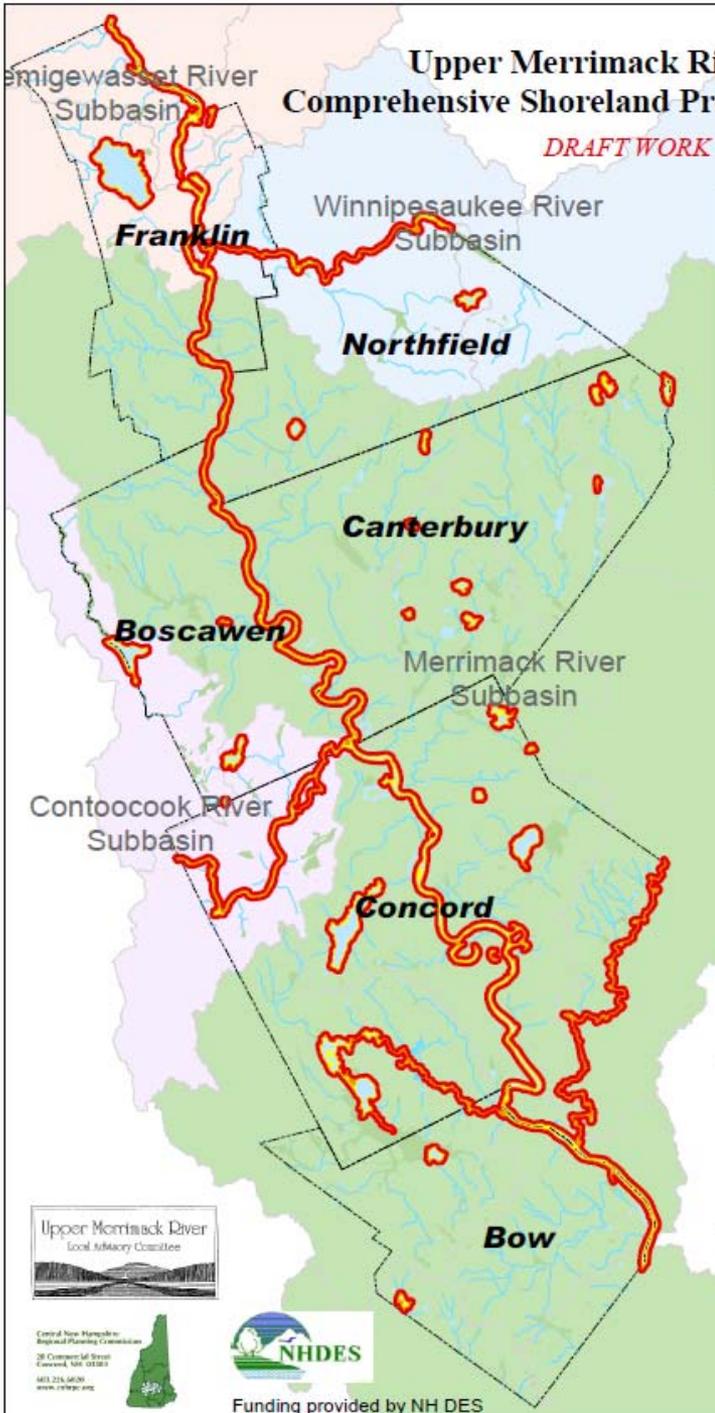
-  50' Waterfront Buffer
-  150' Natural Woodland Buffer
-  250' Protected Shoreland Area

Watershed Subbasin

-  Merrimack River
-  Contoocook River
-  Pemigewasset River
-  Winnepesaukee River

Data sources: 1:24,000 source data from NH GRANIT; buffer data created by CNHRPC from NH DES data.

