TOWN OF FRANCESTOWN,
New Hampshire

Conservation Plan

August 2013

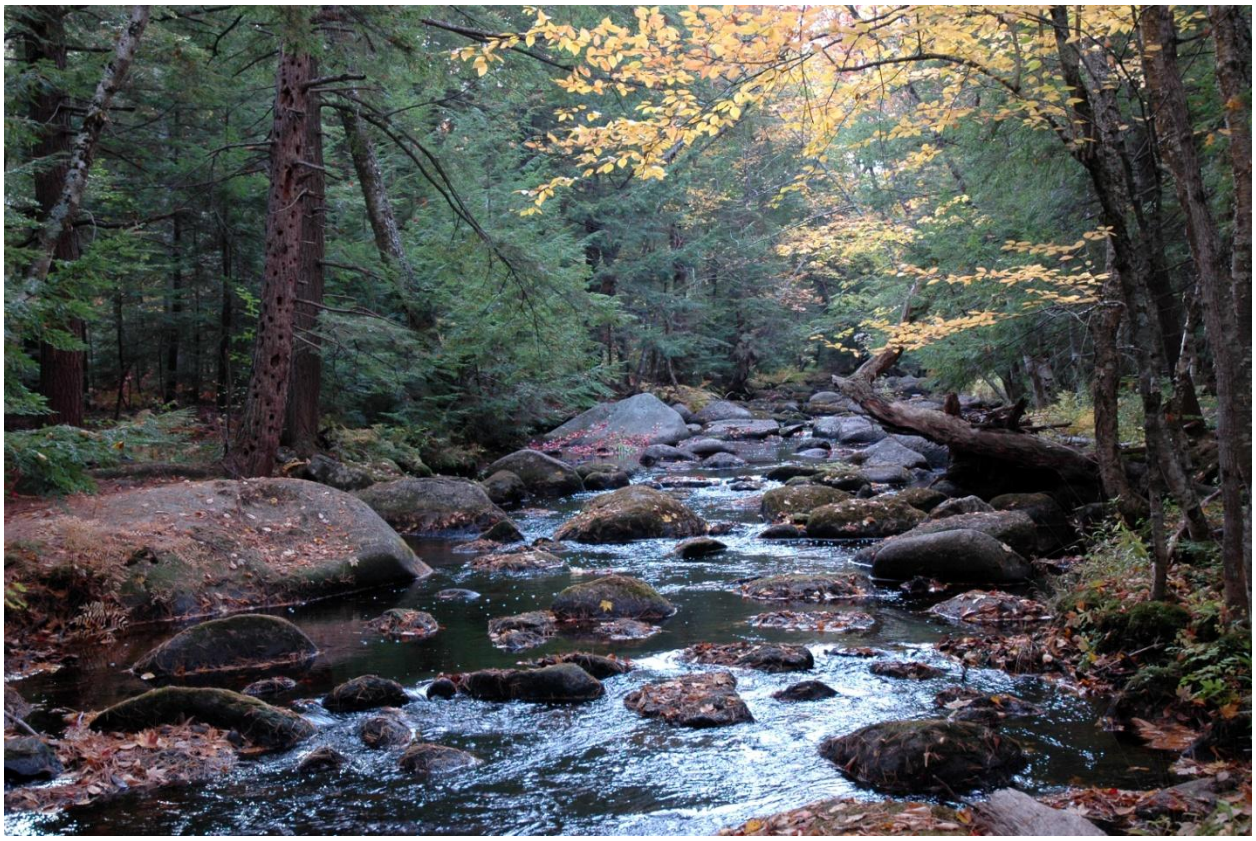


Photo by Barry Wicklow

The Francestown Conservation Plan calls for safeguarding the towns natural resources in order to sustain the many benefits they provide. It further calls for the protection of the most sensitive natural areas, particularly those making up the headwaters of the towns various streams, important wildlife habitat, large forested areas, agricultural lands, and areas that contribute to the town's rural character. The plan also calls for updating the town land use plan so that future growth is focused in places that are most appropriate to accommodate that growth.

This page intentionally blank

TOWN OF FRANCESTOWN, NEW HAMPSHIRE
Land Conservation Plan 2013

TABLE OF CONTENTS

I. Background and Context 5
II. Overview of Planning Process 5
III. Community Engagement Approach and Findings 6
IV. Summary of Important Resource Values and Focus Areas 22
V. Implementation Strategy Recommendations 29
VI. Conclusion 32
APPENDIX 1: Supporting Town Documents 35
APPENDIX 2: Sample Survey 37
APPENDIX 3: Survey Results 38
APPENDIX 4: Natural Resource Workshop Agendas 42
APPENDIX 5: Fundamentals of Land Protection 46
APPENDIX 6: Natural Resources Inventory 48

This page intentionally blank

I. Background and Context

Francestown is a classic small New England town, with historic character reflected in the architecture of its buildings and the surrounding landscape. The town includes a diversity of single family homes, a number of small farmsteads with open hayfields and pastures along narrow country roads, and large expanses of woods, open wetlands, and secluded cold water streams that provide outstanding habitat for the town's abundant wildlife. Outdoor recreational opportunities abound, with large tracts of undeveloped land, many trails and Class VI roads, outstanding scenic vistas and several ponds, some with public access for boating and fishing and seasonal camps along the shoreline.

Over the last several decades, Francestown has experienced development pressures that have shifted the town's rural character little by little. Residential subdivisions break up stretches of sparsely developed roads and single family residences have sprung up in former farm fields. Openings to accommodate house sites appear across woodlands, sometimes fragmenting core habitats and encroaching on wildlife travel corridors. Taking care to thoughtfully guide and design new development in a manner that minimizes impacts on critical natural resources will help maintain Francestown's rural character and continue to provide residents with all the natural resource associated benefits that maintain quality of life.

Francestown's recognition of the important role that the natural environment plays in the resident's quality of life is reflected in the town's most recent Master Plan (1997) and is reaffirmed in a town–wide survey completed in 2002 and a master plan forum held in 2004. It is further supported in the most recent 2013 survey just tabulated. The master plan highlights the importance of the *"preservation of the rural lifestyle so valued by Francestown's residents."* The plan demonstrates many of the core values held by Francestown residents: rich cultural past, pristine natural environment, dynamic sense of community, and passion for rural character. (Excerpts from the Master plan, the 2002 Master Plan Survey, and the 2004 Master Plan Forum appear in Appendix 1.)

Over the years, community volunteers in Francestown have worked tirelessly to promote conservation of the large and wild undeveloped places in town and much has been accomplished. But there is still much more that can be done to take care of the Town's important cultural and natural resources. This conservation plan seeks to further the Master Plan goals, serving as a tool for articulating focus on high priority areas for natural resource protection efforts and providing strategies to further conservation objectives. The conservation plan is intended to be the first step in a broader planning initiative that will ultimately update the town's land use plan.

