

Town of Warner Conservation Plan: Today's Vision, Tomorrow's Reality

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Cover painting by Mimi Wiggin

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Warner Conservation Plan

December 2009

Section 1: Purpose

This Conservation Plan was conceived by the Conservation Commission to guide their land conservation work in identifying land conservation projects, advocating for regulatory protections, and working with the public in outreach and educational efforts. It relies largely on documents prepared for the Commission over the last decade, public input from two town-wide questionnaires (Master Plan survey 2008, Conservation Commission survey 2009, see Appendix A), a meeting with recreational interests, and mapped information.

A 2008 regulatory audit prepared by the regional planning commission as part of the Town's *Master Plan Update* recommended that the Commission "Develop a town-wide conservation plan based on this resource information [Mink Hills] which identifies acquisition priorities and other resources management actions." The *Conservation Plan* will be incorporated into the updated *Master Plan* currently under development.

Section 2: Warner's Natural Resources

As an introduction, most of Warner is forested – about 87% or nearly 31,500 acres – with 75% of the forest cover dominated by hardwood or mixed hardwood/conifer and about 25% in pure conifer forest types. About 3% of the land base is in agriculture or open grasslands, largely north of the Warner River valley, 1% is in open surface waters (lakes, ponds, rivers), 3% in forested and non-forested wetlands, and about 7% in various types of developed land uses, including transportation, gravel pits, and other open lands. The State's *Wildlife Action Plan* ranks most of the town as highest quality habitat statewide or supporting landscape.

Over the past several years the Conservation Commission has commissioned studies of key potential conservation areas in town, including Willow Brook (*Willow Brook Watershed Natural Resource Inventory and Conservation Plan*, September 1999), the Mink Hills (*The Mink Hills Conservation Plan*, June 2004), and an unpublished conservation plan for the Schoodac Brook area (2003). A natural resources inventory for the entire town was completed in January 2009 (*Town of Warner, New Hampshire Natural Resources Inventory*).

The discussion of Natural Resource Areas is based largely on these reports and on information in the 1999 *Master Plan*. The 1999 *Master Plan* identifies 26 watersheds either wholly or partially contained in Warner. The streams that drain them represent more than 45

¹ Town of Warner Natural Resources Inventory, prepared by Society for the Protection of NH Forests (2009), source of these and much of the other statistical data in this *Plan*.

stream miles, with the Warner River adding another 13.8 stream miles. According to the U.S. Environmental Protection Agency, these variously sized drainages provide the most effective framework for addressing water resource issues. Some of the smallest streams are ephemeral, drying up in the summer and flowing in the spring and fall. These "headwater streams" serve key roles in the system of water and wildlife, as do the larger streams they feed.² Streams also factor as key components of wildlife habitat and habitat connectivity, as scenic resources, and in several forms of outdoor recreation. As a result, four of the Commission's six "natural resource areas" are based on watersheds. Note that land on the north side of Mt. Kearsarge drains northerly to the Blackwater River, and much of the land in the Mink Hills along the Henniker and Hopkinton town lines drains to the Contoocook River. All other streams in Warner drain to the Warner River.

NATURAL RESOURCE AREAS

The Commission has identified the six Natural Resource Areas, each of which has distinctive conservation features and characteristics as highlighted below. These areas are:

- Schoodac Brook sub-watershed
- Willow Brook sub-watershed
- Stevens Brook sub-watershed
- the Warner River corridor
- the Mink Hills
- Blackwater River drainage

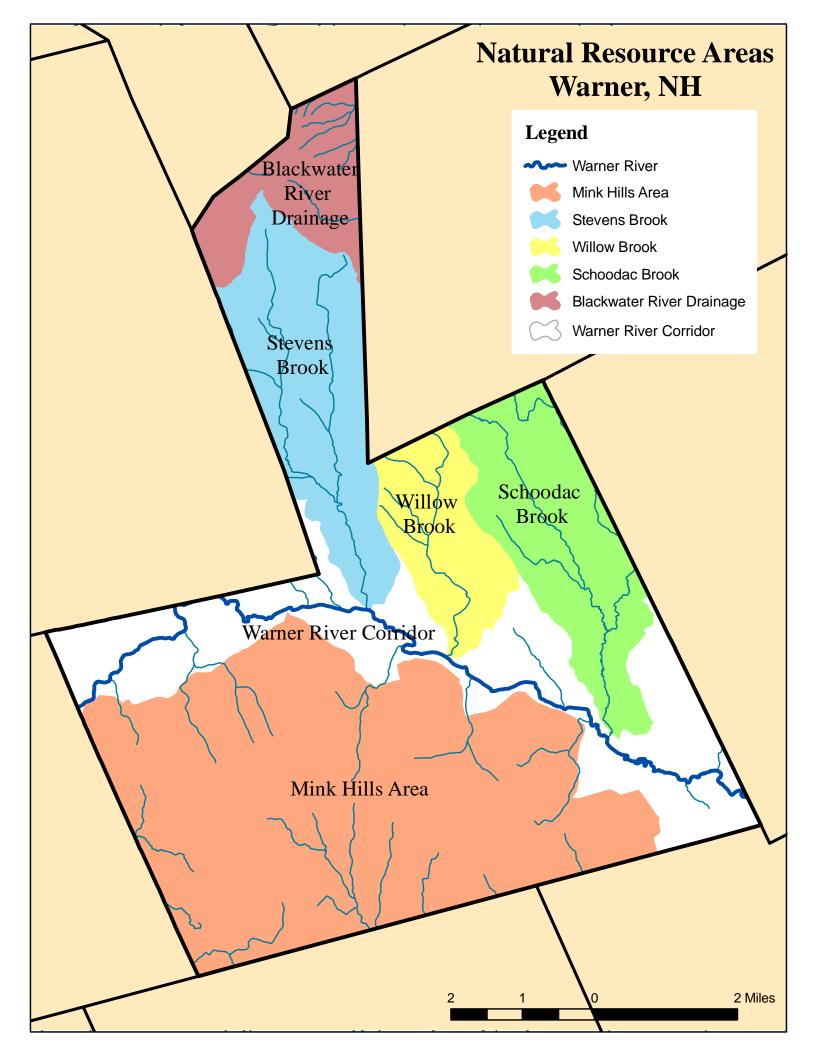
Significant portions of both Schoodac and Stevens brooks lie beyond the Warner town lines, and protection of important stream corridor functions may require collaboration with adjacent towns. This *Plan* focuses on the downstream stream reaches situated in Warner. The Schoodac, Willow, and Stevens brook watersheds include all the smaller watersheds created by the streams that flow into the three large brooks. The Warner River corridor includes small watersheds that drain to the river via streams that are not tributaries to Schoodac, Willow, or Stevens brook on the north side, and the mouths of streams that drain from the Mink Hills. The Mink Hills is not watershed based. Only a fraction of the Blackwater River drainage lands are in Warner. The Natural Resource Areas Map shows the six resource areas.

<u>The Schoodac Brook Sub-Watershed</u> (representing 12% of Warner's natural resource areas [4,146 acres]; 17% [691 acres] is conserved land, of which 680 acres are in easement and 11 acres are Town-owned)³

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² For a discussion of headwater streams see, for example, "Headwater Streams Provide Important Habitat" by Matt Carpenter, NH Fish & Game at www.extension.unh.edu/wildlife/WAPNewsNew.htm, Summer 2009.

³ Throughout this discussion of NRA size and proportions, NRA acreages are based on watershed data in the 1999 *Master Plan* p. 8-7, information from WCC reports, and total acreage for the town; acreages for protected lands are from deeds and surveys, then rounded to the nearest whole number; and total acreage for the town is based on GRANIT acreage of 35,502. Conservation properties located in each of two NRAs were allocated proportionally to each NRA. For example, the 11 acres of town-owned land allocated to the Schoodac Brook NRA is part of the 34-acre Henderson tract.



The Schoodac Brook Sub-Watershed represents approximately 4,146 acres in Warner. Schoodac Brook originates at the confluence of Knight Meadow Brook (known locally as Knight's Meadow Brook) and the outlet of Lake Winnepocket in Webster. Its major tributary, Frazier Brook, flows south from Sawyer Hill in Salisbury. Named ponds associated with the Schoodac Brook watershed (Bagley and Mud ponds in Warner, Tucker Pond in Salisbury, and Knight Meadow Marsh, Trumble Pond, and Lake Winnepocket in Webster) together with other basin wetlands, Schoodac and Frazier brooks, and unnamed feeder streams create a diversity of natural habitats, including thirteen distinct wetland communities documented in the watershed where inventories were conducted by The Nature Conservancy in 2002. The mix of high quality wetlands, associated uplands, land use patterns, and connectivity of habitat features elevate the importance of this watershed for wildlife. The watershed connects with aquatic habitat of statewide importance identified in the state *Wildlife Action Plan* to the north and northeast.

A relatively small, State-identified Conservation Focus Area for wildlife straddles the Warner/Webster town line and is unprotected. Although unprotected, Mud Pond is adjacent to land under permanent conservation management by the state (Knight Meadow Marsh and Leonard State WMA) and by private individuals whose land is under conservation easement to the Ausbon Sargent Land Preservation Trust, with contingent interests to The Nature Conservancy and executory interests to the Town. Nearly 1,000 acres of conserved wildlife habitat located in Webster at Knight Meadow Marsh Wildlife Management Area and Leonard State Wildlife Management Area influence wildlife activity in Warner. Both are near the Blackwater Reservoir, managed by the US Army Corps of Engineers primarily for flood control.

Slopes and upland soils support managed forests characterized chiefly by white pine, hemlock, and multiple hardwood species, while along roads and valleys rural residential and agricultural uses dominate the landscape. Relatively rare in Warner, the deep sandy loams and loamy sands along Schoodac Brook and Poverty Plains Road are prime for growing high-volume white pine and overlie a large aquifer. Blocks of forested areas without roads are relatively smaller in this watershed than in Warner's other natural resource areas, with the exception of the Warner River corridor lands area. Some of the town's limited agricultural soils of prime and statewide importance are in the Schoodac Brook sub-watershed, concentrated along Pumpkin and Burnt hill roads. Particularly along Burnt Hill Road, the accessible land is farmed, and open lands in this watershed represent a significant amount of the open land in Warner.

Water quality of surface waters is high. Lower reaches of Schoodac Brook overlie a highly transmissive (high yield) aquifer associated also with the Warner River. Lower reaches of the brook also provide important flood storage due to the relatively flat terrain and backwater quality of the brook near its mouth. The 100-year floodplain extends up Schoodac Brook to the Webster town line and more than one mile up Frazier Brook.

A State primary snowmobile trail runs through northwesternmost portions of the subwatershed. Several unmaintained trail corridors run northerly and easterly, along Schoodac Brook. As part of the 2009 *Natural Resources Inventory* the Conservation Commission ranked roads and vistas in town using a methodology based on criteria developed by the Vermont

Cultural Byways program. Particularly striking vistas are in the Bagley Pond area and east off Couchtown Road. Most of the roads qualify as scenic.

Northern portions of the watershed in Warner are zoned OC-1 (Open Conservation for agriculture, forestry and very limited residential, 5 acre minimum lot size) and, along roads, R-3 (Low Density Residential for residential and agricultural purposes, 3 acre minimum lot size). The southern 3/5ths of the watershed is zoned R-3. Poverty Plains Road and land to the south by the mouth of Schoodac Brook are zoned R-2 (Medium Density Residential for residential and limited agricultural purposes, schools, parks, and churches permitted by right, 2 acre lots). Sporadic development of new homes and buildings in recent years (2003-2007) has occurred on roads in the northern half of the watershed, including Mason Hill and Burnt Hill roads and Couchtown Road⁴.

The Willow Brook Sub-Watershed (representing 7% of Warner's natural resource areas [2,343 acres]; 7% [166 acres] is conserved land, of which 131 acres are under easement, 29 acres are owned by the State, and 7 acres are Town-owned)

The Willow Brook Watershed covers nearly 3,000 acres, of which 2,317 acres (79%) are in Warner. The brook originates to the north, in Salisbury, and flows south to the Warner River through Duck Pond in Salisbury and Tory Hill Meadow in Warner. Willow Brook is known as Children's Brook where it connects with a feeder stream from the east at Pumpkin Hill Road. Four additional unnamed perennial brooks flow into Tory Hill Meadow. Together with Willow Brook, these headwater streams represent a broad range of stream conditions, and diverse communities of plants and animals have evolved to fill the niches. Water quality monitoring conducted on six parameters (pH, temperature, dissolved oxygen, biological oxygen demand, *E. coli* bacteria, and total suspended solids) in fall of 1997 indicate the stream is "by and large a healthy system."

Wetlands comprise about 6% of the watershed. The largest and most significant is Tory Hill Meadow, some 50 acres of beaver-influenced wetland representing a variety of aquatic habitats, including open water, cattail marsh, and sedge meadow. Numerous smaller, beaver-induced wetlands along the streams reflect varying stages of plant life, depending in large part on the condition of the dam. The two other largest wetlands are in southern reaches of the watershed, where the topography flattens. The wetland to the west is largely forested, that to the east about half herbaceous and half forested. They are generally healthy and functionally intact, capable of storing flood waters, capturing suspended soil particles, providing habitat, and other environmental "functions." Both merit conservation protection. Vernal pools are relatively uncommon in the watershed. A key aquatic feature identified in the *Wildlife Action Plan*, Duck Pond in Salisbury, connects hydrologically with Willow Brook.

Forests are the dominant landscape feature (83%). Stands vary considerably in species and structure. Dominant tree species, based on 1993 aerial photography, include white pine,

⁶Ibid.

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⁴ Data on growth prepared by Central NH Regional Planning Commission for the Town of Warner.

⁵ Willow Brook Watershed Natural Resources Inventory and Conservation Plan, Chris Kane (1999)

hemlock, red oak, beech, red maple, sugar maple, black cherry, white ash, yellow birch, black birch, and paper birch. Most grow in mixed stands of both hardwoods and softwoods. Unusual but present are mature mixed hardwood stands and hemlock stands, both of importance to wildlife, for mast and winter cover, respectively.

Because there are so few roads, both in the watershed and to the north in Salisbury, much of the watershed is part of an uninterrupted forest block of $\geq 10,000$ acres. This coupled with a high variety of managed (e.g., fields) and natural (e.g., wetlands, streamsides) habitats in good condition creates ideal conditions for wildlife. A variety of wide-ranging mammals has been documented in the watershed, as have all but two of the amphibian species likely to be found in this part of the state. Four bird species of particular interest due to declining numbers or specialized habitat needs⁷ were identified in spring surveys, 1997.

Lower reaches of the watershed (84 acres) overlie the large high-yield aquifer along the Warner River. Some of the land east of Kearsarge Mtn. Road in the southwest of the watershed lies within the Water District's Well Head Protection Area.

The State primary snowmobile trail referenced above crosses the Warner River near the mouth of the brook and runs north through the watershed. Several hiking trails in the Tory Hill Meadow area (Indian Museum and Stockwell/Bartlett easement area) link with trails off Pumpkin Hill Road. Most of the trails in this area are maintained. The most scenic views are along Kearsarge Mountain Road, but virtually all the roads were ranked scenic.

Although largely forested, agricultural uses persist, particularly along Pumpkin Hill and Old Denny Hill roads, where the prime agricultural soils are found. Residential development is limited to east and west edges of the watershed, where roads make access possible.

Interior lands are zoned OC-1 (Open Conservation). Roads on the east are zoned R-3 (Low Density Residential); Kearsarge Mountain Road is zoned R-2 (Medium Density Residential), including Pettee Road; further north it is zoned R-3. Little development has occurred in 2003-2007 except a development off Duck Pond Lane.

<u>The Stevens Brook Sub-Watershed</u> (representing 13% of Warner's natural resource areas [4,753 acres]; 52% [2,458 acres] is conserved land, of which 15 acres are in conservation easement, 1,538 acres are in State ownership, and 905 acres are Town-owned.

The Stevens Brook Sub-Watershed represents approximately 4,582 acres in Warner. French Brook, Meadow Brook, and smaller unnamed tributaries flow from the sides of Mount Kearsarge, which, at 2,937', is the dominant topographic feature in Warner. The high energy of the headwater streams created by steep topography dissipates as French Brook and Meadow Brook near their confluences with Stevens Brook in the Warner Town Forest, and lower reaches

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⁷ Conservation Plan for the Piscataquog Watershed, Piscataquog Land Conservancy (2005)

⁸ The Conservation Commission has not done a natural resources inventory for this or the Warner River watershed. Data for this discussion is derived largely from the Natural Resources Inventory prepared for the entire town, SPNHF, 2009.

are characterized by stream-associated wetlands. The largest of these, on Meadow Brook in the Warner Town Forest, has been designated a Conservation Focus Area in the *Wildlife Action Plan*

Stevens Brook originates at a marsh in Sutton, several miles from the Warner/Sutton town line. Stevens Brook flows southerly between I-89 and North Road. It enters the river just south of the I-89 interchange at exit 9. Underlying the brook the aquifer is of moderate transmissivity. The transmissivity increases within about r iver miles of the Warner River to high-yield levels sufficient for public water supply purposes.

Though it supports limited farming and some prime agricultural soils along Kearsarge Mountain Road, the watershed is largely forested, with few roads. Lack of access and the high percentage of state and town land have limited development. Virtually the entire watershed connects with lands outside of Warner to create forest blocks of $\geq 10,000$ acres. The *Wildlife Action Plan* ranks lands on Kearsarge Mountain, including some in the Stevens Brook subwatershed, "highest quality habitat in the bioregion" due to extensive spruce/fir and northern hardwood conifer forests.

At 2,560', Black Mountain is the highest peak in the sub-watershed and the second highest peak in Warner. It, Mt. Kearsarge, and the surrounding lands above 2,500' support a different forest community from those found elsewhere in Warner. The high elevation spruce fir forests provide rare breeding habitat in this region for Swainson's and Bicknell's thrushes and blackpoll warblers.⁹

Mission Ridge to the south and east of Black Mountain has high scenic value, and both major roads in the sub-watershed were designated scenic through the Conservation Commission's assessment. Another highly scenic area lies west of I-89 and north of Rte. 103 near the I-89 interchange.

Recreational resources in the sub-watershed are largely related to Kearsarge Mountain State Park and adjoining state forest reservations.

The northernmost part of the Stevens Brook watershed is zoned OR-1 (Open Recreation for maintaining areas essentially their natural state for their recreational and scenic value to the community). Most of the remaining land is zoned OC-1 (Open Conservation) to lower reaches of the watershed, zoned R-2 (Medium Density Residential), C-1 (Commercial for business, commercial, certain dwelling, and light industrial uses to encourage this type of growth near the interstate highway interchanges), and Intervale (an overlay district designed to "provide a framework for development as a commercial and social hub for the community, compatible with Warner's character as an historic New England town, and providing an appropriate entrance to the Village, which lies less than a mile to the south").

<u>Warner River Corridor</u> (representing 20% of Warner's natural resource areas [7,238 acres]; 7% [508 acres] is conserved or in public ownership, including 40 deed-restricted acres, 11 acres

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⁹ 1999 Master Plan, Chapter VIII: Natural Resources, 8-23

under conservation easement, 49 acres in nonprofit conservation ownership, 72 acres in state ownership, 16 acres owned by the Village Water District, and 320 acres in Town ownership [includes Riverside Park, Bagley Field, one-half of Simonds School lot, and Ordway Woods])

The Warner River Corridor lands cover approximately 7,302 acres, all located in Warner. This area includes the mouths of brooks draining the Mink Hills to the north and the entire Meadow Pond Brook watershed, lower reaches of East Sutton Brook and Birch Hill Brook, and portions of the Simmons Pond watershed. There are about 23 miles of river frontage in Warner.

The Warner River enters Warner from the west in a steep, narrow gorge with short rapids and riffles on a stone bottom. As it winds its way eastward, the floodplain widens, the water slows, and currents develop a meandering course, creating backwaters and swamps along the river corridor. The floodplain ranges from quite narrow to "more than a mile wide in some locations" 10. The River has two small dams. The Meadow Pond watershed is entirely contained in the Warner River Corridor natural resource area.

The River provides flood storage land throughout its course along and under I-89. The river's flood storage capacity is particularly significant in light of the size of the drainage area upstream of Warner (some 100 square miles). This large up-river watershed is characterized in part by steep and rocky watersheds that produce fast-rising, high-volume runoff during severe storms. A gauging station in Davisville documents these volumes. Though the River's mean discharge is 60 cubic feet per second (cfs) in Davisville for the years 1939-9/1978 and 10/2001-2009, flows have trickled to 2.8 cfs (August 1965), 2.9 cfs (October 1964), and 3.6 cfs (September 1963) and flooded at daily mean volumes of 7,740 cfs (May 2006), 5,670 cfs (April 2007), and 3,980 cfs (March 1953). Maximum peak flow occurred in May 2006 at 8,640 cfs. ¹¹ Such variability creates a dynamic environment typical of rivers with characteristics like the Warner River's and highlights the importance of natural floodplains.

The floodplain forests that serve flood storage needs also support diverse natural communities that are adapted to changing water regimes and highly productive for wildlife throughout the year. Extensive floodplain forest communities exist east of the village. Peatlands are another plant community found in association with the lowlands along both Schoodac Brook and the Warner River in the southeast. Characterized by water with low nutrient content and higher acidity cause by limited runoff and groundwater input, peatlands represent a unique natural community in Warner and about 0.4% of the land base.

Although forest blocks are less than 500 acres throughout the Warner River Corridor area, the deep sandy loam and loamy sands that run west to east through the village area and dominate lower reaches of the corridor are relatively uncommon in Warner and for that reason are important.

An unparalleled feature this area is the sand and gravel aquifer that underlies much of the Warner River Corridor from Exit 9 east. Most of the nearly 4,525 acres of sand and gravel

¹⁰ 1999 *Master Plan*, p. 8-10

¹¹ U.S. Geological Survey, N.H. Water Science Center

aquifer, representing 12% of the town's total land area, lies along the River. According to the *Natural Resources Inventory*, "while this is a significant fraction compared to many other upland NH communities ... development, including more than 8 miles of the Interstate 89 corridor, the village district itself, and the Intervale commercial district at the Exit 9 interchange, has disturbed the aquifer's natural state and increased it susceptibility to adverse water quality impacts." Most of the aquifer (about 81%) is classified as potentially low yield, or marginally suitable for municipal water supply purposes. However, all aquifer lands serve as recharge zones for the remaining high yield areas, for public water supply purposes estimated at roughly 540 acres, or 12% of the entire aquifer.

There is one canoe access point to the river in Waterloo recorded on GIS maps, and the river is listed as a "canoe water" in the state. A State primary trail for snowmobiles crosses the river on Joppa Road via the Dalton covered bridge. Rte. 127 is a State-designated scenic byway. This designation recognizes the scenic and cultural values found along the road. An abandoned rail line runs parallel Rte. 103. The land has reverted to abutting landowners, and some has been developed. However, where the original railroad bed, embankments, and bridge infrastructure remain intact, there is potential for recreation trails. A particularly scenic resource in the Corridor lies west of Retreat Road. Warner's soccer and baseball fields are in the river corridor.

