

NATURAL RESOURCES INVENTORY
of the
TOWN OF PIERMONT, NEW HAMPSHIRE

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1.0 INTRODUCTION

Piermont is a small rural town encompassing roughly 25,000 acres in West Central New Hampshire. Fewer than 1,000 year-round residents make their permanent home here, though the population swells in summer due to second homeowners, children's camp attendees, and seasonal workers. A diverse topography, rising from rich Connecticut River farmland on its western border to the foothills of the White Mountains to the east, in combination with mountain lakes, streams, and forestlands, provides a high quality environment for living for Piermont's human inhabitants as well as plant and animal communities.

Protection of the land and waters and our way of life demand the self-conscious vigilance inspired by a Natural Resources Inventory. Mindful of that responsibility, the Piermont Conservation Commission has assembled in the following pages a listing of the life-sustaining and enhancing elements of our natural world. Our hope is that this accounting will inform residents and town government and boards of what must be protected so as to safeguard this nourishing natural environment.

In addition to describing the natural resources in Piermont, the Conservation Commission has also developed a set of conservation priorities and recommendations of what must be done to maintain these natural resources. Public comment on both the natural resources information and the conservation recommendations will be gathered through the posting of the draft document in public locations in Town and a public hearing to be held Sept. 10th, 2008. We intend that this document will form a foundation for the development of land use priorities, master planning, regulation development, and future planning decisions.

2.0 TOPOGRAPHY

The topography, or the form of the Earth's surface, of Piermont is both varied and unique, ranging from 400 feet above sea level in the Connecticut River Valley to 2,717 feet at the summit of Piermont Mountain (Map 1). In Piermont, the hills, mountains, rivers, streams, lakes, and valleys have had a great influence on what, where, and how much we do in Piermont.

From the agricultural soils in the valley to the high-elevation forest on Piermont Mountain, our topography has been shaped by the glaciers of the past. The Connecticut River valley was once the Connecticut River Lake, also known as Lake Hitchcock, which was 200 miles long and 10-20 miles wide. This ancient glacial lake stretched from Connecticut to the Town of Monroe in New Hampshire. When the last glacier retreated 10,000 years ago, Lake Hitchcock drained, leaving behind a large river valley with fine-grained sediments that have developed into excellent agricultural land. The glaciers also sculpted the hills and mountains of Piermont, exposing the bedrock and carving out mountain valleys.

Three distinct topographic areas in Piermont are:

- The Connecticut River Valley, covering the western portion of the Town,
- Foothills and Mountains, covering the central and eastern portions of the Town, and
- The Lake Tarleton/Armington/Katherine area, on the easternmost edge of the Town.

As human pressure to change and develop the land increases, the topography should be considered in identifying areas that should have limitations on development (Map 2). Erosion from land clearing on steep slopes can cause sediments to be washed into streams and rivers, destroying aquatic habitat. In addition, nutrients in these sediments can cause artificial enrichment of the stream, leading to the growth of algae and a reduction in oxygen levels in the water. Cleared land on steep slopes is also at higher risk of landslide, which could block roads or destroy other human infrastructure.

The effects of land use decisions in Piermont affect not only the Town, but also the entire length of the Connecticut River downstream from Piermont. What we do here can be carried down the Connecticut River then into the Atlantic Ocean and beyond. Water quality, community health and scenic beauty should be of the utmost importance when considering how our actions and development change Piermont's topography.

2.1 Recommendations to Protect Steep Slopes

- The Planning Board should consider strengthening regulations regarding development on steep slopes. Currently, the Town of Piermont subdivision regulations contain a guideline that development should be discouraged on slopes of greater than 10% grade. A regulation that *prohibits* development on steep slopes would do more to protect these areas from erosion.

3.0 SOILS

Soil is the thin layer of the earth surface where the plant and animal kingdoms meet the mineral world and establish a dynamic relationship. Plants obtain water and essential nutrients from the soil. Animals depend on plants for their lives. Plant and animal residues find their way back to the soil and are decomposed by the teeming microbial population living there. Life is vital to soil and soil is vital to life.

3.1 Soil Associations

Piermont has four soil associations as described by USDA Natural Resource Conservation Service. Each association has a distinctive pattern of soils, relief, and drainage. Each is a unique natural landscape. An association is named for the major types of soil in each association; Table 1 lists all soil types of each association in Piermont.

The Windsor-Hitchcock-Quonset soil association covers the smallest area in Piermont. These soil types are located in the very western edge of town along the Connecticut River and the lower end of Eastman Brook. The landscape in this area ranges from level to gentle slopes to very steep terraces. Low-lying areas are prone to flooding. These soils can be very deep and well drained with underlying rock that is poorly drained. Most of this soil is considered Prime Farmland, which has been designated as priority for protection by the federal Farmland Protection Policy Act of 1981. Because it has few stones or rocks, these soils are highly erodible and should be managed with that in mind. Forest vegetation on this land is dominated by White Pine, Hemlock, Sugar Maple, Red Oak, and Elm.

The Bernardston-Cardigan-Pittstown soil association is found mainly along the Route 10 corridor and is about the same size area wise as Windsor-Hitchcock- Quonset soil associations. The landscape on these soil types is characterized by smooth, strongly sloping hills and very narrow valleys. The hilltops are broad with nearly level to gentle slopes. These soils are moderately deep and well drained, however bedrock and slowly permeable hardpan require careful selection when developing in these soils. Stones cover 1% to 3% of the surface area. Cleared land is used primarily for hay and pasture. Forested areas are dominated by hardwoods and White Pine.

Marlow-Peru soil types by far cover the largest amount of area in Piermont of any of the soil associations. Marlow-Peru soil associations can be found mainly along the Route 25C corridor and Indian Pond Road. The landscape is smooth hills and uniformly sloping mountainsides. Rock outcropping and shallow soils along the valleys are not uncommon. Forest areas are primarily hardwood with Sugar Maple, Beech, White and Yellow Birch, and Red Oak as the main species. Because of the slopes, stone outcropping, and slowly-permeable hardpan, appropriate land uses in these areas must be selected carefully.

The Tunbridge-Lyman soil association is characterized by rugged hills and mountains, with fast flowing streams in the valleys with small or no floodplains. This soil association makes up a large section of Piermont. Peaked Mountain and Piermont Mountain are two areas where Tunbridge-Lyman soils are located. Because of slope, surface stone, rock outcropping, potential development in these areas is very limited. Erosion and pollution of groundwater are hazards. Tunbridge soils support more hardwood species like Maple, Beech, Ash, and Oak. Lyman soils are dominated by more softwood like Pine, Hemlock, and Spruce.

The Becket-Monadnock-Hermon soil association is located in the eastern part of town around Lakes Tarleton and Armington. The landscape ranges from smooth hills for Becket soils to irregular slopes for Monadnock and Hermon soils. Agriculture is limited to lightly sloping areas where surface stones have been removed; the predominant land use is forestry, with moderate to moderately high forest productivity of hardwoods and white pine.

Table 1. Soil Types within Each Soil Association in Piermont

Windsor-Hitchcock-Quonset	Bernardston-Cardigan-Pittstown	Marlow-Peru	Tunbridge-Lyman	Becket-Monadnock-Hermon
Agawam	Bernardston	Berkshire	Lyman	Becket
Dartmouth	Cardigan	Lyman	Marlow	Hermon
Hadley	Charlton	Marlow	Rock outcrop	Kinsman
Hitchcock	Kearsarge	Peru	Tunbridge	Lyman
Occum	Pittstown	Pillsbury		Lyme
Quonset	Stissing	Tunbridge		Monadnock
Suncook				Moosilauke
Walpole				Pillsbury
Windsor				Skerry
Winooski				Tunbridge
				Waumbek

3.2 Recommendations to Protect Soils

- The Planning Board should consider adopting soils-based lot sizing. Each soil type has a different drainage capacity, which affects its utility to provide an adequate substrate for septic systems. Soils that are well-suited for septic systems would require a small area for a leach field, while soils that are poorly suited to septic system uses would require a larger area to adequately process wastewater. Soils-based lot sizing was identified in the 1991 Master Plan as a suggestion for a new land use approach.

4.0 WATER RESOURCES

Piermont's water resources include our aquifers, surface waters and wetlands. These resources are among the most vital to every community, providing:

- year-round supplies of water for use by all plants and animals,
- critical habitat for wildlife,
- a renewable source of energy,
- an important and varied group of recreational opportunities, and
- scenic enrichment to our everyday life.

Occasional instances of water shortage, contamination, and infestation remind us of the necessity of vigilance and enforcement of existing regulatory measures to protect these resources.

4.1 Watersheds

Watersheds are the catch basins for all precipitation falling from the skies. Rain or frozen precipitation falling within the confines of a watershed's interconnected ridges and high points eventually becomes surface or ground water. Normally, a watershed is defined in terms of a particular river or stream.

Piermont is almost entirely within the Connecticut River watershed with Eastman Brook serving as the primary tributary (Map 3). With the exception of a small amount of precipitation that flows south from the southeasterly corner of Piermont toward Upper Baker Pond, eventually draining into the Merrimack River, the vast majority flows westward from the mountainous areas on our eastern border with Warren until reaching the Connecticut.