II. OVERVIEW OF PLANNING PROCESS

In the summer of 2011, the Town of Francestown initiated a process to develop the town conservation plan in partnership with the Monadnock Conservancy. A primary goal of the conservation plan was to identify places in town with natural and community resource values that are important to residents and to use that information to guide land use planning and regulatory decisions and to focus future natural resource conservation and protection efforts. Another goal was to use the planning process to strengthen community understanding about the functions and values of natural and community resources that exist in the town.

A third goal was to raise landowner awareness of opportunities for improving individual land management practices, taking into consideration the potential impacts of land use decisions and practices on the natural and community resources that people value. In so doing, the process seeks to help the town maintain and preserve the rural character, identity, and quality of life that makes Francestown special.

To accomplish these goals, a planning work group was formed as a subcommittee of the Conservation Commission to guide the planning process. This work group included representation from the conservation commission, planning board, select board and Francestown Land Trust.

The first step in the process was to collect input from residents to understand what they value about the town, what resources they feel contribute to the town's rural character and quality of life, and where the best examples of these values and resources are located in town. Two types of approaches were used to broadly engage residents in the process, a survey distributed to every household in town and series of three natural resource workshops, each with a different natural resource focus.

The second step in the process involved reviewing the town's natural resource maps and collecting local knowledge from residents about the various resources to enhance the town's understanding of the functions and values of the resources. The third step in the process integrated the community values, local knowledge, and the natural resource information to develop a summary map of "lands with important resource values" and strategies to encourage conservation and improved management of these lands.

The planning process was supported by the Monadnock Conservancy's Monadnock Community Conservation Partnership program (MCCP), which helped facilitate the work group's efforts, produced and compiled the results of the conservation survey, provided updated natural resource inventory maps, and convened the three natural resource workshops.

III. COMMUNITY ENGAGEMENT APPROACH AND FINDINGS

The Conservation Survey

In the 2002 Master Plan Survey and the 2004 Master Plan Forum, residents placed a strong emphasis on the importance of maintaining Francestown's rural character, identifying rural character as a "significant contributor to the town's quality of life and should, as such, be protected". The survey design used in this planning process sought to build on the earlier data collection by asking residents to:

- Define rural character and what types of development and land uses contribute or detract from the town's rural character.
- Rate and rank a list of resources based on how important they are to Francestown's rural character and quality of life.
- Indicate on the map up to five places that provide the best examples of rural character and contribute most to Francestown's quality of life and then to briefly describe what makes each place important and special. (A copy of the Survey is included in Appendix 2 and the survey results are provided in Appendix 3.)

The survey was available to be completed at each of the three natural resource workshops held at the town offices and a copy of the survey was also mailed to every household in town to ensure that all residents had ample opportunity to complete the survey. A total of 59 surveys were returned. Key themes that emerged from the definition of rural character included:

- Forests/woodlands, trees, wildlife, wetlands, streams, and ponds
- Fields, farmland, agriculture, farm houses, barns, farm animals
- Small village, mostly local businesses, historic buildings, limited commercial development, no big parking lots, traffic lights, limited lighting, minimal noise
- Controlled development with low population in outlying areas
- Large tracts of open space and undeveloped land, conservation land
- Scenic visual appeal, peace and quiet, recreational opportunities

In rating and ranking the importance of various resources to maintaining the town's character, the top rated and ranked resource values were:

1. Clean Water
2. Abundant Wildlife
3. Scenic qualities
4. Peace and quiet from natural areas
5. Working farms

In identifying places in town that provide the best examples of rural character and contribute most to Francestown's quality of life, the most frequently identified places were:

- Pleasant Pond and surrounding area
- Crotched Mountain area
- Shattuck Pond and surrounding area
- Haunted Lake area including the wetlands north of the lake
- Rand Brook and the Rand Brook Forest area
- Bullard Hill area

In describing what makes the identified places important or special, the most common responses were:

- Forests, habitats and wildlife
- Streams, ponds, and wetlands
- Scenic, remote, and peaceful qualities
- Recreation
- Agriculture, farms, fields, orchards

Natural Resource Workshops

Three natural resource workshops were offered during the planning process, with each one targeting a specific natural resource category. The intent of this design was to increase the overall diversity of participants by emphasizing different and specific areas of interest in each workshop. The workshops were also designed to provide a meaningful experience for participants by both providing practical information and generate awareness among participants while collecting their input and local knowledge about the resource topics. The workshop topics focused on wildlife and wildlife habitat, local agriculture, and maintaining water quality in the town's water resources. (Agendas for each work shop are provided in Appendix 4.)

The first workshop included presentations by Amanda Stone of UNH Cooperative Extension and Lindsey Webb of NH Fish and Game Department. The speakers reviewed natural resource maps relating to wildlife habitat and maps showing the NH Wildlife Action Plan priorities in Francestown. Both speakers provided information and resources that landowners can draw on to improve land management practices for the benefit of wildlife. A total of 35 residents attended the workshop.

Following the presentations, workshop participants worked in small groups and each group was asked to indicate on a map those areas in town they felt were critical to support and maintain healthy wildlife populations. Groups were asked to consider the various life cycle needs of all types of plants and animals, with an eye to keeping common species common. Participants identified core habitat areas, travel corridors and special/unique habitat characteristics.

Information collected included identifying larger core wildlife habitat areas in town, important wildlife corridors, and places known to support specific wildlife needs. From this information a summary map was generated and incorporated into the summary of wildlife resource values map provided later in this plan.

The second workshop focused on agriculture and forestry. George Hamilton and John Nute from UNH Cooperative extension spoke about the importance and benefits of local agriculture and forestry to the community. They also spoke about benefits of applying best management practices to improve or support wildlife habitat, maintain water quality, and support recreation. Chad Cochrane from Natural Resource Conservation Service then spoke about Farm Bill resources and programs available to help landowners implement best practices. Over 50 residents including many of the town's farmers attended this workshop.

Following the presentations, workshop participants formed small groups and talked about the importance of local agriculture and woodlot management to Francestown. There seemed to be broad consensus that both of these land uses are important to the future of the town and overall quality of life. The groups then discussed the various challenges and issues facing farmers and woodlot managers.

The final workshop focused on water resources and water quality in Francestown. The workshop opened with a presentation by Eric Williams of NH Department of Environmental Services, who reviewed basic principles of the water cycle, and how land use can adversely affect water quality. The presentation then focused on actions individual land owners can take to prevent and reduce degradation to water quality. Barry Wicklow, resident of Francestown,

board member of Francestown Land Trust, and professor of biology at St Anselm College, presented his research on wild brook trout in Francestown and showed nine streams known to provide critical habitat for wild brook trout and other cold water species.

Following the presentations, participants worked in small groups to identify what they felt were the most important water resources in town and describe what makes these water resources important. The information generated by the groups was collated and integrated in to a summary map of water resource values provided later in this plan. Over 30 residents participated in this workshop.