All Warner's zoning districts are found in the Warner River Corridor, as this area includes the village center, Intervale lands, Rte. 103, and less accessible lands to the east and west.

<u>The Mink Hills</u> (representing 42% of Warner's natural resource areas [15,031 acres]; 31% [4,652 acres] is conserved or in public ownership, of which 2,396 acres are in conservation easement, 1,363 acres¹² are in Town ownership, 563 are State-owned, 260 acres are owned by the Contoocook Village Precinct, and 70 acres are owned by the Town of Hopkinton)

The Mink Hills is an area of just over15,000 acres, broadly defined by town bounds to the south and west and by roads on the north and east. Brooks draining the area flow north to the Warner River, south to the Contoocook River, and west to Lake Massasecum (headwaters of the Warner River). Named brooks, many of which reflect the names of early settlers to the area, include Bible Hill Book, Slaughter Brook, Davis Brook, Silver Brook, Bartlett Brook, Ballard Brook (all Warner River tributaries), and Amey Brook, Warner Brook, and Hardy Spring Brook (all Contoocook River tributaries, which drain about 38% of the Mink Hills). The larger ponds draining to the north include Silver Lake Reservoir, Fiona's Pond, and Pleasant Pond; to the south, Bear Pond, Cunningham Pond, and Day Pond. Day Pond and associated wetlands form an important hydrologic link with the flood storage represented by Lake Massasecum.

Two sub-watersheds in the Mink Hills, Bear Pond and Hardy Springs Brook, are undeveloped. Bear Pond serves as the water supply for the Village of Contoocook. The rest of the area is largely forested. The 15,000 acres create two large blocks within the town bisected by North Village and Henniker roads. Although the area once supported 140 farm sites and boasted

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¹² Reflects Silver Lake Recreation Area and most of the Chandler Reservation; 80 acres of Chandler Reservation are reflected in the Warner River NRA totals.

a population of 1,970, natural land cover, including open water (3%) and forests, today accounts for 97% of the land in the Mink Hills. The forests are diverse – 31% deciduous, 24% evergreen, and 33% mixed¹³. As of 2004 the State Natural Heritage Inventory has information on the three natural areas that had been reported to it. At least one additional area, a substantial black gum swamp, has been documented. An unnamed pond straddling the Ballard Brook and Bartlett Brook watersheds is identified in the *Wildlife Action Plan* as a Conservation Focus Area.

Topographically, the area is characterized by steep slopes, many hills, and small valleys. The 1999 *Master Plan* identifies 22 hills above 1,000' in elevation. The topography, undeveloped character of the area, forest diversity, abundance of wetlands, ponds, and streams, and the Mink Hills' connectivity to thousands of acres of undeveloped land in Henniker and Bradford, in particular, make it ideal for wildlife. All the species considered "indicator" species of intact habitats in our area, mink, moose, river otter, fisher, black bear, and bobcat, have been documented here. The area supports a large number of vernal pools. 15

The Wildlife Action Plan ranks south facing slopes of the Mink Hills and adjacent undeveloped lands in the Lower Contoocook watershed as a Conservation Focus Area (CFA). Also referenced above, CFAs are places where multiple high-ranked terrestrial and aquatic habitats overlap in relatively small geographic areas. The Nature Conservancy ranks the entire Minks Hills area as a regionally significant exceptional resource because it provides critical connectivity for plants and animals between and among other large tracts in relatively close proximity – Mt. Kearsarge, Washington-Bradford to the southwest, and Mt. Sunapee to the northwest, among others. Such pivotal connectivity allows for movement and genetic exchange in an otherwise increasingly fragmented landscape.

Visually, ridgelines and hill tops of the Mink Hills contribute importantly to the Town's rural character, providing scenic views from many parts of Town, especially from the Village¹⁶. Waldron Hill is one of the more visible, as yet unprotected hills.

Silver Lake offers a beach and swimming opportunities. The State primary snowmobile trail runs north from Henniker through the Mink Hills area, and numerous trails crisscross the area. Many of the Class V and Class VI roads were ranked scenic.

Most of the Mink Hills area to the west and south is zoned OR-1 (Open Recreation) or OC-1 (Open Conservation) except along Rte. 114, Melvin Road, and Newmarket Road, which are zoned R-3 (Low Density Residential). Except as noted, all the land draining to the Contoocook River is zoned OR-1. The northeast section of the Mink Hills is zoned R-3; a small area at Waldron Hill and North Village roads is zoned R-2 (Medium Density Residential). Incremental development along roads in the Mink Hills has occurred every year for the past several years.

¹³ Mink Hills Conservation Plan (2004)

¹⁴ Indicator species were identified for Vermont and NH by Susan Morse, Keeping Track Program.

¹⁵ Per Susi von Oettingen, Warner resident, US Fish & Wildlife Service biologist

¹⁶ 1999 Master Plan; visual assessment by the Warner Conservation Commission, published in Natural Resources Inventory (2009)

Blackwater River Drainage (representing 6% of Warner's natural resource areas [1,991 acres]; 67% [1,329 acres] is in State ownership)

The northernmost reaches of Warner are largely, though not entirely protected as part of Kearsarge Mountain Reservation and Rollins State Park. Of high wildlife value, scenic value, recreational value, and a dominant land feature in Warner, this area drains northerly to the Blackwater River. Virtually all the area is ranked highest quality habitat in the bioregion in the *Wildlife Action Plan* and some of the State-owned land is a Conservation Focus Area.

The Sunapee-Ragged-Kearsarge Trail crosses a small portion of Mt. Kearsarge in Warner, and Mount Kearsarge State Park and surrounding State forest reservation lands provide outdoor recreation opportunities. The entire area is zoned OR-1.

WILDLIFE CONNECTIVITY

Streams of all sizes often serve as travel corridors for wildlife, just as roads help move people from one area to another. The Map entitled Wildlife Connectivity Zones, Local Scale depicts probable wildlife corridors between and among existing protected lands in Warner ≥ 250 acres (blocks and parcels less than 250 acres were not included in the analysis). It is based on a Connectivity Model developed for New Hampshire wildlife species by NH Audubon and the NH Fish & Game Department. The model uses existing information in the State's digitized mapping system (GRANIT) to predict where the landscape is most permeable to a subset of sixteen focal, "umbrella" species. These species include habitat generalists, habitat specialists, area sensitive, and barrier sensitive species. The model averages their travel needs. Four key landscape features influencing their travel patterns were identified and weighted as to importance: land cover (30%); distance to road (by class: interstate/arterial, collector and local paved, gravel and private, railroad) (30%); distance to riparian areas (30%); and slope (10%). The connectivity analysis can identify both key areas for land protection efforts and strategic locations for restoring connectivity in currently fragmented landscapes.

The conservation lands in and immediately adjacent to Warner make up eight distinct conservation areas of ≥ 250 acres. The assumption behind linking conservation areas is that these lands provide good habitat towards which wildlife will gravitate. Although not always the case, the lands protected in Warner are rich in wildlife habitat, and this assumption holds true. The map illustrates the disruptive role of roads in the landscape from a wildlife perspective. Where rivers typically serve as magnets to wildlife, the Warner River is nearly inaccessible as a primary connector due to roads. This contrasts with movement through the Mink Hills, which is relatively unimpeded by roads and enhanced by cover.

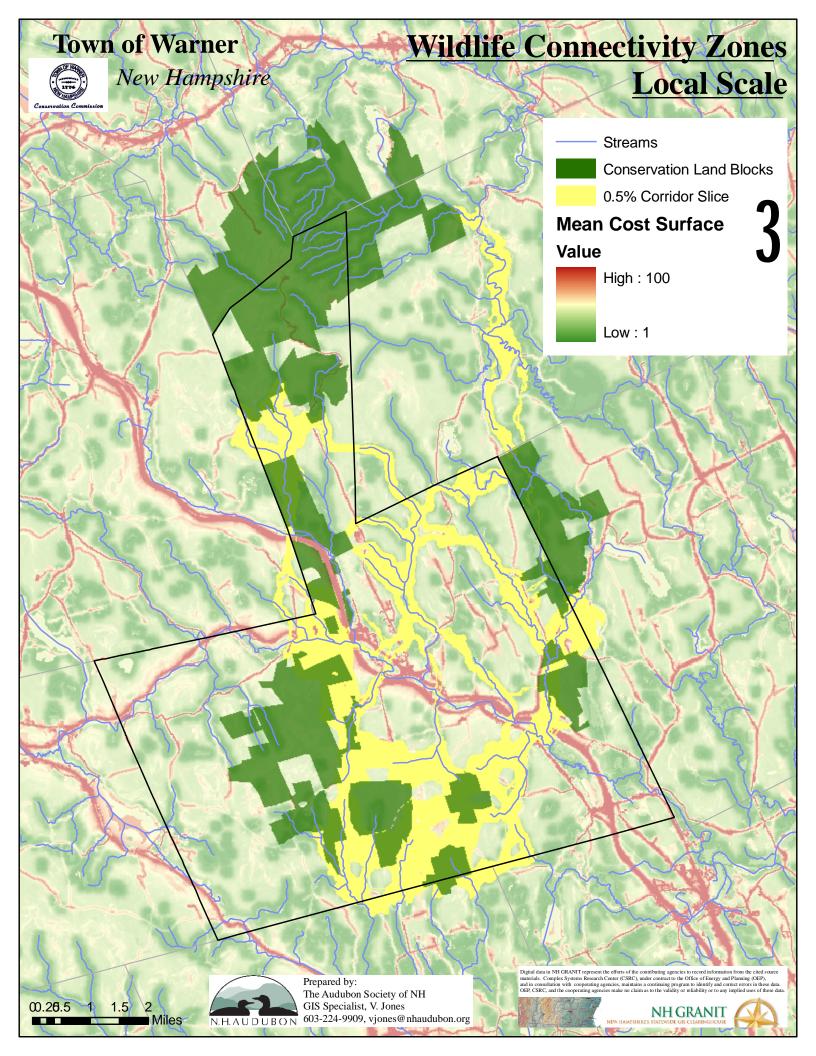
The Map, Wildlife Connectivity Zones, Regional Scale, predicts connectivity between and among eight blocks of land $\geq 2,500$ acres. The connectivity map at a regional scale represents a much larger geographic area and greater distances between conservation blocks than the map depicting local connectivity, and the additive effect of potential routes creates a map differing significantly in appearance. The regional corridors reflect the top 1% of connecting habitat in the regional landscape.

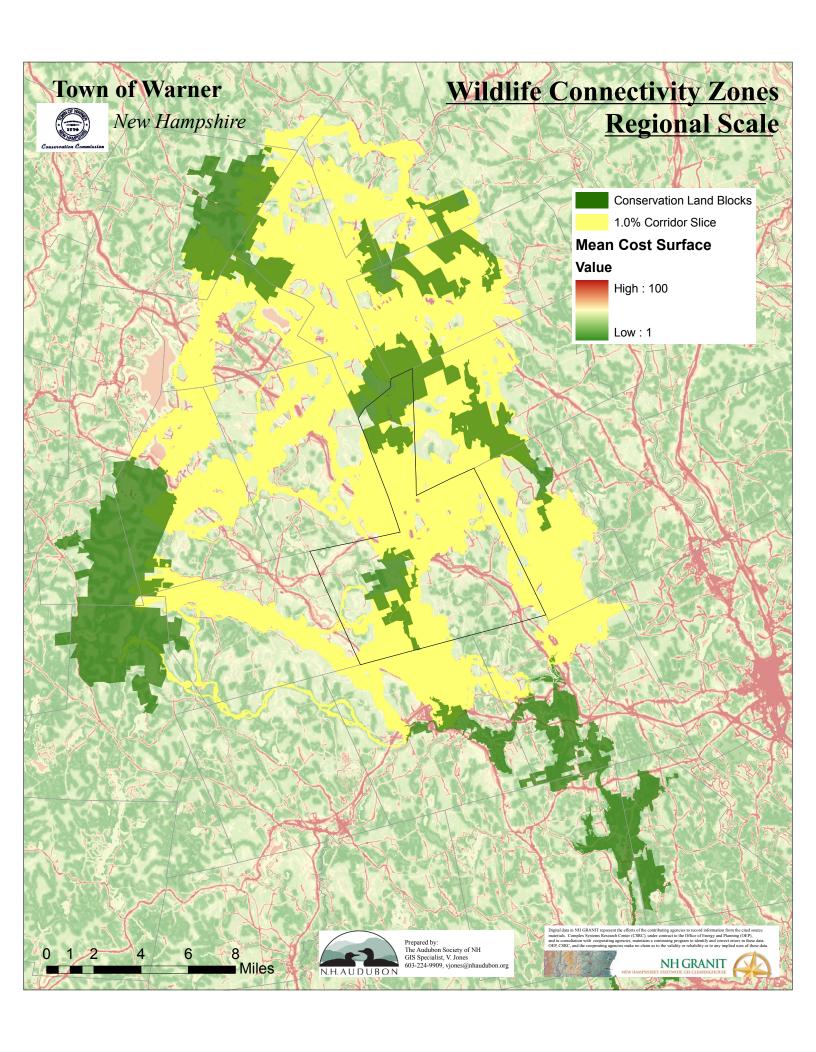
WARNER'S NATURAL RESOURCE AREAS FROM A REGIONAL CONTEXT

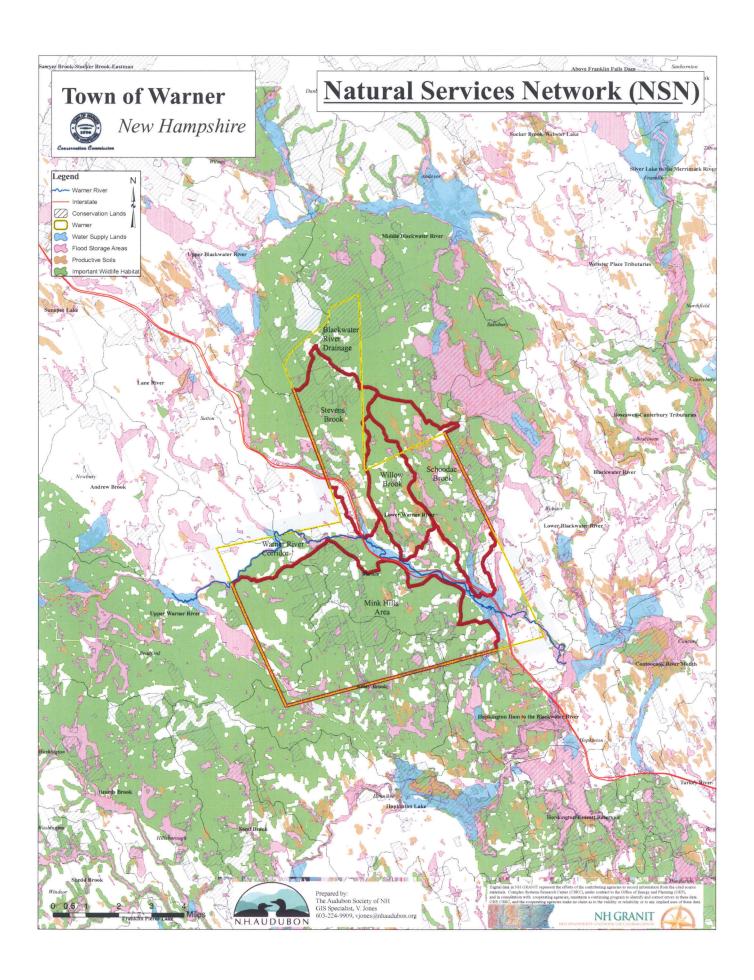
There are many particulars about each of Warner's natural resource areas that distinguish them as special from a naturalist's perspective. As a practical matter, these undeveloped areas are essential to the vitality of Warner as a community and to the health of our residents. Consider, for example:

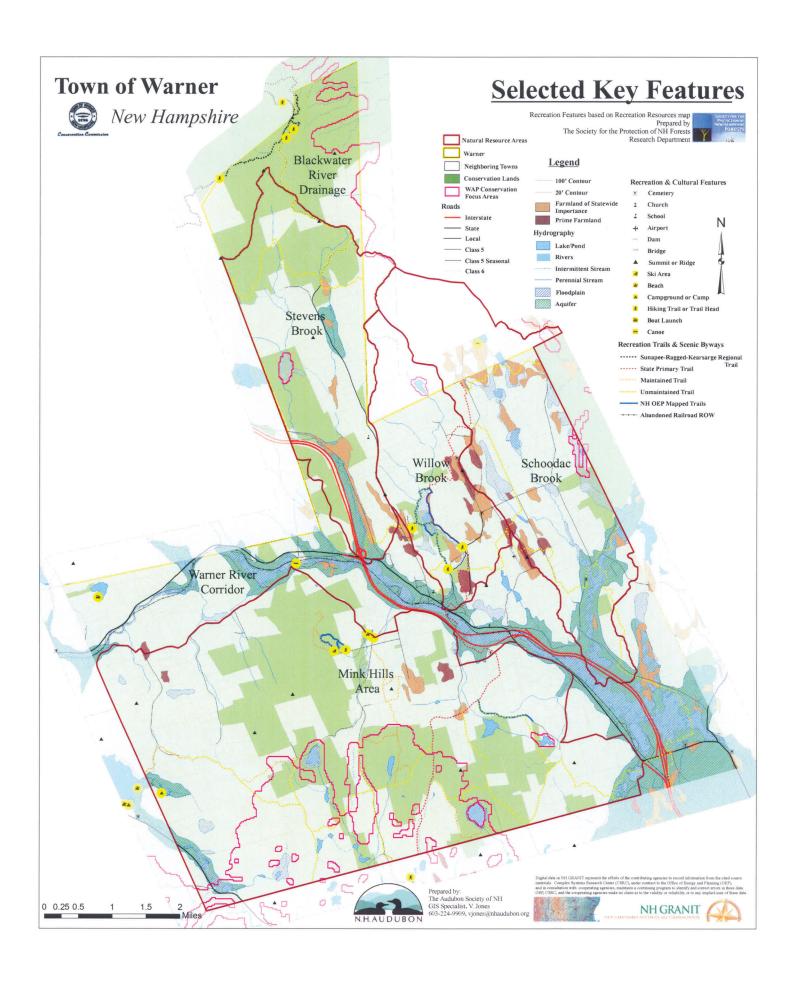
- Floodplains and wetlands provide free flood control, reducing flood damages by storing sometimes huge volumes of water. They also help keep water clean by filtering out pollutants.
- Water supply lands ensure sufficient drinking water for public water supplies.
- Productive agricultural soils provide the opportunity for food security and local sources.
- Important wildlife habitat ensures a diversity of wildlife that adds to our quality of life.
- Forest lands filter pollutants from the air and water, reduce runoff, and ensure wood to heat homes and supply lumber.

The Natural Services Network Map displays the first four of these "natural services." These services extend to adjacent towns, since loss of flood control features or habitat in an abutting town will affect Warner's natural services network, and what happens to Warner's floodplains and wetlands affects downstream communities.









Section 3: Threats to Natural Resources

Natural resources protection begins with an awareness of the impact of our decisions on the environment, whether the studied decisions of the Warner Planning Board or the unconscious act of overfertilizing one's lawn. In addition, because adverse environmental impacts often occur incrementally, resource protection requires a broad perspective, both in time and space, to avoid undesired effects. Cited below are several key threats to natural resources in Warner. Whether the threat actually materializes depends in part on the awareness and thought that are invested in the activity.

LAND DEVELOPMENT

Changes in land use from undeveloped land to developed land have several potential impacts on natural resources. Unless appropriately controlled to keep runoff on site, stripping the land of vegetation can cause loss of topsoil, erosion, and sedimentation in adjacent water bodies. If there is any significant post-construction runoff as a result of new rooftops, driveways, parking lots, and other hard surfaces that do not allow water to penetrate through to the soil, a variety of resources may be impacted: recharge of surface waters to groundwater is reduced; streams and ponds must absorb whatever pollutants are carried from the hard surfaces to the water body, including, for example, oil and grease from vehicles, road salt, dirt and petrochemicals from tires, fertilizer spilled on driveways; peak flows during storms are heightened, altering stream channels and intensifying flood events; pollutants, sedimentation, and stream bank erosion can significantly degrade stream habitat for fish and other aquatic dwellers.

For wildlife, the loss of habitat resulting from the conversion of land from a natural to a developed state represents the single greatest threat to native wildlife in New Hampshire ¹⁷. Only those species that thrive in urban or suburban settings can tolerate the changes that urban and suburban development bring. The bear and bobcat move out. The Cooper's Hawk, Northern Saw-whet Owl, and wood-pewee shift to other forests. In some cases, development obliterates a key habitat component, often a vernal pool or other wetland, which may be essential to a species or a stage in the species' life cycle.

Development also affects the ease with which wildlife can move through their habitat. Biologists often refer to this dissecting of habitats into ever smaller areas as "habitat fragmentation." In effect, development creates patches of habitat much smaller than the original habitat. This has potentially devastating ramifications. For example, a patch may be too small to support a species' various life stages and cycles; patch size may make wildlife more susceptible to predation; wildlife in patches are more vulnerable to the decimating effects of natural disturbances like fire and ice storms.

Development that causes fragmentation is not limited to buildings and related structures. Roads are a significant source of habitat fragmentation, by some assessments the single most destructive factor. Utility lines can have a similar effect.

¹⁷ NH Department of Environmental Services, Fact Sheet ID-4 (2004)

The impacts of development on wildlife extend beyond the site that is disturbed. Development shrinks the effective habitat along all the boundaries where human activity is in close proximity to wildlife, increasing the likelihood of predation by pets, introduction of invasive species, unnatural light regimes, increased interactions between people and wildlife, and other new sources of stress for wildlife. The presence of humans may also be a draw for certain kinds of wildlife, like rats, skunks, and raccoons, whose presence in turn alters the composition of the wildlife community.

LAND MANAGEMENT – FORESTRY, AGRICULTURE, HYDROGRAPHY

Foresters, loggers, and farmers actively manage land for the crops it can grow. Poor management practices affect both the current and future resource base, as when no thought is given to future harvests when timber is cut or appropriate runoff controls are not put in place. According to the NH Department of Environmental Services, about 90 percent of the sediment in runoff from logging operations comes from logging roads with inadequate drainage and erosion controls. With sedimentation, nutrients in the soil are also released to streams and aquatic systems, causing water quality issues and potentially impacting recreational uses downstream. Soil loss affects future forest productivity.

Forest management activities have direct implications for wildlife. Unless protected, vernal pools, headwater streams, wetland edges, deer yards, den trees, unique plant communities, and other key habitat features can be obliterated, while opportunities to create or enhance habitat, such as permanent openings dominated by grasses and shrubs and promotion of mast producing trees (such as oak and beech), can be lost. Poor planning can also result in the destruction of stone walls and cellar holes.

