CHAPTER 5 NATURAL RESOURCES

1. Introduction

Conway enjoys an abundance of environmental features and natural resources which contributes to the high quality of life associated with the town. Arguably the prime attraction for year-round and seasonal residents, as well as tourists visiting Conway, is the abundance and access to the varied natural environment. Despite having urbanized nodes contained within the villages, as well as the Route 16 highway corridor (also known as "the strip"), much of the town's landscape can be classified as rural in character. Planning based on natural features is motivated by the desire to conserve and protect important areas, but also by the belief that development of any kind can best be located, with less present expense and future problems, if based on an understanding of natural constraints.

This chapter of the master plan examines natural features located in the town of Conway. Inventory and analysis is provided for water resources, hazardous materials and contaminated sites, floodplains, soils, wetlands, protected and conservation lands, and forest resources.

In order to provide data and information for this chapter, three principle methods were used. The first consisted of an analysis of existing sources of natural resource literature pertaining to Conway and/or the Mount Washington Valley region. Two primary sources of information used for this analysis included *Scoping Report: New Hampshire Route 16 and U.S. Route 302*^[1] and *Conway Natural Resources Inventory*^[2]. These studies represented the most current inventories of natural resources in Conway completed since 1990. The second method consisted of natural resources map layers provided by the University of New Hampshire Complex Systems Research Center, the Town of Conway, the U.S. Federal Emergency Management Agency (FEMA), and the New Hampshire Audubon Society. The third approach involved a series of interviews with representatives of the Town of Conway Conservation Commission, the U.S. Forest Service, the New Hampshire Division of Forestry, and the University of New Hampshire Country branch) to verify and update the information contained within the published natural resource inventories.

2. Summary of Findings and Conclusions

The following points highlight various natural resource findings and conclusions presented within this chapter. Additionally, possible impacts on natural resources due to growth and development within Conway are also discussed.

Conway's water bodies (lakes, ponds, rivers, brooks and streams) serve a multitude of uses including a utility function, an economic stimulus through the attraction of tourists and seasonal residents, and an aesthetic resource which improves the quality of life of residents. Other water resource findings include:

- A total of 71 water bodies have been identified in Conway.
- Conway has over 1,400 acres of surface water contained within six major lakes and ponds.
- The town of Conway obtains its municipal water supply exclusively from the extraction of groundwater with the primary source of this water being the Saco River Valley Glacial Aquifer.

Every community has areas which have been subject to negative environmental impacts such as spills of hazardous materials and chemicals. Most environmental liabilities in Conway are located within close proximity to major arterial roadways and near prominent commercial nodes. Hazardous material findings include:

- According to the New Hampshire Department of Environmental Services (NHDES), there are 132 sites or areas within Conway that are either contaminated with hazardous material or are currently registered for potential contamination monitoring.
- The majority of the contaminated sites in Conway involve leaking underground storage tanks or heating oil tanks.

As water resources, in particular the Saco and Swift Rivers, are dominant features on Conway's landscape, floodplains are also a significant constraint to growth and development in the town. Findings concerning Conway's floodplains include:

- Due to the steep slopes, general topography and concentration of numerous rivers, brooks and streams, Conway is prone to periodic flooding over relatively short time periods.
- Flooding has occurred during all seasons in Conway and can be attributed to the lack of effective storage capacity within ponds and valleys throughout the entire watershed.

Soils and slopes present a planning and development challenge in Conway due to the undulating topography throughout the entire town. Findings on soils and slopes within Conway include:

- The majority of Conway's soils fall within the glacial till group. Soils within the glacial till group consist of either loose till (soils with a loose or granular consistency) or hardpan (a dense subsurface stratified soil layer).
- The majority of land within Conway contains slopes that are less than 35%.

Historically, wetlands were manipulated and destroyed for the benefit of man made development. However, communities now understand that wetlands represent some of the most important materials within an ecosystem for both humans and wildlife as they provide both flood and erosion control, as well as habitat for animals. Observations on Conway's wetlands include:

- The U.S. Department of Agriculture Soil Conservation Service has identified 289 wetland areas within Conway.
- The wetlands within the Page Randall Brook Watershed, the Black Cat Brook Watershed, and the Weeks Brook/White Lot Brook/Black Brook Watershed stood out from other Conway wetland as they provide valuable wildlife habitat, water quality improvements, and flood control functions.