Natural and Community Resource Map Analysis

In late 2010 and early 2011, the MCCP program assisted Francestown with updating the town's natural resource inventory maps based on the most recent data available through the NH Granit Geographic Information Database. MCCP augmented the publicly available data with two data layers created from the 2010 high resolution aerial photographs of southern New Hampshire. One data layer provides the outline of all structures that are visible on the aerial photographs and the other shows the outline of open lands including fields, large unforested wetlands, and other forest openings. A trails data layer was also created from data provided by committee members. (The Natural Resources Inventory is included in Appendix 6.)

The work group reviewed the natural resource information and maps to gain an understanding of what resources exist in town, where the resources are located, and how the resources contribute to Francestown's character and quality of life. Community members provided extensive local knowledge regarding the town's natural resources including: water resource use and quality, wildlife habitat function and quality, wildlife corridors, wildlife road crossings, the location of wild trout streams, and scenic views and viewpoints.

The Resource Inventory includes the following data:

- Water resources
  - Watershed delineations (from topographic mapping)
  - Surface waters including streams, rivers, ponds and lakes
  - Wetlands (National Wetlands Inventory and poorly and very poorly drained soils from the Soil Survey of Hillsborough County)
  - Stratified drift aquifers (from NHDES transmissivity model) and possible recharge areas (soils classified as having probable sand or gravel deposits from the Soil Survey of Hillsborough County)
  - Public water supplies (water supplies serving 25 or more people for a minimum of 60 days per year)
  - Steep slopes (derived from digital elevation models; included here because of increased erosion risk when soils on steep slopes are disturbed)
  - Highly erodible soils (Soil Survey of Hillsborough County)
- Wildlife habitat
  - Natural vegetation communities (NH Wildlife Action Plan)
  - Large unfragmented forested blocks (NH Wildlife Action Plan)
  - Known sites supporting rare, threatened, or endangered species and exemplary natural communities (Natural Heritage Bureau)

  - Surface waters including streams, rivers, ponds, lakes, and wetlands
- Working lands
  - Agricultural soils (prime agricultural soils, farmland of statewide importance, and farmland of local importance)
  - Actively managed agricultural lands (from 2010 aerial photos and local knowledge)
  - Group I forest soils (Soil Survey of Hillsborough County; good for forest regeneration and limited impediments to harvesting)
- Community Resources
  - Existing structures (visible structures digitized from 2010 Aerial Photos)
  - Historic mill sites
  - Named hills
  - Conserved Lands
  - Open land areas (fields, open wetlands, forest cuts (from 2010 aerial photos)
  - Roads with undeveloped frontages (rural roads)
  - Recreational uses including, trails, wildlife viewing, and water recreation
  - Local knowledge regarding wildlife road crossings, core habitat areas, high value wetlands and water resources, wild trout streams, and other wildlife observations.

Summary Maps of Natural and Community Resources

The analysis of natural and cultural resources demonstrates that the town of Francestown is rich with topographic, biological, and cultural resource diversity. The following set of maps summarizes many of the individual natural and cultural resources in Francestown by combining multiple data layers from individual maps onto summary maps. There is a separate summary map for each of the three broad resource categories (water, wildlife, and agriculture.) Each of these maps includes both natural resource and community resource information.

Water Resource Values Map

This map shows the location and types of water related resources in Francestown. The small areas of stratified drift aquifer may have potential as a future town water supply. Approximate locations of wetlands are shown from the county soils maps. Disturbance of soils on steep slopes can lead to erosion and degraded water quality. The map also shows important water related resources identified in the community survey (blue dots) and the water resources workshop (colored diamonds). The light blue shading around the water resources indicate areas of important conservation values for maintaining water quality and other water resource functions.

Map #1-Local Input Relating to Water Resources

(See separate uploaded map files)

This page intentionally blank

Agricultural Resource Values Map

This map shows important agricultural resource areas identified in the community survey (green dots). The map also shows existing open fields digitized from aerial photographs (green outlines) and agricultural soils (tan, orange, and brown areas). The areas identified with brown cross hatching indicate areas with important conservation values for sustaining agriculture in town.

Map #2-Natural Resources & Local Input Regarding Agricultural Values
(See separate uploaded map files)

This page intentionally blank

Wildlife Resource Values Map

This map shows important wildlife related resources identified in the community survey (green dots) and the wildlife workshop (brown cross hatching). The yellow colored areas indicate wildlife road crossing, and the orange circles indicate community identified core habitat areas. The light green shaded areas indicate areas with important conservation values to support wildlife.

Map #3-Local Input Regarding Wildlife Resources
(See separate uploaded map files)

This page intentionally blank

Land Fragmentation Map

Large blocks of undeveloped land are among the most important characteristics for maintaining healthy wildlife populations and pristine water resources. Blocks such as those found in Francestown are becoming more uncommon, as new roads and the development they bring increasingly fragments the landscape.

Map #4-NH Wildlife Action Plan Land Fragmentation
(See separate uploaded map files)

This page intentionally blank

Existing Conservation Lands Map

This map shows all lands in Francestown that are privately owned and protected by permanent conservation easements, are owned by qualified conservation organizations, or are owned by governmental entities for the express purpose of conserving land. (updated as of December 2012).

Map #5-Conservation Lands & Parcels
(See separate uploaded map files)

This page intentionally blank

Resource Vulnerability

This section lists some of the more common forces that can adversely affect water quality, wildlife quality, and agricultural viability. When considering conservation priorities and determining where to focus limited human and financial resources to accomplish conservation objectives, it is often helpful to give consideration to the vulnerability of the various resources and specific resource locations to outside influences from both natural and human origins. Those areas that are more likely to be subjected to adverse forces may deserve a higher level of priority and may benefit from proactive or preventative actions to avoid the adverse impacts.

- Water resource degradation
  - Land use changes: increased conversion of land from a natural to built condition, increased impervious surfaces leading to increased runoff volume and velocity, erosion, sediment transport flooding, increased risk of pollution transport in runoff.
  - Development in groundwater recharge areas: can increase risk of ground water pollution and impervious surfaces and soil compaction can reduce recharge of groundwater aquifers.
  - Management practices: inappropriate animal waste storage; over grazing; overharvesting of timber on slopes increases runoff volume and velocity; forest cutting too close to water resources increases erosion potential, decreases natural filtration of sediments and pollutants, reduces shade over water resource increasing temperatures.
  - Changes in storm frequency and intensity: undersized culverts leading to flooding, infrastructure washout/damage, water quality degradation, and increased cost to tax payer.
  - Invasive aquatic species introduction or migration: often caused by introduction of seeds by wildlife, or transport of seeds by boats and personal watercraft. Can clog waterways; degrade water quality and aesthetic qualities and may potentially reduce tax base.
- Wildlife resource degradation
  - Increased fragmentation: road building and land conversion to residential and commercial uses reduces size and function of core habitat and wildlife corridors increasing predation; risk of human/wildlife interface leading to nuisance problems and motor vehicle collisions.
  - Encroachment on core habitats: reduces quality of key resources for wildlife and may block travel from one habitat area to another, preventing access to needed resources and access to other animals to ensure genetic transfer.
  - Invasive terrestrial species introduction or spreading: often caused by transport of seeds in construction materials or on equipment; wildlife also introduce seeds. Areas of soil disturbance are most prone to initial introduction. Reduces overall plant diversity and often provides lower quality resources for wildlife.