Piermont is fortunate in that we have a relatively great amount of potential control over our own water supplies. This is because the high lands from which our water flows are largely undeveloped and much of this land is conserved or owned by the White Mountain National Forest. In addition, because a great deal of this flow is initially captured by three lakes: Tarleton, Armington, and Katherine, before entering Eastman Brook, the quality of the water can easily be measured for pollutants, thus assuring early detection of contamination. Through a partnership between the town and the Armington and Tarleton Lake Associations and the State of New Hampshire's Department of Environmental Services, these waters are tested three times a year for a variety of contaminants. This is especially important because Lake Armington is one of most highly developed areas in the Town with roughly 50 summer camps, a few year-round homes, and a large children's camp. Our vigilance has paid off as all three lakes continue to receive high grades for water quality.

4.2. Lakes and Ponds

Piermont boasts four mountain lakes in its northeastern corner: Lake Tarleton, Lake Armington, Lake Katherine, and Lake Constance.

The largest is Lake Tarleton, which we share with the town of Warren. Tarleton has 315.4 acres and 3.7 miles of shoreline of which 160 acres and 2.3 miles of shoreline is within Piermont. Over 90% of Lake Tarleton's shoreline is undeveloped.

Second largest, and the most developed, is Lake Armington which is 142.2 acres with 2.8 miles of shoreline. Roughly 30% of Lake Armington is undeveloped. Both of these lakes have access and boat launch capability provided and maintained by New Hampshire Fish and Game.

Lake Katherine is 37.1 acres with 1.1 miles of completely undeveloped shoreline. These three lakes are a major natural resource because of their beauty and the recreational opportunities they afford. Because all three are easily accessible via New Hampshire Route 25-C, these lakes have been subject to occasional development pressures until recently when their surrounding lands were acquired by the White Mountain National Forest. This ensures that remaining undeveloped land around these lakes will stay as it is, protecting it from the risks that human habitation creates.

The fourth, Lake Constance, is only six acres, but shares the beauty of the others and its remoteness enhances its allure. It is a favorite for wilderness camping and day hikes by picnickers.

Piermont has a number of wetland ponds of various sizes and significance. The two largest will be mentioned here with the remainder discussed in Section 5.0 Wetlands. The largest wetland pond at 60.5 acres is Whitman Pond, which is located to the west of Cape Moonshine Road. The pond is named after Camp Walt Whitman to its north. More than half the pond is open water, but it is not used much for boating because of its relative inaccessibility. Whitman Pond is home to an active great blue heron rookery and also has a recent history of being an osprey nesting site.

The next largest wetland pond is Lily Pond at 38 acres. Lily Pond is situated to the east of Lily Pond Road off of Route 25-C. Mostly open water but with abundant wetland vegetation, this Pond is best known locally as home and safe gathering spot of the migratory Canada goose flock that spends the late spring, summer, and fall in Piermont.

Aside from their recreational and scenic value, these lakes and ponds provide wildlife habitat and their waters directly or indirectly contribute to our drinking water supplies. As well, lake and pond waters can recharge groundwater supplies during times of excess precipitation and accept groundwater replenishment during times of drought.

4.3 Rivers and Streams

The Connecticut River, Eastman Brook, Bean Brook, and Oxbow Brook are important natural resources. These water courses and their adjacent riparian corridors are home to many aquatic species, providing both habitat and travel corridors. Many bird species are attracted to the water and food sources that are located nearby. The historic importance of the Connecticut River in terms of commerce and farming is being transformed into an important recreational resource, justifying the attention it receives from regional initiatives such as the Connecticut River Scenic Byway and the Conte National Wildlife Refuge.

Recent decades have seen a dramatic increase in the Connecticut's water quality. Regional groups such as the Connecticut River Watershed Council and the Connecticut River Joint Commissions have been able to coordinate protection efforts, allowing separate communities to work together more effectively. As sources of pollution have been eliminated or ameliorated, more people can safely use the water for swimming. Some uses must still be limited such as consumption of fish from the river because of high mercury levels or swimming in areas directly downstream from some water treatment facilities. As the reputation of the river has improved, communities have increasingly chosen to create improved access to, and use of, the river with the addition of new boat launches and camping sites for canoeists and kayakers. The conserved Sarah Moore Lot provides canoe access to the river and the Underhill Farm easement provides a primitive camping site.

The most prominent brook is Eastman Brook. Draining Lakes Armington, Tarleton, and Katherine, Eastman Brook empties into the Connecticut River after flowing through the Village, where two small hydroelectric stations provide electricity as well as tax revenue.

Bean Brook emerges from the southeast quadrant of Piermont, crosses under Clay Hollow Road, and then flows eastward to the town "swimming hole" before continuing its path under Route 10 and into the Connecticut River.

Lastly, Oxbow Brook (so named in a 1978 environmental survey report by Sarah Bennett, Ph.D) begins just east of River Road from where it runs south and empties into the Connecticut River just east of an oxbow lake.

4.5 Current Water Resources Protection Efforts

Piermont residents have been both wise and fortunate. As a result, we have an extraordinary degree of protection of our water resources. There are very few potential threats to water resources in Piermont because of the rural nature of the Town (Map 4). Threats of further major development around Lakes Tarleton, Armington, Katherine, and Constance has been almost completely eliminated, thanks to all those who participated in and supported the purchase and/or protection of the

5000+ acres surrounding these lakes. The land is now owned or managed by the White Mountain National Forest and the State of New Hampshire. In addition to limiting adverse impact from development, Piermont residents and town government have proactively taken steps to both monitor and protect these public waters from other sources of harm. Serious threats are posed by exotic species of plants such as milfoil that have infested many other lakes in the area. Both the Lake Tarleton and Lake Armington Associations have applied for and won grants from the New Hampshire Lakes Association to mount boat inspection programs that guard against the importation of milfoil and other exotic species into these lakes. The Town of Piermont also makes a financial contribution to this program.

Both the Lake Armington and Tarleton Associations have, for many years, paid for three annual inspections of the quality of water in their lakes as well as in Lake Katherine by the New Hampshire Department of Environmental Services.

4.6 Recommendations to Protect Water Resources

- The Planning Board should revise the Zoning Ordinance to require that the Zoning Board of Adjustment invite comment from the Conservation Commission in land use cases within the Protected Shoreland. The Piermont Zoning Ordinance requires a 75-foot setback from the highwater line (referred to as the “reference line” in 483-B, the Shoreland Protection Act). Land owners hoping to relax this requirement must apply for a variance from the Zoning Board. As currently written, the Zoning Board may make this decision without input from the Conservation Commission about the conservation issues involved.
- The Planning Board should consider revising the Zoning Ordinance so that the Protected Shoreland is 100 ft from the highwater line. According to the Audubon Society publication *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities*, the 100-ft buffer is recommended as “a reasonable buffer width under most circumstances.” The Planning Board may also want to consider a larger buffer to more thoroughly protect water quality and wildlife.
- The Planning Board should consider developing a Water Resource Protection Plan per RSA 4-C:22. This plan requires an inventory of a community’s water resources and an analysis of the demands and threats to those resources. Once adopted, a water plan becomes an element of the Town Master Plan and may be implemented through the adoption and enforcement of municipal ordinances.

5.0 WETLANDS

Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland areas include, but are not limited to, swamps, marshes and bogs.

Though the definition of wetland is not controversial, identification of a specific area as wetland sometimes generates disagreement because it involves combining evidence about the presence of hydric soils, wetland plants, and the degree and duration of saturation. Perhaps this is why current estimates of wetland acreage in Piermont vary. For example, in Piermont's 1991 Master Plan, it is said that there are approximately 743 acres of wetland (about 3% of all land) in Piermont. However, according to the GRANIT database, only 401.3 acres of wetlands can be found in Piermont. According to a study released in 2005 by the Society for the Protection of New Hampshire Forests, between 10 and 20% of Piermont's wetlands are protected. Most of this protection can be attributed to the acquisition by the White Mountain National Forest of the lands surrounding Lakes Armington, Constance, Katherine, and Tarleton.

5.1 Wetland Functions

For a long time, wetlands were considered to be worthless or, worse, a source of disease. Gradually, scientific study has shown the value of wetlands for ground water and stream recharge, erosion control and flood attenuation, pollution abatement, and wildlife habitat. Nonetheless, despite all that wetlands provide to us, they are disappearing across the country as wet areas are filled in to allow for new development. More gradual destruction of wetland can occur when development occurs too close to existing wetlands, i.e., without adequate buffers. Wetlands can often be found in close proximity to scenic areas with high recreational value, therefore development of these scenic spots leads to wetland ecosystems that are isolated like islands surrounded by development. This decreases their value for all of the above functions, but particularly for wildlife habitat.

Though no comprehensive inventory of Piermont wetlands has been carried out, a selected few were studied during the 1990s by Erik Solberg, a graduate student at Plymouth State University. This work was done in collaboration with the Piermont Conservation Commission and the UNH Cooperative Extension. Five wetlands were evaluated including the above-mentioned Whitman Pond and Lily Pond as well as three smaller wetlands:

- the Eastman Brook wetland, located a short distance from the Piermont Town Library and adjacent to Eastman Brook covering approximately one acre,
- Day Farm Preserve, an 8.5 acre wetland near the intersection of Routes 10 and 25, and
- Beaver Pond at Clay Hollow, a 2.3 acre wetland associated with a series of beaver dams constructed in the lowlands of Clay Hollow.

All five wetlands were submitted to an evaluation technology that involves ratings of 14 different aspects that combine to give wetlands an overall “functional value”. Examples include wildlife habitat, visual or aesthetic quality, flood control potential, and ability to trap sediment. Because the overall functional value of a wetland is calculated by multiplying the average functional value across all 14 different aspects by the size of the wetland, it is hardly surprising to find that Whitman and Lily Pond wetlands, at 60.5 and 38 acres respectively, turn out to have greater functional value than the smaller wetlands, but as the report shows, each performs important tasks for our environment, both locally and downstream.