The attraction of Conway to many is that it has a superior quality of life and character that is typically defined by its environmental features such as lakes, ponds, rivers, brooks, farms, forestland, wetlands and scenic views. Protected lands which contain these environmental features are an asset to the town and have contributed to Conway's unique quality of life. Protected and conservation findings include:

 Conway has 62 parcels totaling approximately 8,610 acres protected for conservation purposes, representing about 20% of the town's land area.

- The protected land parcels range from two (2) acres to over 2,700 acres in size.
- Most of the protected land is located in the northern portion of Conway with the largest parcels located within the Mountain Conservation District under Conway's Zoning Ordinance. The vast majority of these areas represent portions of the town with elevations over 800 feet.

Based on the natural resource findings presented throughout this chapter, implications about how Conway may change in the future include:

- As so much of Conway's character, quality of life and economic base is associated with the abundance and accessibility of environmental features, it is imperative that the town encourage the permanent protection of environmentally significant lands. Inability to protect these lands from future development could lead to the incremental deterioration of qualities which have historically made Conway a desirable community in which to live and work.
- The influence of topography on Conway's natural form has created a situation where the most desirable and feasible development locations for residential, non-residential and roadways are flat parcels at relatively low elevations with gradual slopes. Coincidentally, these same locations contain a large portion of the town's wetland areas. In order to ensure that development does not compromise the environmental integrity of these lands, the town needs to maintain guidelines and policies that ensures that the development of wetlands is avoided. In order to reduce the chance of wetland development, it may be necessary to incorporate comprehensive wetland surveys of potential residential and non-residential sites over three acres in size as a condition of development or subdivision.
- Although Conway enjoys the benefits of having an adequate supply of municipal water, future development will no doubt place pressure on water resources. To protect groundwater resources the town should evaluate the need for additional aquifer protection and water conservation guidelines and policies.

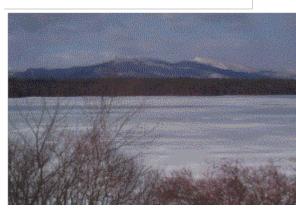
3. Water Resources

The lakes, ponds, rivers, brooks and streams of Conway represent a uniquely distinct feature of the town's landscape. Their scenic beauty and recreational appeal contributes both to the town's quality of life and economic health. The water bodies are one part of the "scenic package" that enhances the significant draw for the tourism industry which is the foundation for the local economy. In addition to surface water, groundwater is an important water resource as it is the primary potable water source for Conway residents. With many competing demands for the town's water resources, a balance must be maintained between their use and protection.

For many communities in New Hampshire, water resource issues have become one of the most important environmental issue over the past five to ten years. Traditionally, communities across New England have taken an infinite supply of inexpensive, clean water for granted. However, a number of communities are now realizing that the concept of a limitless supply of affordable, uncontaminated water is something that is not a "given" and the unwise use of this resource could result in a very significant financial burden. For the purposes of this section, water resources have been defined as surface water bodies (lakes, ponds and rivers), aquifers, and public drinking water supplies (groundwater wells and surface water intakes).

Like many communities in central and northern New Hampshire, Conway is home to many forms of surface water bodies. Surface water bodies are defined as perennial lakes, ponds, rivers and streams. A total of seventy-one water bodies have been identified within Conway by various federal, state, and local organizations.

Figure 5-1. Conway Lake



In terms of lakes and ponds, the largest lake in town is Conway Lake at 1,316 acres (see Figure 5-1). A series of smaller ponds are scattered throughout the town with Pequawket Pond being the largest at 64 acres. Table 5-1 indicates significant lakes and ponds within the town's boundaries.

Table 5-1. Lakes	s and Ponds	
Town of Conway		
Name	Area (Acres)	
Conway Lake	1,316	
Labrador Point	31	
Dollof Pond	21	
Pequawket Pond	64	
Pudding Pond	22	
Echo Lake	16	
Total Acreage	1,470	
Source: Conway Na	atural	
Resource Inventory, 1996.		