- Agricultural resource degradation
  - Conversion to non-agricultural uses: Ag lands are often most vulnerable to conversion to residential and commercial uses. Land tends to be less expensive because farmers often have high motivation to sell. Lands tend to be flat and open, which are easier and less expensive to develop. Soils are often excellent for accommodating in ground waste water systems and can sometimes accommodate increased development densities.
  - Loss of farms: reduces economy of scale to support agricultural related farm support businesses. Loss of tractor dealers, fertilizer and seed suppliers, agricultural processing facilities and transportation/distribution centers raises producer cost and reduces economic viability of local agricultural industry.
  - In the future: local agriculture may become significantly more important in meeting food needs of local populations.

IV. SUMMARY OF IMPORTANT RESOURCE VALUES AND FOCUS AREAS

Important resource values and focus areas were identified by evaluating the type and locations of various resources associated with community values to determine where multiple resources overlap. Individual resource values that were deemed important in their own right were included in the resulting priority focus areas.

Based on the community data collected and the work group's analysis of the natural resource information, work group members feel that focusing conservation efforts on protecting water quality, wildlife habitat and agricultural resources will also enable the town to protect its rural character and the many aesthetic and cultural values that are part of Francestown's quality of life. As such, conservation priorities and focus areas identified in this plan are expressed by describing the most important areas for preserving water quality, wildlife habitat, and agricultural lands.

The following map brings together the resource value maps shown above to provide a single summary map of "lands with important resource values". A second map is provided that overlays the towns existing conservation lands and highlights focus areas to guide the towns conservation and land use planning efforts. A written description of general conservation priority areas listed by resource type and general location appears after the maps. These written descriptions include a description of the community values associated with each priority area.

Important Resource Values Summary Map

Map #6-Important Conservation Values with Conserved Lands
(See separate uploaded map files)

This page intentionally blank

Conservation Focus Area Map

Map #7-Conservation Focus Areas
(See separate uploaded map files)

This page intentionally blank

Written Descriptions of Conservation Priorities and Associated Community Values

Watersheds and stream corridors

- Conservation priorities include:
  - Watersheds for Shattuck Pond, Haunted Lake (aka Scoby Pond), and Pleasant Pond. The watersheds associated with these ponds are largely located within the town boundaries and significant portions of some of these watersheds are conserved.
  - Watersheds associated with Brennan Brook, Rand Brook, Avery Brook, and all of Collins Brook, including Dinsmore Brook. All of these watersheds include some previously conserved lands and several have extensive areas that are conserved.
  - Corridors along all brooks including the uplands along stream channels and surrounding wetlands, extending away from the stream channels and wetlands by 600 feet or more. Conservation efforts should focus on protecting stream corridors that are most vulnerable to future, more intensive land use conversions.
- Community values associated with priorities include:
  - Water Quality: Buffers around surface water and wetlands prevent adverse effects to water quality from pollution, sedimentation, and temperature increases caused by removal of shoreline vegetation or disturbance of soils within the buffer.

    Buffers also allow storm water runoff from adjacent lands to be filtered in the buffer before it enters the water body, trapping sediments, allowing uptake of pollutants by vegetation, and slowing the velocity of storm water, thereby allowing some infiltration to groundwater and reducing the potential for erosion.
  - Wildlife habitat: These watersheds all have extraordinary wildlife habitat values, and excellent water quality. Some of the streams are known to support populations of wild brook trout, and are particularly important for meeting their need for refugia during hot summer months. The three ponds also have important wildlife values particularly for aquatic species and for nesting water fowl. Pleasant Pond has an active loon nesting site.
  - Recreation, serenity, and rural character: Streams and ponds in Francestown are focal points for recreational activities and provide important scenic viewpoints in the community. The continued potential for public access to these resources for tradition recreational activities and enjoyment of nature is essential for Francestown's quality of life. It is important to continue to promote swimming accessibility at Haunted Lake and Pleasant pond, including the public beach at Haunted Lake.

Lands overlaying stratified drift aquifers and bedrock aquifers serving both public and private wells.

- Protection priorities include:
  - Areas overlaying two stratified drift aquifer areas with low to moderate transmissivity and recharge areas for these aquifers and public water supply wells in Francestown. (Analysis of existing water quality and quantity within the aquifers will be necessary to quantify this resource and to accurately identify aquifer recharge areas. Great care should be taken in siting and designing future development and uses over the aquifers so that adverse impacts to the quality and quantity of water in the aquifers are minimized.)
- Community values include:
  - Current and future supply of clean water to serve the town.

Open fields and farmland throughout Town

- Conservation priorities include, but are not limited to:
  - All areas of prime agricultural soils and agricultural soils of state wide importance.
  - Existing open fields and farming activities throughout town.
- Community values include:
  - Protects the capacity and potential for future food production, even though some agricultural soils are currently fallow or forested.
  - Contributes to the viability of local food production and to the affordability of the land for future farmers.
  - Local agriculture contributes directly to the local economy and helps maintain a stable farm base to support agricultural related businesses.

Large blocks of undeveloped woodlands, forested hills and ridges

- Conservation priorities include:
  - Forested hills associated with Crotched Mountain, including Bullard Hill, Campbell Hill and the upper reach of Brennan Brook east to Perley Road and south to NH Route 136. This is part of a significant and large undeveloped block of land that includes a large area already conserved.
  - Woodlands throughout the lowlands of the south end of Francestown which extends from the Rand Brook Forest eastward and includes extensive and relatively uncommon flood plain forests.
  - Forested hills in the northern end of town, north of NH Route 47 and west of Bible Hill Road and Poor Farm Road. This includes a significant and large undeveloped block of land in the greater Collins Brook watershed much of which is already conserved.

- Woodlands throughout the Haunted Lake watershed. These areas have been increasingly subdivided over the last few decades and continue to be vulnerable to future growth and development pressure.

- Community values include:
  - Wildlife habitat: Identified areas include known wildlife corridors and a mosaic of the less common vegetation community types that contribute to the potential for habitat diversity.

    Maintaining large unfragmented blocks of land allows for connectivity between wildlife subpopulations that is necessary for maintaining genetic diversity. Larger unfragmented areas also increase the chances that some wildlife can meet seasonal and life cycle resource needs without crossing major roads, one of the greatest contributors to wildlife mortality.
  - Water quality: Protection of upland buffers along surface water bodies prevents degradation of pristine headwaters, wetlands functions, and surface water quality.
  - Local economy: forestry activities including commercial timber harvesting and maple sugaring support the local economy and provide a means for landowners to be able to keep larger forested tracts undeveloped.
  - Carbon Sequestration: protection of forests enhances the amount of carbon sequestration.
  - Recreation: Continued potential for access to lands for outdoor recreational activities contributes to community quality of life.
  - Community character and scenic values: Protection of the scenic forest back drop that contributes to the rural character of the community. Crotched Mountain is particularly noteworthy, as the highest peak it can be seen from virtually all corners of town and the area is rich with local history and lore.