5.2 Vernal Pools

A vernal pool is a unique type of wetland that has incredible ecological importance. This is an intermittently flooded small pond that is filled with water in the spring and early summer, but dries up completely during the rest of the year. Vernal pools provide critical breeding habitat for many amphibians, as the intermittent nature of these ponds does not support aquatic predators, like fish. Amphibians breeding in vernal pools in New Hampshire include marbled salamanders, wood frogs, spotted salamanders, and Jefferson or blue-spotted salamanders. These species depend on vernal pools, which make this wetland type a highly important resource.

Because vernal pools are dry most of the year, developing an inventory of vernal pools is challenging. It is not known how many vernal pools exist within Piermont.

Activities in and around vernal pools are regulated by NHDES. The State’s official definition of a vernal pool is included as Appendix A.

5.3 Existing Protections for Wetlands

NH Department of Environmental Services is the agency responsible for protecting wetlands in the state. RSA 482-A authorizes NHDES to protect the State's wetlands and surface waters by requiring a permit for dredge or fill or construction of structures in wetlands or other waters of the state.

The administrative rules of the NHDES Water Supply and Pollution Control Division, Subsurface Bureau, currently require setbacks from wetlands only for subsurface wastewater disposal systems. These requirements are: a 50-foot setback from wetlands of predominantly hydric B (poorly drained) soils and a 75-foot setback from predominantly hydric A (very poorly drained) soils.

The Town of Piermont currently has no wetland regulations in place.

5.4 Recommendations to Protect Wetlands

- The Planning Board should consider the development of a wetlands overlay district, which would prohibit development in the wetland and a 100-ft minimum buffer area of upland around the wetland.
- The Conservation Commission should consider designating prime wetlands. Prime wetlands designation, a process whereby specific high-value wetlands are identified and assigned “prime” status, affords prime wetlands additional protection in the dredge and fill permitting process. All projects that are in or within 100 feet of a prime wetland require a field inspection by NHDES and a public hearing to be conducted by NHDES.

6.0 AQUIFERS

Aquifer materials in Piermont are mainly stratified, sorted, mostly coarse-grained sand and gravels deposited by glacial melt water. These deposits were laid down when the Connecticut River Valley was occupied by glacial Lake Hitchcock. The glacier retreated from this area about 12,000 years ago. The successive stages in the lowering of the level of Lake Hitchcock can be seen in the terraces along the present river.

In Piermont the principal stratified-drift aquifers are found under the floodplain of the Connecticut River and its higher terraces (Map 3). The pattern of deposits includes fairly coarse-grained material in the deltas derived from tributaries of the Connecticut River overlaid by fine-grained sediments that settled out of Lake Hitchcock. Deep wells drilled into these formations can yield flows ranging from 1 to 5 gallons per minute to wells producing 25 gallons or more per minute in highly permeable strata.

Smaller aquifers are found along Eastman Brook. Isolated aquifers are also located along Mazzilli Road, Arron Road, Rivervale Road, and Piermont Heights Road.

Much of the land covering the aquifers along the Connecticut River is valuable farm land and a significant proportion of that is protected through conservation easements; apart from wetland restrictions, no such protection covers the smaller aquifers on higher tributaries. In New Hampshire, however, groundwater is protected from commercial exploitation by a comprehensive protection law.

6.1 Recommendations to Protect Aquifers

- The Conservation Commission should identify aquifer locations and work with landowners to develop a strategy for protection.
- The Planning Board should consider designating significant aquifers which should be given special protection by Town Ordinance.
- The Conservation Commission should encourage public education on groundwater and drinking water resources. The New Hampshire Department of Environmental Services has developed a fact sheet about protecting drinking water supplies, which is included as Appendix B.

7.0 AGRICULTURAL RESOURCES

Piermont's location in the Connecticut River has allowed commercial and homestead agriculture to develop and be sustained throughout the history of the Town. Farms and agricultural soils are important natural resources, for the farmers, the buyers of farm products, and all Town residents. Farms keep land open, which adds to our diversified landscape. This landscape promotes wildlife and adds to our viewing pleasure.

Farms provide a locally grown food supply. More locally grown food reduces our dependence on having food shipped in from far off places. Farms also offer economic advantages to the Town. Farms are rural businesses that pay taxes, while keeping land open, undeveloped, and requiring little in way of town services.

7.1 Farms

The Town of Piermont has eleven commercial farms and several non-commercial farms. Of these farms, most of the land is used for growing forage crops, such as hay and corn, or is used as pasture. This is indicative of Piermont's agricultural resources being used for livestock production, including dairy cattle, beef cattle, horses, and sheep. However, there are signs of more diversification in agriculture as farmers change their production practices over time. Piermont has two Certified Organic farms, one greenhouse vegetable farm, one horse-breeding farm, six dairy farms, one blueberry/maple syrup farm, one sheep farm, and one beef farm (Table 2). Farm products from these farms are sold locally, regionally, nationally, and internationally.

There are numerous other rural residents of Piermont who raise livestock, poultry, vegetables, fruit, herbs, and other crops for both themselves and others. There are other landowners who rent their land for other farmers to use.

Table 2. Commercial Farms in Piermont

Farm Name	Location	Product(s)
Putnam Farm	Route 25	Dairy
Glen Farm	River Road	Dairy
Mitchell Farm	River Road	Hay, Corn, Forage Crops
Batchelder/Hahn	River Road	Horses, Breeding Stock
Moonstruck Farm	River Road	Dairy
Winsome Farm	Route 10	Organic Dairy
Trapp Farm	Route 10	Organic Beef
Sayers/Knapp	Route 10	Dairy
Robie Farm	Route 10	Dairy, Farm Store
Metcalf Farm	Route 25	Greenhouse, Vegetable
Underhill Farm	Bedford Road	Blueberry, Maple Syrup
Fagnant Farm	Lily Pond Road	Hay, Forage Crops
Danielson Farm	Ansley Road	Sheep

7.2 Agricultural Soils

Piermont has a limited amount of Prime Agricultural Soils. These soils represent less than 10% of Piermont’s land area, roughly 1,500 acres (Table 3). However, these soils are considered to be of national, statewide, and local importance. The Windsor-Hadley-Quonset soil association composes the predominant agricultural soils in the Town. These soil types are located along the Connecticut River, Route 10 north, and along the low-lying area of Eastman Brook and Lake Katherine.

Agricultural soils are characterized by level to gentle slopes, few stones or rocks, and with fairly good drainage. Because of these characteristics, these soils are easily tilled and ideal for crop production. A portion of Piermont’s agricultural soils are under conservation easement (Map 4).

Table 3. Agricultural Soils in Piermont.

Soil Type	Acres	Soil Type	Acres
Agawam	234	Marlow	73
Becket	4	Occum	83
Berkshire	6	Peru	108
Bernardston	42	Pittstown	273
Charlton	16	Pootatuck	67
Dartmouth	51	Skerry	76
Groveton	6	Winooski	68
Hadley	361		
		Total	1,467

7.3 Recommendations to Protect Agricultural Resources

- The Town should support the continuation of Current Use taxation. If farmland is assessed at its value for developed land, it would be hard to keep land in farming.
- Piermont’s residents, neighbors, and visitors should buy locally grown food. In 2006 the Piermont Farmer’s Market was started. More growers should be encouraged to sell there, and more consumers to buy there. There are also opportunities to buy locally produced products at farm stands and stores.
- The Conservation Commission should work with local land trusts to identify farmland and areas of prime agricultural soils that should be protected.
- The Town should consider establishing a Local Agricultural Commission to advise town boards on agricultural issues and advocate for farming.

8.0 FOREST RESOURCES

Piermont's forests provide valuable habitat for plant and animal populations. Forests absorb rainwater, increase groundwater infiltration, and buffer surface waters from sedimentation and contamination. Forests provide us with wood and food products, wildlife, scenic beauty, a modified microclimate, stabilization of steep slopes and snowpack, the control of water flows, the creation and maintenance of stream habitat for aquatic animals, and recreation. Many of Piermont's forests have grown up from abandoned agricultural land and are now mature. Piermont is just over 75% forested (Table 4).

Table 4. Forest Types in Piermont.

Forest Type	Acreage	% of Town
Beech-oak	2,107	8.3%
Paper birch-aspen	3,615	14.2%
Other hardwoods	5,079	19.9%
White/red pine	2,050	8.0%
Spruce-fir	523	2.1%
Hemlock	2,078	8.1%
Mixed forest	4,173	16.3%
Forested wetlands	157	0.6%
Total Forested Area	20,095	77.5%

8.1 Commercial Forestry

Forestry products provide an important revenue source to the town, and if forests are sustainably managed, this can be a stable income flow for landowners as well as the town. In 2007, 24 Intent-to-Cut forms were filed in Piermont. The Town receives a timber tax which is based on 10% of the value of the timber harvested. The timber tax received in the last 5 years totaled over \$50,000 (Table 5).

Table 5. Piermont Timber Tax Revenues, 2003-2007.