The major river water bodies in Conway include the Saco River (Figure 5-2) with its respective tributary streams, and the Swift River (Figure 5-3). Both the Saco and Swift Rivers are protected under the New Hampshire Rivers Management and Protection Act (RSA 483) and the New Hampshire Rivers Protection Program. These programs are statewide initiatives which support the local protection of rivers, shorelines and adjacent lands through river management plans. The segments of the Saco and Swift Rivers that run through Conway have been designated as "rural" rivers, which are defined as those rivers which are adjacent to lands which are partially or predominantly used for agriculture, forest management, and dispersed or clustered residential development. Some modifications have been made to both rivers including low dams and diversion works. Other streams and brooks within Conway include:

- Artist Brook
- Black Cat Brook
- Black Brook
- Clarke Brook
- Elm Brook
- Kearsarge Brook
- Lucy Brook
- Mason Brook
- McQuade Brook
- Mill Brook
- Moat Brook
- Page Randall Brook
- Red Eagle Brook
- Shepards Brook
- Weeks Brook
- White Lot Brook
- Willey Brook

Figure 5-3. Swift River

Figure 5-2. Saco River

Map 5-1 indicates surface water bodies within Conway.

Aquifers and Groundwater Sources

Groundwater sources are defined as including both public wells and aquifers, whether tapped or

untapped. The town of Conway obtains its municipal water supply exclusively from the extraction of groundwater with the primary source of this water being the Saco River Valley Glacial Aquifer. The United States Geological Survey describes the Saco Valley Glacial Aquifer as:

The extensive, unconfined sand and gravel aquifer located along the Saco River from Bartlett, New Hampshire to Fryeburg, Maine, is an important water supply for this region. The aquifer ranges in width from one to three miles, covers a surface area of 39 square miles and is located in the foothills of the White Mountains. Saturated thickness ranged from ten feet or less near the valley walls to approximately 280 feet near the center of the valley in Fryeburg...The principle flow path in the aquifer is in a cross-valley direction from the till-covered or bedrock uplands toward the Saco River, the major ground water discharge zone. Gradients are steepest near the valley walls and flatten towards the center of the valley. A groundwater flow divide, which coincides with a surface water divide, is located to the northeast of Pine Hill in the Redstone area of Conway, New Hampshire. Another groundwater flow divide is located in the rear from north of Swans Falls to northwest of Fryeburg Center, Maine, and has an approximate southwest-northeast trend.

Map 5-1 Water Bodies

The portion of the aquifer located in the northwestern part of Conway is very productive with transmissivities^[3] exceeding 8,000 cubic feet per day. Due to this productivity, the aquifer is an important water supply for the North Conway Water Precinct, the Conway Village Fire District, as well as numerous private wells that draw water from this source.

There are two other aquifers that are found within the town's boundaries, namely, the Weeks Brook Aquifer, and the Pequawket Brook Aquifer. The Weeks Brook Aquifer is located in the northeastern area of Conway within a tributary valley of the Saco River. This aquifer is not as productive as the Saco River Aquifer with transmissivities ranging from 0 to 1,000 cubic feet per day for most of the aquifer, to 8,000 cubic feet per day in the north central and southwestern sections. The Pequawket Brook Aquifer is located in the southwest corner of Conway and extends south through Albany to Silver Lake in Madison. Productivity is limited for this aquifer with transmissivities ranging from 4,000 to 8,000 cubic feet per day. Map 5-2 indicates aquifer locations within Conway.

4. Hazardous Materials and Contaminated Sites

According to the New Hampshire Department of Environmental Services (NHDES), there are 132 sites or areas within Conway that are either contaminated with hazardous material or are currently registered for potential contamination monitoring. As shown on Map 5-3, the majority of these sites are located within close proximity to major arterial roadways near prominent commercial nodes (North Conway Village and Conway Village). The purpose of identifying and monitoring contaminated or potentially contaminated sites is to protect groundwater sources from pollutants. As shown in Table 5-2, the majority of Conway's contaminated sites involve leaking underground storage tanks or heating oil tanks. Many of the other listed sources in Table 5-2, are registrations for potential sources of groundwater contamination including large septic systems and above-ground storage tanks.

Table 5-2. Most Common Existing or Potentially Existing Contaminated Sites			
Town of Conway: 2002			
Contaminant Source	# Sites	Description	
Above-Ground Storage Tank	10	Registration of above-ground storage tank	
Holding Tank	5	Non-hazardous, non-sanitary holding tank registration	
Underground Storage Tank	32	Leaking underground storage tank	
Leaking Heating Oil Tank	9	Leaking residential or commercial heating oil tank	
Septic System	32	Registration of sub-surface septic system receiving >20,000 gallons/day	
Underground Injection Control	17	Discharges of benign wastewaters not requiring a permit or a request to cease a discharge	
Source: New Hampshire Department of Environmental Services			

Other sources of potential and existing threats to groundwater quality found within Conway include:

- A Superfund site (1);
- Hazardous waste sites;
- Waste disposal grounds and stump disposal areas;
- Oil spill release areas;
- Septic lagoons; and,
- Spray irrigation sites.