V. IMPLEMENTATION STRATEGY RECOMMENDATIONS

The most important role that a community can play to protect resource values is to generate resident awareness of those resource values that exist in the town and an understanding of conservation options and land management practices that are available to protect, enhance, and avoid degradation of those resource values. The following implementation strategies are proposed to support and enhance natural resource protection and conservation efforts in Francestown.

- Community Outreach and Education:
  - Ensure that the plan is made readily available to Town boards and commissions and to the general public.
  - Continue to develop outreach initiatives to educate people in town about our natural resources - what they are and why they are important to the community.
  - Develop resident's appreciation of the land by getting them out and active on the land. Offer hikes, and other activities on publicly owned and privately conserved

lands, including programs for school students, to increase understanding of wildlife, agriculture, and water values, and to connect residents to the town's special places.

  - Continue to work with local and regional conservation organizations to offer and promote natural resource workshops and environmental programs for residents and landowners to increase their understanding of and connection to the natural environment, and to promote land use decisions and land management activities that will avoid the degradation of important conservation resources.
  - Update the town website to enable residents to access natural resource maps and information, with links to other local and state resources.

- Master Plan Updates, Zoning & Regulation Changes:
  - Integrate the Conservation Plan and goals, including the Natural and Community Resource Inventory information into the Master Plan and Land Use Plan updates.
  - Ask the Planning Board to modify land use regulations and draft zoning changes to reflect the values and priorities in the plan.
  - Encourage the Planning Board and developers to use information in the plan to improve proposed land development projects brought before the Board.
  - Encourage new development in areas near existing infrastructure and where services are most available.
  - Promote new types of development and creative zoning regulations that will minimize increases to the cost of providing community services and guide future development toward those areas most appropriate for accommodating future growth.
  - Guide development away from lands with important resource values and work to modify proposed development to avoid or minimize loss of benefits associated with important natural and community resources. Support and encourage 'Open Space' development where appropriate.

- Landowner Outreach:
  - Complete a parcel analysis to determine ownership of lands with important resource values and develop individual strategies to approach and communicate directly with these land owners.
  - Recognize and celebrate landowners who choose to manage their land to protect and enhance resource values and those landowners who decide to conserve their land through conservation easement.
  - Encourage landowners of high priority conservation areas to consider conservation easements as an option for their land. (See Appendix 5 which summarizes the nature of land conservation transactions).
  - Develop landowner understanding of suitable management practices and programs available to help enhance the natural resource values associated with their property and to avoid degrading resource values

- Maintain sufficient funds in the Conservation Fund
  - By continuing to dedicate 50% of Land Use Change Tax to the fund.
  - Through income from sustainable timber harvesting of town forests in accordance with management plans.
  - By annual appropriations if needed.
  - By accepting donations and applying for grants, in order to:
    - Provide for stewardship of Town-owned conservation lands and easement interests.
    - Enable funding of conservation transaction costs for appropriate easement or land donations to a qualified conservation organization.
    - Provide funds to be used as a match for grants funds for appropriate conservation projects.
    - Allow the Conservation Commission to continue with programs and projects to support natural resource conservation and water quality protection in accordance with NH RSA 36-A.
- Periodically review and update criteria and policies for when to consider using municipal funds to support conservation projects, and/or for when to have the Town consider accepting an interest in land including an executory or 'back up' interest.
- Continuously update conservation focus areas based on accomplishments and more detailed landowner and landscape information collected.
  - Continue to collect input from town residents about what they value most about Francestown and how they want to see the town evolve over the coming decades.
  - Maintain good records documenting land owner communications, impressions, and land management behaviors.
  - Encourage site -specific studies to collect additional detailed natural resource data and ground truth (verify) data displayed on planning maps.
  - Periodically update land conservation priorities and implementation strategies as GIS data are refined, new detailed data are collected, and community values change.
- Respond to invasive species threat.
  - Collect field based data about invasive occurrences and map them.
  - Develop comprehensive approach and plan for responding to the threat and to minimize spread.
- Consider stormwater management requirements to maintain water quality and mitigate potential risk of flooding.

VI. CONCLUSION

Being informed and prepared is critical in order to be able to most effectively respond to natural resource protection opportunities and concerns. Having the Conservation Plan in place will help guide decisions related to these opportunities and concerns. It will also help promote conservation and protection of natural resources through education and outreach. The Francestown Master Plan calls for actions that will protect the town's rural character and important open space throughout town. This plan provides further guidance for such action. It should be the responsibility of the Conservation Commission to promote the adoption of the plan by the Planning Board, to ensure that all municipal officials understand it, and to see that the Conservation Commission updates it regularly.

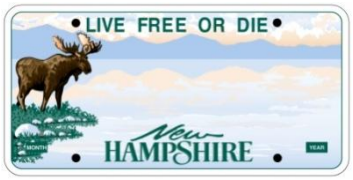
ACKNOWLEDGEMENTS

We wish to thank the residents of Francestown who participated in the town forums that formed a basis for the creation of this land conservation plan. We would also like to acknowledge the overall guidance, information, and support provided by the Community Conservation Partnership – Monadnock Conservancy, Antioch New England Institute, Southwest Region Planning Commission, and UNH Cooperative Extension.

This report was prepared by a Conservation Commission subcommittee:
Conservation Commission Work Group Members

Betsy Hardwick
Linda Kunhardt
Pete Throop, Monadnock Conservancy
Ben Haubrich
Barry Wicklow

This project is supported by funds from the sale of the Conservation License Plate (Moose Plate) through the NH State Conservation Committee Conservation Grant Program.



This page intentionally blank

APPENDIX 1: SUPPORTING TOWN DOCUMENTS

The Francestown Master Plan

The Francestown Master Plan describes the look and feel of the town while underscoring the role that natural landscape features play in drawing people to the area.

> *"Located on the periphery of several sub-regional hubs, the town is primarily a residential community with an architectural heritage and a rural atmosphere reminiscent of its past. One thing, however, has not changed; Francestown's meadows, lakes, rivers, streams, hills and forests. The beauty of these natural resources attracts suburban commuters and supports the town's main recreational businesses just as the utilitarian value of these assets was a magnet for the settler-entrepreneurs of an earlier time."*

The master plan also describes the role the town has played over time to retain the character it cherishes and it reaffirms a need for the town to continue to work to protect the open space that supports this character.