Year	Timber Tax Revenue
2007	\$7,325
2006	\$19,465
2005	\$14,083
2004	\$6,728
2003	\$2,478
5-Yr Total	\$50,079

Currently, there are five landowners holding 1,843 acres who have enrolled their land in the American Tree Farm system. A Tree Farm is a privately owned forest managed to produce timber with added benefits of improved wildlife habitat, water quality, recreation, and scenic value. Town forests and other publicly owned land may also be certified as a Tree Farm. To qualify, a landowner must:

- dedicate at least 10 acres to growing and harvesting forest products;
- have a written plan for the future management of their forest;
- follow management recommendations prescribed by a licensed forester;
- demonstrate a commitment to stewardship of their forest for multiple values.

In addition to land that has been officially designated as a tree farm, there are many acres that are actively managed under a Forest Management Plan written by a licensed professional forester. A list of licensed professional foresters is available from the Grafton County Cooperative Extension office.

8.2 Forest Soils

Forest soils have a range of productivity for different types of tree species and suitability for management. Forest soils in New Hampshire have been classified for their productive value and operability in the County Soil Survey (Table 6). Piermont has large areas of Group I soils, which are the most productive soils with the fewest limitations (Map 4).

Table 6. Forest Soil Groups, Grafton County Soil Survey.

Soil Class	Description
IA	Deeper, loamy soil, moderately to well drained (best for northern hardwood sites)
IB	Sandy or loamy soils, moderately to well drained (mixed hardwood sites)
IC	Outwash sands and gravels (best pine sites)
IIA	IA and IB soils with limitations such as steepness, shallow depth to bedrock, or rockiness
IIB	Poorly drained soils
Unclassified	Muck and peat, rock outcrop, gravel pits, marsh

8.3 Town Forests

Piermont has two Town Forests, which cover 170.2 acres (Table 7). In addition to the Town Forests, Sentinel Mountain State Forest and a portion of the White Mountain National Forest is also located within the Town. Sentinel Mountain State Forest is anticipated to become a part of the White Mountain National Forest, in a pending land swap between the State of New Hampshire and the US Forest Service.

Table 7. Town Forests

Town Forest	Acreage	Location
Glebe Lot	113 acres	Northern border with Haverhill; East of Rt. 10
Bedford Road Town Forest and Trails	57.2 acres	Near Piermont Village; on Bedford Road

The Glebe Lot was originally allocated in the town’s 1764 charter as “one whole share for a glebe for the Church of England,” a glebe being land that benefits a church. In 1975, thanks to the effort of Robert Michenfelder, then Chairman of the Piermont Conservation Commission, the land was legally acquired by the town. The deed specifies that the property shall be under the supervision of the Piermont Conservation Commission. The property has been a Tree Farm under the American Tree Farm System since 1991 and has been under the management of O’Brien Forestry Services. The property was last inspected in 2007.

The Bedford Road Town Forest and Trails was developed by the Piermont in 1997 for recreational and educational purposes and to promote wildlife and forest stewardship. The site serves as an outdoor classroom for students of the Piermont

Village School and townspeople use the trails for hiking, cross-country skiing, and snowmobiling.

8.4 Recommendations to Protect Forest Resources

- The Conservation Commission should maintain and improve the overall quality of timber from the Town Forests, protect the unique and historic cultural features, conserve native plant and animal species, and continue to provide access for recreational activities.
- The Conservation Commission should encourage local landowners to take advantage of Current Use taxation, American Tree Farm certification, and conservation easements to maintain a forested landscape.

9.0 NATURAL COMMUNITIES

The New Hampshire Natural Heritage Program defines a “natural community” as an assemblage of plants, animals and other organisms together with the natural physical environment in which they are found. Natural communities include different types of upland forests, grasslands, and wetlands, and they repeat on the landscape wherever suitable conditions occur. Piermont’s natural communities play an essential role in keeping our soil, water and air healthy as well as providing us with diverse physical landscapes and scenic beauty.

Natural communities are made up of living components that are closely interrelated and interact with one another and the environment. Human disturbance of the natural environment is occurring at a faster pace than the natural communities can adapt to. It is vital that we become aware of the natural communities we have in Piermont in order to protect them.

The best information we have about Piermont’s natural communities come from two studies carried out by environmental scientists:

- a survey conducted by Sara E. Bennett, Ph. D in 1978 in connection with a town sewer project;
- a study of five selected wetlands (see Section 5.0) in the town of Piermont conducted in the 1990s by Erik Solberg of Plymouth State University.

Solberg’s wetlands study showed that two of the five wetlands surveyed, Whitman Pond and Lily Pond, can be described as important natural communities because of their function as wetland wildlife habitat. Wetlands constitute “natural communities” when they have high suitability as a habitat for those plants and animals typically associated with wetlands and wetland edges. By virtue of the variety of vegetation, proximity to other wetlands, and a large uninterrupted area for wildlife travel, they provide niches for a variety of animals.

Sara Bennett’s survey was broader in scope as it surveyed all plant and vertebrate species she observed during a 10-day period in October, 1978. Bennett described three elevation-defined forest types in Piermont. Most of Piermont (up to 1800 feet in elevation) is within the *lower phase northern hardwoods or transition hardwoods*, so-called because the ranges of species most characteristics of associations to the north and south of this region overlap extensively. Red and white oak, butternut, red maple, white ash, black cherry, paper birch, white pine, and eastern hemlock are common in these forest types. As altitude is gained (up to 2400 feet), the vegetation gradually changes to *upper phase northern hardwoods* such as beech, sugar maple, and yellow birch. Near mountain summits, the vegetation changes again into a *high-elevation spruce-fir forest*, with red spruce and balsam fir.

Bennett also surveyed several wetland locations, some of which anticipated Solberg’s study:

- the wetlands of the Eastman Brook watershed, including Lakes Armington, Tarleton, Constance, and Katherine,
- the wetlands of the Bean Brook watershed including the Clay Hollow area, “Oxbow” brook, and
- the Upper Baker Wetlands.

Piermont is extremely rich in good and varied wildlife habitat. The lakes, beaver ponds, and floodplain swamps described in Bennett’s report are particularly valuable because they represent limited, yet extremely important resources for many breeding, migrating, and wintering birds. They are, for the most part, undisturbed, have good cover and food for waterfowl, many dead trees which provide nesting sites for cavity-nesters, and support a great diversity of fruit-bearing vines and shrubs.

Bennett sounded a warning within her report that these rich areas are at risk because they are sensitive to human disturbance and attractive areas for development. Excessive use of Lakes Tarleton, Armington, and Katherine for power boating and waterskiing would, she predicted, render them unsuitable for osprey, eagle, and loon, as well as other waterfowl species.

9.1 Rare Plants

In 1987, the State Legislature passed the Native Plant Protection Act (NH RSA 217-A) which mandated the creation of the Natural Heritage Bureau (NHB). The mission of the NHB is (1) to determine protective measures necessary for the survival of native plant species in New Hampshire, (2) to investigate the condition and rarity of plant species in the state, and (3) to distribute information regarding the viability of these species and their habitats. In July of 2007, the NHB released an updated version of available information on rare and endangered plants, animals, and natural communities in New Hampshire towns. The list of rare plants was compiled and originally released in 2005.

The New Hampshire Native Plant Protection Act defines Endangered (E) species as those in danger of being extirpated from the state; Threatened (T) species face the possibility of becoming “endangered”. Five of these rare plant species have been documented in Piermont. They are as follows:

- Hackberry (*Celtis occidentalis*) – T
- Northern Slender Pondweed (*Stuckenia filiformis ssp. alpina*) – E
- Northern Waterleaf (*Hydrophyllum virginianum*) – T
- Sago Pondweed (*Stuckenia pectinata*) – E
- Squirrel Corn (*Dicentra canadensis*) – T

In addition to recognizing threatened and endangered species, the New Hampshire Native Plant Protection Act specifies 11 other plants as being of Special Concern. These plants are somewhat uncommon in the State and are at risk of decline due to over-collection.

- Narrow-leaf wild leek (*Allium tricoccum* var. *burdickii*)
- Wild leek (*Allium tricoccum* var. *tricoccum*)
- Wild ginger (*Asarum canadense*)
- Giant blue cohosh (*Caulophyllum giganteum*)
- Blue cohosh (*Caulophyllum thalictroides*)
- Sea lavender (*Limonium carolinianum*)
- Ostrich fern (*Matteuccia struthiopteris* var. *pensylvanica*)
- Canadian burnet (*Sanguisorba canadensis*)
- Slippery elm (*Ulmus rubra*)

9.2 Invasive Plants

The viability of all native plants can be adversely affected by so-called “invasive species”, i.e., species that are non-native and spread aggressively in a new habitat. Invasive plants have growth and reproduction habits that allow them to proliferate and have few, if any, animal grazers or disease organisms in their new environment to slow their growth. Such plants can choke out native vegetation and thereby reduce biodiversity, reduce soil stability and nutrient status, and/or degrade wildlife forage and habitat. A recent (2005) list of prohibited invasive species compiled by the New Hampshire Invasive Species Committee includes the following plant species:

- | | |
|--|--|
| ▪ Norway Maple
(<i>Acer platanoides</i>) | ▪ Yellow-Flag Iris
(<i>Iris pseudacorus</i>) |
| ▪ Tree of Heaven
(<i>Ailanthus altissima</i>) | ▪ Blunt-Leaved Privet
(<i>Ligustrum obtusifolium</i>) |
| ▪ Garlic Mustard
(<i>Alliaria petiolata</i>) | ▪ Showy Bush Honeysuckle
(<i>Lonicera x bella</i>) |
| ▪ Japanese Barberry
(<i>Berberis thunbergii</i>) | ▪ Japanese Honeysuckle
(<i>Lonicera japonica</i>) |
| ▪ European Barberry
(<i>Berberis vulgaris</i>) | ▪ Morrow’s Honeysuckle
(<i>Lonicera morrowii</i>) |
| ▪ Oriental Bittersweet
(<i>Celastrus orbiculatus</i>) | ▪ Tatarian Honeysuckle
(<i>Lonicera tatarica</i>) |
| ▪ Black Swallow-Wort
(<i>Cynanchum nigrum</i>) | ▪ Japanese Knotweed
(<i>Polygonum cuspidatum</i>) |
| ▪ Pale Swallow-Wort
(<i>Cynanchum rossicum</i>) | ▪ Common Buckthorn
(<i>Rhamnus cathartica</i>) |
| ▪ Autumn Olive
(<i>Elaeagnus umbellata</i>) | ▪ Glossy Buckthorn
(<i>Rhamnus frangula</i>) |
| ▪ Burning Bush
(<i>Euonymus alatus</i>) | ▪ Multiflora Rose
(<i>Rosa multiflora</i>) |
| ▪ Giant Hogweed
(<i>Heracleum mantegazzianum</i>) | |

The list of prohibited aquatic invasive species is as follows:

- Fanwort
(*Cabomba caroliniana*)
- Variable milfoil
(*Myriophyllum heterophyllum*)
- Purple loosestrife
(*Lythrum salicaria*)
- Common reed
(*Phragmites australis*)

All of these plants represent an immediate danger to the health of native species, to the environment, to commercial agricultural or forest crop production, or human health. These species may not be sold, transported, distributed, propagated, or transplanted in New Hampshire. Knowledge of such prohibited activities should be reported to the Piermont Conservation Commission.

9.3 Recommendations to Protect Natural Communities

- The Conservation Commission should seek to protect the natural communities where rare plants grow and to discourage the construction of trails or roads near rare plants or other sensitive communities.
- The Town should continue to support invasive species education efforts on Lakes Tarleton and Armington.

10.0 WILDLIFE

Piermont’s wildlife is valuable to those who like to hunt, fish, birdwatch, or just enjoy sharing a landscape with wild animals. In addition, certain wildlife species control pest populations. Songbirds eat large numbers of mosquitoes and other bugs, beneficial insects attack garden and agricultural pests, and hawks, foxes, and other predators control rodent populations.

Piermont’s wildlife includes white-tailed deer, black bear, squirrels, songbirds, game birds, red-spotted newts, and some native brook trout. Piermont also is home to two rare and threatened animal species: the common loon and the peregrine falcon. There are tens to hundreds of species that we see and hear regularly, but there are thousands of insects, mollusks, and other invertebrates which we know little about. In order to protect all these species that compose the wildlife community, we must protect their habitats.

10.1 Wildlife Habitat

Piermont’s backyards, farmlands, rocky ridges, forests, waterbodies, and wetlands provide rich and diverse habitats for many species of wildlife (Map 6). Each species of wildlife utilizes one or more natural communities during its lifecycle; the natural communities that wildlife uses for mating, breeding, and/or overwintering are of special importance. Species that rely primarily or entirely on one habitat type are referred to as habitat specialists; those that range over many different habitat types are referred to as habitat generalists. Table 8 describes several wildlife species in Piermont and some of their habitat requirements.

Table 8. Habitat Requirements for Selected Wildlife Species

Wildlife Species	Habitat Requirements
White-tailed deer	Dense coniferous forest for overwintering (deeryards); this species prefers edge habitats, as it eats both grasses and woody plants
Brook trout	Clean, cold waters with high oxygen levels Gravel beds in spring-fed streams or lakes for spawning
Bobcat	Large, unfragmented, heavily wooded forest Rocky areas for den sites
Peregrine falcon	Undisturbed cliff areas for nesting Open land for attacking its prey on the wing
Black bear	Large forested areas with a mix of wetlands and thick understory vegetation; prefer areas with little human disturbance

Habitat is generally defined as sufficient food, water, shelter, and space to survive. This definition is valid, but the table above shows that the habitat requirements of

many animals are much more specific. Game species (i.e., deer and trout) and endangered species (i.e., peregrine falcon and bald eagle) generally have well-documented habitat requirements and management plans developed by the state and federal fish and wildlife agencies. Species that do not fall into either of these categories often have not been studied as closely, and the habitat requirements for these species are not as well-understood. This creates a complicated and difficult situation for understanding the effects of development on all species of wildlife.

The New Hampshire Fish and Game Department has created a multi-species approach to wildlife conservation, where the conservation focus is on important habitat types rather than individual species. The Wildlife Action Plan, published in 2005, identifies important habitat types and also the species that depend on these habitats for their survival. A spreadsheet of species of concern and their associated habitats is included in this report as Appendix C.

10.2 Human Impacts on Wildlife

Human activities affect wildlife in many different and sometimes surprising ways. It is not realistic to assume that our actions will not affect wildlife and wildlife habitat. What is realistic is to understand how our actions do affect wildlife and habitat, and then to do the best we can to minimize these effects and be responsible in our actions. The most common activities in Piermont that have major impacts on wildlife are: new residential and commercial development, forestry, farming, and lawn and garden care.

As the population of Piermont grows, so does the demand for housing, jobs, and services. The conversion of agricultural or forested land to residential or commercial use changes the landscape in many ways. The soil is disturbed, native vegetation is removed, and impervious surfaces (roofs, roadways, etc.) are built; all these activities change the way water drains, and can have detrimental effects on aquatic wildlife habitat. When development breaks up continuous tracts of natural land cover, the quality of wildlife habitat is diminished. Landscape fragmentation is harmful to many species of wildlife, in terms of:

- loss of habitat area,
- loss of habitat connectivity,
- increased potential for movement of invasive or damaging species into native plant communities, which degrades food resources and nesting sites,
- increased potential for vehicle-wildlife collisions, and
- other undesirable human-wildlife interactions, e.g., nuisance bears and raccoons.

Planning new development in an environmentally sensitive manner and following best management practices at the construction site can go far to minimize the impacts of new development on wildlife.

A thriving forest products industry preserves a forested landscape, which is good for wildlife, but forestry practices can also be harmful to wildlife. Placing logging roads and skid tracks on steep slopes increases runoff and can cause erosion of sediment

into streams. In addition, stream crossings can destroy the structure of aquatic and wetland habitats. When foresters follow Best Management Practices for forestry operations, these impacts are greatly minimized. In addition, the way forest products are harvested affects wildlife; for example, patch-cut clearings provide food and cover for small mammals and some game birds. A professional certified forester can develop a forest management plan to balance timber yields with long-term sustainability and habitat protection.

Like forestry, farming and conserving wildlife habitat can be compatible activities. Orchards, cultivated lands, abandoned fields, field edges, and hedge rows all provide wildlife habitat. Many animals are attracted to the edge habitat at the interface of field and forest, as the forest provides shelter and the field provides food. Several species of bird, including the bobolink and eastern meadowlark, rely on pastures and hayfields for nesting.

Agricultural practices may also harm wildlife. Nesting grassland birds lose their eggs if hayfields are mowed too early in the summer. Erosion from cleared fields and runoff of animal waste, fertilizers, and pesticides into streams and rivers degrade aquatic habitat. Careful timing, crop rotation, cover crops, and the use of naturally pest resistant crops can have short and long term beneficial effects on wildlife habitat.

Every home impacts wildlife habitat to some degree. Pesticides, herbicides and fertilizers applied on our lawns and gardens can run off into streams and lakes. Pesticides will often kill nuisance bugs as well as beneficial insects. Another common household impact on wildlife is the use of birdfeeders. Many people put out birdfeeders to provide winter food. Birds and squirrels generally utilize these food sources as a supplement to their wild foraging, but black bears can become accustomed to the free birdseed and learn to find other easily available food sources, such as food in trash cans. The New Hampshire Fish and Game Department suggests taking down birdfeeders in early spring or bringing them in at night to minimize bear problems.

10.3 Recommendations for Protecting Wildlife

- The Conservation Commission should encourage farmers, foresters, and developers to reduce their impacts through the use of Best Management Practices.
- The Planning Board should consider a revision to the Town Ordinance to encourage cluster development or other development strategies that set aside areas for wildlife. In a cluster development, houses are built close together (e.g., ten 1-acre lots instead of ten 10-acre lots) and the remainder of the existing lot (e.g., 90 acres) is left under natural land cover. Siting new buildings away from steep slopes, wetlands, and waterbodies is another wildlife-friendly option.
- The Conservation Commission should identify large areas of unfragmented land (Map 7) as conservation priorities.
- The Conservation Commission should educate Town residents on environmentally sensitive lawn, garden, and home care, especially on shorelands.

Planting native species that provide food sources for wildlife, maintaining natural vegetation along lakes and streams, and using low-phosphorus fertilizers all protect wildlife.

11.0 SCENIC RESOURCES

The scenic resources and beauty in Piermont are everywhere. Even Piermont's name expresses the beauty in the town, as it was named for a town in the picturesque Italian Alps.

The many farms and open fields, the forests, rivers, hills, mountains and lakes help to make Piermont one of the jewels of the Upper Valley. Our scenic resources also serve to attract new residents and lead to increased development pressure. New development should seek to preserve scenic resources rather than diminish them.