5. Floodplains

For the purposes of determining 100 and 500-year floodplains for the Saco and Swift Rivers, information was obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for Conway. As mentioned previously within the water resources section, the dominant river features in Conway includes the Saco and Swift Rivers, as well as smaller tributaries (Artist Brook, Black Cat Brook, etc.).

As indicated on Map 5-4, most of the floodplains within Conway are located in the "U-shaped" valleys of the Saco and Swift Rivers. This type of figure indicates the floodway (river course) as well as the 100 and 500-year floodplains. Due to the steep slopes, general topography and the concentration of the region's rivers, brooks and streams, Conway is prone to periodic flooding over relatively short time periods. Flooding has occurred during all seasons and can partially be attributed to the lack of effective storage capacity within ponds and valleys throughout the entire watershed.

According to the U.S. Department of Housing and Urban Development, historic flooding has occurred on the Saco and Swift Rivers, and to a lesser extent on Kearsarge Brook and Pequawket Pond. Furthermore, minor flooding has also occurred on Black Brook, Page Randall Brook, and Lucy Brook as a result of ponding runoff. Conway has also experienced periods of heavy flooding which has been attributed to a deep snow

pack combined with heavy spring rainfall as well as summer downpours. For example, in 1953, a heavy snow melt combined with spring rains contributed to Conway's largest flood which produced a peak discharge of 43,900 cubic feet per second.

Map 5-2 Aquifers

Map 5-3 Contaminated Sites

6. Soils

Soils are a natural three-dimensional body on the earth's surface that supports plants and that have properties resulting from the integrated effect of climate and living matter acting on early parent material, as conditioned by topography over periods of time^[4].

Soils differ because of different topography, even though they are formed from the same kind of parent material. A soil's parent material is the disintegrated and partially weathered rock from which the soil has formed. Parent materials for soils are grouped under five categories including:

<u>Alluvial</u> – Soil material such as sand, silt or clay that has been deposited on land by recent rivers and streams.

<u>Marine or Lacustrine</u> – Fine grain clays that have been deposited by lakes and seas. The low permeability of the clay makes these deposits poor aquifers.

<u>Organic</u> – Rotting vegetation mixed with silt, sand and gravel. Organic materials typically occupy poorly drained areas, including lowlands underlain by marine deposits and depressions between ridges of bedrock.

<u>Outwash</u> – Deposited by meltwater from a glacier's retreating front, this material consists of particles ranging from silt to coarse gravel, but medium-sized sands predominate.

<u>Glacial Till</u> – Unsorted mixtures of clay, silt, sand and broken rock which was transported and deposited directly by glacial ice.

Non-Classifiable – a combination of many different types of parent materials.

As indicated in Map 5-5, the majority of Conway's soils fall within the glacial till group. Soils within the glacial till group consist of either loose till (soils with a loose or granular consistency) or hardpan (a dense subsurface stratified soil layer). Outwash represents the second largest parent material category with outwash soils being typically described with a high sand content. Organic soils are found within scattered pockets throughout the town which have formed in Conway's depressions where plant remains have accumulated over a long period of time. The smallest percentage of soils within the town fall within the marine or lacustine parent material category which are essentially former lake beds.

Soils are defined in more narrow classes than parent materials in order to provide more detailed identification and a better understanding of their characteristics. These characteristics are applicable for proper soil management and/or for development and construction purposes. The classification of soils, referred to as

the soil survey, is prepared on a county-wide basis by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service. Field work for the last soil survey in Carroll County was completed in the late 1960s with periodic published updates and mapping. Based on interviews with federal officials, a new soil survey for Carroll County is projected for completion within the next five years. Since the survey covers the entire county, soil surveys are generally considered a "broad brush" type of analyses that is primarily suitable for large-scale analysis and municipal planning purposes. These surveys, however, are usually not an accurate representation of soils at small scales (development parcels) such as the neighborhood or village level.