> *"Francestown has demonstrated an abiding concern with both the maintenance of its natural beauty and the quality of its natural resources and also the avoidance of the costs associated with the failure to do so. The town has been committed to preventing development which will cause pollution, protecting unique and unusual natural areas, protecting wildlife habitats, and maintaining ecological balance, preserving and protecting potential sources of water supply, …and assuring that development is in overall harmony with the town's natural character."*

> *"Francestown needs to take a number of steps to encourage the preservation and protection of open space."*

2002 Master Plan Survey

In response to questions asked in the 2002 Master Plan Questionnaire, residents indicated that the "*Most important factor in why they choose to live in Francestown*" (the responses that received the highest number of "Very Important" and "Important" ratings of all factors) was:

"Rural Lifestyle"	*(629 very important, 149 Important, 19 not important).*
"Low Crime Rate"	*(505 very important, 234 Important, 28 not important).*
"Property tax Rate"	*(261 very important, 341 Important, 126 not important).*
"Architectural Atmosphere"	*(271 very important, 317 Important, 160 not important).*
"Zoning Provision"	*(218 very important, 313 Important, 179 not important).*

Residents indicated that the issues that concern them most in relation to population growth in Francestown are (top 4 responses shown):

"Loss of open, rural, and forest areas"	*(452 responses)*
"Increased residential development"	*(412 responses)*
"Increased taxes"	*(346 responses)*
"Traffic"	*(342 responses)*

The results also demonstrate overwhelming support for the town continuing to *purchase property from landowners for conservation and wildlife habitat improvement* (637 responses in favor, 150 opposed) and for *recreational purposes* (601 responses in favor, 157 opposed).

2004 Master Plan Forum

During the 2004 Master Plan Forum, residents indicated that Francestown's rural character was one of the most significant contributors to the town's quality of life and efforts should be made to protect the town's rural character.

When asked what their "vision for Francestown is in 20, 30, even 100 years", participant responded with:

> *"Rural; able to recognize the town; keep it the same; quiet, dark; safe; gravel roads, overarching trees, and no homes; it is most important to protect quality of life."*

When asked "how do we protect the quality of life in Francestown", participants responded:

> *"Dramatically slow down development; clean water, open space; protect wildlife habitat; increase purchase of conservation land; protect 25% of land or as much as is practical."*

Audience members encouraged the planning board to "incorporate the protection of land into the master plan."

APPENDIX 2: SAMPLE SURVEY

Francestown Land Use Planning Survey – Page 1 of 2

Please turn over for page 2

Part 1: **During a 2004 Master Plan Forum, residents indicated that Francestown's "Rural Character " was a significant contributor to our quality of life and should be protected. Please help us better understand what rural character means to you by answering the following questions.**

a. How do you define rural character? How do you know it when you see it (please be specific)?_____

b. What types of development and land use contribute most to Francestown's rural character and what types detract most from Francestown's rural character (please be specific)?

*Contributes:*_____

*Detracts:*_____

Part 2: **Resource Importance Ratings**

Below you will find a list of natural, cultural and community resources.

a. Please rate each resource based on **how much the resource contributes to the Town's unique character and quality of life.** Circle a number from 1 to 7, with 7 being very important and 1 being not important.

b. Next, please rank all resources by assigning each with a number from 1 to 11 where 1 is the most important resource, 2 is second most important, 3 is third, etc. This activity forces you to rank each resource in relation to the others. (no duplicate numbers please)

How important are each of these resources to Francestown's rural character and your quality of life?	*Importance Rating - Circle One* **Low**						**High**	*Ranking* **1 to 11**	*Comments*
•Clean water (Lakes, ponds, streams, wetlands, aquifers)……..	1	2	3	4	5	6	7	____	_____
•Abundant wildlife (diverse habitat, large undeveloped land areas)..	1	2	3	4	5	6	7	____	_____
•Land/water for recreation (hiking, hunting, fishing, etc.)…….	1	2	3	4	5	6	7	____	_____
•Scenic qualities associated with forest, water, farms, etc…… ……	1	2	3	4	5	6	7	____	_____
•Peace and quiet from open spaces and natural areas…….....	1	2	3	4	5	6	7	____	_____
•Working farms (local food, local economy)……..	1	2	3	4	5	6	7	____	_____
•Working forests (forest health, local fuel & fiber, local economy) ….	1	2	3	4	5	6	7	____	_____
•Historic features (cellar holes, stone walls, springs, dirt roads) ……	1	2	3	4	5	6	7	____	_____
•Active village center (services to meet daily needs, gathering places)	1	2	3	4	5	6	7	____	_____
•Local economic base (commerce and industry in town)…….	1	2	3	4	5	6	7	____	_____

Check Boxes: ☐ I would like to learn about the results of this survey. ☐ I have questions about land use planning or conservation. Please provide your name and contact information:

Name:_____ Email:_____ Phone:_____

Mailing Address: _____

Francestown Land Use Planning Survey – Page 2 of 2

Please turn over for Page 1

Part 3: **Mapping Special Places**

Identify places on the map to the right that you feel contribute most to Francestown's rural character and quality of life.

a. Using a pen or pencil, draw a circle around up to five places in town that you feel are most important to the town's rural character and quality of life.

b. Next, number the circles from 1 to 5.

c. Finally, in the space below, write the name of each place (or a brief description if there is no name) and describe what makes that place important or special (scenic, wildlife, recreation, land use type, development qualities, etc.) .

Place 1:_____

Place 2:_____

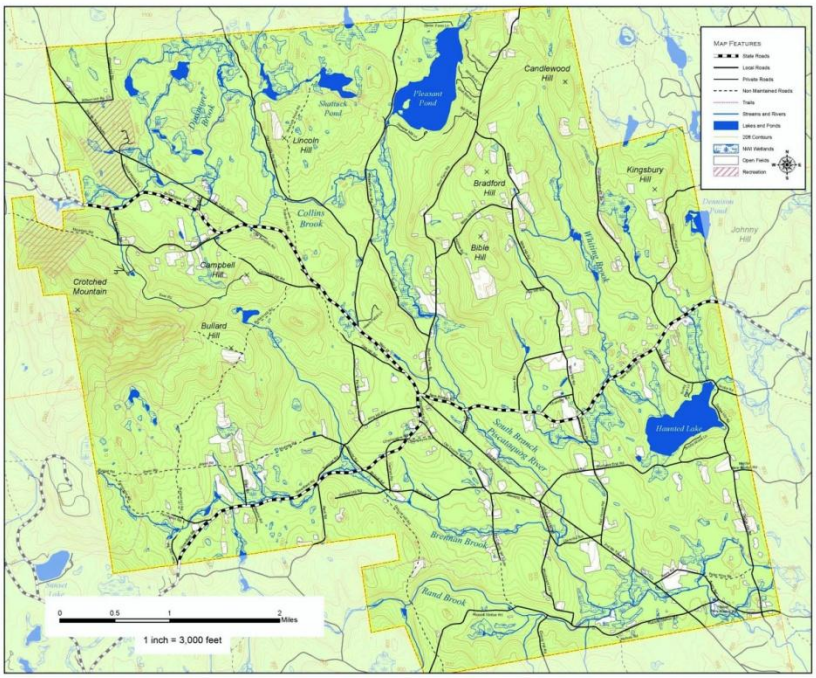
Place 3:_____

Place 4:_____

Place 5:_____

Please return completed surveys to
the Town Offices or the Library
or
Mail to: Town of Francestown
P.O Box 67, Francestown, NH 03043

Where are Francestown's best examples of Rural Character?
What Places Contribute Most to Francestown's Quality of Life?