Some of the scenic resources are:

- The farms and fields on River Road.
- The forested hills.
- The ponds, swamps, vernal pools and wetlands.
- The Connecticut River, Eastman Brook, Bean Brook and all other seasonal and year-round streams.
- The Connecticut River Valley views from Rt. 10 and Rt. 25.
- Indian Pond Road.
- Lake Tarleton, Lake Armington, Lake Katherine, and Lake Constance.
- Peaked and Piermont Mountain.
- The night sky
- The many other scenic resources only you know about.

The Connecticut River Scenic Byway runs along Route 10 through Piermont. This byway is a two-state (New Hampshire and Vermont) initiative to highlight the historic, cultural, scenic and recreational resources along the Connecticut River. Route 25C has also been designated as a Scenic Byway.

11.1 Recommendations to Protect Scenic Resources

- The Planning Board should manage the development of the Town with care and consideration for Piermont's scenic resources.
- The Town should designate Scenic Roads on Town roads in Piermont. Designation as a Scenic Road means that tree cutting or removal and stone wall destruction cannot occur during road repair, maintenance, and reconstruction work without prior written consent of the planning board or board responsible for the local Scenic Roads program.

12.0 RECREATIONAL TRAILS

Piermont has several recreational trails in the Town Forest and on state and federal land, and there is great potential for linking existing trails in different parts of Town. Trail users include walkers, birdwatchers, bicyclists, horse riders, snowmobilers, ATV riders, and just nature lovers. Trails help keep us all connected.

There are beautiful maintained trails in the Bedford Road Town Forest. These trails are maintained by members of the Conservation Commission, Ernie, Pam and Dana Hartly, Eric Underhill and other volunteers from the school and community. Many thanks to them for setting up and maintaining these trails for all to use.

The Lake Tarleton Snow Travelers snowmobile club, have done a great job of opening up some old roads and connecting new ones. They have obtained landowners' permission and maintained the trails for winter travel and enjoyment. Roy Belyea and other club members have put out signs and plan to create a map of the 20 miles of snowmobile trails. A big thank you goes out to all landowners who allow the trails to pass through their property.

The Connecticut River provides a river trail for boaters and paddlers; the Sarah Moore Lot allows canoe access and Underhill Farm easement offers a campsite for users of the river trails. While Lakes Tarleton, Armington, and Katherine are not internavigable, they are popular locations for boating and paddling. Lakes Tarleton and Armington both have boat launches; Lake Katherine is accessed by an unofficial trail. Developing a better walk-in access and parking area may be beneficial for Lake Katherine's users.

Preliminary planning for a trail network on the public land near Lake Tarleton has been ongoing. Initial plans and a possible map of the area have been done by John Mortin, who is a builder of many local and world class trails.

A trail network could be developed along old roads so that one could travel on connecting trails from the village to Lake Tarleton. In order to create an expanded trail network in Piermont, support for the landowners is absolutely imperative.

12.1 Recommendations to Protect Recreational Resources

- The Conservation Commission should support trail maintenance activities.
- The Conservation Commission should educate landowners on the benefits of an expanded trail network in Piermont.
- The Conservation Commission should support efforts to develop trails on public land.
- All trail users should respect the rights of private landowners who have generously provided trail easements and engage in responsible trail use.
- The Conservation Commission should support development of a walk-in access trail to Lake Katherine.

- The Conservation Commission should facilitate a public dialogue when threats to trail use arise. Land ownership changes, development and misuse all threaten a trail network in Piermont.
- The Conservation Commission should study the possibility of Town designation of certain Class VI roads as trails. Designating municipal trails allows the regulation and enforcement of trail uses and liability protections for maintenance groups.

13.0 PROTECTED LANDS

Piermont has roughly 25% of its area protected from future development (5,709.5 acres). Much of this protected land is located in the mountains in the eastern part of town, although a significant portion of the Connecticut River Valley is also protected. Lands are protected through town, state, or federal ownership, or by conservation easements and deed restrictions on privately owned land. Water quality, wildlife habitat, scenic views, and other natural resources are safeguarded when land is protected. In addition, owners of farmland and managed forestland can continue their revenue-generating operations. Public land provides access to all for recreation; some privately conserved land also permits recreational uses. Please contact the landowner prior to recreating on their property – landowners may require permission or only certain modes of recreation.

Privately conserved land is managed or monitored by the Town, the State, or a land trust (Table 9). In Piermont, the Upper Valley Land Trust (UVLT) and the Society for the Protection of New Hampshire Forests (SPNHF) hold several conservation easements.

Table 9. Privately Owned Conserved Land in Piermont.

Name	Acres	Agency	Public Access
Putnam Farm, Rt. 25	127.14	NH	No
Putnam Farm, Rt. 25C	15.9	NH	
Underhill Farm (Covert/Knapton)	209.17	NH	
Mueller, Helga	107	Town	Yes
Faulkner, Quentin	232	UVLT	Yes
Putnam Pasture	115	UVLT	
Nichols, William	1600	NH	Yes
Thorndike, Alan	33.33	SPNHF	Yes
Batchelder/Hahn	100.9	NH	
Rivers Edge/Grant	51.56	UVLT	
Daley/Bayne	10.3	UVLT	
Schmid, George	62	UVLT	
Moonstruck Farm	125	UVLT	
Winsome Farm	46	UVLT	
Schmid Round Barn	71	UVLT	
Total of Conserved Land	2,906.3		

Town-owned conservation land includes the two Town Forests, the Swimming Hole, and lots along the Connecticut River (Table 10). These lands provide a number of recreational opportunities, including hiking, river access (at the Sarah Moore Lot), and swimming. In addition, the Town Forests provide revenue to the Town.

Table 10. Town Land Protected from Development

Name	Acres	Agency	Public Access
Bedford Road Town Forest	67	Town	Yes
Day Farm Preserve	8.5	Town	Yes
Swimming Hole	5.7	Town	Yes
Sarah Moore Lot	16	Town	Yes
School Lot	20	Town	Yes
Glebe Lot Town Forest	113	Town	Yes
Bonnett Lot	2	Town	Yes
Total of Town Land	232.2		

Piermont has both Lake Tarleton State Park and Sentinel Mountain State Forest in the eastern section of Town; New Hampshire Fish and Game also maintains two boat launches on Lakes Tarleton and Armington. Sentinel Mountain State Forest is anticipated to become a part of the White Mountain National Forest, in a pending land swap between the State of New Hampshire and the US Forest Service. The National Park Service (NPS) manages the Appalachian Trail Corridor, 26 acres of which run through the southeasternmost corner of Piermont. Around Lakes Tarleton, Armington, and Katherine lies the White Mountain National Forest, which covers 2,268.4 acres in Piermont and connects to a vast area of National Forest in the central part of the state.

Table 11. State and Federal Land Protected from Development

Name	Acres	Agency	Public Access
Sentinel Mountain State Forest*	236	NH	Yes
Lake Tarleton State Park	40	NH	Yes
Lake Tarleton Boat Access	1.1	NH	Yes
Appalachian Trail Corridor	26.3	NPS	Yes
White Mountain National Forest*	2,268.4	USFS	Yes
Total of State/Federal Land	2,571.4		

* A pending land swap would change the 236 acres of Sentinel Mountain State Forest from State Forest land to National Forest land.

13.1 Current Use

Current Use is a method of taxation established by NH RSA 79-A, which states as its purpose:

It is hereby declared to be in the public interest to encourage the preservation of open space, thus providing a healthful and attractive outdoor environment for work and recreation of the state's citizens, maintaining the character of the state's landscape, and conserving the land, water, forest, agricultural and wildlife resources. It is further declared to be in the public interest to prevent the loss of open space due to property taxation at values incompatible with open space usage. Open space land imposes few if any costs on local government and is therefore an economic benefit to its citizens. The means for encouraging preservation of open space authorized by this chapter is the assessment of land value for property taxation on the basis of current use. It is the intent of this chapter to encourage but not to require management practices on open space lands under current use assessment. (RSA 79-A:1)

Thus, Current Use is designed to help landowners keep their open space undeveloped by assessing the land at its present use rather than its highest potential use. There are several land use categories, each with its own assessment value for its current use (see Table 12). To accomplish the goal of encouraging management practices, the Current Use program stipulates that forest land with documented stewardship receives a lower assessment than forest land without a management plan. It is important to understand that Current Use is not a method for permanent protection of open space land. Land placed in Current Use can be removed from the program, should the landowner decide to change the use of the land, but there is a penalty, called the Land Use Change Tax. Detailed information about Current Use is in the Current Use Criteria Booklet available from the Department of Revenue Administration online at www.state.nh.us/revenue.

Approximately 63% of Piermont’s land area is enrolled in the Current Use program, as of 2006. This represents 414 parcels owned by 104 different landowners. Table 12 below details the acreage of each Current Use category in Piermont. Current Use data for each town in New Hampshire is reported yearly by the Department of Revenue Administration, and is available online.

Table 12. Current Use in Piermont. 2006

Current Use Category	Acreage
Farmland	2,279.09
Forest Land	9,117.04
Forest Land with Documented Stewardship	2,891.31
Unproductive	475.34
Wetland	298.72
Uncategorized	631.05
Total in Current Use	15,692.55

13.2 Recommendations for Future Land Protection

- The Conservation Commission should make protecting unfragmented land a priority. Unfragmented land provides wildlife habitat, water resource protection, and recreational opportunities; and a clustered pattern of development reduces infrastructure and service costs for the Town. One method to accomplish this is to encourage the conservation of parcels adjacent to protected land (Map 7).
- The Conservation Commission should make protecting shorelines, riparian areas, and wetlands a priority (Map 3). These areas are important for wildlife, water quality, recreation, and scenic value. In addition, these ecosystems can be fragile and easily impacted by humans, more so than other natural communities.
- Educate the public and community decision-makers about the wealth of natural resources within the Town. Consider Conservation Commission-sponsored hikes and other events on protected properties for the purpose of educating the public on the benefits of open space and protected land.