Similarly, agricultural operations that do not follow best management practices to hold top soil in place and minimize the potential for pollution from manure, from fertilizers and other applications to fields, from stored chemical leaching, and from chemical spills threaten surface and ground waters, soil productivity, people, and wildlife. Mowing regimes can destroy groundnesting bird nests and harm other wildlife dependent on field edges.

Changes in natural flow patterns, as when a landowner diverts water from a stream for lawn or garden use or a stream is channelized, affect habitat, flow, flooding potential, and some people would maintain aesthetic qualities.

BACKYARD ACTIVITIES

Although at a smaller scale, homeowners also manage land and pursue activities that have the potential to harm natural resources. Everyday activities may have significant impacts on land and water resources, whether from pesticides and fertilizers applied in excessive amounts to lawns and gardens, septic systems that fail due to inappropriate use or poor maintenance, oils and additives leaked from vehicles, or invasive species introduced from landscape plantings (see below). Runoff from backyards, driveways, and parking areas that doesn't filter into the soil on site carries elsewhere – often to the nearest waterbody - whatever it picks up (whether pet wastes, oil, fertilizer, or soaps). Clearing of vegetation along the brook that flows through the

back yard affects water temperature, stream bank erosion, both terrestrial and aquatic habitats, and water quality.

Aggregated, "backyard" sources like these contribute to a serious and widespread water quality problem statewide and to other forms of natural resource degradation. Consider, for example, that MTBE, the gasoline additive now banned from use in the state, found in public and private wells appears to have been associated with "usage of small amounts of gasoline by homeowners rather than leaking underground storage tanks or commercial operations" 18.

LAND USE

Many activities have unintended consequences that we come to understand only with time, after the fact. Following is a list of some of the land uses that may require particular care during siting, installation, maintenance, and/or closure to minimize impacts on key natural resources. This list is not exhaustive and merely illustrates how through land use choices inadvertently we affect natural resources.

- Dams and bridge footings: can adversely impact flow, bank stability, aquatic habitat, water quality.
- Sand and gravel excavations: can adversely impact surface and ground water quality, aesthetics, soil erosion, drinking water supplies if located over an aquifer.
- Golf courses: can adversely impact habitat, wildlife directly, surface and ground water quality.
- Roads: 1) Salt storage and salting and sanding practices can adversely impact drinking water (sodium from sodium chloride is an issue for people on low-sodium diets; chloride affects taste but is not a health risk), vegetation, and aquatic life. 2) Gravel roads can cause sedimentation with all the attendant effects on water quality, instream habitat, and stream flow. 3) Culverts can interrupt the movement of fish and other aquatic species, cause erosion. 4) As referenced above, roads can disrupt wildlife travel corridors, cutting into and through habitats, isolating areas and ultimately shifting the composition of wildlife. For wildlife populations of limited extent, wildlife mortality due to traffic can reduce genetic diversity in the local population.
- Cell towers and other tall structures: can adversely impact scenic views.

The Department of Environmental Services has developed best management practices (in rules at Env-Wq 401) for the following land uses because of their potentially significant adverse impacts on groundwater, in particular:

- Vehicle service and repair shops
- General service and repair shops
- Metalworking shops
- Manufacturing facilities
- Underground and above ground storage tanks
- Waste and scrap processing and storage facilities
- Transportation corridors

• Septic systems (at commercial and industrial facilities)

¹⁸ NH Dept. of Environmental Services, NH 2008 Section 305(b) and 303(d) Surface Water Quality Report, p. 33

- Farms using agricultural chemicals (in NH Dept of Food, Agriculture, and Markets)
- Salt storage/use
- Snow dumps
- Stormwater infiltration ponds or leaching catch basins
- Cleaning services
- Food processing plants
- Concrete, asphalt, and tar manufacture
- Any site where fueling and maintenance of earth moving equipment occurs
- Laboratories and certain medical offices (dental, medical, veterinary)
- Cemeteries
- Hazardous waste facilities

Recreational land uses can also impact natural resources, as when erosion from overuse or inappropriate use causes water quality and stream habitat loss, nesting areas are destroyed by foot, wheeled, or vehicular traffic, or winter trails are subject to summer uses, crushing vegetation and exposing wildlife to stress.

INVASIVE SPECIES

The National Invasive Species Information Center defines an "invasive species" as a species that is: 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes).

Humans are the primary means for introducing invasive species to a new environment. Plants, for example, imported from elsewhere, are purchased for home landscaping and gardens. The imported stock may carry other plant seeds and animals as well. Freshwater zebra mussels, for example, are thought to have arrived in ballast water, which is a major source of exotic marine organisms. European colonists intentionally brought European birds to the New World. Even today intentional introductions continue. The Nature Conservancy estimates put the damage from invasive species worldwide totals more than \$1.4 trillion – five percent of the global economy.

In Warner, a shift from native to invasive plants has the potential to affect such key resources as native plants and plant communities, scenic resources, water quality, and water-based recreation. By eliminating important food sources and cover, invasive plants can also affect wildlife. Among the invasive plants likely to be found in Warner are European or Japanese barberry (*Berberis vulgaris*, *B. thunbergii*), Japanese knotweed (*Polygonum cuspidatum*), purple loosestrife (*Lythrum salicaria*), Norway maple (*Acer platanoides*), multiflora rose (*Rosa multiflora*), burning bush (*Euonymus alatus*), garlic mustard (*Alliaria petiolata*), common or glossy buckthorn (*Rhamnus cathartica*, *R. frangula*), and Oriental bittersweet (*Celastrus orbiculatus*).

Invasive insects of particular concern to forest resources include the hemlock wholly adelgid (introduced from Asia in the 1920s), the Asian long horned beetle (first discovered in

Brooklyn, NY in 1996), and the emerald ash borer (not yet found in the state but a significant threat). All are on the state's invasive species list (see Appendix B).

Section 4: Goals & Implementation Strategies

In addition to the survey conducted for the Master Plan Committee, the Conservation Commission mailed a survey targeting land conservation issues to all residents in May 2009 (see Appendix A). This initial effort, resulting in some 123 responses, was followed up with additional efforts at the Farmers' Market, transfer station, and the Fourth of July celebration breakfast sponsored by the Warner Veterans organization. According to pollsters at the UNH Survey Center, the initial respondents were likely those residents with the greatest interest in or concerns about land conservation in Warner. In all, the survey generated 154 responses (11%). The Conservation Commission considered these views, and those of respondents to the *Master Plan* survey of 2008, in developing this *Plan*.

NATURAL RESOURCE CONSERVATION GOALS

<u>Goal 1</u>: Protect key natural resources identified for protection in this *Plan* (see below). Objectives:

- 1) Work with the Planning and Zoning boards to identify where local regulatory tools can be strengthened to protect natural resources, e.g., floodplains, riparian areas, scenic views, aquifers, wildlife habitat.
- 2) Once needed changes have been identified, work with boards to help implement new regulations. ¹⁹
- 3) To complement regulatory controls develop a habitat conservation checklist to be used in project reviews.
- 4) Continue to promote donation and sale of conservation easements consistent with the Commission's land conservation guidelines.
- 5) Continue working with regional and statewide land trusts and state agencies interested in protecting land in Warner.
- 6) Work with the Selectmen and appropriate groups in town to permanently protect Town-owned lands with good conservation value, including lands currently under management (town forests, for example) and those with no managing entity (Town-owned parcel abutting Brown easement in the Mink Hills, for example).
- 7) Explore new funding sources for land and easement acquisition as one way to offset the need for annual appropriations. Recognize voluntary contributions to the Conservation Fund from local citizens.
- 8) Create opportunities for the public to learn about natural resource protection, conservation, and what they can do to help protect resources in town.
- 9) Continue to refine resource inventories and monitor conservation opportunities.
- 10) Promote policies that protect current use.

<u>Goal 2</u>: Enhance conservation outcomes in Warner by working with adjacent towns to maintain wildlife corridors and flood storage capacity and to expand conservation areas.

¹⁹ Note that in both the 1999 *Master Plan* survey and the 2008 survey for the *Master Plan* under development, environmental impact was ranked as the most important criterion to consider in reviewing proposed developments.

<u>Goal 3</u>: Maintain and expand recreation opportunities compatible with natural resources protection by working with other recreation interests in town and with the State Forests Division and NH Fish & Game

CONSERVATION TARGETS

The following conservation targets measure specific outcomes of the town's actions to protect natural resources. They are protective of the natural resources that the Commission has identified as important and reflect the high level of town support for the land conservation work accomplished to date, where 56% of residents responding to the 2008 *Master Plan* survey indicated the preservation of open space in Warner is "most important"; "natural environment" and "rural character" were the two top ranked "qualities of Warner," at 57% and 55%, respectively; and 69% indicated a willingness to continue spending town money to protect natural resources and open space.

- Protect meaningful blocks of high quality conservation land and distinctive natural features in at least 40% of the Mink Hills, Blackwater, and Stevens Brook natural resource areas; protect high quality wetland and upland systems in at least 30% of the Schoodac and Willow brook natural resource areas; protect at least 20% of the Warner River corridor.
- Connect conservation blocks of \geq 250 acres, particularly along stream and wetland corridors, to enhance wildlife movement.
- Ensure a minimum buffer of 300' around conserved wetlands and establish riparian buffers along all streams and other waterbodies, ranging in size from 75' in headwater streams (including intermittent streams) that can be crossed easily to wider buffers for larger streams and wetlands.
- Protect a significant percentage of Warner's unique and special habitats, e.g., south facing slopes, vernal pools, wetland complexes, State-identified wildlife habitat, rare plant communities, floodplain forests, either through conservation ownership/easements or by voluntary land management practices.
- Protect groundwater resources throughout town.

The targets for conservation land in each of the Natural Resource Areas (NRAs) are based on existing zoning and development patterns, conservation goals identified in the Commission's reports and discussions, and the effects of development on streams and stream systems. Clearly, the Warner River Corridor is already the most developed part of town, yet it also contains significant, highly productive aquifer zones and the town's current water supply wells, as well as the river, a conservation priority, and the largest number of residents, who benefit from close-to-home conservation lands and associated recreational opportunities (see Appendix A, Q. 1). Conservation goals for the Mink Hills area focus on protecting unfragmented blocks of high quality conservation land; 40%, less than half the area, represents a reasonable minimum target for achieving this goal, particularly in light of development patterns in the area and Town support for conservation projects in the Mink Hills. Similar goals of protecting large blocks of conservation land, along with scenic views and water resources, apply to both the Stevens Brook and Blackwater Drainage NRAs. Rich in natural resources, including prime agricultural lands, aquifers, diverse and significant wildlife habitats, and water resources, the Stevens and Schoodac

brook NRA targets of 30% will help protect these conservation priorities, in smaller blocks of land.

In addition to the above rationale for its targets, the Commission believes that land conservation plays an important role in protecting water quality, minimizing flood damage, and sustaining aquatic ecology in Warner. Research by the Center for Watershed Protection summarized by the NH Department of Environmental Services in *New Hampshire Stormwater Management, Volume I: Stormwater and Antidegradation*²⁰ indicates that when the land surface of a watershed is from 0 to 10% impervious, receiving waters are slightly impacted by watershed development. When imperviousness exceeds 25% of the watershed, streams suffer significant impairment (they do not meet federal water quality standards). The NRA targets implement a strategy of using conservation land to ensure that 20% to 40% of the land in Warner is protected from rooftops, roads, driveways, patios, parking lots, and other features of our built environment that contribute to imperviousness – less than half the goal for pervious lands, but a significant step.

The table below indicates how conservation efforts to date compare with conservation targets. Note that Town lands managed for conservation purposes, such as the Warner Town Forest, are included, even though they are not permanently protected by conservation easements. Active recreation areas in the Warner River floodplain and at Silver Lake are also included, as are the Warner Village Water District lands along the Warner River.

Natural Resource Area	Target Acreage	Current Protected Acres	Acres Shy of Goal
Blackwater Drainage	40%, 800 ac	67%, 1,329 ac	
Mink Hills	40%, 6,012 ac	31%, 4,652 ac	1,360 ac
Schoodac Brook	30%, 1,244 ac	17%, 691 ac	553 ac
Stevens Brook	40%, 1,901 ac	52%, 2,458 ac	
Warner River Corridor	20%, 1,448 ac	7%, 508 ac	940 ac
Willow Brook	30%, 703 ac	7%, 166 ac	537 ac
Totals	12,108 ac	9,805 ac	3,390 ac

Total protected acres as a percentage of town currently: 28%, 9,805 acres Total protected acres as a percentage of town if goals are met: 37%, 13,195 acres

CONSERVATION PRIORITIES

The Commission's focus is conserving areas that contribute importantly to natural resources protection in Warner. The Commission will rank properties with reference to a policy on acceptance of land or a conservation easement in the Town of Warner similar to the draft policy in Appendix E. The following discussion identifies recommended strategies to protect key natural resources.

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²⁰ New Hampshire Stormwater Management, Volume I: Stormwater and Antidegradation, produced by NH DES in cooperation with the U.S. Environmental Protection Agency and Comprehensive Environmental, Inc. (December 2008). Available on line at http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-08-20a.pdf

Maintaining High Quality Water Resources

Warner's water resources include both surface waters and groundwater. Surface waters include rivers, lakes, ponds, marshes, swamps, and streams, and Warner's more ephemeral water resources, its vernal pools and intermittent streams. Groundwater resources are the source of water on which both public and private wells depend. Respondents to the Conservation Commission's 2009 questionnaire identified the protection of current and future water supplies as one of two top conservation priorities. Protecting rivers and streams and wetlands, marshes, ponds, and bogs ranked third and fourth, respectively.

<u>Water Supplies</u> While private wells can draw water from less abundant groundwater sources, the Warner Village Water District's public water supply relies on ample, uncontaminated sources of groundwater that can be drawn easily from water-holding strata of permeable rock, sand, or gravel. Groundwater generally is most vulnerable to pollution from contaminants that infiltrate into it from the land surface or just below the surface. Leaking underground storage tanks, parking lot runoff, and septic systems are examples of sources of groundwater pollution. Currently only a small portion of the aquifer along the Warner River and Schoodac Brook is protected. Of this, 70 acres lie in the high-yield area suitable for public water supplies. As the District's current public water supply source, the wells along the river are a top water resources protection priority. A 655-acre drinking water protection zone delineated by NHDES has been established to identify recharge areas and minimize contamination risks at the Royce wells off Chemical Road. Of this, 25 acres, less than 4% of the area, is currently municipally owned or permanently protected.

PRIMARY CONSERVATION STRATEGY: Regulatory, education & outreach, and land conservation.

- Review existing regulatory tools for aquifer protections. If inadequate, consider protective overlay zoning and regulatory controls to minimize contamination and maximize infiltration in the wellhead protection area. In keeping with the 2008 *Master Plan* survey, prohibit new construction in the Warner River and other FEMA-mapped 100 year floodplains. The townwide 2009 Natural Resources Inventory identifies views along the ridge that constitutes much of the southern portion of the wellhead area as among the best in the town. Zoning to protect these vistas may contribute to aquifer protection as well.
- Work with citizens to promote groundwater protection (see Sections 7 and 8).
- Focus on expanding the Tory Hill Meadows Conservation Area and seeking smaller pockets of conservation land accessible to residents in the town center. Land conservation may play a more pivotal role protecting a second, 157-acre high-yield aquifer associated with Tom Pond. NH DES has identified 17.5 acres here suitable for future municipal wells, of which fewer than half are currently protected. Less than half of the entire aquifer is protected.²¹ Curtailment of development in the floodplain would significantly enhance aquifer protection, as would continued conservation of floodplain lands

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²¹ Town of Warner, New Hampshire Natural Resources Inventory (2009), p. 21.

<u>Surface Waters/Floodplains</u> As discussed, surface waters serve many functions, from flood storage and wildlife habitat to scenic beauty and recreational opportunity to water quality and flow regimes.

PRIMARY CONSERVATION STRATEGY: Regulatory, voluntary land management, and land conservation

- Stop allowing fill in floodplains.
- Review zoning ordinance and regulations to improve regulatory setbacks, buffers, and water quality controls.
- Work with citizens to promote surface water and streamside best management practices (see Sections 7 and 8).
- Include key stream corridors and high quality wetland systems in land conservation efforts within each of the Natural Resource Areas.

Minimizing Loss of Wildlife Habitat

Wildlife habitat and corridors linking habitats was the second top conservation priority identified by respondents to the Conservation Commission's 2009 survey. As one respondent commented, if you protect habitat, you are protecting a whole suite of natural resources.

Water, Cover, and Connectivity

PRIMARY CONSERVATION STRATEGY: Regulatory, voluntary land management, and land conservation

- Review the 75' setback and buffer requirements, particularly as they relate to larger streams and ponds and to stream systems important to habitat connectivity. See *Innovative Land Use Planning Techniques* (2008) for a variety of approaches to protecting streams and wetlands. Consider regulatory protections for and include vernal pools and intermittent streams on development project checklists.
- Educate the public about the importance of smaller streams that may not run year-round and of vernal pools that have no regulatory protection but do play critical ecological roles
- Seek to conserve assemblages of headwater streams and vernal pools, setbacks for which are recommended at 400°²². Target stream systems with high integrity (no road crossings, intact riparian areas) for conservation.

<u>Unfragmented blocks/forests/fields</u> Large tracts of contiguous open space with a mix of habitat types are essential for some wide-ranging species. In addition, unfragmented blocks provide a range of contiguous natural habitats that often capture many habitat types, helping ensure that "common" species remain common. In the Commission's 2009 survey, continued conservation action to protect contiguous tracts of land received 36% support, with an additional 46% indicating large blocks are important but so are smaller areas around town.

PRIMARY CONSERVATION STRATEGY: Voluntary land management, land conservation

²² See Innovative Land Use Planing Techniques: A Handbook for Sustainable Development (2008), p. 195.

- Building on Class VI roads should be discouraged to avoid premature development and habitat fragmentation.
- Encourage landowners of large tracts to manage their land for sustainable timber outputs, water resource protection, and wildlife. Explore landowner interest in cooperative land management efforts, or at a minimum, targeted educational programs around important habitat types that cross property lines.
- Continue land conservation efforts in the Mink Hills as a priority build on existing conservation areas and protect areas ranked as high priorities in the *Mink Hills Conservation Plan*, considering also new data from the *Wildlife Action Plan* and the connectivity study conducted as part of this *Plan*.
- Seek opportunities for permanent protection for unfragmented, roadless blocks in other Natural Resources Areas.

<u>Special habitats</u> Bat hibernation sites, migration stopover habitat, deer wintering areas, mast production areas, high elevation forests, fields, rocky outcrops, and south facing slopes may be critical to wildlife species' persistence in an area.

PRIMARY CONSERVATION STRATEGY: Voluntary land management and land conservation

- Work with landowners who manage lands with one or more of these special habitats on them to maximize wildlife protection.
- Continue identifying areas that support special wildlife habitats and consider their presence in setting land conservation priorities.
- Land conservation efforts should include not only the special habitat but sufficient land around it to ensure continued viability of the habitat.

Protecting Forestry and Agricultural Resources

Conservation of forests and farmlands ranked equally (8% considered these one of three top conservation priorities). Farmland conservation ranked third as the most critical conservation action to take.

<u>Forests</u> Working forests provide many amenities in addition to wood fiber, from water filtration and erosion control to wildlife habitat and recreation opportunities.

PRIMARY CONSERVATION STRATEGY: Voluntary land management, land conservation

- Encourage landowners to use best management practices; recommend multifaceted forest management as in *Good Forestry for the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire.*
- In addition to conservation for key forest tracts, seek conservation of old growth forests, if any, as a conservation priority. These forests are rare in the state and offer landscape diversity.
- Deep, sandy loams and loamy sands along the Warner River and lower reaches of Schoodac Brook align closely with the major aquifer in town. Because these soils are relatively rare in Warner, provide the best high-volume white pine growing conditions in the state, and are relatively flat and hence developable, seek protection on an

"opportunity arises" basis and where they overlap with other resource conservation priorities.

<u>Agriculture</u>

PRIMARY CONSERVATION STRATEGY: Voluntary land management, public education and outreach, land conservation

- Work with farmers to promote best management practices. With their cooperation, determine whether zoning or planning tools would be beneficial.
- Encourage the public to buy farm products produced on local farms.
- Focus conservation efforts on areas where soils are ranked prime or of statewide importance and on active farms.

Maintaining Scenic Vistas

Protection of scenic vistas did not rank high relative to other natural resources in the 2009 survey. However, support for regulatory protection of ridge lines and hilltops is strong (62.5% in 2008 *Master Plan* survey), and vistas constitute part of Warner's special character.

PRIMARY CONSERVATION STRATEGY: Regulatory, education and outreach, land conservation

- Consider expanding on the standards that are in place; additional opportunities for protection are outlined in *Innovative Land Use Planning Techniques: A Handbook for Sustainable Development* (2008). Research these and consider the possibility of enacting a scenic ridgeline and slope protection ordinance.
- If people are building in areas identified as scenic, provide recommendations for siting and height of buildings, clearings, etc.
- Particularly where scenic features overlap with other natural resources, pursue land conservation.

Section 5: Regulatory Protection for Warner's Natural Resources

Regulatory tools are part of the mix of implementation strategies for protecting many of Warner's natural features. The following table provides summary information on state laws and key rules for interpreting or implementing them and on local ordinances and regulations intended for the protection of natural resources. It is not exhaustive but identifies the most relevant or most commonly invoked. Note that some of the laws may be relevant to more than one resource, but they are listed where the impact is most typical. Abbreviations are listed at the end of the table. While many regulations are applied only to specific development activities, the practices they implement may also be relevant at the very small scale of one's own home or back yard.