APPENDIX 3: SURVEY RESULTS

2012 Conservation Survey

Each response to survey questions 1 and 2 was coded so that like ideas could be grouped and statistics could be generated to understand how often each idea was mentioned. An analysis of the resource ratings and rankings was completed to determine the average rating for each resource and the average rank of each resource in relation to the other resources. The places identified in the survey map were grouped based on their proximity to a named landscape feature such as pond, brook, or hill. Codes were developed to group the descriptions of what makes the places important into like categories. Most places identified on the map had several descriptions as to why the place was special.

All places identified on the survey maps were digitized as points and combined on a single map to visually summarize the places that were valued by the survey respondents. Each point was then color coded to reflect the described special nature of the place.

Part 1 A: How do you define rural character?

Rural Character Themes	Number of Mentions
Forests/Woodlands, trees, plants, wildlife, diversity, wetlands, streams, ponds	37
Fields, farmland, agriculture, farming, farm house, barns, farm animals	35
Small village, mostly local businesses, historic district and buildings, no Mac-mansions, limited commercial development, limited industrial development, low key signage, no big parking lots, no traffic lights, no big gas stations, no street lights, limited lighting, minimal noise	32
Controlled or clustered development, low population/density in forests, and outlying areas, low traffic,	29
Open Spaces, large tracts, undeveloped land, lack of new development, conserved land	28
Scenic, visual appeal, peace and quiet, calm environment, tranquility, serenity, recreational opportunities	22
Dirt roads, tree lined roads, class VI roads, stonewalls	11
Sense of community, balance between human and wild, a sense of caring for natural resources and history, respect for wildlife during land use management	8

Part 1 B: What types of development and land use contribute most to Francestown's rural character?

Land Use Themes	Number of Mentions
Farmland, farming, barns, animals, fields, gardens	33
Conservation land	19
Forests, forestry	17
Village, historic buildings, historic protection, residential village	13
Recreation, trails	10

Part 1C: "What types of development and land use detract most from Francestown's rural character?

Land Use Themes	Number of Mentions
Suburban style subdivisions, condo development, tract development, Bowling alley lots, paved driveways	22
Commercial outside of downtown, business not locally owned	9
Houses in the middle of fields, Houses close to roads, visible, development in undeveloped areas	5
Clear cutting	5
Abandoned structures, structures in disrepair, defacto junk yards	4
Traffic, large SUV's speeding up back roads	4

Part 1A: Sample Responses

"Rural Character means that a town like Francestown retains its historic town buildings and homes. There is a preservation of the past in the upkeep of these older buildings. Also, there is open space, stone walls, controlled building, and expansion and land conservation. Working farms, livestock, low-key signage for commercial endeavors. A landscape that promotes a sense and spirit of tranquility; minimal noise, lighting, development, vehicles. I feel a calmness, wellbeing, and sense of caring for our natural resources and history."

"Best defined by what it isn't: Not suburbia, not heavy traffic, not housing tracts, not noisy, BUT: A beautiful old-time country atmosphere that seems to live directly off the land..."

"To me, rural landscapes are devoid of new developments. Agricultural rural areas contain open fields, a farmhouse – outbuildings. Unfarmed areas consist of woodlands, wetlands, ponds, and streams. It abounds in often glimpsed wildlife.

"Rural means no billboards or big gas stations or second hand cars for sale or lots of traffic and traffic lights. Rural character is residential, perhaps livestock in the fields, lots of trees and some lawns with flower and vegetable gardens, a close feeling among residents to their community and fairly little outside traffic."

"A tractor driving on the road to the village store; lots of land, both forest and fields; a pretty downtown (Quaint); a dump that is awesome to go to."

Part 2: Value ratings and rankings

Residents were asked to rate and rank the importance of various natural, cultural, and community resources to rural character and quality of life. Clean water, Abundant Wildlife, and Scenic Qualities were most important to town residents.

Resource Importance to Rural Character	Average Rating 1=low, 7=high	Average Ranking 1=high, 11=low
Clean Water	6.67	3.19
Abundant Wildlife	6.63	3.69
Scenic Qualities	6.41	3.63
Peace and Quiet from Natural Areas	6.28	4.69
Working Farms	6.06	4.85
Land/Water for Recreation	5.85	5.10
Working Forests	5.65	6.43
Historic Features	5.53	7.23
Active Village Center	5.35	7.23
Local Economic Base	4.25	8.75

Part 3: Identifying Places that Contribute to Rural Character and Quality of Life

Residents were asked to draw a circle around up to five places that they feel contribute most to Francestown's rural character and quality of life. Residents were asked to provide a brief written description of the area circled and to indicate the resource values that made that location important.

Sizes of the circles residents drew on the map varied significantly with a few residents drawing a circle around the whole town and many residents drawing large circles around extended parts of the town. For the sake of analysis, each circle was evaluated to identify the places included within the circle. To simplify displaying the results on a summary map, the center point of each circle was digitized for the summary map. Each center point was assigned a color representing the dominant resource value the resident associated with the place. The conclusions drawn from the analysis reflect the full breadth of areas and resource values identified by residents.

Location Analysis of Places Contributing to Rural Character

Locations included in area circled	Number of Mentions
Pleasant Pond watershed	25
Shattuck Pond watershed	22
Dinsmore Brook watershed	12
Crotched Mountain area	22
Bullard Hill area	18
Brennan Brook area (Upper and Lower)	14
Rand Brook & Rand Brook Forest area	19
Haunted Lake area & wetlands north of	20
Bible Hill Area	16
Whiting Brook watershed	12
Village area	13
Other specific locations	64

Importance Analysis - Number of times resource or characteristic were mentioned

Resources or Characteristics Mentioned	Number of Mentions
Forests, Habitat, and Wildlife (includes identified hills)	127
Streams, Ponds, Wetlands	113
Scenic, Remote, Peaceful	64
Recreation	43
Agriculture, Farms, Fields, Orchards	36
Cultural, Historical	34
Other Special Features	31

APPENDIX 4: NATURAL RESOURCE WORKSHOP AGENDAS

Workshop #1 – Taking Action for Wildlife
November 10, 2011

Workshop Agenda

1. Refreshments
2. Introductions
   a. Purpose: Familiarize group with Wildlife Action Plan and Communities Taking Action for Wildlife and get input from the group re: wildlife sightings, important areas for wildlife, etc.
   b. Outcome: Participants will have priorities and goals for moving forward with strategies to protect wildlife habitat
3. Overview of Taking Action for Wildlife and the Wildlife Action Plan (Amanda Stone, UNHCE)
4. Review of the Wildlife Action Plan maps and the data behind them (Lindsey Webb, NHF&G)
5. Small Group Review WAP maps for Francestown
   a. Identifying local wildlife species and habitats
   b. Integrating local knowledge re: wildlife observations, exemplary habitat, special habitat features, core habitat areas, corridors, etc.
   c. Are there areas in town that need some ground-truthing
   d. Are there areas that need restoration or management
   e. Identifying local priorities for protecting wildlife and keeping common species common
   f. Small Group report-out
6. Questions, wrap up and next steps

