

View of the Halfway Brook Priority Area and surrounding land uses. The current tax map boundaries have been overlaid on the land use data to assess the number of properties located within this area.



View of Halfway Brook and adjacent agricultural and open land within the Halfway Brook Priority Area during May 2007.

## **Natural Resource Inventory for the Town of Moultonborough Moultonborough, NH**

NHSC, Inc. was contracted by the Town of Moultonborough in 2006 to conduct an inventory of natural resources. The overall objective of the natural resource inventory was to provide a detailed description and analysis of the town's natural resources as well as to help guide future planning and conservation efforts. The specific goals set for the project were to map and describe natural resources of the town, develop a geographical information system (GIS) database for the town to store and update spatial data, identify areas with high ecological, natural resource, and recreational value using a co-occurrence model, and develop recommendations for natural resource protection.

- Ten maps were developed by NHSC to include Steep Slopes, Conservation Lands, Cultural/Recreation Resources, Water Resources, Wildlife and Habitat, Land Use, Pollution Sources, USGS Bedrock Geology, Soils, and High Priority Areas. ArcGIS 9 was used to query and summarize the spatial data.
- Nine priority areas were identified that ranged in size from 76.9 to 847 acres.
- Factors in determining priorities included quality and quantity of significant natural resources, size and diversity of cover types, the presence of rare and unique habitat types, or threatened and endangered species, and the lack of existing conservation properties within the areas.

The Natural Resource Inventory Report and associated GIS database provide a structured source to utilize and build upon for town planning and natural resource management and protection. NHSC recommendations included: creating a mechanism to maintain and update the database, creating a town-maintained protected species data layer, establishing wetland buffers for high-value wetland systems, and promoting land protection in high priority areas.

## **Town of Kingston Buffer Ordinance Kingston, NH**

Through a grant provided by the New Hampshire Estuaries Project (NHEP) NHSC worked with the Town of Kingston Planning Board, Conservation Commission, Regional Planning Commission and local residents to develop an ordinance that established a setback to wetlands. NHSC made presentations at public meetings and gathered input from the stakeholders on the draft ordinance and incorporated stakeholder input onto the final ordinance language.



NHSC observed spotted salamander larvae in this wetland, documented it as a vernal pool, and recommended that the town maintain a 100-foot no cut buffer around the wetland.

## Natural Resource Inventory and Management Plan Farmington, NH

NHSC, Inc. was contracted by the Town of Farmington to conduct a baseline study of the natural resources and develop a management plan for a 69-acre conservation parcel within the Mad River watershed. The specific objectives and management goals were:

- conduct site visits of the property to document plant species, wildlife species, general soil types, wetland and upland cover types, natural communities, and other natural features on the reference property.
- determine the presence of threatened, endangered, or special concern animal and plant species.
- prepare a management plan for the property that addressed the established management goals and priorities.
- maintain and improve fish, wildlife and endangered species habitat; maintain soil productivity; protect water quality.
- protect unique or fragile natural areas including historical or cultural resources.
- protect scenic and recreational qualities.

NHSC developed 15 methods to accomplish the management goals. In order to improve wildlife habitat, a five-year rotation cut of the old field habitat was proposed with a minimum 100-foot no-cut buffer around a documented vernal pool. In addition, a recommendation to preserve the overstory hemlock for winter cover was included with an improvement cut of low-grade hardwoods to enhance the growth of hemlock cover and mast trees. Other recommendations included no-cut wetland buffers, trail development, and the establishment of a parking area with an educational station.

## Design and Permitting of Recreation Trails Dover, NH

- NHSC, Inc. was contracted by the City of Dover's Recreation Department to assist in the design, layout and wetland permitting of new recreation trails on 30 acres of conservation land in Dover.
- NHSC reviewed existing data for the site included a wetland delineation completed by others.
- NHSC verified the locations of existing wetlands delineated by others in the context of the proposed recreation trails. Flags were hung in the field to identify the proposed wetland crossing areas.
- NHSC completed the layout of a proposed route for the trails, with a focus on avoiding wetland impact. NHSC's recommendations included using elevated walkways to allow access to these aesthetically significant areas.
- NHSC completed a trails notification to the NHDES Wetlands Bureau. This notification included identification of a proposed route for the trail and wetland impact crossing structures according to Best Management Practices for Erosion Control during Trail Maintenance and Construction (NHDRED, 2004). The trail layout and crossing locations were finalized with input from the City on priorities and maintaining minimal wetland crossing distances where possible.





## **Natural Resource Management Plan Newmarket, NH**

NHSC, Inc. was contracted by the Town of Newmarket Open Space Commission to develop natural resource management plans for the Piscassic River-Loiselle Conservation Area (47 acres) and the Grapevine Hill/Tuttle Swamp Conservation Area (160 acres) in Newmarket. The objectives were to:

- conduct site inspections of the property to document plant and wildlife species, general soil types, wetland and upland cover types, natural communities, and other relevant features
- review the New Hampshire Natural Heritage Bureau reports to determine known records of threatened, endangered, or special concern species on or near the properties
- meet with the Town of Newmarket Open Space Commission and funding partners to review the results of the site assessments
- prepare a Management Plan for each property that addressed landowner management goals and objectives.

