Conserving the Ecology of the Piscataquog River Watershed

Hillsborough and Merrimack Counties, New Hampshire

Unfragmented Forest Blocks (> 500 acres)
1 point

Open Lands (> 40 acres)
1 point

Riparian and Shoreland Buffers (300 feet)
1 point

Composite Wetlands (> 20 acres)
1 point

Emergent Wetlands
1 point

Alluvial Soils
Note: Alluvial soils are only available for Hillsborough County
1 point

Steep Slopes (> 35 %)
1 point

South Facing Slopes (> 10 %)
1 point

Legend

- Watershed Boundary
- Municipal Boundaries
- County Boundaries
- Conservation and Public Lands

Roads
- Highways
- Local Roads
- Not Maintained
- Streams
- Wetlands (NWI)
- Surface Water

Co-occurrence Model
0 points
5 Points

NATURAL RESOURCE CO-OCCURRENCE ANALYSIS

High-value natural resource areas can be identified by creating a resource co-occurrence model. The model is developed by overlaying selected natural resource layers (listed below) in a geographic information system to identify locations where multiple occurrences of those resources exist. Numeric values are applied to natural resource layers, in the case of this "coarse" model, each layer was given a value of 1 (one). In locations where more resource factors occur, higher values can be seen (for example where one value occurs, the model's value is 1; where three occur, the value is 3, etc.)

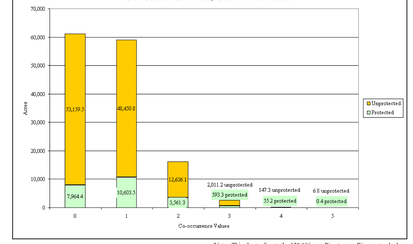
This map is intended for use as a watershed-wide planning tool. Since the incorporated resource data come from varying sources and scales, the co-occurrence model here has been "smoothed" to show the general patterns of natural resource values. This was done by applying a focal-means filter which averages raw resource values over a ten (10) acre area. This model is akin to an elevation map, where the dark "peaks" represent high value areas, and the light "valleys" represent areas with fewer resources.

The co-occurrence model for the Piscataquog watershed consisted of eight (8) natural resource factors. Each factor was assigned a value of 1 point. The resources include:

Unfragmented Forest Blocks (> 500 acres)
Open Lands
(Agricultural and cleared land; > 40 acres)
Riparian and Shoreland Buffers (300 feet)
Composite Wetlands
(National Wetlands Inventory and Hydric Soils; > 20 acres)
Emergent Wetlands
Alluvial Soils
Steep Slopes (> 35 %)
South Facing Slopes (> 10 %)

The main map displays the smoothed co-occurrence model. The inset maps to the left show the extent of each of the nine resource factors.

Piscataquog River Watershed
Co-occurrence Values; Conservation Status



(Note: This chart refers to the 139,186 acre Piscataquog River watershed, and does not include acreage of the 1-mile study area buffer)

Study Area
Piscataquog Watershed

Co-occurrence Model

Produced by the Society for the Protection of NH Forests
for the Piscataquog Watershed Association, February 2004

The New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT) is a cooperative project to create, maintain, and make available a statewide geographic data base serving the information needs of state, regional, and local decision-makers. A collaborative effort between the University of New Hampshire and the NH Office of State Planning (OSP), the core GRANIT System is housed at the UNH Institute for the Study of Earth, Oceans, and Space in Durham. The GRANIT approach to a statewide GIS depends upon the cooperative efforts of a host of agencies, collaborating on various elements of database design and construction as well as application development.

NH GRANIT and CSRC maintain a continuing program to identify and correct errors in these data. CSRC, OSP, and the cooperating agencies and organizations make no claims as to the validity or reliability or to any implied uses of these data.

These maps are produced as part of a conservation planning initiative -- Conserving the Ecology of the Piscataquog River Watershed. The initiative is a collaboration of the Piscataquog Watershed Association, UNH Cooperative Extension, and the New Hampshire Living Legacy Project with funding provided by the USDA Forest Service. The Living Legacy Project is a public-private partnership among state agencies and conservation groups to conserve the state's biological diversity.

N

1:37,500

5000 0 5000 10000 Feet

1 0 1 2 3 Miles

Piscataquog Watershed Association

University of New Hampshire Cooperative Extension

SOCIETY FOR THE PROTECTION OF NEW HAMPSHIRE FORESTS

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