Workshop #2 – Local Agriculture and Forestry
Wednesday, February 8, 2012

Workshop Agenda

1. Refreshments, poster session, and complete surveys

2. Introductions – Pete Throop

3. Brief Presentations
   a. George Hamilton (UNHCE): Status of Agriculture in NH and Hillsboro County
   b. John Nute (UNHCE): Status of Forestry in NH and Hillsboro County
   c. Chad Cochrane (NRCS): Resources available to landowners through the farm bill

4. Small Group Discussions
   a. On a scale of 1(low) to 7(high), how important is local Agricultural/local food sources to the future of your community and your overall quality of life? "Why do you think so?"
   b. On a scale of 1(low) to 7(high), how important is sustainable forest management/timber production to the future of your community and your overall quality of life?"
      Why do you think so?"
   c. What obstacles and challenges do local farmers face? What can our community do to help address some of these obstacles and challenges?
   d. Small Group Report out

5. Wrap up

Workshop #3 - Water Quality in Francestown
Wednesday, April 11, 2012

Workshop Agenda

1. Refreshments, poster session, and complete surveys

2. Introductions – Pete Throop
   a. Objective of this workshop
      i. Provide information about what causes water quality degradation and impairment, what can be done to improve water quality, water resources in Francestown
      ii. Gather local knowledge and input from you regarding water resources, priorities for protection, specific areas of concern, and ideas for improvement
   b. Approach for workshop
      i. Three part program: Presentation on Water Quality
      ii. Overview of water resources in Francestown
      iii. Small group discussion

3. Presentations
   a. Eric Williams (NHDES): Land use and water
      i. Overview of water cycle and watersheds
      ii. Types of water resource impairment and how land uses can lead to degradation
      iii. Examples strategies landowners can use to improve quality or prevent future degradation
      iv. Resources available to landowners
   b. Barry Wicklow (FLT and St Anselm College): Wild Trout Streams in Francestown
   c. Pete Throop (Monadnock Conservancy): Overview of Francestown Water Resources

4. Small Group Discussions
   a. Help us identify any water resources missing on the map?
   b. Tell us what water resources are most important to you and why?
   c. (indicate on map with sticky dot – swim, boat, fish, hiking along, view, wildlife)
   d. Help us identify water resources that might be degraded or impaired?
   e. Generate ideas for how degraded or impaired water resources might be improved
   f. Small group report out

5. Wrap up

This page intentionally blank

APPENDIX 5: FUNDAMENTALS OF LAND PROTECTION

Understanding the purpose and benefits of land conservation includes understanding several fundamental principles about the nature of a land conservation transaction:

- All land conservation is the result of a voluntary act by a willing land owner. Whether land is sold or donated in fee to a conservation minded entity (a town or conservation organization such as a land trust) or a conservation easement is sold or donated to a conservation organization, the process begins with the original landowner making a decision to do something with their land. In New Hampshire a town or commission is prohibited from taking or "condemning" land for conservation reasons, though it is possible that some land taken for other primary public purposes, such as for road building, or schools, or municipal water systems, or flood control dams, may be considered as conservation land once the primary public purpose is fulfilled.
- Conservation easements are not a form of government imposed regulation.
- One of the most common approaches to accomplishing land conservation is through the donation or sale of a conservation easement. An easement donation may result in an income tax deduction for the donor, though every situation is different and a qualified tax professional should be consulted.
- A conservation easement is a legal real estate transaction between a landowner and a qualified conservation organization (such as the Forest Society, The Nature Conservancy, NH Audubon, New England Forestry Foundation or a local land trust) or public agency (such as a municipal conservation commission or NH Fish & Game) that permanently restricts certain uses on the land to protect important natural features. The restrictions stay with the land in perpetuity (they are passed on to all subsequent owners). The land owner retains certain rights (i.e. to farm, harvest timber, engage in non-commercial recreation, and sometimes to do small future development under certain circumstances) and gives up other rights (i.e. the right to sub-divide, build residential, commercial, or industrial structures). Generally, when an easement is donated the landowner may reserve the right to restrict public access to the property.
- The conservation organization holding the easement is responsible for ensuring that the identified conservation values in the easement are not adversely compromised or diminished. When negotiating the terms of a conservation easement, a land owner and land trust have a fair amount of flexibility, as long as specific conservation values are identified and protected and there is a clear public benefit associated with the protection of those values.
- When a conservation organization accepts a conservation easement, it has the legal responsibility to steward and enforce all terms of that conservation easement in perpetuity.
- Given that land conservation is the voluntary act of a willing land owner, typically in partnership with a land trust, what role can and should a municipality play in land conservation? Many towns hold conservation easements or purchase lands for conservation purposes; however there are necessary financial and human resources

needed to fulfill the ongoing obligations of an easement agreement or to meet responsible stewardship needs of fee-owned lands that should be carefully considered first. Easements come with the obligation to monitor and enforce them in perpetuity, and responsibly managed fee-owned parcels have ongoing stewardship needs too. A relatively simple way a municipality might contribute to a conservation project is to hold an Executory Interest (or secondary interest) – this is less of a responsibility and can eliminate the need for the primary easement holder to pay state transfer tax if the easement is purchased.

- When property is acquired in fee by a municipality it is then taken off the tax roll, however many times land acquired by a town is in current use in which case there is a relatively minor tax impact to the town. Fee-owned forested parcels may even provide income to the town through timber harvests. However, unless the property is protected by a conservation easement or other binding deed restriction a future town vote may result in the land being developed by the town or sold for private development, thereby eliminating the conservation benefits intended through the original purchase. The majority of Francestown's town-owned conservation properties are protected by deed restrictions or conservation easements.
- A benefit provided to residents through having municipally owned conservation land is that it is generally open to the public for passive recreational activities. It also provides an opportunity for public education and informational programs.
- Some of the more valuable things that a town can do to encourage land conservation are to promote awareness of the town's natural resources, educate the public about the values of those resources, and provide information to owners of special lands.
- To be most effective in reaching people it is important to first understand how residents feel that the landscape of the town contributes to the town's character, desirability as a place to live, and overall quality of life. It is also essential to understand the physical characteristics of the land that makes up the town, including its ownership and existing uses. Some parcels contribute more to the character and quality of life than others: some land areas are more important to wildlife, some are critical to water quality, some have prime agricultural soils and contribute to the rural economy, and some are more suitable for residential and commercial development.

APPENDIX 6: NATURAL RESOURCES INVENTORY