RESOURCE	STATE	LOCAL
Surface Waters, Floodplains, and Aquatic Life	RSA 482-A Wetlands Dredge ad Fill, permitting program for activities in wetlands. Seeks advisory opinions of local conservation commission. Env-Wt 100-800. DES RSA 483-B Comprehensive Shoreland Protection Act, regulates setbacks, buffers, use of fertilizers, salt storage, control of runoff, and lot size within 250' of protected water body (except where local regulations are more stringent, in which case more stringent regulations apply). The Warner River, Bagley Pond, Bear Pond, Cunningham Pond, Pleasant Pond, Simmons Pond, and Tom Pond (also known as Diamond Pond) fall under RSA 483-B jurisdiction. Env-Wq 1400. DES	Flood Plain Development Ordinance, establishes special standards for development in floodplains aimed at ensuring that the flood carrying capacity of an altered or relocated watercourse can and will be maintained with no increase in flood levels within the community during the base flood discharge. Based on Federal Emergency Management Agency maps. In Warner, there are 1,217 acres in flood Zone A, 963 acres in Zone AE, and 126 acres in Zone B. These areas include all the floodplain along the Warner River, Schoodac Brook and lower reaches of Frazier Brook, Tom Pond, Pleasant Pond, Mud Pond, wetlands along upper reaches of Meadow Brook, and other smaller ponds and
	RSA 485-A Water Pollution and Waste Disposal, multiple provisions to protect water supplies, prevent pollution in the surface and groundwaters of the state and prevent nuisances and potential health hazards. At Env-Wq 1700, surface water quality and nondegradation policy regulations. DES RSA 485-A:13 Water Discharge Permits, prohibits certain discharges and requires permits for discharging of sewage or wastes into surface waters without a permit. Env-Ws 401. DES	wetlands. Zoning Ordinance: excludes from definition of "buildable area" streams, rivers, ponds, lakes, and other waterbodies, wetlands, poorly and very poorly drained soils, and land within a 100 year floodplain or floodway. Requires 75' setback and natural buffers (50%) from Warner River, ponds >10 ac, perennial streams. Authorizes open space
	RSA 485-A:17, Terrain Alteration, or Site Specific program requires erosion controls for large-scale (>100,000 ft²) construction activities; affects smaller projects (>50,000 ft² within protected shoreland per RSA 483-B); invokes both temporary and permanent control measures. Env-Wq 1500. DES RSA 485-A:14-15, deals with vehicles and petroleum containers submerged in surface waters and with litter	developments to help preserve wetlands, floodplains, stream corridors. • Minimum lot size is 2 acres unless lot is served by town sewer. Earth Excavation Regulations, require setbacks from water, plans for erosion control, and post-operations stabilization, with plan showing final surface drainage patterns. No excavation may occur within 75' of a great
	(e.g., garbage, scrap metal, old cars, trees) disposed of in, on frozen, or on the banks of surface waters. RSA 227-J, Timber Harvesting, prohibits slash and mill	pond, navigable river, or waterbody ≥ 10 ac or within 25' of any other perennial stream, open water < 10 ac, wetland > 5 ac, or prime wetland.

waste in any stream, river, or brook which normally flows	
	1
throughout the year or within 25 feet of a 4 th order stream (Warner River) and requires that ≥50% of the basal area be left within 150' of ponds ≥10 acres, standing water bodies ≥ 10 acres, or a 4 th order stream, and within 50' of a perennial stream and associated wetlands. Applies wetland and terrain alteration provisions to timber operations. Excludes clearing for conversion purposes. Res 5300. DRED RSA 430:28-49, Pesticides Control, provides for state regulation of pesticide applications to protect ground and surface waters. Pes 100-1000. DAMF RSA 431:33-35, Manure, Agricultural Compost, and Chemical Fertilizer Handling Law, requires manure and chemical fertilizer to be handled in accordance with Best Management Practices as published by the NH Commissioner of Agriculture, Markets and Food. DAMF RSA 146-A, Oil Discharge or Spillage in Surface Water or Groundwater, authorizes DES to regulate above ground storage tanks. Env-Wm 1402. DES RSA 155-E, Local Regulation Excavations, requires municipalities to regulate gravel excavation and sets out operational and reclamation standards, many of which relate to water quality protection from runoff and on-site storage of fuels and other toxic materials. See also BMPs for Urban Stormwater Runoff (DES); Stormwater Management and Erosion and Sedimentation Control Handbook for Urban and Developing Areas (DES, Rockingham Co. Conservation District); BMPs for Routine Roadway Maintenance in NH (DOT); numerous fact sheets produced by DES at www. des.nh.gov/oranization/commissioner/oin/factsheets/index htm	Site Plan Review Regulations requires erosion and sedimentation control plan, identification of all water bodies on site plan. Subdivision Regulations: Natural features, including water bodies, shall be preserved to the maximum extent possible. Site maps must include soils data, water courses Major subdivisions to prepare soil erosion control plans and obtain federal National Pollution Discharge Elimination System (NPDES) permit for disturbances of >1 acre. All applications must include drainage plans and watershed maps. Special provisions for septic systems within 500' of flood zone.
RSA 485-C Groundwater Protection Act, establishes ground water as primarily a local resource, authorizes state assistance to municipalities, and establishes procedures and standards for the classification and remediation of groundwater. Protective measures include release detection permits for certain facilities located within certain groundwater protection areas. At Env-Wq 401, BMPs for Groundwater Protection. DES RSA 485-C:12 Groundwater Protection Act, specifically prohibits certain uses within a wellhead protection area classified as GAA (local option for well-head protection area designation). DES RSA 485-A Water Pollution and Waste Disposal, among several provisions, authorizes state regulation of	Earth Excavation Regulations prohibit issuance of permit if excavation would substantially damage an aquifer and require information on groundwater table and seasonal high water table; no on-site storage of potential pollutants allowed unless per state rules. Site Plan Review Regulations have as stated purpose protection of ground water quality
	bodies ≥ 10 acres, or a 4th order stream, and within 50' of a perennial stream and associated wetlands. Applies wetland and terrain alteration provisions to timber operations. Excludes clearing for conversion purposes. Res 5300. DRED RSA 430:28-49, Pesticides Control, provides for state regulation of pesticide applications to protect ground and surface waters. Pes 100-1000. DAMF RSA 431:33-35, Manure, Agricultural Compost, and Chemical Fertilizer Handling Law, requires manure and chemical fertilizer to be handled in accordance with Best Management Practices as published by the NH Commissioner of Agriculture, Markets and Food. DAMF RSA 146-A, Oil Discharge or Spillage in Surface Water or Groundwater, authorizes DES to regulate above ground storage tanks. Env-Wm 1402. DES RSA 155-E, Local Regulation Excavations, requires municipalities to regulate gravel excavation and sets out operational and reclamation standards, many of which relate to water quality protection from runoff and on-site storage of fuels and other toxic materials. See also BMPs for Urban Stormwater Runoff (DES); Stormwater Management and Erosion and Sedimentation Control Handbook for Urban and Developing Areas (DES, Rockingham Co. Conservation District); BMPs for Routine Roadway Maintenance in NH (DOT); numerous fact sheets produced by DES at www. des.nh.gow/ organization/commissioner/pip/factsheets/index.htm. RSA 485-C Groundwater Protection Act, establishes ground water as primarily a local resource, authorizes state assistance to municipalities, and establishes procedures and standards for the classification and remediation of groundwater. Protective measures include release detection permits for certain facilities located within certain groundwater Protection area. At Env-Wq 401, BMPs for Groundwater Protection Act, specifically prohibits certain uses within a wellhead protection area classified as GAA (local option for well-head protection area classified as GAA (local option for well-head protection area classified as GAA (local opti

RESOURCE	STATE	LOCAL
	(RSA 483-B). Env-Ws 1000. DES RSA 485-A:13 Water Discharge Permits prohibits certain discharges and requiring permits for discharging of sewage or wastes into surface or ground waters without a permit. Env-Ws 401. DES RSA 430:28-49 Pesticides Control, regulates pesticide applications and applicators to protect ground and surface waters. Pes 100-1000. DAMF RSA 149-M, Solid Waste Management, provides comprehensive authority to NHDES to regulate solid waste management facilities, including landfills, incinerators, and motor vehicle salvage and storage facilities. It promotes, in preference of first to last, source reduction, recycling and reuse, composting, waste-to-energy technologies (including incineration), incineration without resource recovery, and landfilling. Env-Sw. DES RSA 146-C Underground Storage Facilities, requires registration and permits for underground storage tanks >110 gallons, >1100 gallons if for nonresidential onpremise heating oil. Env-Wm 1401. DES RSA 146-E Fuel Oil Discharge Clean up Fund, authorizes a grant program to assist qualifying owners of on-premise-use heating oil tanks. See also BMPs for the Installation or Upgrading of On-Premise-Use Heating Oil Tank Facilities. DES RSA 147-A, Hazardous Waste Management, authorizes regulation of hazardous wastes. Env-Hw 100-1000. DES RSA 155-E, Local Regulation Excavations, requires municipalities to regulate gravel excavation and sets out operational and reclamation standards, many of which relate to water quality protection from runoff and on-site storage of fuels and other toxic materials. See also www. des.nh.gov/ organization /commission/pip/factsheets/index.htm.	
Forests, Farmlands	Guidance documents designed to protect forest and farmland soils, most notably BMPs for Erosion Control on Timber Harvesting Operations in NH (DRED), BMPs for Erosion Control on Timber Harvesting Operations in NH, a Pocket Guide (NH Timberland Owners Association), Manual of BMPs for Agriculture in NH (DAMF). RSA 227-K Forest Health, establishes state responsibility for monitoring forest health and long-term trends in forest health and protection from insects and disease. Res. 5500. DRED	Subdivision Regulations provide for traditional timber management and agriculture in open space developments. Zoning Ordinance Allows commercial forestry and agriculture in low and medium density residential, conservation and open recreation districts as a matter of right. Identifies preservation of farmland as a purpose of open space development.
Wildlife Habitat	Although not primarily designed for habitat protection, several RSAs dealing with water quality protection	Subdivision Regulations require applicants to provide information for the proposed site

RESOURCE	STATE	LOCAL
	indirectly serve wildlife habitat interests, including restrictions on timber harvesting near water and Shoreland Protection Act setbacks. Water quality standards to provide suitable physical and chemical conditions in the water and riparian corridor to support wildlife are under development in NH. RSA 208 Game Animals, providing for regulation of	and adjacent land on environmentally sensitive areas, including rare wildlife species. Environmental Impact Assessment relative to impacts on species must accompany the final plan.
	game animal hunting , prohibits the taking of Canadian Lynx or Mountain Lion, silent as to habitat. Fis 300. F&GD	
	RSA 212-A Endangered Species Conservation Act, states as its goal to maintain and enhance wildlife normally occurring in the state which may be in jeopardy and establishing programs, including acquisition of land and aquatic habitat; no rule shall cause undue interference with normal agricultural and silvicultural practices. Fis 1000. F&GD	
	RSA 212-B Nongame Species Management Act, focuses on education, research and management of the state's 420 species of wildlife (of which 60 are considered game birds or mammals, furbearers, or sport fish) and creates a fund for public and private contributions. Fis 1400. F&GD	
	RSA 483-B Comprehensive Shoreland Protection Act, applicable to the Warner River and ponds ≥ 10 ac, aims to protect habitat by establishing minimum statewide shoreland protection standards. Env-Wq 1400. DES	
Plants and Plant Communities	217-A NH Native Plant Protection Act, authorizes a protected plants list for NH, creates funding mechanism for Natural Heritage Bureau, and prohibits certain activities harmful to protected plants unless when committed by landowner. The Bureau's mission is to: determine protective measures and requirements for the survival of native plant species in the state, investigate the condition and rarity of plant species, distribute information regarding the these species and their habitats, and maintain information on rare wildlife in cooperation with the Nongame and Endangered Wildlife Program. Res 1100. DRED	Subdivision Regulations require applicants to provide information on environmentally sensitive areas, including rare plants and exemplary plant communities on the proposed site and adjacent land. Environmental Impact Assessment must accompany the final plan.
	HB-1258-FN, An Act Relative to Invasive Plant, Insect, and Fungal Species, deals with invasive species and requires a list of regulated invasive species. Agr 3800. DAMF	
Scenic Resources	RSA 227-J, Timber Harvesting, prohibits timber cutting within 150' of a public highway and slash within 50'. Res 5300. DRED	Site Plan Review Regulations contain landscaping standards; require view shed analysis for communications towers.
	RSA 236:90-110, RSA 236:111-129 Control of Junk Yards and Automotive Recycling Yards, establishes	Excavation Regulations prohibit excavations where existing visual barriers would be removed; reclamation requires planting of

RESOURCE	STATE	LOCAL
	setbacks from interstate, state, and local roads. DES	trees where visible from a public way. Zoning Ordinance requires 5 acre minimum in Open Recreation (purpose includes protecting scenic values) and Open Conservation districts. establishes 75' buffers from existing highways. prohibits accumulation of junk. limits building height provides for open space developments to protect ridge tops and scenic views.
Recreation Resources	RSA 233-A Access to Public Waters, establishes a statewide program in NH Fish & Game Department to promote boat access on public water bodies. Fis 1600. F&GD RSA 482-A Wetlands permit required for dock construction. DES RSA 215-A Off Highway Recreation Vehicles and Trails creates a Bureau of Trails in Dept. of Resources and Economic Development to coordinate with other state agencies, administer funds for OHRVs and snowmobiles, and assist communities with trail efforts. Res 8400, 8500. DRED; Fis 1500, F&GD RSA 207 General Provisions as to Fish and Game, deals with hunting, trapping, angling generally. F&GD Saf-C-400 Watercraft Safety Rules, includes regulation of headway speed and no wake areas to protect against erosion.	Zoning Ordinance
Historic and Cultural Sites	RSA 227-C Historic Preservation, creates state Historic Preservation Office responsible for documentation, assistance, and promotion of historic resources and properties. Note this act does not prevent destruction of historic sites unless federal funding is involved. DCR	

DAMF, Department of Agriculture (may also appear as Agr), Marketing, and Food; DCR, Department of Cultural Resources; DES, Department of Environmental Services; DOT, Department of Transportation; DRED, Department of Resources and Economic Development; F&GD, Fish & Game Department; BMPs, Best Management Practices

In addition to state and local laws and ordinances, the Federal government plays a role in natural resource protection in New Hampshire. Two important Federal statutes of particular relevance to Warner are:

The **Federal Clean Water Act** (1977) established the goal of "swimmable, fishable" waters for all Americans on which the state's water quality standards are based. Section 404 of the Clean Water Act establishes a federal permitting program directed by the US Army Corps of Engineers designed to protect wetland and aquatic resources from adverse impacts of dredge and fill activities. In NH, the state issues a programmatic permit, which means that state-permitted projects may proceed without the federal permit. The Corps reviews state-issued wetlands permits and reserves the right to issue individual permits on projects. Section 402 of the Clean Water Act aims at maintaining water quality standards and requires a permit for discharges into public waters (National Pollutant Discharge Elimination System [NPDES] permit). In New Hampshire, EPA administers the NPDES permit program, working closely with the state, which typically uses the NPDES permit to satisfy state discharge requirements as well. Section 402 of the Act also authorizes stormwater management for certain municipalities, certain industries, and construction activities. Of most relevance to Warner are the Phase II Stormwater Regulations for construction activities that disturb one or more acres and from smaller areas that are part of a larger common plan of development. In New Hampshire, Phase II permits are issued by the US Environmental Protection Agency. Anyone with a construction site that falls under Phase II regulation must develop and implement a stormwater pollution prevention plan similar to the BMPs required by the DES site-specific program. This program includes road construction where soil will be disturbed unless such construction is done in accordance with "best management practices" developed by the NH Department of Transportation for routine roadway maintenance activities in NH. For more information see: http://cfpub.epa.gov/npdes/stormwater; http://des.nh.gov/organization/divisions/water/stormwater/index.htm.

The **Wild and Scenic Rivers Act** (16 USC Chapter 28) governs federal actions. By executive order, all federal agencies must make all reasonable efforts to avoid negative impacts to rivers designated as Wild and Scenic and those listed in the Nationwide Rivers Inventory as potential Wild and Scenic Rivers. That segment of the Warner River from Bradford to its confluence with the Contoocook River is listed on the inventory; outstanding resource values cited for it are recreational opportunities, fish, and historic sites or features.

BEST MANAGEMENT PRACTICES

Many regulatory approaches to resource protection are supplemented by <u>voluntary</u> guidance that has been developed for various specific activities with the potential to cause environmental harm. Some of these "best management practices" have been codified into state law. BMPs have been developed for: agricultural operations, horse farms, timber harvests, site excavation and road construction, road salting and snow dumping, motor vehicle salvage and storage facilities, golf courses, sand and gravel operations, chemical and petroleum storage, marinas, both new and existing development projects, and drinking water protection, as well as home-based activities like septic system maintenance, lawn and garden care, chemical storage, and runoff control. An excellent introduction to BMPs, including homeowner tips, available at no charge is entitled *Best Management Practices to Control Nonpoint Source Pollution, A Guide for Citizens and Town Officials*, produced by the NH DES, January 2004. This publication focuses on water quality protection. A number of fact sheets available at the DES website and publications by other entities provide additional guidance that is not necessarily limited to water quality.

KEY RECOMMENDATION

The Conservation Commission should work through the Planning Board to initiate a thorough comprehensive analysis of Warner's land use planning documents with respect to wildlife habitat and natural resources protection. Such a review, as developed by NH Audubon and The Jordan Institute, would identify inconsistencies among documents (e.g. zoning requirements relative to buffers along waterbodies and excavation regulations) and opportunities for enhancing protection of multiple resources through district-wide regulation, including specific proposed revisions. See "Addressing Wildlife Habitat and Natural Resource Protection In Municipal Land Use Documents: Ideas for New Hampshire Municipalities" at http://wildlife.state.nh.us/Wildlife/Wildlife_Plan/WAP_habitat_audit.html for assistance, or contact NH Audubon. See also *Innovative Land Use Planning Techniques: A Handbook for Sustainable Development* (2008) for a range of planning and zoning options.

See also Section 4, recommendations for regulatory opportunities under strategies.

Section 6: Land Conservation, Current Status

Permanent land conservation is the best way to protect certain natural resources and is a key implementation strategy for conserving large blocks of undeveloped land. Existing "conservation" lands in Warner have a variety of managing entities and management strategies. The wildlife habitats they protect are diverse. The forests support a variety of natural resource goals identified as important in both the master plan survey and the survey conducted summer 2009 by the Conservation Commission, including particularly protection of water supply and wildlife habitat, as well as economic goals of individual landowners, scenic quality, and rural character.

The recreational opportunities they afford for dispersed activities like hunting, fishing, snowmobiling, hiking, and nature observation complement the opportunities at town-owned properties managed for team sports, swimming, picnicking, and related activities. The following discussion identifies key management objectives for the different types of conservation land. It is organized by managing entity. Appendix C contains more detailed information on easement properties. Appendix D summarizes Town projects, 2000-2009.

STATE-OWNED LANDS

Department of Resources and Economic Development, Division of Forests and Lands

•	Kearsarge Mountain State Forest	$2,740 \text{ acres}^{23}$	Stevens Br/Blackwtr
•	Harriman-Chandler State Forest	395 acres	Mink Hills
•	Ashendon State Forest	168 acres	Mink Hills
•	Gilmore State Forest	37 acres	Warner River
•	Carroll State Forest	29 acres	Willow Brook
•	Davisville State Forest	18 acres	Warner River

Most DRED forest lands, also referred to as "reservations", have been gifted to the state to be managed for forestry in perpetuity. A statewide plan governs management activities on DRED forest lands. Overall cut is defined by a policy applied to each of the state's 13 forest ranger districts that limits the timber harvested to no more than two-thirds the annual growth. All activities must adhere to best management practices and to guidance provided in *Good Forestry for the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire*. This publication was developed by natural resource experts from state and for profit and nonprofit organizations in New Hampshire to provide "practical recommendations on sustainable management practices for individual forest ownerships" [Introduction]. It identifies two principles of sustainability:

- 1) maintain the structural, functional, and compositional integrity of the forest as an ecosystem through:
 - maintenance of soil productivity
 - conservation of water quality, wetlands, and riparian zones

²³ The Mt. Kearsarge Reservation includes additional acreage in Adnover, Salisbury, and Wilmot for a total of 4,847 acres (121-acre Rollins State Park is considered separately, below).

- maintenance or creation of a healthy balance of forest size classes
- conservation and enhancement of habitats that support a full range of native flora and fauna
- protection of unique and fragile natural areas
- 2) meet the diverse needs of the human community through:
 - continuous flow of timber, pulpwood, and other forest products
 - improvement of the overall quality of the timber resource as a foundation for more value added opportunities
 - addressing aesthetic impacts of forest harvesting
 - continuation of opportunities for traditional recreation.

Good Forestry addresses soil, water, habitat, unique features, timber, and aesthetics.

At the time a timber harvest is planned, the regional forester prepares a Forest Operation Planning Report, which is circulated to state agency personnel for their comments on Natural Heritage impacts, wildlife and nongame impacts, trail impacts, state park impacts, and cultural/historical impacts. DRED notifies abutters and municipalities of proposed sales and will accompany interested parties on site to review proposed activities. NH Fish & Game Department biologists advise DRED foresters on wildlife habitat needs.

Most state forest reservations are on a similar 20-year cycle for some type of harvest activity. Even small parcels like Davisville State Forest are managed when, as at Davisville, the stand has commercial value. Of the state forests in Warner, only Gilmore State Forest has seen no forestry activity, largely due to poor access. The other forests were cut in the mid 1980s. A timber sale on Ashendon State Forest is scheduled for summer/fall of 2009. Two sales in Kearsarge State Forest are underway. Harriman-Chandler State Forest has a regime that includes maintenance of small openings so experiences more frequent cutting. A commercial timber sale in a white pine plantation in Carroll State Forest is scheduled for winter 2010.

DRED forest lands are open to low impact recreational uses, including hunting, hiking, bird watching, cross country skiing, snowshoeing, and horseback riding. Snowmobile trails through state forest lands are by special use permit issued by the state. They are locally maintained. Special use permits may be issued for other recreational activities as well. ATV use is prohibited on state forest lands, in part due to extensive damage to DRED-maintained forest roads that has resulted from ATV activity (which also has impacted the Class VI roads that DRED or private landowners may need to maintain in order to access their land). Cellar holes and other historic features are often omitted from state maps to discourage collection of artifacts, old bottles, and the like.

Department of Resources and Economic Development, Division of Parks and Recreation

Rollins State Park

121 acres

Stevens Brook

Rollins State Park, on the south slope of Mt. Kearsarge, is managed for recreational dayuse. Accessible to vehicles during the summer and into October via a 31/2-mile long scenic auto road originally built in 1873 by a private company with the support of Warner residents, the grounds include a parking lot, picnic area (the "Garden"), and a 1/2-mile hiking trail to the summit of Mt. Kearsarge. From the picnic area one can see Mt. Monadnock, Pack Monadnock, Crotched and the Uncanoonuc Mountains, the hills of central Massachusetts, the Boston skyline, and in the foreground, the Mink Hills and Merrimack River Valley. That portion of the original 521-acre park not zoned for recreation/park management is managed by the Division of Forests and Lands and included in the Mt. Kearsarge State Forest acreage figure.

Fish & Game Department, Wildlife Division

Leonard Wildlife Management Area
 Knight Meadow Marsh Wildlife Management Area
 Kearsarge Wildlife Management Area
 Kearsarge Wildlife Management Area
 101 acres, Webster
 1,050 acres, Andover

Although not in Warner, the two properties in Webster are in the Schoodac Brook watershed and directly benefit wildlife and wildlife activity on adjacent Warner lands. The Kearsarge WMA lands abut Kearsarge State Forest Reservation lands and an 850-acre easement in Andover held by the Society for the Protection of New Hampshire Forests. All were acquired and are managed primarily for wildlife and wildlife habitat. Secondary objectives are to provide recreational opportunities to the general public.