NHSC developed Natural Resource Management Plans for the two conservation areas that included:

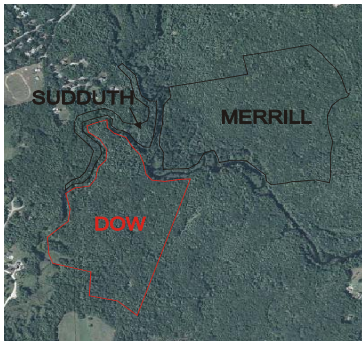
- description of goals of the funding partners
- statement of landowner management objectives
- textual description of natural features including land cover, topography, soils, geology, wetlands, streams, wildlife habitat features, recreational uses, educational uses, and boundary conditions
- map showing property boundaries, access roads, public use areas, and habitat types/natural communities
- photo log that documented important features of the property
- identification of sensitive plant species, wildlife species, or natural communities and a description of how management will enhance or avoid impacts to these resources
- recommended management prescriptions for wildlife habitat management, forestry, conservation, as well as limited non-commercial outdoor recreation and education
- recommended schedule of implementation of management and maintenance prescriptions

In addition, NHSC prepared a DES “Notification of Trail Development” application for the Grapevine Hill-Tuttle Swamp Conservation Area for wetland impacts associated with a proposed trail. (A good figure would be the Trail and Habitat Management Plan on Cad)



### Mary's Brook Water Quality Monitoring Plan Town of Seabrook, New Hampshire

NHSC developed a monitoring plan as part of the Cains Brook and Mill Creek Watershed Management Plan for the Town of Seabrook, New Hampshire. Mary's Brook is within a sub-watershed of the Cains Brook/Mill Creek Watershed. The Cains Brook/Mill Creek Watershed is the subject of a variety of on-going efforts by the Town of Seabrook to address water quality issues resulting from the surrounding densely developed corridor along Route 1. The implementation of this Sampling and Analysis Plan for Mary's Brook is intended to compliment the on-going efforts to manage this larger watershed. NHSC is in the implementation phase of this project.



### Baseline Documentation for Conservation Easements Brentwood, NH

NHSC, Inc. was contracted by the New Hampshire Estuaries Project for the Town of Brentwood in 2006 to complete the baseline monitoring and documentation for fourteen (14) conservation easement parcels located in Brentwood, NH. The objectives included: compiling existing information on the parcels; developing a baseline report form to be used during site inspections to compile parcel specific information; evaluating the 14 parcels for existing conditions and use, and identifying potential future uses; and organizing the information into the baseline reports for each property for use by the Brentwood Conservation Commission.

Example of a 2003 aerial photograph site figure for the Dow property showing the relation to other conservation easement parcels.

NHSC met with the Town of Brentwood Conservation Commission to discuss the Town's long-term management goals and the properties to include in the conservation easement baseline monitoring. The Land Trust Alliance Standards and Practices were used by NHSC to establish minimum criteria for the baseline monitoring documentation.

- NHSC reviewed existing documentation for each of the subject parcels on file at the Brentwood Town Offices.

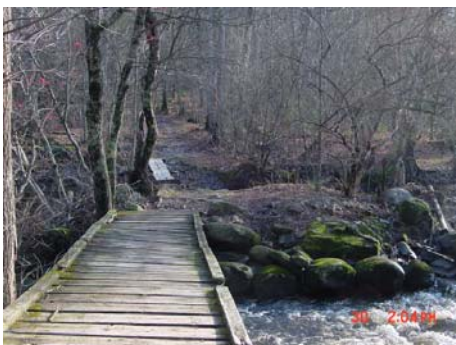


Photo taken from the photo log of the Dow property baseline documentation report showing the condition of the existing footbridge and access across the stream.

- Relevant information from the Town files and the Rockingham County Registry of Deeds were populated into the created baseline documentation forms.
- NHSC conducted site inspections of the easement parcels to document overall conditions, accessibility and unique natural and/or historical features.
- NHSC involved residents familiar with the parcels during inspections to gain and understanding of historic use and compile ideas for future use.
- Baseline documentation forms for each parcel were completed with the information gathered from each step in the review process, and USGS topographic map and 2003 aerial photograph site figures were created for each parcel illustrating key features.

- In total, NHSC evaluated 328 acres of conservation land in Brentwood. An individual baseline documentation folder was created for each parcel. Each folder contained a copy of the baseline documentation form, a photo log, a copy of the appropriate field map (site plan or site sketch showing photo locations and other field notes), a USGS topographic map figure, and a 2003 aerial photograph site figure.