14.0 SUMMARY

Piermont enjoys a wealth of natural resources, as this inventory has detailed. Few towns have the variety of terrain and natural communities, the agricultural resources, and the lake water quality that Piermont has. The residents of Piermont utilize these resources for many different purposes:

- clean air and water
- economic revenue
- food production
- cordwood and timber
- recreational opportunities
- wildlife viewing
- hunting and fishing
- a sense of connection to nature.

It is imperative that these resources be closely monitored and protected because they provide the Town with many goods and services and greatly influence the character of the Town. While all natural resources are important, some are more sensitive, threatened, or unique than others and deserve special emphasis in conservation efforts. The Conservation Commission has identified Agricultural Land, Water, Wetlands, Wildlife, and Recreational Opportunities as the five natural resources of highest conservation priority.

The level of protection for these resources in Piermont varies greatly. The Town and its residents should be commended for their excellent work! However, there are still areas for improvement and opportunities for better protection. The best examples of strong protection are listed below:

- Lakes Tarleton, Armington, and Katherine are monitored for water quality, and work is being done to prevent the spread of invasive species into these lakes.
- Many working farms take advantage of the Current Use program to reduce taxes and make farming more affordable; several have conservation easements in order to protect their land.
- Many landowners follow forest management plans on their forested land, and five run Certified Tree Farms. A large number utilize the Current Use program for forested land. There are also several forested parcels under conservation easement. Forested land protects both water and wildlife resources, and, may allow for recreational access.
- Conserved and protected land is well-distributed over the Town, and includes river and lake frontage, agricultural land, and forests.

15.0 RECOMMENDATIONS FOR FUTURE ACTION

Many recommendations for protection have been made for each resource in each section of this report; the Conservation Commission has reviewed these in regard to the five priority natural resources and created a list of ten high-priority recommendations.

- The Conservation Commission should consider designating prime wetlands.
- The Conservation Commission should work with local land trusts to identify farmland and areas of prime agricultural soils that should be protected.
- The Conservation Commission should encourage farmers, foresters, and developers to reduce their impacts through the use of Best Management Practices.
- The Conservation Commission should identify large areas of unfragmented land as conservation priorities.
- The Conservation Commission should educate landowners on environmentally sensitive lawn and garden care, especially on shorelands.
- The Conservation Commission should educate landowners on the benefits of an expanded trail network in Piermont.
- The Conservation Commission should promote a public dialogue when threats to trail use arise.
- The Planning Board should consider adopting soils-based lot sizing.
- The Planning Board should revise the Zoning Ordinance to require that the Zoning Board of Adjustment invite comment from the Conservation Commission in land use cases within the Protected Shoreland.
- The Town should support the continuation of Current Use taxation.

Beyond these specific recommendations, the Conservation Commission hopes that this Natural Resources Inventory will be used to encourage the responsible use of land and natural resources, whether for recreation, agriculture, forestry, or residential development. Theodore Roosevelt put it well in a 1900 speech in Washington, D.C.: *"I recognize the right and duty of this generation to develop and use our natural resources, but I do not recognize the right to waste them, or to rob by wasteful use, the generations that come after us."*

APPENDIX A:

New Hampshire State Definition of Vernal Pool

(Wetlands Administrative Rules, including this information, is available on the Web at:
http://www.des.state.nh.us/rules/desadmin_list.htm)

Adopt new Env-Wt 101.70 to read as follows:

Env-Wt 101.70 “Primary vernal pool indicators” means the presence or physical evidence of breeding by marbled salamander, wood frog, spotted salamander, jefferson-blue spotted salamander complex, or fairy shrimp.

Adopt new Env-Wt 101.81 to read as follows:

Env- Wt 101.81 “Secondary vernal pool indicators” means physical evidence used by wildlife biologists or certified wetlands scientists who are familiar with vernal pool habitats as evidence of the presence of a vernal pool, if primary vernal pool indicators are absent and other vernal pool characteristics suggest vernal pool habitat. Secondary vernal pool indicators include, but are not limited to, caddisfly larvae and cases (Limnephilidae, Phyrganeidae, or Polycentropodidae), clam shrimp and their shells (Laevicaudata, Spinicaudata), fingernail clams and their shells (Sphaeriidae), aquatic beetle larvae (Dytiscidae, Gyrinidae, Haliplidae, and Hydrophilidae), dragonfly larvae and exuviae (Aeshnidae, Libellulidae), spire-shaped snails and their shells (Physidae, Lymnaeidae), flat-spire snails and their shells (Planorbidae), damselfly larvae and exuviae (Coenagrionidae, Lestidae), and true fly larvae and pupae (Cuculidae, Chaoboridae, and Chironomidae).

Adopt new Env-Wt 101.99 to read as follows:

Env- Wt 101.99 “Vernal pool” means a surface water or wetland, including an area intentionally created for purposes of compensatory mitigation, which provides breeding habitat for amphibians and invertebrates that have adapted to the unique environments provided by such pools and which:

(a) Is not the result of on-going anthropogenic activities that are not intended to provide compensatory mitigation, including but not limited to:

- (1) Gravel pit operations in a pit that has been mined at least every other year; and
- (2) Logging and agricultural operations conducted in accordance with all applicable New Hampshire statutes and rules; and

(b) Typically has the following characteristics:

- (1) Cycles annually from flooded to dry conditions, although the hydroperiod, size, and shape of the pool might vary from year to year;
- (2) Forms in a shallow depression or basin;
- (3) Has no permanently flowing outlet;
- (4) Holds water for at least 2 continuous months following spring ice-out;
- (5) Lacks a viable fish population; and
- (6) Supports one or more primary vernal pool indicators, or 3 or more secondary vernal pool indicators.

NB: ALL EXISTING RULES IN Env-Wt 101 WILL BE RENUMBERED ACCORDINGLY

APPENDIX B:
“Clean Drinking Water is Up to You!”
Education brochure from
NH Department of Environmental Services
(This brochure is available on the Web at:
https://www.airquality.nh.gov/dwspp/pdf/clean_drinking_water.pdf)

Is Gasoline Contaminating Your Drinking Water?

Gasoline is one of the most dangerous products commonly found around the home, yet people often store and use it with little care. Some of the chemicals in gasoline have been found in drinking water with increasing frequency, including benzene, toluene, and ether, which are *easily dissolved in water*. Even very small gasoline spills can contaminate your drinking water wells or a public water supply.

To Protect Your Drinking Water From Gasoline:

1. Avoid spilling gasoline on the ground, especially near wells

- Don't drain gasoline from lawn mowers, snowblowers, etc. onto the ground. Much of it does not evaporate.
- Don't burn brush with gasoline.
- Don't top off your fuel tank.
- Keep refueling and engine work away from water supply wells, if possible over a concrete floor or similar barrier, and immediately clean up any gas or oil spills.

2. Avoid spilling gasoline in lakes, ponds, and rivers

- Keep special gasoline-absorbing pads on your gas-powered boat; know how to use them.
- If you own a larger boat, make sure it has no-spill tank vents.

- Fill portable tanks from outboard boat engines on shore.

- Refuel snowmobiles and ice augers on shore; do not take gasoline storage tanks onto ice-covered ponds.

3. Store gasoline properly

- Use a clearly labeled container made for gasoline, with a spout to avoid spills.
- Keep gasoline containers in a dry, well ventilated shed or detached garage away from water supply wells.
- Don't keep metal gasoline cans on a dirt floor for extended periods.

4. Dispose of waste gasoline properly

- Handle old or dirty gasoline as hazardous waste. Bring it to a household hazardous waste collection center in a proper gasoline container.

If a Spill Occurs

For *any size* spill that is not immediately cleaned up, call the DES emergency petroleum spill number at **(603) 271-3644** immediately for instructions. The DES line is answered weekdays from 8 a.m. to 4 p.m. For all other times please call the NH State Police at **(603) 271-3636**.

Revised 3/2007

Clean Drinking Water Is Up To You!



Where does your drinking water come from?

Your drinking water comes from either groundwater or surface water.

Groundwater is the water that flows through the spaces between soil particles and through fractures in rock. It comes from rain and snowmelt percolating through the ground.



Surface water comes from rainfall and snowmelt running over land and from *groundwater* seepage into lakes and rivers (including reservoirs).

Why should you be concerned?

While some pollutants (such as bacteria, viruses, and phosphorus) can be reduced by passing through soil under certain conditions, groundwater can be easily contaminated by chemicals and oils. Surface water is also affected by soil and pollutants picked up as water flows over land.

Do's and Don'ts to protect your drinking water

DO use non-toxic and less-toxic alternatives to pesticides and household chemicals.

DO take leftover household chemicals to your town's household hazardous waste collection day.

DO use slow or controlled release nitrogen sources of fertilizer.

DO test soil every two years to determine existing nutrient levels and pH before applying fertilizers.

Keep these Household Hazardous Wastes Out of your Drinking Water

Automotive fluids, auto batteries, used motor oil, paint, paint thinner, other solvents, pesticides, and cleaning products

DO follow package directions on pesticides, fertilizers, and other household chemicals.

DO check your underground fuel storage tank (UST) frequently for leaks. Have an UST removed if it is more than 20 years old. Replace it with an aboveground storage tank that has a concrete slab underneath it, a cover and secondary containment.