Written management plans for all Wildlife Management Areas are under development. As one of the largest WMAs, Leonard WMA is a top priority for plan development; the plan will include a current habitat assessment and "desired future condition" of habitat for key wildlife species, including but not limited to species covered in the State's Wildlife Action Plan and the Waterfowl Plan. Leonard WMG is largely forested, with current forest management activity focusing on crown tree release and hemlock regeneration. The property includes some small fields, which the state maintains to provide foraging and pollination opportunities. There is also a black gum swamp on the property. No wildlife, e.g., pheasants, are stocked at Leonard WMA.

Knight Meadow Marsh WMA is managed for waterfowl but falls under WMA guidelines for management purposes. This marsh is a significant landscape feature and supports a variety of waterfowl, as well as other species.

The primary goal of Kearsarge WMA management activities is to maintain habitat diversity, primarily by means of patch clearcuts. Recent cutting in a hemlock stand on the property aimed at enhancing hemlock regeneration for wintering deer. A bridge is proposed to remedy a recurring issue with beaver clogging the culvert on Lead Mine Road.

Fish and Game considers management of surrounding properties in determining treatments for the lands under their control. In general, the Department seeks to maintain a high level of structure in the forest. In Knight Meadow Marsh Fish and Game is working to control a patch of phragmites (*P. australis*), also known as common reed, an invasive plant affecting wetlands.

Recreational uses of WMAs are governed by Rules at Fis 902. All WMAs are open for hunting, trapping, fishing, birding, and wildlife observation. Horseback riding is permitted. No permanent tree stands and blinds, rope swings, or diving platforms are permitted. Special use permits may be issued for group activities (15 people or more) and specific uses, both recreational and nonrecreational, provided they "do not interfere with the purpose for which the area was acquired, developed or managed." The snowmobile trail through Leonard WMA operates under a special use permit and is maintained by the local club. A special use permit trail for snowmobiles also runs through Kearsarge WMA. ATV use requires a special use permit.

Fish & Game Department, Lands Bureau

o Simmons Pond Remote Access Facility 17 acres Warner River

This property was acquired primarily for fishing access. The foot trail for accessing this 22-acre pond is owned by NH Fish & Game. The Pond is state-owned, and abutting lands are privately owned. The trail is a low state priority and needs maintenance. The Department's policy is to allow local people to maintain trails as worked through the local game warden, who for Warner is Delayne Brown. The pond is stocked with Brook Trout and may support bass and other fresh water species. See map at

http://wildlife.state.nh.us/fishing/bathy_maps/simmons_warner.pdf.

LAND OWNED BY NONPROFIT ORGANIZATIONS

Society for the Protection of NH Forests

Jellome Forest

48.7 acres Warner River

This property in Davisville was gifted to the SPNHF in 1966 with expressed conditions, "binding as long as is practicable," that the tract be managed as a woodlot according to acceptable forestry practices and maintained as a bird and wildlife refuge, with no hunting privileges, and subject to use by neighborhood children "provided they kindle no fires, kill no wildlife, and do not mutilate trees." SPNHF prepared a intensive biotimber inventory, including wildlife, soil and water resources, and plants, and identified one exemplary natural forest community on the property. For management purposes, the area has been designated an "ecoreserve" designation governing approximately one-third of the property.

Prior to timber harvesting, SPNHF develops a harvest plan. An intermediate timber harvest conducted in 2007 focused on white pine stand improvement and hardwood release. Plans anticipate a cut in another 15 years.

The land is not posted, but there are no formal trails due to access issues. A land steward is assigned the property to help ensure it is not abused.

MUNICIPAL LANDS

Warner

The land owned by the Town of Warner is managed by a variety of entities in town. Of the properties listed, only the Village Water District and Precinct lands are not Town-owned.

Conservation Commission

0	Goodwin Trust	2.2 acres	Warner River
0	Henderson Tract	34 acres	Warner River
0	Hill tracts	104 acres	Warner River

Of these tracts, the management of the Henderson and the Goodwin Trust lands is governed by deed restrictions (see Appendix C for deed restrictions). Management responsibilities are specifically assigned to the Conservation Commission by deed for the Henderson tract only. Because the Hill tracts are situated in the river corridor, management by the Conservation Commission makes sense. The Goodwin Trust land is largely wet, abuts the Hill property, and was dedicated to open space, with public water supply a secondary potential use, and management by the Commission again makes sense. None of these properties has a management plan.

Chandler Reservation Committee

0	Chandler Reservation	1,426 acres	Mink Hills
0	Warner Town Forest	955 acres	Stevens Br/Warner R

The Chandler Reservation Committee, a four member committee elected for 4 year terms, manages the Chandler Reservation. The original 800 acres dedicated to Chandler Reservation were gifted to the Town in 1919. Additional tracts have been added over the years to create the Chandler Reservation. Chandler Reservation is a designated Tree Farm. The current management plan includes specific stand improvements to: enhance forest health and timber value, wildlife habitat, and wetland protection and maintain/expand recreation trails. The plan includes soils information and an inventory of cultural features, including stone walls, foundations, old roads, sawmill remains, a cemetery, and tower remnants.

The Warner Town Forest was created in the 1990's through land acquired for tax delinquency. The Chandler Reservation Committee provides advice and guidance to the Board of Selectmen on timber harvesting and other management activities on this property. Timber management activities have focused on timber stand improvements and wildlife. Recreationally, the land is used for hunting and fishing, hiking on woods roads, and nature observation.

Proceeds from the sale of timber are managed by the Committee and used for property maintenance and selected projects that benefit the entire town, such as fire equipment.

Warner Village Water District

0	Royce Well Site	8.5 acres	Warner River
0	Flanders Well Site	7 acres	Warner River

The Water District acquired both these parcels along the Warner River for public water supply purposes. The wells on the Royce site are active; the Flanders site represents potential future water supply but will be more costly to develop. The Royce wells provide enough water to meet present demand and can accommodate growth. The Commissioners are looking for a

third source remote from the river that will not be affected by unanticipated pollution to current wells

American Legion, Post 39

o Ordway Woods

3.6 acres

Warner River

This small but scenic pull out on Rte. 103 offers a restful site with surprising natural interest.

Parks & Recreation Commission

0	Bagley Field (Bagley/Stillman/Clark)	35 acres	Warner River
0	Riverside Park	16 acres	Warner River
0	Silver Lake Recreation Area	17 acres	Mink Hills
	~		

o Simonds School Area 13 acres Warner R/Willow Br

These properties are managed by the Commission, whose members are appointed by the selectmen. Bagley Field, a.k.a the Bagley Stillman Clark parcel, includes 1 mile of river frontage, lies in the 100-year floodplain, and is used for soccer. Riverside Park, also used for organized sports, has a dugout, irrigation system, and excellent turf despite the land's propensity to flood. The Silver Lake Recreation Area has a beach for swimming and a picnic area. The Simonds School area is unmanaged.

Other

In addition to the above properties, there are lots in town, often acquired for back taxes, for which no managing entity has been identified.

Hopkinton

Hopkinton Conservation Commission

o Myron-Cecil-Harris Tract 110.9 acres Mink Hills

Of the 110.9 acres, 70.3 are in Warner and 40.6 are in Hopkinton. The land was acquired by the Town of Hopkinton in 2005 as an actively managed forest lot. The Hopkinton land was purchased, and the Warner land was gifted. The Conservation Commission manages the property, and a new forest management plan is under development. A cellar hole and waterfall create points of interest on the property, and the Commission plans to develop a trail at some point. However, the property's relative isolation makes trail development a low priority relative to other more accessible lands in town. The land is under a conservation easement held by Five Rivers Conservation Trust. The property is also known as Bermuda Harris tract.

Contoocook Village Precinct

0	Bear Pond Protection Land	220 acres	Mink Hills
0	Contoocook Village Precinct Land	136 acres	Mink Hills
0	Additional land, lot 6-10	40 acres	Mink Hills

All of these properties are managed primarily for watershed protection. The Bear Pond property, acquired in 1935, completely surrounds Bear Pond, the water source for Contoocook Village and at 48 acres, the largest of Warner's great ponds. The Contoocook Village Precinct land was acquired in 2001 and is under easement to the Town of Warner (see Appendix C). The 40-acre lot was acquired in 2006, on prompting by the Warner Conservation Commission, that they were not in a position to acquire the land. A property monitor periodically monitors trails, bounds, and use of the properties, which are open to low impact recreation. Most of the trails are maintained by the local snowmobile club, with whom the Precinct Commissioners work to ensure locations are appropriate to the properties' primary protective use. The limited ATV use is for access to other Mink Hills land. The Precinct has conducted timber harvests in the past; there are no current plans for timber cutting.

CONSERVATION EASEMENTS

As of 2009, there are 21 conservation easements governing some 3,303 acres of land in Warner. The smallest is 10.2 acres, the largest 745 acres, and the median is 121.8 acres. There is also one privately owned deed-restricted property of slightly more than 40 acres, with restrictions enforceable by the Society for the Protection of New Hampshire Forests. Entities with lead responsibility for easement stewardship include the Town, under auspices of its Conservation Commission, the Society for the Protection of New Hampshire Forests, the Ausbon Sargent Land Preservation Trust, the Contoocook Village Precinct, and the Natural Resources Conservation Service. The NH Fish & Game Department and The Nature Conservancy hold contingent interests in one and two Courser easements, respectively, giving them rights of enforcement. The Conservation Commission holds executory interest in 10 of the easements in Warner. Should the lead entity fail to enforce the terms of the easement, executory interest gives the Town the right to enforce, terminate the original grantee's rights, and assume full responsibility for easement stewardship.

These conservation easements typically prohibit industrial or commercial activity, except forestry and agriculture, which must be performed according to best management practices and/or written plans. They generally prohibit subdivision or sale of individual tracts separately, the intent being to maintain the land intact as part of the working landscape or as viable habitat. Structures are limited to those related to permitted activities, such as trails, fences, barns, and sheds. Changes to topography must conform to easement standards, and no quarrying, mining or excavation is permitted. No dumping or disposal of hazardous or man-made materials is permitted. Newer easements prohibit the granting of new rights-of-way or easements across the property.

The easement may prohibit posting against public access, it may otherwise define access by the public, or it may be silent as to access, leaving the decision to the owner. Most of the easements in Warner allow for nonmotorized, pedestrian access. Some specify specific areas for motorized use, typically winter snowmobile use. Hunting is generally permitted.

Reserved rights are rights the Grantor specifically retains that might otherwise not be permitted by the easement, like building a cabin, subdividing one or more lots from the property, creating a pond, or commercial recreation associated with agritourism.

The provisions run with the land and bind future landowners. The land remains in private ownership, is taxed at its current use rate, and is bought and sold on the open market.

Easements held by the Town as Grantee

Carter Easement

Contoocook Village Precinct Easement

Kearsarge Indian Museum Easement

McCausland Easement

Nemec Easement

R.A.W. Investment Trust Easement

Ries Easement

Stockwell/Bartlett Easement

Executory Interest held by the Town

Badger Easement

Bound Tree Forest Easement

Brown Easement Chase Easement

Courser Easements, #1, #2, #3

Eubank Easements, #1, #2

Wiggin Easement

KEY RECOMMENDATIONS, WITH A FOCUS ON EXISTING CONSERVATION LANDS

The Conservation Commission should continue to develop and refine its stewardship program for both the fee-owned and easement properties for which it is primarily responsible. The program must have sufficient structure and documentation to survive changes in Commission membership, the voluntary nature of Conservation Commissions, file upkeep errors, and changes in political will.

The Commission should consider hosting an annual event for conservation easement donors and donors of land, both as a continuing gesture of appreciation and to maintain relationships with landowners and create informal opportunities to review management expectations on easement lands. The event could include an educational program around one or more land management issues of interest to landowners. It could be used to determine whether there is interest on the part of individual landowners to work together, as when resource conservation needs are best served by a collaborative approach to managing multiple parcels.

The Commission should work with the Selectmen, a regional land trust, and Town Forest/Chandler Reservation Committee to put town forest lands into permanent conservation by protecting them with conservation easements.

The Conservation Commission should consider working with the American Legion to capitalize on educational opportunities at the Ordway Woods by identifying the plants that grow along the short path along a deep ravine and a plaque about the valley, the river, and forces creating our landscape.

The Conservation Commission should consider working with the Parks and Recreation Committee to develop an interpretive trail at the Simonds School property.

The Conservation Commission should follow up with landowners who through the survey expressed interest in protecting their land.

See also the last two recommendations in Section 7 relative to landowner outreach.

For implementation of new projects, see Section 4, goals 1 and 2, targets, priorities, and strategies.

Section 7: Ways the Conservation Commission Can Promote Resource Protection through Outreach and Education

Education and outreach are a key conservation strategy, as is voluntary land management, a strategy in which education plays a major role that the Conservation Commission can facilitate. The Conservation Commission aims to help residents appreciate and care for the natural world that surrounds and supports them. Three key sources of information are summarized below. There are many others, including New Hampshire's nonprofits dedicated to resource conservation.

- The NH Department of Environmental Services has developed fact sheets and publications aimed at citizens and lay boards and commissions to help explain ways to minimize the environmental impact of daily activities and major developments, particularly with respect to <u>air and water resources</u>. For conservation practices applicable to residents, see *Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials* (January 2004).
- With support from the Sustainable Forestry Initiative and the N.H. Fish & Game Department, UNH Cooperative Extension is developing a series of wildlife habitat stewardship brochures containing practical information for landowners interested in protecting wildlife at risk in New Hampshire, based on the Wildlife Action Plan. The first four brochures, available now, focus on grasslands, marsh and shrub wetlands, floodplain forests, and vernal pools. Cooperative Extension has a variety of other publications designed for lay people interested in natural resources management and protection. Landowners may download these publications at www.nhwoods.org or receive a single set free through the UNH Forestry Information Center (call 1-800-444-8978, email forest.info@unh.edu).
- The NH DES in cooperation with the NH Association of Regional Planning Commissions, Office of Energy and Planning, and NH Municipal Association has compiled a state of the art handbook for sustainable development to help communities interested in promoting natural resource protection while allowing for development. Entitled *Innovative Land Use Planning Techniques: A Handbook for Sustainable Development* (October 2008), this reference manual includes background information, model ordinances and regulations, and explanatory notes. Sections include (are not limited to): agricultural incentive zoning, post-construction stormwater management, steep slope and ridgeline protection, habitat protection, wetlands protection, protection of groundwater and surface water resources, shoreland protection, flood hazard area zoning, and erosion and sediment control during construction.

EDUCATIONAL OPPORTUNITIES

The following opportunities are geared towards the Conservation Commission and actions it might take to promote public involvement in natural resources protection.

The above resources alone provide the Conservation Commission solid information. Use them as background for ongoing reminders to residents of simple steps they can take to protect the Town's remarkable assemblage of natural resources, similar to pieces already developed by Commission members. The Town newsletter and website provide two existing vehicles for "getting the word out" on a reasonably regular basis. Use both vehicles also to notify residents of educational opportunities offered through UNH, in particular.

Maintain a selection of factsheets (from e.g., NH DES, UNH, NH Fish & Game) at the Town Clerk's office. The care and maintenance of septic systems, minimization of impervious surfaces, "green" lawn and garden practices, and importance of streams or vernal pools to wildlife would be appropriate topics. Winter topics might include woodstove maintenance for minimal emissions or hazards of salting.

Invite a UNH Cooperative Extension specialist to discuss the opportunities for wildlife, recreation, and forestry that a backyard offers, or invite a local landowner whose land is under forest management to discuss his/her plan. Consider a winter series of monthly talks by authors, naturalists, conservation easement specialists from regional or statewide land trusts, local landowners who have conserved their land, local farmers, wildlife experts, and the like. Adopt a theme and carrying it through several speakers, themes like "conserving your land" or "greening your home."

Invite a neighbor, a Planning Board member, or a Selectman to join the Commission on an easement monitoring walk or in other Commission work. Not only is this a way to recruit prospective Commission members, but it enhances residents' understanding of what the Commission's responsibilities are. Consider also recruiting volunteers who are not members of the Conservation Commission to assist with the Commission's easement and fee-owned lands monitoring program.

Co-sponsor nature walks with other organizations in town, such as co-sponsoring with the historical society on lands with interesting cultural features in the Mink Hills. Of all the listed recreational opportunities in the 2009 survey, more organized nature hikes was among the top three. Create an e-mail list of town residents interested in the Commission's activities to enhance communications about hikes, programs, or events.

The Commission has done an exceptional job of conserving land, working with residents and land trusts, and capitalizing on the expertise of its members and of Warner residents. Comments from the town-wide survey conducted as part of this plan attest to the gratitude and respect many residents have for these efforts and the people behind them. As this *Plan* suggests, some key resources can be protected through planning and zoning. Work more closely with the appropriate boards in town to ensure that Warner's zoning and regulations reflect the best protections available through land use planning, and the protections are carried through in implementation. Consider co-funding with the Planning and Zoning boards a comprehensive analysis of Warner's planning

documents for habitat and natural resource protection, the key recommendation of Section 5, regulatory tools.

Some areas in town may benefit from targeted outreach. Consider, for example, targeted outreach in the Schoodac and Frazier brook area, which is characterized by smaller land holdings that don't lend themselves to permanent conservation but do play a role in habitat viability, which landowner practices and recreational activities can influence.

In talking with landowners and residents about easements, particularly on larger forested tracts, emphasize the role forests play in combating global climate change by absorbing carbon dioxide emissions. New Hampshire is the second most densely forested state in the country, and the state's role in carbon sequestration could be significant.

Notify owners of forested easement land if any of the proposals for encouraging forest management to increase carbon uptake are enacted and applicable to their land.

See also Section 4, Goal 1-10, and strategies.

Section 8: Voluntary Action

Many impacts damaging to natural resources occur incrementally over time. Individuals can reduce the environmental degradation that results from the cumulative impacts of individual actions. Following are examples of simple ways residents can help implement protection for some of Warner's key natural resources.

PROTECTING WATER RESOURCES

- Know where your septic tank and leach field are, and keep vehicles, livestock, or heavy foot traffic off the leach field to avoid compacting the soil or breaking the pipes. Keep deep-rooted trees and bushes away from the leach field. Don't put toxics like paint thinner, chlorine, or bleaches down the drain they may kill the bacteria on which your system depends for breaking down the effluent. For the same reason, avoid septic tank additives. Reduce the amount of water the system has to treat by repairing leaking faucets immediately and minimizing water use.
- If you use chemicals (there are many "green" alternatives on the market today), read labels carefully and use chemicals as directed. Buy only what you need, and store any excess in a way that ensures it can be used up in the future. Do not pour chemicals on the ground or down the drain, and do not burn them.
- If you need fertilizer for lawns or gardens (have UNH Cooperative Extension test your soil so you know exactly what it needs), use a slow-release fertilizer that minimizes any release of nutrients to the water. Reduce your work load and dependence on inputs by landscaping with native plants, which generally require less water as well as less fertilizer and trimming.
- Reduce runoff from your lot by limiting impervious surfaces. Use gravel, brick, and stepping stones for walks and outdoor patios so water can filter into the ground. Collect roof runoff in a water barrel or direct it to a grassy or gravel area on your lot where it can filter into the ground and recharge the groundwater.
- If there is a stream on your property, maintain a naturally vegetated buffer along it to help filter out any pollutants in runoff to it.

Good Resources for Citizen Action to Protect Water Resources: *Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials* (January 2004); NH Department of Environmental Services website; US Environmental Protection Agency website.

PROTECTING WILDLIFE

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• Maintain a buffer of natural vegetation on both sides of any stream and around ponds and wetlands and minimize crossings – the bigger the buffer, the better.²⁴ Such "riparian areas" typically support more biological diversity than adjacent aquatic habitat or upland

²⁴ Innovative Land Use Planning Techniques: A Handbook for Sustainable Development recommends the following buffers. For streams: 300' for wildlife habitat, 50'-100' for water quality except in steep slope environments. For deer wintering core areas: ≥200'. For vernal pools: 400', maintain a closed canopy within 100'. Mast stands: avoid construction within 300'; avoid paved roads within 200'.

habitat. Natural vegetation along shorelines helps protect water quality, provides cover for wildlife in and around the wetland, helps keep water temperatures cool, and provides essential inputs to the aquatic food web. Don't overlook the small, intermittent streams, as they are vitally important to downstream water quality and flows, aquatic biodiversity, groundwater recharge, and wildlife.

- Avoid using non-native plants in home landscaping. Native wildlife are adapted to the nutrient value of the food native plants produce and to the cycles of production.
- If you are planning a timber sale, review the forester's plan with an eye towards wildlife needs, such as habitat diversity, deer wintering areas, mast-producing trees, cavity nesting trees, dens, and snags, and downed woody debris. See, for example, *Good Forestry in the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire* (currently under revision by UNH Cooperative Extension).
- If you own or recreate on land with important habitat features, avoid activities that diminish their value as habitat. Important habitat includes features like wetlands of all kinds, streams, riparian areas, deer wintering areas (dense softwood stands >10 acres). This may mean permanently rerouting trails or avoiding areas during certain seasons of the year.
- Have you a seasonal pool on your property that comes to life in the spring when peepers are in full voice? Some frogs and salamanders require these fish-free "vernal pools" for breeding, and many return to the same pool year after year. Vernal pools provide important, sometimes critical foraging habitat and travel corridors. Pools differ in size, depth, and other features, thus playing different roles in an area's ecology. In upland areas within 300 feet of a pool, leave logs, surface stones, and deep leaf-litter as cover for amphibians. Maintain a moist environment on the forest floor by retaining patches of canopy shade. When possible, keep development, roads, and driveways at least 300 yards away from vernal pools (and other wetlands) See Habitat Stewardship Series from the NH Wildlife Action Plan at http://extension.unh.edu/Wildlife/VernalPoolHabitats.htm.
- Support efforts to protect special habitats and large areas of unfragmented land.

Good Resources for Citizen Action to Protect Wildlife: UNH Cooperative Extension website; *NH Wildlife Action Plan* at NH Fish & Game Department website.

PROTECTING FORESTS AND AGRICULTURAL LANDS

- Buy from local farmers. Commercially viable farms keep land in agriculture.
- If you buy firewood, whether for home use or when camping, make sure it is from within New Hampshire. Studies of firewood brought into the state in 2007 and 2008 identified 8 orders of insects traveling in it, including 4 species of bark beetles, one of which carries an oak blight not yet known to occur in the state. For similar reasons, buy Christmas trees locally (the pine shoot beetle was discovered on a Christmas tree farm in Ohio).
- Help the state monitor insect pests. Readily identifiable insect pests include the hemlock woolly adelgid and Asian long horned beetle.
- If you own a woodlot, hire a licensed forester to assess the property, develop a comprehensive management plan, and oversee all timber harvests.

• If you own farm or forestland, consider putting it into permanent conservation, thereby ensuring that the land will be available to future generations for food and timber production.

Good Resources for Citizen Action to Protect Forests and Agricultural Resources: *Good Forestry in the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire* (1997), available from Society for the Protection of NH Forests; UNH Cooperative Extension website; NH Department of Agriculture, Food, and Marketing (see especially information on local food sources); Department of Resources and Economic Development, Forests and Lands website (selected resources).