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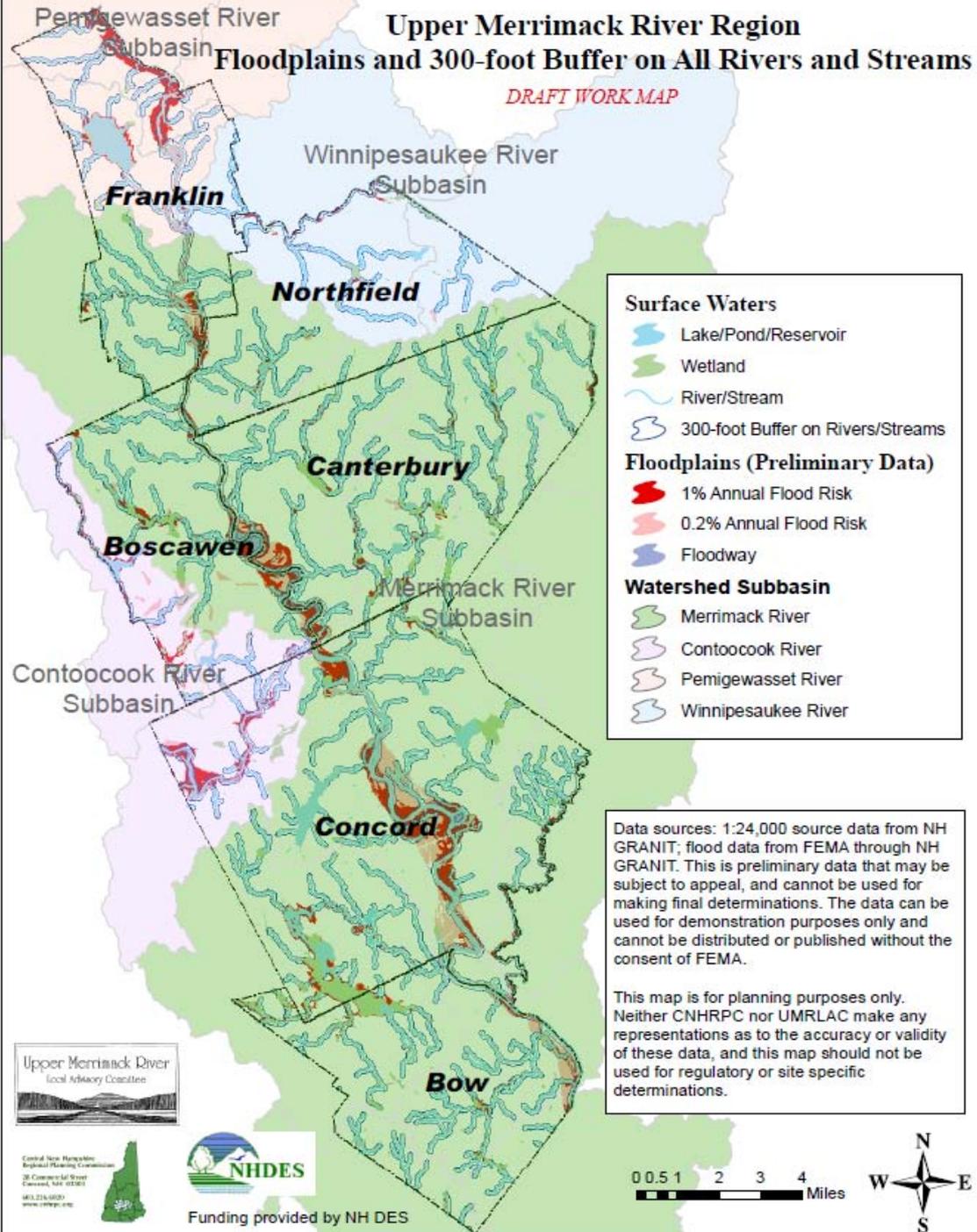


Pemigewasset River Subbasin

Upper Merrimack River Region

Floodplains and 300-foot Buffer on All Rivers and Streams

DRAFT WORK MAP



Surface Waters

- Lake/Pond/Reservoir
- Wetland
- River/Stream
- 300-foot Buffer on Rivers/Streams

Floodplains (Preliminary Data)

- 1% Annual Flood Risk
- 0.2% Annual Flood Risk
- Floodway

Watershed Subbasin

- Merrimack River
- Contoocook River
- Pemigewasset River
- Winnipisaukee River

Data sources: 1:24,000 source data from NH GRANIT; flood data from FEMA through NH GRANIT. This is preliminary data that may be subject to appeal, and cannot be used for making final determinations. The data can be used for demonstration purposes only and cannot be distributed or published without the consent of FEMA.

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0 0.5 1 2 3 4 Miles

Next Steps

- Develop GIS-based land use interpretation to create a baseline dataset depicting how land is currently being used
 - How do existing land uses relate to regulations that are in place and existing levels of protection
- Make policy recommendations for each town:
 - Identified gaps in protection
 - Ways to strengthen local ordinances

Land Use Interpretation



Legend

Land Use

- | | |
|--|---|
|  Multi-family, low rise apartments and townhouses, but not duplexes (1 - 3 stories) |  Other transportation, communications, and utilities |
|  Single family/duplex |  Office park |
|  Mobile home parks |  Multiple stories, residential in upper stories only |
|  Group and transient quarters |  Other mixed uses |
|  Other residential |  Outdoor cultural |
|  Commercial retail |  Outdoor recreation |
|  Services |  Cemeteries |
|  Government |  Vacant Land |
|  Institutional |  Agricultural Land |
|  Educational |  Other Agricultural Land |
|  Industrial |  Brush or Transitional Between Open and Forested |
|  Mining |  Forest Land |
|  Air transportation |  Water |
|  Limited & controlled highway right-of-way |  Wetlands |
|  Road right-of-way |  Beaches and River Banks |
|  Parking structure/lot |  Strip Mine/Quarry or Gravel Pit |
|  Auxiliary transportation |  Disturbed Land |
|  Electric, gas and other utilities |  Undetermined |
|  Water and wastewater utilities | |

Questions?

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