DO take care of your septic system. Inspect the septic tank every year and have it pumped out every 3-5 years. **DO** avoid damage to your leachfield and distribution lines by keeping vehicles, livestock, and other heavy objects off of it.

DO measure the area of your lawn to be fertilized to determine how much to use.

DO calibrate or adjust spreader settings to match the recommended rate for fertilizers.

DO use drip pans large enough to contain motor vehicle or power equipment fluids being replaced or drained.

DO fully drain oil over a drip pan or pail before disposal. Most solid waste transfer stations accept used oil filters for recycling. Store and transport used oil filters in a covered leak-proof container until disposal.

DO keep absorbent materials such as rags, pads, speedee-dri, kitty litter, or other clay-based products handy to the work area and clean up all spills as soon as they occur. Dispose of all used absorbents immediately in a leak-proof container.

DO refuel or repair engines over an impervious surface such as a concrete floor or tarp.

DO drain all fluids from motor vehicle parts before removing them from the vehicle.

DON'T buy more pesticides or hazardous chemicals than you need.

DON'T dispose of hazardous chemicals by pouring them down the drain or onto the ground.

DON'T over-use pesticides or household chemicals. More is not necessarily better.

Reduce - Reuse - Recycle

For more information about what you can do, please contact the Drinking Water Source Protection Program at (603) 271-7061 or visit our website at www.des.nh.gov/dwsp.

DON'T have your UST removed by a contractor who is not familiar with state guidelines for UST removal.

DON'T overload your septic system with solids by using a garbage disposal, unless the system is specifically designed for one.

DON'T pour chemicals down the sink or toilet.

DON'T use septic system cleaners or additives containing acids or chemical solvents such as trichloroethylene (TCE).

DON'T use fertilizers if heavy rains are anticipated as the nutrients will be flushed from the lawn into drains and low areas.

DON'T apply fertilizers within 10 feet of culverts, drainage ditches, wells, roadways, and walks, or 25 feet of most lakes and streams as required by the Comprehensive Shoreland Protection Act, RSA 483 B:9.

APPENDIX C:
Species-Habitat Crosswalk, NH Wildlife Action Plan
(This crosswalk was published as part of the New Hampshire Fish and Game
Departments' 2006 Wildlife Action Plan, which is available on the Web at:
http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm
- click to download WAP Appendix D: Species and Habitats)

Species & Habitats

New Hampshire's species of greatest need of conservation and associated habitats. Habitats are marked (X) for a particular species if they are important for completing life history cycles. Habitats only occasionally used by species were generally excluded. This table is intended to be a cross reference for users of the plan when selecting species and associated habitat profiles of interest.

Watershed Groupings

1. Connecticut River Mainstem Watersheds
2. Southern Upland Watersheds
3. Northern Upland Watersheds
4. Montane Watersheds
5. Coastal Transitional Watersheds
6. Non-Tidal Coastal Watersheds
7. Tidal Coastal Watersheds

Matrix Forest Types

8. Appalachian Oak-Pine Forest
9. High-Elevation Spruce-Fir Forest
10. Lowland Spruce-Fir Forest
11. Northern Hardwood-Conifer Forest
12. Hemlock-Hardwood-Pine Forest

Medium and Small-Scale Habitats

13. Alpine
14. Anthropogenic Grassland
15. Anthropogenic Shrublands
16. Caves and Mines
17. Cliffs
18. Coastal Islands
19. Dunes
20. Floodplain Forests
21. Marsh and Shrub Wetlands
22. Peatlands
23. Pine Barrens
24. Rocky Ridges and Talus Slopes
25. Salt Marshes
26. Vernal Pools

SPECIES	WATERSHED GROUPINGS							MATRIX FOREST TYPES							MEDIUM AND SMALL-SCALE HABITATS												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
Invertebrates																											
Barrens itame																											
Barrens xylotype																											
Broad-lined catopyrtha																											
Brook floater		X			X	X	X																				
Cobblestone tiger beetle																											
Cora moth	X																										
Dwarf wedgemussel	X	X	X																								
Eastern pond mussel	X	X				X	X																				
Frosted elfin butterfly																											
Karner blue butterfly																											
Persius duskywing																											
Phyllira tiger moth																											
Pine barrens zandlognatha moth																											
Pine pinion moth																											
Puritan tiger beetle																											
Ringed boghaunter																											
Sleepy duskywing																											
White Mountain arctic																											
White Mountain fritillary													X	X													
Fish																											
Alewife																											
American brook lamprey																											
American eel																											
American shad	X		X			X	X																				
Atlantic salmon	X		X		X	X	X																				
Atlantic sturgeon																											
Banded sunfish																											
Blueback herring	X					X	X																				
Bridle shiner																											
Burbot																											
Eastern brook trout	X	X	X	X	X	X	X																				
Finescale dace	X	X	X	X	X	X	X																				
Lake trout																											
Lake whitefish																											

SPECIES	WATERSHED GROUPINGS							MATRIX FOREST TYPES							MEDIUM AND SMALL-SCALE HABITATS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Northern redbelly dace	X																									
Rainbow smelt	X	X	X	X	X	X	X																			
Redfin pickerel						X	X																			
Round whitefish																										
Sea lamprey						X	X																			
Shortnose sturgeon						X	X																			
Slimy sculpin						X	X																			
Sunapee trout						X	X																			
Swamp darter						X	X																			
Tessellated darter						X	X																			
Amphibians																										
Blue-spotted salamander								X			X	X							X							X
Fowler's toad								X			X	X							X							
Jefferson salamander								X			X	X							X							X
Marbled salamander								X			X	X							X							X
Mink frog							X	X			X	X							X	X						
Northern leopard frog							X	X			X	X							X	X						
Reptiles																										
Black racer								X			X	X							X							X
Blanding's turtle							X	X			X	X							X	X						X
Eastern box turtle								X			X	X							X							
Eastern hognose snake								X			X	X							X							X
Ribbon snake								X			X	X							X	X						X
Spotted turtle							X	X			X	X							X	X						X
Smooth green snake								X			X	X							X	X						X
Timber rattlesnake								X			X	X							X	X						X
Wood turtle							X	X			X	X							X							
Birds																										
American bittern											X	X							X							
American black duck											X	X							X							X
American pipit									X		X	X							X							
American woodcock											X	X							X							
Arctic tern											X	X							X							
Bald eagle (breeding/wintering)							X	X			X	X							X							
Bay-breasted warbler							X	X			X	X							X							

SPECIES	WATERSHED GROUPINGS							MATRIX FOREST TYPES							MEDIUM AND SMALL-SCALE HABITATS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Bicknells thrush									X																	
Black guillemot								X																		
Canada warbler								X			X									X						
Cerulean warbler								X			X									X						
Common loon																										
Common nighthawk								X																		
Common tern								X			X															
Cooper's hawk								X			X															
Common moothern																										
Eastern meadowlark													X													
Eastern towhee								X																		
Golden eagle																										
Golden-winged warbler																										
Grasshopper sparrow													X													
Great blue heron													X													
Horned lark													X													
Least bittern																										
Least tern																										
Nelson's sharp-tailed sparrow																										
Non breeding birds								X			X		X													
Northern goshawk								X			X		X													
Northern harrier													X													
Osprey								X			X		X													
Palm warbler																										
Peregrine falcon																										
Pied-billed grebe																										
Piping plover																										
Purple finch																										
Purple martin																										
Purple sandpiper																										
Red shouldered hawk																										
Roseate tern																										
Ruffed grouse																										
Rusty blackbird								X			X		X													
Salt marsh sharp-tailed sparrow																										

SPECIES	WATERSHED GROUPINGS							MATRIX FOREST TYPES							MEDIUM AND SMALL-SCALE HABITATS											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Seaside sparrow																										
Sedge wren																					X					X
Semipalmated sandpiper																										X
Spruce grouse									X	X											X					
Three-toed woodpecker									X	X												X				
Turkey*									X		X	X														
Upland sandpiper									X		X	X		X												
Veery									X											X						
Vesper sparrow									X			X		X												
Whippoorwill									X			X		X								X				
Willet									X			X		X												X
Wood thrush									X		X	X								X						
Mammals																										
American marten									X	X	X	X														
Black bear*									X	X	X	X			X									X		X
Bobcat									X	X	X	X			X									X		X
Canada lynx									X	X	X	X			X											
Eastern pipistrelle									X	X	X	X				X										
Eastern red bat									X	X	X	X				X					X					
Eastern smallfooted bat									X	X	X	X				X										
Hairy bat									X	X	X	X														
Indiana bat									X	X	X	X				X										
Moose*									X	X	X	X									X					
New England cottontail									X	X	X	X									X			X		
Northern bog lemming									X	X	X	X									X					
Northern myotis (long-eared bat)									X	X	X	X										X				
Silver-haired bat									X	X	X	X									X					
White-tailed deer*									X	X	X	X									X			X		X
Wolf									X	X	X	X									X			X		X

* Species that are included in the NH Big Game Management Plan; Not ranked as species of highest conservation concern in Comprehensive Wildlife Strategy

APPENDIX D:
References and Resources

References and Resources

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APPENDIX E: Maps

Map 1: Elevation

Map 2: Development Limitations (with updated conservation lands)

Map 3: Water Resources

Map 4: Potential Threats to Water Resources

Map 5: Important Soils

Map 6: Wildlife Habitat

Map 7: Unfragmented Lands