PROTECTING SCENIC RESOURCES

- Maintain existing natural and topographic features to the greatest extent possible.
- If property is visible from a distance or from a river, a trail, or a traveled way, limit the extent to which you clear for a view. Minimize use of reflective glass. Avoid outdoor spotlights and floodlights.
- If a building is sited along a visible ridgeline, keep all of the building below the ridgeline.
- Note that many ridgelines have shallow soils that support mast-bearing trees of importance to wildlife including oak, beech, and hickory. Retain these trees.

Section 9: Recreation Challenges and Opportunities

Warner's conservation lands support a variety of outdoor recreational pursuits, as outlined in Section 6. According to the Conservation Commission's 2009 survey, about half (45%) of respondents feel conservation lands currently provide sufficient recreational opportunities. Twenty-five percent feel more opportunities should be available, and 30% don't know. See Appendix A for additional responses to a question concerning recreation needs.

he Parks and Recreation Commission maintains playing fields at Bagley Field and Riverside Park, both floodplain properties. In addition, the Commission oversees the Silver Lake recreation area. None of these is considered conservation land as such, but each contributes importantly to outdoor recreation in Warner.

The Kearsarge Trail Snails snowmobile club maintains from 75 – 100 miles of trails in Warner and, on Mt. Kearsarge, in Salisbury and Webster. According to club members, Warner's trails are excellent, well groomed, free of vegetation, and well signed. Virtually all the trails connect across private land, and every year some rerouting is necessary due to changed circumstances with landowners. Most of the trails are kept open based on verbal agreements with landowners. Mt. Kearsarge is a snowmobiling magnet, and the Class VI roads in the Minks are second in popularity. Food and fuel at Exit 9 support snowmobiling activities and add to Warner's draw, particularly at Mt. Kearsarge. The number of snowmobilers has been increasing over recent years due to good weather, good maintenance of the trail system, and faster sleds covering more territory. Trails are officially closed at the end of the season.

Kearsarge Trail Snail trails are used by many other recreationists, including horseback riders, dog sledders, hikers, bikers, runners, and skiers. In addition, the Sunapee-Ragged-Kearsarge trail offers long-distance (74-mile loop) hiking opportunities. There are trails on the Chandler Reservation, at the Indian Museum and adjacent Stockwell/Bartlett easements, and informally along parts of the abandoned railroad by the river.

The Warner Fish & Game Club (www.warnerfishandgameclub.org/cms/) offers a variety of programs related to hunter safety and woods skills and operates a shooting range. According to Club members, the Warner River has good fishing access. NH Fish & Game Department stocks Simmons Pond, and other areas in town are fished. There is canoe access to the River at Waterloo.

ISSUES

- Hunting near developments is prohibited, and many new residents are inclined to post their land. According to one member of the Warner Fish & Game Club, Warner may already be too populated for a good hunting experience.
- Trail systems dependent on private landowners are always at their mercy, and changes in ownership or a single negative experience can result in landowners closing their section of trails. More recreationists on Warner trails increase the probability that problems will occur. Maintaining trail connectivity is a significant concern.

- Currently none of the Class VI roads in Warner or any trails are open to ATVs, yet ATV'rs live in and around Warner and are looking for places to ride. The places they select are often off-limits, damage Class VI roads, or severely impact natural resources.
- New fields for field sports need to be developed. Existing fields are too wet for reliable play. Riverside fields have had to be rebuilt three times in the last 3 years due to flooding.

KEY RECOMMENDATIONS

The Conservation Commission should work with the Parks & Recreation Commission to identify an alternative site for active team sports, and with them determine appropriate uses for existing fields, including allowing for reversion to active floodplain.

In its easements, the Conservation Commission should keep the door open to snowmobile use of conservation lands by not prohibiting their use. Where existing trails cross easement lands, the easement should specifically authorize their continued use, providing such activity does not harm key resources for which the land is being preserved.

In its easements, the Conservation Commission should continue to allow for traditional low impact, nonmotorized outdoor recreational activities, such as hunting, fishing, hiking, wildlife observation, and cross-country skiing.

Many natural resource and recreational conflicts stem from ATV use. Illegal ATV riding due to the paucity of legitimate areas has increased public ire. In response, ATV clubs in some areas (the Vermont ATV Sportsman's Association, for example) are promoting safe riding, working with landowners to repair damage to private lands, and building legal trails on private lands. The nonprofit "Tread Lightly" has developed information to promote responsible trail use. Because the impacts of ATV riding on natural resources are often severe, Town bodies should continue their cautious approach to prohibit ATV use on public or easement lands. Where dialogue can be initiated, however, such discussion should take place.

See also Section 4, Goal 3.

Appendix A – Survey sent to Warner residents & Responses

Spring/Summer 2009

CONSERVATION QUESTIONNAIRE

The Warner Conservation Commission is preparing a conservation plan for our town. Your answers to the following questions will help us set conservation priorities and identify conservation issues and opportunities. Please return by <u>June 22</u>. Add additional paper for comments, if needed. This questionnaire also is available on line at www.Warner.nh.us/ccsurvey.htm. Thank you for your help!

order to meet several goals, including protecting clean water, providing wildlife habitat, maintaining commercially viable forests, and providing for recreational opportunities like hiking, skiing, and snowmobiling. Do you agree with this approach of protecting large areas of conservation land? Yes
Yes, but smaller conservation areas around town are also important No, I would prefer to see more emphasis on smaller conservation areas located throughout the town
No, we have enough land protected already Undecided
2. Check three of the resources in the following list that you think the Conservation Commission should work to protect as top priorities: Current and future water supplies Farmland Forestland Historic/cultural sites Rivers and streams Scenic views Trail systems for outdoor recreation Unusual or one of a kind natural features, plants, and animal species Wetlands, marshes, ponds, bogs Wildlife habitat, wildlife travel corridors Other:
Of the three priorities you selected, which is the most critical to protect by permanently conserving the land?
3. Why do you value Conservation Land? (Mark all that apply.) Increases property values Offers recreational uses Provides open vistas of fields, wetlands, and other undeveloped land Preserves plant and animal habitat Gives the community a rural feeling Protects ground water Helps limit Town services in remote areas I do not value Conservation Land
4. Do you agree with the following statement: "Town conservation lands currently provide appropriate kinds and amounts of outdoor recreation opportunities." — Yes No.
No Don't know

Boating access	More	Fewer	Eliminate
Fishing			
Horseback riding trails			
Hunting			
Mountain bike trails			
Organized nature hikes			
Pedestrian trails			
Snowmobile trails			
Swimming areas			
Trapping			
Other:			
Other:			
			
Very SatisfiedSomewhat SatisfiedSomewhat Dissatisfied	-d		
Not Satisfied	- Ca		
Don't Know			
lease tell us why you think this w	10 X I.		
Please tell us of any specific cof:	ncerns that you the	nink the Conservation (Commission should be awa
	would you recom		
. What area(s) or site(s) in town		nmend be considered fo	er conservation?
. Would you like to talk with sor	-	possibility of conserving	g your land? Yes No
. Would you like to talk with sor	-	possibility of conserving	g your land? Yes No
. Would you like to talk with sor	you on question 7	possibility of conserving, 8, or 9, please provid	g your land? Yes No e your name and preferred

Summary	of results of W	Summary of results of Warner Conservation Question		naire, May 17-August 1,	ust 1, 2009					
1. The Wa	ırner Conserv	1. The Warner Conservation Commission is curre	s currently	working to p	rotect cont	iguous tra	cts of land	in order tc	ntly working to protect contiguous tracts of land in order to meet several goals,	
including	protecting cl	including protecting clean water, providing wildl		ife habitat, maintaining commercially viable forests, and providing for	aining com	mercially \	viable fore:	sts, and prα	oviding for	
recreation	nal opportun	recreational opportunitieslike hiking, skiing, and		snowmobiling. D	o you agre	e with the	approach	of protecti	Do you agree with the approach of protecting large areas of	
conservat	conservation land?									
						Total	% of Total			
	Yes					26	36%			
	Yes, but sma	Yes, but smaller conservation areas ar		ound town also important	mportant	69	45%			
	More emph.	More emphasis on smaller throughout	ughout town	u/		3	2%			
	No, enough now	now				24	16%			
	Undecided/skipped	skipped				2	1%			
	Tc	Total				154				
2. Check t	hree of the res	2. Check three of the resources in the following list th	g list that yc	ou think the Co	onservation	Commissio	n should wc	ork to protec	lat you think the Conservation Commission should work to protect as top priorities.	
						Total	% of Total	2	Most Critical	
	Current and f	Current and future water supplies				72	17%		33	
	Farmland					38	%6		14	
	Forestland					38	%6		5	
	Historic/cultural sites	ural sites				26	%9		3	
	Rivers and streams	reams				52	13%		10	
	Scenic Views					15	4%		1	
	Trail systems	Trail systems for outdoor recreation	_			33	8%		3	
	Unusual or or	Unusual or one of a kind natural features,	-	plants, animals		19	2%		4	
	Wetlands, ma	Wetlands, marshes, ponds, bogs				44	11%		6	
	Wildlife Habi	Wildlife Habitat, wildlife corridors				92	18%		27	
	Forever wild land	land							П	
	Tc	Total				413			107	

3. Why do you value Conservation Land? (Mark all that apply)	hat apply)		
		Total % of Total exc	% of Total excl. I do not value conservation land
Increases property values		45 7%	
Offers recreational uses		97 16%	
Provides open vistas of fields, wetlands, c	other undev land	108 18%	
Preserves plant & animal habitat		121 20%	
Gives the community a rural feeling		93 15%	
Protects groundwater		113 18%	
Helps limit Town services in remote areas		38 88	
I do not value conservation land		12	
Total		627	
Total excl. I do not value conservation land	ervation land	615	
4. Do you agree with the following statement: Town	conservation lands currently provide appropriate kinds and amounts of outdoor	provide appropriate kinds	and amounts of outdoor
recreation opportunities.			
Total	al % of Total		
Yes	69 45%		
NO	38 25%		
Don't know	46 30%		
Total	153		

5. What ty	ypes of outd	5. What types of outdoor recreation opportunities sh		d be increased	l or reduced?	ould be increased or reduced? (Check all that apply)	(Alddi		
						More	Fewer	Eliminate	
	Boating					19	2	2	
	Fishing					23	2	0	
	Horseback	Horseback riding trails				17	2	2	
	Hunting					14	5	2	
	Mtn bike trails	rails				21	4	2	
	Org nature hikes	hikes				26	2	1	
	Pedestrian trails	trails				36	3	1	
	Snowmobile trails	le trails				16	13	2	
	Swimming areas	areas				28	1	1	
	Trapping					4	3	10	
	Other: AT\	Other: ATVs/4 wheeled				7	2	3	
	Other: Mo	Other: Motorized access (water,rd,trail),	esp	2-stroke eng				П	
	Other: Wil	Other: Wilderness Experience				1			
	Other: Eas	Other: Easier access to all activities listed	es listed			1			
	Other: Flat	Other: Flat bike trails/rail trails				2			
	Other: Motorcycle	otorcycle				1			
	Other: Prir	Other: Primitive Camping				1			
		Total				217	42	33	
6. How sa	tisfied are yo	How satisfied are you with the Town's initiatives for	atives for pi	protecting open	open space in Warner?	rner?			
					Total	% of Total			
	Very satisfied	jed			61	41%			
	Somewhat satisfied	satisfied			44	30%			
	Somewhat	Somewhat dissatisfied			9	4%			
	Not satisfied	pa			14	%6			
	Don't know	>			24	16%			
					149				

Note: Separate comments are separated by a space between lines or a dash between comments.

Question 2: Check three of the resources on the following list that you think the Conservation Commission should work to protect as its top priorities:

Other: Volunteers can work on hiking trails or community projects - Trail systems - But if owners are willing to put in current use, then doesn't need to be protected.

Existing trails are not well maintained! - No more money to the Coursers. - Individual freedoms.

Top priority: farmland, though I realize we don't have much of it. - Top priority: farmland – we have so little of it, and it is so easy to develop! - Top priority: forests – good lumber/forest management – no clearcut. - Top priority: wetlands access to waterways

Designate some tract in Warner as forever wild

I found Question 2 to be very limiting and did not feel comfortable limiting my answers.

Question 3: Why do you value Conservation Land? Check all that apply.

I think the current percentage of conservation is adequate. - I do not value conservation land as much as I need tax relief. - Protects from future development

Question 4: Do you agree with the following statement: "Town conservation lands currently provide appropriate kinds and amounts of outdoor recreation opportunities."

Don't know - I'm sorry but I doubt they are enough for the future of 100 years ahead – look at California land use – acres of subdivisions.

Don't know - We are new to Warner and are excited to explore Warner conservation land!

Question 5: If "no" to question 4, what types of recreation opportunities should be increased or reduced (check all that apply):

Swimming areas: Do something about the leeches and more people would use the one we have - Can I waterski on Silver Lake?

Snowmobiling (fewer) - this activity has a much higher negative impact on the environment – air pollution as well as noise and physical destruction. - ATVs – permission to ride Class 6 roads as allowed in other towns. - How about working with Recreation in Warner? - There are currently a variety of options for recreation – but many are not well known.

"Easier access" to all types of activities listed (no more land) - I don't really favor organized use of wild lands. Let wild be wild! - Lot more trails separated by uses: snowmobiles, x-c ski, foot, horses, ATVs

Question 6: How satisfied are you with the Town's initiatives for protecting Open Space in Warner? Please tell us why you think this way.

Very Satisfied:

I think the Con Com does a thoughtful, diligent job of identifying and protecting important resources – I think the town should invest more \$ in these efforts!

The town has methodically invested money for many years to purchase conservation lands and easements using funding sources at state and federal levels as well as from private sources to increase our lands being protected.

It seems that each [year] the town has been forward looking in passing budget items to support land conservation. - Don't need more! We have enough space protected right now. We don't need nor can afford more! - The amount of land so far protected is very good.

The Warner CC and their efforts are leaps and bounds ahead of most towns & you have wide spread town support. I would like to see more land conserved, both large and small tracts, but I do understand that money is your limiting factor. Thank you for your outstanding efforts!

I think that between the money raised yearly at town meeting and the active purchase of conservation easements by the Con Comm are outstanding in comparison with many NH towns. - Excellent level of effort and community support, compared to similar small towns.

We have a higher ratio of "protected and/or conservation land" than almost any other town. Compared to other small towns, we have done lots of good for people, animals and land in looking to the future of all.

My only concern is that we do the same or more. - It maintains the rural feeling. - Important to continue efforts and expand protected areas to maintain rural character. - The CC uses a science based approach, and its members are educated appropriately.

Town's approach doesn't remove land from tax rolls – very effective use of public funds to leverage private and nontown money to protect open space.

The town's cooperation with SPNHF & Ausbon Sargent. - I think public land should be open to all (even hunting). - We have great people that care about this town, and watch what goes on.

Because there are a group of committed people who are always willing to conserve land, thinking of the future and keeping it in the public eye .. good work!

Terrific people on the cc! Thank you! - The Conservation Commission's approach is thoughtful, pragmatic, and looks long-term.

Getting the Courser property was a big plus .. and other land in that area of farmland & wood lots. - We are concerned about land usage and preservation. As active members of the Ausbon Sargent Land Preservation Trust we appreciate the Courser Family and their commitment to land protection.

I believe it's a wonderful place to live. - Significant portions of forest are being protected. - A great deal of progress has been made. Warner has an opportunity to be a leader in conservation because we have large areas of undeveloped land. Cluster zoning would help conserve more land. 5-acre lots are a waste.

Clearly this info will be utilized, a good idea. Initiatives in the future will be enhanced if the info given here is utilized. - Need more if opportunities arise. - Because we are blessed to have amazing people in this town that care enough to do as you are doing now -

They have made an attempt to protect our land. - Need to balance protection of open space with tax costs to Warner's resident property owners. - Good support groups and budget support. - We have a very active, proactive group on cc – and they have a very good reputation. Thank you! - It is important for future generations. - Been doing a great job in preserving large tracts in the Mink Hills

Somewhat Satisfied:

<u>Do more</u>: Happy with aggressive acquisition of conservation land to lower taxes and limit growth. - Do more! - There is always more that could be done. - Town should <u>invest</u> \$100K or more every year. - I wish we could protect more.

Need to increase effort, establish fund where we can make voluntary contributions to it. - We would like to see as much done as possible to protect open space. - There is so much more that can be done.

We have a dedicated group of people on the conservation commission. I think we should dedicate more \$\$ toward land conservation.

Would like to see more funds put toward this. - We have voted to spend on conservation. Continue in this direction. Keep it up.. <u>do</u> more. - More wildness is extremely important, land not destroyed by recreation

The Con Comm is limited by the funds available to them. I would like to see a more aggressive conservation effort – perhaps fund raising to be in position to secure easements on key properties as they become available.

<u>Slow down</u>: It's hard for the town to completely satisfy everybody, when private property and town money is used to help purchase or conserve this land. (Q1 answ #1)

I'm a little concerned that we are asking taxpayers to fund too much "open space" during these tough economic times.

The community has conserved enough land currently. The town should be more concerned with expanding the commercial tax base so all members of the community can continue to afford to live here, and not see money spent on open lands.

<u>Outreach:</u> A constructive effort but most land masses conserved not easily accessible for public use - Am aware of conservation news via town mailings, but am not actively involved in studying town conservation plans and policies.

<u>Good work:</u> It appears from this survey that thoughtful people are involved in this process and I hope that the community will support their concerns. - The CC has done an extraordinary job. The planning & zoning boards need to encourage cluster zoning. The parking rules in town prohibit more business in town – pushes new businesses to the fringes.

I'm happy how things are currently run. - Keep it going! - Keep up the good work!!

Management: The land has been protected, but would like to see more trails maintained and marked.

Glad to see land "protected." But just locking up land can make a community expensive, elitist, and sterile. We must also protect the opportunities for a rural economy and <u>functional</u> rural society that is <u>viable</u> and <u>sustainable</u>. That would better ensure the values that "conservation" aims for. Allow the ACTIVITIES that embody the values.

Somewhat Dissatisfied:

The town is taking away too many rights from the property owner. - We hear often that the conservation easements allow public access .. but recently have found two instances where property owners control access .. so I would not call it access to the public.

You constantly want us to pay for land that otherwise could not be built on. Protection of swamplands should not be required. By taxing townsfolk or others, since no one can develop [it] anyway. - I feel there is enough. Need help with my taxes. - More needs to be done.

Not Satisfied:

<u>Money:</u> Disappointed in the way the town spends money. - If people don't want to give okay, but do not agree to pay for. - Spending too much of our taxes on buying land. - We spend too much money, my taxes are high enough!

You can only save so much land before the taxes becomes too high for the elderly, who have very little use for the recreational opportunities. We need to increase the tax base instead of reducing it. My taxes continue to go up, my fixed income stays the same which purchases less. - We have conserved enough land already. We have spent enough.

<u>Other:</u> We need room to grow. - Don't believe in government controlled property – we live in the "Live Free or Die" state. - Believe in private property - "Big brother" is not what we need. - Enough is enough. - Too much now. - Too many restrictions

Don't Know:

How does one find out what's been/being done? - Don't have enough info - I don't know enough about current initiatives.

Don't know the town's initiatives. - I'm not entirely sure what the town's initiatives for protecting open space are. - Need to educate self on this subject. - We are new to town and still learning! - I need to know more to offer an educated opinion - I don't know all the issues.

I haven't thought much about town conservation. - Not well enough informed.

Question 7: Please tell us of any specific concerns that you think the Conservation Commission should be aware of: **Planning/Zoning Concerns**

Please put attention to the "west" of Warner. There are variances being allowed for commercial uses, applications that don't bode well for the rural character of Warner. - Beware the ruse of "cluster housing." - Zoning that encourages development can diminish the great work/results you achieve.

Control of urbanization of the town. - The increased paving of parking lots and driveways near watersheds.

Before land is developed, a plant specialist should ask permission to walk the area and be able to transplant rare, threatened or endangered plants to protected land (David Carle (?) "but no follow-up is needed")

Current zoning and land use regulations are used (state tax system) to establish a paradigm by which land has only a monetary value thus stifling farming, creativity, and natural land values. Banks <=>insurance \infty real estate = Banks.

Concerns re. Specific Areas

I am quite concerned about Ballard Brook, especially the area along the right of way at the lower end of Red Chimney Road. I suspect strongly that it is being manipulated (dam/down?) by folks who live on and use this right of way to access their residence. It used to be full of native trout and I'm concerned about the integrity of this beautiful water source.

Illegal dumping near the transfer station.

Now that the Courser's have gated their gravel pit, there has been dumping of a cow carcass, and god knows what else down by Schoodac Brook on Poverty Plains. May become a bigger problem

Environmental impact of development at the Warner Intervale area (Water impacts, wildlife habitat impacts). - Sale of Bouchard farm on Kearsarge Mountain Road - Bouchard Farm for sale. Someone will develop it. Should stay as open space. - Preservation of land next to river

The gradual closing of corridors leading to major water sites, such as the Warner River - Odd Fellows Building - Bring back Old Springs! of drinking water! - 86 acres on the left side of Bible Hill Development by neighboring towns that impacts Warner

Wetlands protection. Complete ecosystem protection. - No need to harvest Chandler Forest. This would be an ideal area to allow natural wilderness.

Concerns re. Specific Activities

ATV's – they tear up trails and are noisy and dangerous to those on foot. - Limit 4-wheel destruction of class 6 roads.

There is a need to figure out how to deal with OHRVs and CC lands. We know that class VI roads are thought of as being open to destruction by OHRVs. But, they must also infringe on the rights of private property owners, who may have given development rights to save the land.

As I hike in conservation areas I see increasing damage from 4-wheeler traffic and other off road vehicles. Let us <u>not</u> encourage more ATV uses! - We are very concerned about land damage and the noise pollution caused by 4-wheelers and snowmobiles. - I am concerned about ATV use ... degrading trails when wet and noise scaring away wildlife.

Unauthorized ORV use, e.g., on class 6 roads in Minks during road closures. Maintaining our class 6 roads in their present state, i.e., rebuff efforts to improve them and move them to class 5. - I am sure there is awareness, but I think that as a town we are going to have more and more conflict with the destructive riding of ATVs. As a town we are going to have to choose to discourage or encourage the use of ATVs. I would like to see and support discouraging the use of ATVs.

4-wheeling in Mink Hills and on snowmobile trails. Many people have worked for years to develop a trail system with the cooperation of landowners. 4-wheelers damage trails and provide landowners an opportunity to close trails to all.

Snowmobiles have caused "air pollution" in the Brown-Slayton-Burnt Hill areas. A mixed bag as we use <u>their</u> trails for x-country skiing. - Impacts on scenic areas of cellular phone tower installations.

Abandoned vehicles & dumping of items both on residential property and at other sites can leach chemicals into soil, hence into groundwater as well as prove hazardous to wildlife and humans. - It would be nice to have more boating access w/ clear markers.

Cost Concerns

Costing the tax payers too much money to continue conserving space. How much open space do we need.

Stop \$50,000 to your budget every year. - Given the current economy and the fact that Warner's taxes are increasing at rediculus (sic) rates I think these types of projects should not be funded with any tax revenue. People should look at the tax increases over the past five (5) years. - Taxes

Increase timber harvesting to pay for additional lands vs. raising taxes every year. - The poor people who live in this town. - Tax dollars and this economy

Current economic and budgeting problems. Increasing conservation of open space raises taxes for town's homeowners, many of them are hard pressed to pay increased taxes - Trying to over purchase conservation land - The time to buy land for conservation is now while the real estate market is flat and timber is @ lower value.

Stop asking taxpayers for funds – fund it by other ways. Times are hard for everyone. - Our taxpayer limits ... Don't keep business out, we need the tax base. - I think taxpayers are willing to support greater investment in conservation.

Poor economy with resulting other demands for tax revenues – less money available for conservation. - Reducing budgets during "hard times"

General Issues

Ground water -- You are protecting land that will never be developed!

Some land should be preserved without thinking of recreational opportunities. - Further adaptation of "local" conserved land for public use - As an owner of a large tract of land, my property is abused weekly by trespassers. I have great concern for the property owners who protect their land by conservation. I believe there should be a way to help these people protect their property from the losers in this area that dump trash, set fires, smash beer bottles, and steal things, such as firewood. Kimberly Fredrickson, 648 Pumpkin Hill Rd

Consider purpose (and meaning) of conservation u/r/t intended use: does it make sense to conserve land for snowmobiling, hunting, or trapping? Land, and natural habitat/resources should be maintained/protected for low impact use.

Interior lands – Road frontage is finite and slated for development under current zoning laws/regs. The larger interior lands are where the major development can occur through subdivision. Having grown up in Northern Virginia, I fear for Warner what can happen in future real estate waves.

Open space park in each of the old school district areas (Davisville, Bagley, Schoodac, etc.) looking towards end of the century and open space. - Residents and wildlife co existing or not. More emphasis on not attracting unwanted wildlife, ie. Bears/bobcats [favorable to wildlife protection] - Preserving wildlife habitat, educating public

Question 8 – What area(s) or site(s) in town would you recommend be considered for conservation? Many comments, lumped into areas below

Mink Hills

Specific place named

Mink Hills. The Rose property in particular - 60 acres on east side of Horne St, contiguous with state and town conservation land, important wildlife corridor. Land is currently for sale - Blue Berry Farm - Waldron Hill - 86 acres on Bible Hill - Pleasant Lake - Tail and lookout on Stewarts Peak (Harriman Chandler State Forest)

Kearsarge

Approaches to Kearsarge Mtn - The area surrounding Kearsarge Mtn - Kearsarge Mtn area - On Kearsarge Mtn Rd. - Mt. Kearsarge slopes

Willow Brook

Add to Torey Meadow area - Bouchard Farm

Schoodac Brook

Bagley Pond - Top of Burnt Hill Road ... Meadow Pond Brook watershed and Warner River corridor as well - Open fields on Burnt Hill ... Meadow Pond Brook watershed and Warner River corridor as well - Burnt Hill area ... Meadow Pond Brook watershed and Warner River corridor as well

Warner River

Areas along the Warner River. - Along the river only - Riverfront - Rail trail? - Land adjacent to Warner River - Flood plain areas of Warner River - Parcels between Warner River and I-89 - Warner River frontage - The river - Protect Warner River - Warner River - Land along Warner River - Warner River from Exit 7 to Exit 9

Wetlands at the end of Birch Hill Road - By the covered bridge at Newmarket Street ... that walk, west along the old railroad track is truly <u>priceless</u>, along the Warner River ... this could be a major conservation effort - Tom's Pond - The Warner River - 103 between Warner and Bradford - Meadow Pond - Wendy and Steve Hall's farm in town?

Stevens Brook Watershed

Stevens Brook riparian areas

Other Specific Places Named

Tracts of land that could be easily accessed from village (no car travel required) - Maybe some of Davisville section. - Simmons Pond

Specific Resources

Farmland/prime soil areas -Cellar holes in general anywhere in town - Trails and forest land - Old railroad beds - Lot more planned trails with low gradient (<50%) for foot and x-c ski. - Vistas along the highway 89 - Land that borders existing conservation land. - Wetlands - Tracts that complete ecosystems

Miscellaneous Comments

More volunteer work, less dollars, setup a better volunteer community. Have people bring their own equipment and materials.

Does everyone on the committee have a conservation easement on their property? If not, why not!! - Town budget - None if property taxes are earmarked to pay for them. We are in a recession stop spending money.

We have enough. Too many people getting rich off of this. - At this time I think our town should be working toward making this a more affordable place to both live and retire in. - I think this town has done a good job so far. - The conservation commission is the best judge of the areas to be recommended.

Any and all land that you can get! I think Education & Outreach is critical. Is the cost of community service survey still available – was good tool when a particular Town is modeled – local and larger Land Trust partnerships like you have done. Most people don't understand land conservation and its tax savings!

Smaller conservation areas around town make the town livable and attractive

Appendix B - Invasive Plants and Insects in NH

PART Agr 3802 NH PROHIBITED INVASIVE SPECIES

Agr 3802.01 NH Prohibited Invasive Species.

(a) The following species, listed by scientific name in the New Hampshire prohibited invasive species list in Table 3800.1, shall be prohibited:

Table 3800.1 New Hampshire Prohibited Invasive Species List

Scientific Name	Common Name
Pl	ants
Acer platanoides	Norway maple
Ailanthus altissima	tree of heaven
Alliaria petiolata	garlic mustard
Berberis thunbergii	Japanese barberry
Berberis vulgaris	European barberry
Celastrus orbiculatus	Oriental bittersweet
Centaurea biebersteinii	spotted knapweed
Cynanchum nigrum	black swallow-wort
Cynanchum rossicum	pale swallow-wort
Elaeagnus umbellata	autumn olive
Euonymus alatus	burning bush
Heracleum mantegazzianum	giant hogweed
Hesperis matronalis	dame's rocket
Iris pseudacorus	water-flag
Lepidium latifolium	perennial pepperweed
Ligustrum obtusifolium	blunt-leaved privet
Lonicera bella	showy bush honeysuckle
Lonicera japonica	Japanese honeysuckle
Lonicera morrowii	Morrow's honeysuckle
Lonicera tatarica	Tatarian honeysuckle
Microstegium vimineum	Japanese stilt grass
Polygonum cuspidatum	Japanese knotweed
Polygonum perfoliatum	mile-a-minute vine
Reynoutria × bohemica	bohemia knotweed
Rhamnus cathartica	common buckthorn
Rhamnus frangula	glossy buckthorn
Rosa multiflora	multiflora rose
In	sects
Acarapis woodi	honeybee tracheal mite
Adelges tsugae	hemlock woolly adelgid

Scientific Name	Common Name		
Aeolesthes sarta	city longhorn beetle		
Agrilus planipennis	emerald ash borer		
Anoplophora glabripennis	Asian longhorned beetle		
Callidiellum rufipenne	cedar longhorned beetle		
Dendrolimus sibiricus	Siberian silk moth		
Hylurgus lingniperda	redhaired bark beetle		
Ips typographus	European spruce bark beetle		
Lymantria dispar	Asian gypsy moth		
Popillia japonica	Japanese beetle		
Pyrrhalta viburni	viburnum leaf beetle		
Rhizotrogus majalis	European chafer		
Symantria monacha	nun moth		
Tetropium fuscum	brown spruce longhorned beetle		
Varroa destructor	varroa mite		

- (b) No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1, New Hampshire prohibited invasive species list.
- (c) No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or release any living insect species listed in Table 3800.1, New Hampshire prohibited invasive species list.

Appendix C – Conservation Easements and Deed Restricted Lands in Warner

Name: Badger Easement

Grantor: Andrew Duncan & Laurel Horne

Grantee: Society for the Protection of NH Forests (SPNHF)

Executory Interest: Town of Warner (secondary) & NH Land and Community Heritage

Investment Program (LCHIP, primary)

Date closed: 10/15/2003

Book/Page: 2584/0051

Acreage: 745

Location: Henniker Rd, Hoyt Lane, Badger Rd, Mink Hills

Public access: Yes, for noncommercial outdoor recreation uses such as hiking, birding, cross-country skiing, fishing, and hunting but not camping. At the owner's sole discretion, educational activities may be conducted on the property.

Brief description:

The WCC, LCHIP, and the Society for the Protection of New Hampshire Forests (SPNHF) partnered to acquire a conservation easement on the 745-acre Badger property. While the appraised value of the easement was \$201,500, the landowners, Andrew Duncan and Laurel Horne, agreed to a bargain sale of the conservation easement at \$147,000. The Town of Warner contributed approximately \$50,000 toward the easement purchase. The State of New Hampshire through the LCHIP program awarded a \$98,000 grant to the project. SPNHF assisted with the negoitiations and development of the easement terms and in the end acquired the grantee interest in the easement.

The easement aims to protect the land in its present scenic and open space condition, protect soil productivity for agriculture and forestry, preserve biological diversity of native flora and fauna and protect ecological processes, and prevent any use or fragmentation that would impair the land's unique qualities of public benefit and conservation character. It also allows for public access for noncommercial outdoor recreation uses such as hiking, birding, cross-country skiing, fishing, and hunting but not camping. At the owner's sole discretion, educational activities may be conducted on the property. The owner reserves the right to withdraw up to two lots of up to 10 acres in size, as needed. The grantee may install signs on the property.

Name: Bound Tree Forest Easement

Grantor: Jonathan F. and Sarah H. Stone

Grantee: Society for the Protection of New Hampshire Forests

Executory Interest: Town of Warner

Date closed: 9/16/2009

Book/Page: 3155/1467

Acreage: 374

Location: East Joppa, Dummer, and Bear Pond roads, Mink Hills

Public access: Yes, for nonwheeled, pedestrian, noncommercial outdoor recreation such as hunting, fishing, hiking, wildlife observation, cross-country skiing, and snowmobiling on a designated trail approved by Grantor.

Brief description:

This property, acquired by bargain sale, links Bear Pond conservation land and the Chase easement, which in turn abut additional conservation land, creating a block of more than 2,000 acres of undeveloped land. Excellent forest soils and habitat characterize this property, which lies on the divide between the Warner and Contoocook river watersheds. The easement is designed to protect the property for outdoor recreation and education of the general public, conserve native habitats, protect productive land for forestry and agriculture, provide scenic enjoyment from public roads on which the property fronts, and protect surface and ground waters. The tracts that comprise the entire property cannot be sold separately, although portions may be leased for permitted uses. Grantor reserves the right to construct and maintain a cabin and ancillary buildings as defined in the easement; to cut firewood for personal use without a forest management plan; to create and maintain trails for use of Grantor for horses, motorized off-road recreational vehicles, or other wheeled vehicles; to limit public access during periods of agricultural use or forest harvesting or to stem abusive activity; and to maintain an existing access road on the property. The Town and SPNHF contributed financially to this project.

Name: Brown Easement

Grantor: Katherine A. Brown, trustee of the Katherine Brown Revocable Trust

Grantee: Ausbon Sargent Land Preservation Trust (ASPLT)

Executory Interest: Town of Warner

Date closed: 10/2/2001

Book/Page: 2301/0575

Acreage: 78.3, incl. 7 acres of homestead area

Location: School House Lane, Mink Hills

Public access: Not via easement, which explicitly states that the easement is not to be interpreted as permitting physical access to the public.

Brief description

Warner Brook flows southerly through this mix of forest land and considerable wetlands, including two manmade ponds. Abutting it to the north is the Ashendon State Forest. The property is part of the larger, multi-thousand acre Mink Hills Conservation Area. It lies in the Contoocook River watershed and was recognized in the 1999 Master Plan for its significant contribution to wildlife habitat. It includes foundation remains of former mills. The WCC assisted ASPLT in securing this easement, including a contribution of \$6,650 towards the \$29,150 project costs. The WCC paid for a survey of the easement boundaries and contributed to ASPLT's Easement Stewardship Endowment Fund. The parcel is protected to: ensure it remains forever undeveloped, preserve wetlands and wildlife habitat, and prevent subdivision of the 7-acre homestead area from the larger, undeveloped tract. The easement does not convey any right of access by the general public. It is depicted in plan #15591, MCRD.

Name: Carter Easement

Grantor: Damon Carter

Grantee: Town of Warner

Executory Interest:

Date closed: 11/30/93

Book/Page: 1942/0699

Acreage: 34.775

Location: Old Pumpkin Hill Road, Willow Brook watershed

Public access: By implication under specified auspices

Brief description:

Productive forestland donated for purposes of 1) outdoor recreation by and/or education of the general public through auspices of the Warner Conservation Commission or the Sunapee-Ragged-Kearsarge Greenway and 2) the preservation of open space.

Name: Chase Easement

Grantor: George W. Chase III

Grantee: Society for the Protection of NH Forests

Executory Interest: Town of Warner

Date closed: 3/15/2005

Book/Page: 2757/486

Acreage: 272

Location: Joppa and Bear Pond roads, Mink Hills

Public access: Yes, no posting against pedestrian access, fishing, and hunting; outdoor

education permitted

Brief description:

Protection for this area was a joint undertaking of George Chase, Jr., SPNHF, and the Conservation Commission. The easement was sold at a reduced price, with funds provided by the Town. It was identified as one of the top ranked parcels in the Town's *Mink Hills Conservation Plan*. The property, currently well managed forest, will be maintained as permanent open space, with commercial agriculture and forestry permitted. It has 825' of frontage on Joppa Road and 3275' of frontage along Bear Pond Road. The property builds on protected land to the west and provides varied wildlife habitat, including a stretch of Bartlett Brook and the entire frontage on a small beaver pond, Fiona's Pond, for which the easement establishes a 250' setback for structures. The pond contains an active heron rookery. Specific purposes of the easement are the protection of productive forest land, natural habitats, and scenic views along public roads, expansion upon existing conservations, and outdoor recreation and education. The easement allows for withdrawal of one lot from the protected area.

Name: Contoocook Village Precinct Easement

Grantor: Fortin & Redman Associates; current owner, Contoocook Village Precinct

Grantee: Town of Warner

Date closed: 6/14/2001

Book/Page: 2270/1921

Acreage: 130+/- (deed); 136 (tax map)

Location: Bear Pond Road north of Bear Pond, Mink Hills

Primary use: Watershed protection/public water supply for Contoocook Village, Hopkinton

Secondary uses (other permissible): Fire suppression, low impact recreation

Public Access: Yes, by easement, including but not limited to hiking, hunting, snowmobiling, and biking. Owner may control uses.

Brief description:

The Precinct acquired this property in 2001 from Fortin and Redmond Associates (see Bk 2270, Pg 1943). The property lies just north of Bear Pond and adds significantly to water supply protection. The Town acquired a conservation easement on this and a second 211-acre "Ries" easement property simultaneously for a total of \$27,400, including transaction costs. The easement seeks to protect open space, especially wildlife habitat and productive forests, preserve native habitats, protect surface and groundwater to safeguard present and future water supplies provided by Bear Pond, and perpetuate noncommercial recreational uses compatible with these purposes. Terms are similar to other easements, with the exception, no buildings are allowed. Structures, such as bridges, culverts, fences, roads, and dams may be constructed on the Property. All uses of land within the Bear Pond watershed as delineated by the State must be in accordance with ENV-Ws 386.35.

Name: Courser Easement #1

Grantor: Rebecca, Gerald, Timothy, and Fred Courser, as trustees of the Fred William Courser, Jr. Marital Trust – Reverse QTIP Trust

Grantee: Ausbon Sargent Land Preservation Trust

Contingent Interest, including 3rd party right of enforcement: The Nature Conservancy

Executory Interest: Town of Warner

Date closed: 6/10/2005

Book/Page: 2785/1765

Acreage: 201

Location: NW side of Schoodac Road and E side of Couchtown Road, Schoodac Brook

watershed

Public access: No posting against pedestrian access is allowed, unless it is determined by grantee organizations in consultation with the owner to be in the public interest to do so. Snowmobiles are permitted on skid roads at grantee's discretion. No other motorized or wheeled recreational uses are permitted.

Brief description:

The Courser family donated an easement on this property, which is dominated by managed forestland and wetlands. It abuts 850-acres of State controlled wildlife management land and is part of the larger ecosystem/habitat conservation area designated in a plan by The Nature Conservancy. Mud Pond Brook drains the property. Key reasons for the easement are protection of critical wildlife habitat, scenic views, outdoor recreation opportunities, open space, and forestry opportunities. The easement specifies forest management limitations and prohibits such activity in riparian buffers. Forestry practices must respect the needs of sensitive wildlife species. Specific protections apply to vernal pools on the property. The easement prohibits removal of beaver without grantee permission. Property is depicted in Plan #17430, MCRD.

Recommendations

• Continue building on the habitat protection efforts initiated in this and subsequent Schoodac Brook watershed projects.

Name: Courser Easement #2

Grantor: Rebecca, Gerald, Timothy, and Fred Courser, as trustees of the Fred William Cuorser,

Jr. Family Trust

Grantee: Ausbon Sargent Land Preservation Trust and U.S.D.A, Natural Resources

Conservation Service

Contingency Interest including 3rd party right of enforcement: The Nature Conservancy

Executory Interest: Town of Warner acting through its conservation commission

Date closed: 9/28/2006

Book/Page: 2931/0227

Acreage: 138 acres, including farmstead area of 3 acres

Location: Schoodac Road, Schoodac Brook watershed

Public access: No posting against pedestrian use, snowmobiles are permitted on designated trails existing at the time the easement was executed and on forestry roads at grantor's discretion; no other motorized or wheeled recreational vehicles are permitted. Access may be terminated if it is considered in the public interest by grantee organizations in consultation with the owner.

Brief description:

This property includes all the agricultural fields, wetlands, and frontage on Schoodac Brook and some forestland. The easement allows for forestry and agriculture, spelling out specific management protocols for protecting both Frazier Brook and Schoodac Brook corridors. The area is a high priority conservation area recognized in the 1999 Master Plan. Fields provide upland grassland habitat complementary to the stream corridor. Some of the few prime agricultural soils in Warner occur on this property. The easement stresses protection for farmland soils, critical habitats, riparian areas, and water quality, wetlands, scenic views, and noncommercial recreation opportunities. It includes riparian buffer prescriptions for forestry and agricultural operations, with broader prescriptions for forestry. It specifically protects beaver, prohibiting their removal without grantee permission. Mining is permitted only if sand and gravel are to be used for permitted activities on the Property or adjacent Courser Bog Road land. Commercial recreation associated with agritourism is permissible, subject to grantee and TNC approval. Water withdrawals from Schoodac and Frazier brooks for agricultural purposes are subject to grantee review. The land cannot be sold separately from the 146-acre lot adjacent to it and west of Bog Road, also owned by grantor. The easement allows for withdrawal of land for a house lot (see corrective deed at 3097/0009). See also corrective deed at 2972/1380. This was the second project with the Courser family and involved a significant bargain sale. Funds from the Town Conservation Fund, the federal Farm and Ranch Land Protection Program, and local fund raising secured the land.

Name: Courser Easement #3

Grantor: Rebecca, Gerald, Timothy, and Fred Courser, as trustees of the Fred William Cuorser,

Jr. Family Trust

Grantee: Ausbon Sargent Land Preservation Trust

Contingent Interest, including 3rd party right of enforcement: NH Fish & Game Department

Executory Interest: Town of Warner acting through its Conservation Commission

Date closed: 12/10/2008

Book/Page: 3099/1779

Acreage: 146

Location: Connor's Mill and Bog roads, Schoodac Brook watershed

Public access: No posting against pedestrian use, , including hiking, hunting, fishing, cross country skiing, snowshoeing, or snowmobiles in existing designated trail and forestry roads; no wheeled recreational vehicles

Brief description:

This sustainably managed forested tract drains to Schoodac Brook to the west and a large wetland complex off Bog Road. It contributes to an undeveloped area of several thousand acres and supports three species of special concern. The easement aims to: protect this habitat, in furtherance of Wildlife Action Plan and Landowner Incentive Program goals, protect other upland and wetland habitat and biodiversity through sound management practices, protect water quality, aquatic habitat, and riparian zones, ensure continued productivity of forest, wetland, and agricultural land under easement, enable continued conduct of outdoor recreation, and provide scenic enjoyment to the general public travelling public roads. Sand and gravel may be taken from the easement property only for use on it and adjacent lands under easement and only if the parcels are under the same ownership. The property cannot be sold separately from the adjacent 138 acres, also under easement (see 2931/0277). The easement includes specific protection for beavers and allows for withdrawal of one house lot, as shown on Plan #18125. The project was funded with a grant from the Landowner Incentive Program, US Fish & Wildlife Service and NH Fish & Game Department, private donations, Town funds, and a bargain sale donation by the Courser family.

Name: Courser Easement #3 (second parcel)

Grantor: Rebecca, Gerald, Timothy, and Fred Courser, as trustees of the Fred William Cuorser,

Jr. Family Trust

Grantee: Ausbon Sargent Land Preservation Trust

Contingent Interest, including 3rd party right of enforcement: NH Fish & Game Department

Executory Interest: Town of Warner acting through its Conservation Commission

Date closed: 12/10/2008

Book/Page: 3099/1803

Acreage: 185

Location: E side of Poverty Plains Road, Schoodac Brook watershed

Public access: No posting against pedestrian use, including hiking, hunting, fishing, cross country skiing, snowshoeing, or snowmobiles in existing designated trail and forestry roads; no wheeled recreational vehicles

Brief description:

This predominantly forested tract drains to Schoodac Brook and associated wetlands. It contributes to an undeveloped area of several thousand acres and supports three species of special concern. The easements aim to: protect this habitat, in furtherance of Wildlife Action Plan and Landowner Incentive Program goals, to protect other upland and wetland habitat and biodiversity through sound management practices, to protect water quality, aquatic habitat, and riparian zones, including the undeveloped frontage along Schoodac Brook, ensure continued productivity of forest, wetland, and agricultural land under easement, and provide scenic enjoyment to the general public travelling public roads. The easement includes specific protection for beavers and allows for withdrawal of one house lot, as shown on Plan #19112. The easement includes specific language relative to management of riparian buffers as mapped by The Nature Conservancy. The project was funded with a grant from the Landowner Incentive Program, US Fish & Wildlife Service and NH Fish & Game Department, private donations, Town funds, and a bargain sale donation by the Courser family.

Name: Eubank #1

Grantor: Daniel and Virginia Eubank

Grantee: Society for the Protection of NH Forests

Executory Interest: Town of Warner

Date closed: 12/30/2003

Book/Page: 2611/1037

Acreage: 142

Location: Cunningham Pond Road, Mink Hills

Public access: No posting against low impact, nonmotorized, nonwheeled recreational access

allowed.

Brief description:

Efforts to protect this property were a direct result of the WCC's land protection campaign to protect the remaining undeveloped tracts of forestland in the Mink Hills. The town's contribution of \$63,209.33 covered the purchase price, transaction expenses, and a long-term stewardship contribution. The easement on this parcel conserves open space and the land's productive capacity, the natural habitat of native plants and animals, and frontage along both sides of Cunningham Pond Road. It enhances several conservation properties in the vicinity, and provides for noncommercial, nonmotorized, nonwheeled outdoor recreation and education of the general public. The easement covers two lots, Lot 29, Map 8 and Lot 41, Map 9. The lots may not be conveyed separately from each other. The easement area includes a small cabin. One house lot of up to 5 acres, as necessary, may be withdrawn from the easement.

Name: Eubank #2

Grantor: Daniel Eubank

Grantee: Society for the Protection of NH Forests

Executory Interest: Town of Warner

Date closed: 5/13/2004

Book/Page: 2655/0917

Acreage: 220

Location: Cunningham Pond Road, Colby Lane, Mink Hills

Public access: No posting against low-impact, noncommercial, nonmotorized, nonwheeled

outdoor recreation

Brief description:

Daniel Eubank donated a conservation easement on his remaining land on Cunningham Pond Road. It includes all the land surrounding Cunningham Pond, a naturally occurring pond, at 21.7 acres the third largest pond in Warner, and the highest in elevation. This was another joint project of the WCC and SPNHF, with the town contributing \$4,000 towards expenses. The easement provides similar conservation protections to those of Eubank #1, with purposes, the conservation of productive farm and forestland, natural habitats, undeveloped pond frontage, and scenic views along roads on which the property fronts, the enhancement of existing conservation land in the vicinity, and outdoor recreation. The two tracts that make up this parcel (Map 9, lots 38 and 39) may be conveyed separately but not further subdivided, with the exception, that withdrawal of one house lot, in this case up to ten acres in size, as necessary, is permissible.

Name: Indian Museum Easement

Grantor: Mount Kearsarge Indian Museum

Grantee: Town of Warner, through its conservation commission

Executory Interest: None

Date closed: 1/11/2000

Book/Page: 2201/1930

Acreage: 80+/- (deed); 88.2 (tax map)

Location: Pattee Road, Willow Brook watershed

Public access: Yes. Grantor may post against motorized wheeled vehicles and may limit general public use to prevent conflict with the museum's use of the property for educational purposes.

Brief description:

This tract was acquired by the Town in order to: protect forest and wetland wildlife habitat, including a Great Blue Heron rookery, provide scenic enjoyment, and provide opportunities for outdoor recreation by and/or education of the general public. It abuts the Town's Stockwell Bartlett easement and, with the Stockwell Bartlett easement land protects a significant proportion of Tory Hill Meadow Marsh. See Plan #10140. Willow Brook, a town conservation priority, feeds and drains through this wetland. The easement allows structures consistent with the Museum's nonprofit mission to be installed, if mutually agreeable to grantor and grantee. Transaction expenses, contributed by the town, totaled \$7,500.00.

Recommendations

• Tory Hill Marsh Meadow is the largest wetland in the Willow Brook watershed, providing significant open water and emergent wetland habitat used by a variety of wildlife. To protect water quality, "critical habitat," and encourage Great Blue Herons and other nesting species, the Conservation Commission should continue to pursue protection of additional land in this area, particularly to the north and east and to the southwest, where an adjoining, "Priority Areas" wetland lies (from Willow Brook Watershed Natural Resource Inventory and Conservation Plan, prepared in conjunction with the Warner Conservation Commission by Chris Kane, 9/99). Uplands are integral to this natural system; protection of upland areas also complements protection for recreational trails in the area.

Name: Kumin Easement

Grantor: Maxine and Victor Kumin

Grantee: Society for the Protection of NH Forests

Executory Interest: None

Date closed: 12/21/1995

Book/Page: 2008/1392

Acreage: 107.6

Location: Harriman Lane, Mink Hills

Public access: Not via easement

Brief description:

This forested parcel was gifted by the grantors to preserve open space and productive forest land, and for the scenic enjoyment of the general public. It can be managed for commercial forestry and agriculture as well as noncommercial outdoor uses.

Name: McCausland Easement

Grantor: Allan McCausland, as trustee of the Allan S. McCausland Revocable Trust

Grantee: Town of Warner acting through its Conservation Commission

Executory Interest: None

Date closed: 12/22/1998

Book/Page: 2133/1822

Acreage: 10.2

Location: S side of Conner's Mill Road, W side of Brook Meadow Lane, Schoodac Brook

watershed

Public access: Non motorized recreational vehicles permitted

Brief description:

This open field creates "unusual natural habitat utilized by grassland birds, reptiles, and a variety of mammals." The purposes stress the importance of rural character and agricultural land and specifically identify the protection of productive farm and wetland habitats and scenic enjoyment of the public. The easement allows for agriculture and forestry, prohibits motorized recreation vehicles, and provides for withdrawal from the easement area land sufficient for a house site.

Name: Myron-Cecil-Harris Easement, a.k.a. Burmuda Harris Woods Easement

Grantor: Town of Hopkinton

Grantee: Five Rivers Conservation Trust

Executory Interest: None

Date closed: 6/6/2006

Book/Page: 2906/0032

Acreage: 70.3 in Warner, 110.9 total

Location: Bound Tree Road, Mink Hills

Public access: yes

Brief description

This property is managed by the Hopkinton Conservation Commission. The easement aims to protect open space, especially the forested land, wetlands, and wildlife, to preserve Hardy Spring Brook, which runs through the property, to provide for outdoor recreation and education of the general public, and to protect natural habitat, the riparian corridor habitats, and cultural features on the land, including a mill and cellar hole. Forestry is permitted with oversight of a licensed forester. No subdivision, no structures except as necessary for forestry, wildlife, and outdoor recreation, no removal of fill, no changes to topography, no outdoor advertising, no mining, and no dumping are allowed. The owners reserve the right to post against vehicles and against hunting and access during timber harvests. They may create trails, signs, and kiosks, all in consultation with the grantee. They may create a parking lot for up to 10 cars in consultation with the grantee, and they may limit access if uses conflict with conservation values.

Name: Nemec Easement

Grantor: Nancy Nemec

Grantee: Town of Warner

Executory Interest: None

Date closed: 4/8/1998

Book/Page: 2107/0937 (7 ac parcel, Map 20 Lot 1) and 2107/0943 (8 ac parcel, Map 18, Lot 42)

Acreage: 15

Location: Kearsarge Mtn Road and Tory Hill Road, Stevens Brook watershed

Public access: Yes, excluding motorized wheeled recreational vehicles

Brief description:

This property lies just west of relatively isolated northern portions of the Willow Brook watershed important to the persistence of wide-ranging wildlife and providing specialized habitats for wildlife, like hemlock stands and large cavity trees. The donor's intent was to provide opportunity for outdoor recreation by and education of the general public, excluding motorized, wheeled forms of recreation, and preserve open space for the enjoyment of the general public. The easement allows for forestry and agriculture.

Name: R.A.W. Easement

Grantor: R.A.W. Investment Trust, Inc.

Grantee: Town of Warner through its Conservation Commission

Executory Interest: None

Date closed: 7/14/2003 (corrective deed)

Book/Page: 2547/1295

Acreage: 11.2 (deed)

Location: Warner River/Exit 9, Warner River Corridor

Public access: Low-impact, nonmotorized, non-wheeled (cannot post against)

Brief description:

This floodplain/wetland property is dedicated as permanent open space and provides pedestrian access to the Warner River. It was given to the Town to: protect and provide access to the River, offer scenic enjoyment, protect natural habitats, conserve open space and maintain the capacity of the land to provide habitat, protect water quality of the Warner River by providing a natural, vegetated buffer, and protect the aquifer and wellhead protection area of the two Town wells downstream.

Name: Ries Easement

Grantor: Fortin & Redman Associates; current owner, David P. Ries

Grantee: Town of Warner

Executory Interest: Contoocook Village Precinct

Date closed: 6/14/2001

Book/Page: 2270/1931

Acreage: 211

Location: Bear Pond, north west of Contoocook Village Precinct parcel, Mink Hills

Public access: No

Brief description:

This forested property was conserved to: protect open space, wildlife habitat, and forestland, preserve, protect and conserve natural habitats of plants and animals and animals native to New Hampshire, and protect the surface and groundwater resources of the property for future water supplies. The town contributed \$27,400.00 to this (map 5 lot 16) and the Contoocook Village Precinct easement (map 6 lot 11), and the Warner Conservation Commission helped identify buyers for the "Ries" and precinct parcels.

Name: Stockwell & Bartlett Easement

Grantor: Philip B. Stockwell and Susan R. Bartlett

Grantee: Town of Warner

Executory Interest: None

Date closed: 8/8/2001

Book/Page: 2288/1358

Acreage: 16

Location: Bartlett Loop off Pumpkin Hill Road, Willow Brook watershed

Public access: Owners retain the right to post.

Brief description:

Philip Stockwell and Susan Bartlett donated a conservation easement on their 16-acre parcel that includes portions of the Tory Hill Meadow Marsh, which was identified as a Conservation Priority Area in the 1999 "Willow Brook Watershed Natural Resources Inventory and Conservation Plan." The easement specifically alludes to preserving the wetlands and Great Blue Heron rookery, as well as protecting productive forests and wetlands, enhancing the abutting Kearsarge Indian Museum property, and providing scenic enjoyment. It prohibits any logging within 300 feet of the marsh but otherwise allows for agriculture and forestry.

Recommendations

• In 1997 the NH Department of Environmental Services identified optimal stream conditions for all but 4 parameters tested on Willow Brook. DES linked key degradation issues with gravel roads in the Children's Brook area. The Conservation Commission should work with the Road Agent to minimize erosion from gravel roads.

Name: Wiggin Easement

Grantor: Miriam Wiggin

Grantee: Society for the Protection of NH Forests

Executory Interest: Town of Warner

Date closed: 10/10/2006

Book/Page: 2936/1247

Acreage: 87

Location: Howe Lane, Mink Hills

Public access: Pedestrian access only (nonmotorized, non-wheeled; no camping)

Brief description:

This parcel consists of productive forest land, which the easement is written to protect. It was donated by Mimi Wiggin with the intent also to protect natural habitats for song birds, birds of prey, amphibians, and other small and large animals known to frequent the area, enhance the Chandler Reservation, which it abuts, and the nearby Harriman-Chandler State Forest, and to provide for outdoor recreation by and/or education of the general public. The property includes a portion of one of the more prominent peaks in the Minks and was ranked in the second highest category for protection in the Town's Minks Hills Conservation Plan. A driveway passes through the easement.

Deed Restricted Public Lands

Name: Goodwin Trust Land Gift

Grantor: Mark Bates, successor to the Herbert W.G. Revocable Trust

Date: 12/5/2006

Owner: Town of Warner

Manager: Conservation Commission

Acreage: 2.2

Location: Tom Pond, Warner River, Warner River Corridor

Level of protection (could be in summaries about town or state lands): Conveyed with a deed restriction.

Primary use: Open space

Secondary uses (other permissible): Public water supply

Brief description:

This undeveloped wetland lies at the north end of Tom Pond within the floodplain of the Warner River, Map 7, Lot 44. It is primarily wetlands and abuts other Town-owned land. The land overlies a stratified drift aquifer of potential value as a drinking water source for the Town. It was donated to help the Conservation Commission achieve its goal of conserving land along the Warner River. At 2951/1287 the deed restricts the land as follows: maintain as open space in perpetuity; no commercial or industrial activity; no subdivision; no removal of soil, changes to topography or to surface or groundwater systems; no outdoor advertising except as necessary for noncommercial outdoor recreational use; no dumping or storage of hazardous materials; no mining except that the Town has the right to withdraw groundwater on a sustainable yield basis for purposes of public water supply only. The deed specifically authorizes any resident of Warner to enforce these restrictions.

Recommendations

• Continue to build on the riverside conservation work that has been accomplished along this section of river, seeking gifts of land as feasible.

Name: **Henderson Tract**

Grantor: John and Terrill Henderson

Owner: Town of Warner

Manager: Conservation Commission, by deed

Date: 5/2/2005

Acreage: 34

Location: E side of Warner River, W of I-89, SE side of town, Warner River Corridor

Level of protection: Deed restriction limiting the land to permanent open space, no commercial activity, except that groundwater withdrawal by the Town on a sustainable yield basis, only for a public water system.

Primary use: River protection and conservation

Secondary uses (other permissible): Public water supply

Brief description:

The Hendersons donated this property, consisting mostly of wetlands, to further the WCC's interest in creating a protective floodplain buffer along the Warner River. The land abuts one of the Hill tracts and the Bagley/Stillman Clark parcel across the river and north. At 2774/1709 the deed restricts the land as follows: maintain as open space in perpetuity; no commercial or industrial activity; no subdivision; no removal of soil, changes to topography or to surface or groundwater systems; no outdoor advertising except as necessary for noncommercial outdoor recreational use; no dumping or storage of hazardous materials; no mining except that the Town has the right to withdraw groundwater on a sustainable yield basis for purposes of public water supply only.

Recommendations

• Continue to build on the riverside conservation work that has been accomplished along this section of river, seeking gifts of land as feasible.

Deed Restricted Private Land

Similar to an Easement, Enforceable by Grantor

Grantor: Society for the Protection of New Hampshire Forests

Grantee: Wendy S. Ballou and Scott Ballou

Date closed: 3/21/1995

Book/Page: 1983/0363

Acreage: 40.43

Location: Rte. 103, Warner River Corridor Lands

Public access: No

Brief description:

This property was gifted to SPNHF in 1992 by Kenneth and Jean Scott. It was then sold by SPNHF subject deed restrictions that the property be maintained as open space, the soils be protected for forestry and agricultural use, the property's scenic quality be maintained, the land's wildlife resources be protected, and surface and ground water be protected. One residential dwelling is permitted on a 2 acre area, and forestry and agriculture are permitted, subject to standard best management practices.

Appendix D
DRAFT Summary of Warner Land Conservation
2000 - 2009 (to date)

Year	돌 건	Amount from CU penalties	Amor Warra	Amount from Varrant Articles	_ <u>_</u> _	Total Available Funding per year	Acres protected	Proj	Estimated Project Value	Cost to Warner	% of project value
2000	ક	7,340.00	s		s	7,340.00	80	ઝ	36,000.00	7,500.00	
2001	₩	6,255.00	\	•	s	6,255.00	441	s	59,150.00	\$ 34,050.00	28.00%
2002	↔	17,311.00	⇔	1	s	17,311.00	11.2	↔		· •	
2003	↔	56,433.00	↔	1	↔	56,433.00	887	↔	273,771.00	\$ 115,485.00	42.00%
2004	↔	40,855.00	↔	50,000.00	s	90,855.00	220	s	440,000.00	\$ 4,000.00	1.00%
2005	↔	28,432.00	⇔	100,000.00	s	128,432.00	507	↔	421,730.00	\$ 156,131.00	37.00%
2006	↔	24,560.00	↔	50,000.00	↔	74,560.00	297.5	↔	613,608.00	\$ 134,347.00	22.00%
2007	↔	26,021.00	⇔	50,000.00	s	76,021.00	0				
2008	↔	7,500.00	⇔	50,000.00	s	57,500.00	331	↔	323,866.00	\$ 75,000.00	23.00%
2009	↔	1	s	30,000.00	↔	30,000.00	374	↔	165,000.00	\$ 100,000.00	%00.09
Totals	\$	214,707.00	s	330,000.00	s	544,707.00	3148.7	\$	2,338,125.00	\$ 626,513.00	27.00%
Average	69	24,000.00	↔	37,000.00	↔	60,000.00	350	\$	259,791.66	\$ 69,619.55	27.00%
		; ;	•			Estimated	Cost to				
Project Name		Year	Acres			Project Value	Warner				
Indian Museum Easement		2000		80		<i>د</i> .	7,500.00				
Stockwell & Bartlett Easement		2001		16		خ	خ				
Fortin & Redmond Easements		2001		347	8	30,000.00	27,400.00				
Brown Easement		2001		78	8	29,150.00 \$	6,650.00				
R.A.W. Investments Trust		2002		11.2		خ.	<i>خ</i> .				
Badger Easement		2003		745	8	205,062.00 \$	51,776.00				
Eubank Easement #1		2003		142	↔	\$ 00.602,89	63,709.00				
Eubank Easement #2		2004		220	↔	440,000.00 \$	4,000.00				
Chase Easement		2005		272	↔	140,864.00 \$	130,865.00				
Courser Easement #1		2005		201	↔	272,366.58 \$	23,966.58				
Henderson Land Gift		2005		34	↔	8,500.00 \$	1,300.00				
Courser Easement #2		2006		138	↔	520,000.00 \$	125,000.00				
Wiggin Easement		2006		87	↔	93,108.00 \$	9,108.00				
Myron – Cecil Harris Trust		2006		70.3	<i>~</i> .	€	1				
Goodwin Trust Land Gift		2006		2.2	↔	\$ 00.005	239.39				
Courser Easements #3		2008		331	↔	475,000.00 \$	75,000.00				
Bound Tree Easement		2009		374	ક	165,000.00 \$	100,000.00				
		•		3148.7	s	2,448,259.58 \$	626,513.97	ı	<u>-</u>	Prepared by B. Hotz, Warner CC	otz, Warner CC

Appendix E

Policy for Acceptance of Land or a Conservation Easement in the	ne Town of	Warner
Adopted by the Warner Conservation Commission on		

Goals Statement

The Conservation Commission's land conservation efforts are aimed at:

- maintaining Warner's high quality surface waters and ground water,
- minimizing the loss of wildlife habitat, especially habitat critical to species' survival, such as vernal pools, wildlife corridors, or large blocks of unfragmented lands,
- protecting unique or fragile natural communities, and
- maintaining outdoor recreational opportunities and scenic vistas, whether of ridgelines or wet meadows.
- protecting active farms and farmland soils of prime or statewide significance.

The Commission recognizes the value of a variety of tools to meet its land conservation goals, including outright conservation ownership, conservation easements, regulatory techniques, public education, and collaboration with other groups in town. The following criteria are aimed primarily at assessing land for conservation through ownership or easements.

Guidelines

could protect an entire wetland complex.

The Commission will consider each project based on the following attributes. In general, the
more attributes a property has, the more likely the Commission is to pursue protection efforts.
Not that some attributes overlap. The Commission will consider the importance of each attribut
in its broader context. The order an attribute is listed does not imply priority nor weights, which
the Commission may assign.
All natural resource values being equal, land or easements gifted to the Town have higher priority
than land for which funding must be raised privately or raised and appropriated by the Town Meeting.
Land is in the Werner Diver fleedulein
Land is in the Warner River floodplain.
Protection of the property would enhance protection of mapped aquifers.
Land contains a stream corridor of any size with no development potential near it if the land is
conserved.
Land protects a stream corridor with significant associated wetlands.
Land protects an entire wetland complex, or in conjunction with additional conservation action
zama provesta an emine wettand compress, or in conjunction with additional content action

Land protects essentially undeveloped shoreline on an essentially undeveloped waterbody.

Land abuts existing conservation land or helps connect existing conservation land.
Land protects known natural resources of high conservation value, i.e., identified in one of the town's natural resource inventories, in State or regional plans or inventories, or by subsequent research. Such resources could include, but are not limited to, south facing slopes, vernal pools, ecologically significant breeding habitat, unusually productive forest soils.
Land adds to the natural diversity of an area or contains significant natural diversity of native flora and fauna. E.g., Emergent marsh is the only such wetland in the Willow Brook watershed (Willow Brook Natural Resources Area).
Land is free of invasive species.
Land has documented wildlife corridor use or is likely to be used, as predicted in Local Connectivity or Regional Connectivity maps, or is used as a migration staging area.
Land has notable historical or archaeological feature(s).
Land includes an existing trail or lends itself to connecting trails and is suitable for recreational use.
Conservation of the parcel would help ensure traditional land uses, e.g., farming, forestry, hunting, and fishing, persist.
Land has high scenic or educational value.
Land contains prime agricultural soils, or soils of statewide importance.
Land is currently being farmed.
Land contains one or more features of limited extent in the Town of Warner, e.g., peat land, high volume white pine soils, floodplain forest.
Land contains special or unusual topographic/geologic feature(s), e.g., esker, cave.
Property to be protected is ≥ 75 acres.
Land has strategic value due to frontage on a Class VI road or conservation of the parcel may influence abutting landowners to protect their land.

The Commission will emphasize continued private ownership of conservation lands except when Town ownership is the best or most viable conservation tool, as when the land is particularly well suited for educational or recreational purposes; when the land's inherent limitations may discourage private ownership, as a floodplain forest; or when opportunities to expand existing Town-owned conservation land, including town forest lands, arise.

Guidelines for Warner Conservation Commission's Review Of Proposed Conservation Easements in Open Space Developments Adopted by the Conservation Commission on _____

In order to ensure that land for which the Town assumes a conservation easement interest as a result of Planning Board decisions relative to Open Space Developments is land that will benefit the Town and minimize ongoing Town stewardship obligations, the Conservation Commission developed the following guidance for open space land dedications. We hope it will be useful to developers in planning Open Space Developments and to the Planning Board in its review of plans, as well as to present and future commission members.

The Zoning Ordinance presently requires Conservation Commission review of all easement documentation. To minimize costs to all parties and maximize opportunities for the Conservation Commission to help shape decisions, the Conservation Commission would like to participate in all preliminary discussions relative to Common Open Space design and management.

The Commission is not interested in taking responsibility for land on which active field sports or developed recreational facilities are anticipated, i.e., land that is not essentially conservation land.

The Commission will review each proposed gift of Common Open Space with respect to the

following criteria.	
Property abuts existing conservation land or helps to link parcels in close p	roximity.
Property provides a naturally vegetated buffer of at least 300 feet along a watrails are proposed, the buffer must exceed 300 feet.	raterbody; if
Property is strategically located so as to limit or prevent future development protection, is developable.	t and, without
Property is configured so as to minimize the interface with developed land	uses.
Ideal property is a minimum of 50 acres.	

Common Open Space that fails to meet one or more of the above criteria may be better managed and protected by the homeowners in the development, or the Town may be better served by an alternative Common Open Space design.

In addition, all projects must meet the following two standards:

1. Conservation easements dedicated to the Town to satisfy the Common Open Space requirement will be owned by an individual landowner; no easements on land held by a landowners association or other group of individuals will be accepted.

2. If individual ownership is not feasible or for other reasons, the Commission may explore the option of Town ownership.

Suggested modifications to Article XIV:

In order to avoid terms and conditions that would impose burdensome ongoing obligations on the Town, the Commission seeks the following modifications to the review process outlined in Article XIV of the Warner Zoning Ordinance.

- 1. Authority both to review, as currently required, and to approve every proposed conservation easement prior to execution. In each case, the Commission will provide written documentation of their decision to the Planning Board and the Selectmen.
- 2. Ability to decline any easement if, in its opinion, enforcement will impose an unacceptable burden on the Commission or the land does not meet a conservation threshold, as described above.