The kinds of soils present within a community can greatly influence the types of activities that can take place in specific areas. Some areas, such as wetlands and steep slopes, have inherent limitations to development. The potential for development based on soil conditions are defined as follows:

Very High – Site conditions and soil properties are favorable for development with few or no soil limitations.

<u>High</u> – Site conditions and soil properties are not as favorable for development. Costs of measures for overcoming soil limitations are slightly higher than those soils with very high potential.

<u>Moderate</u> – Site conditions and soil properties are below the reference soil (a soil with properties that have the most favorable characteristics for that particular use).

Low – Site conditions and soil properties are significantly below the reference soil.

<u>Very Low</u> – There are severe soil limitations. Measures to overcome limitations are extremely high or prohibitive.

In combination with soil types, the topography, in particular the slope, is a condition that is typically factored into the development potential of a respective area. Depending on the region of the country and the type of development, site development regulations generally place limitations on building activities on slopes over 10% to 15%. The Town of Conway's Subdivision Regulations indicate that parcels with slopes of 35% or more are subject to rigorous development restrictions. As shown in Map 5-6, the majority of Conway contains slopes that are less than 35%.

Map 5-4 Floodplain

Map 5-5 Soils

Map 5-6 Slopes

7. Wetlands

Wetlands are areas that represent an interface between the terrestrial and aquatic environments – essentially where land meets water. Historically wetlands were considered problem areas that had to be drained for agricultural uses or filled for development. However, over the past few decades a better understanding of the important ecological role that wetlands play has emerged. For example, wetlands provide the following environmental and socioeconomic benefits:

 <u>Flood and Storm Damage Protection</u> – In their natural condition, most wetlands serve to temporarily store floodwaters, thereby protecting downstream property owners from flood damage.

- <u>Erosion Control</u> When located between water courses and uplands, wetlands help protect uplands from erosion because the wetland vegetation increases the durability of sediment through binding with its roots.
- <u>Water Quality Improvement</u> Wetlands are able to intercept runoff from land before it reaches the water and help filter nutrients, wastes and sediments from water. Wetland plants and microorganisms are able to remove such nutrients as nitrogen and phosphorus from runoff thus helping to prevent eutrophication or over-enrichment of natural waters.
- <u>Fish and Wildlife Values</u> Wetlands are among the most productive ecosystems in the world and plants located in wetlands serve as a food source for a multitude of animals. Some animals spend their entire lives in wetlands, while others use wetlands primarily for reproduction and nursery grounds. Most freshwater fisheries are considered wetland-dependent because many species feed in wetlands or upon wetland-produced food.
- Recreation and Aesthetics Many recreational activities take place in and around wetlands. Hunting and fishing are popular activities, as well as hiking, bird watching and photography which are all dependent, in some form or fashion, on wetlands. While these activities are important to the individuals participating in them, but they also represent a significant boost to the economy from the spending by the individuals involved in these type of activities. This is particularly important in Conway due to the integral connection of outdoor recreation and tourism and the local economy.

The most accurate way to identify the existence and boundaries of wetland areas is by field assessments by wetland scientists. However, for the purposes of this chapter, wetlands are identified using soil maps provided by the USDA. The Carroll County Soil Survey identifies hydric (wetland) soils based on current standards for wetland delineation. As indicated in Map 5-7, a total of 289 wetlands were identified based on separate soil units as defined within the soil survey.

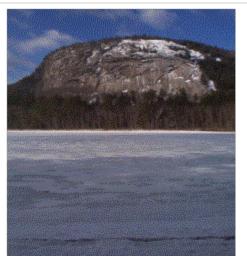
The *Natural Resource Inventory* for Conway evaluated each of Conway's wetlands in the context of watersheds in which they occurred, and their role as part of the larger wetlands complex. Three watersheds stood out as being important since they provide valuable wildlife habitat, water quality improvements, and flood control functions:

- Page Randall Brook Watershed (664 acres);
- Black Cat Brook Watershed (239 acres); and,
- Weeks Brook/White Lot Brook/Black Brook Watershed (1,764 acres).

8. **Protected and Conservation Lands**

The attraction of Conway for many residents, seasonal visitors and tourists is the quality of life associated with the area. As such, undeveloped land that has been protected from possible future development and conserved through various protection mechanisms is commonly perceived as contributing to a community's quality of life. Quality of life in a community is generally one of the factors that influence people to move to, and stay in a particular community. As shown in Figure 5-4, part of Conway's character is its environmental features such as lakes, ponds, rivers, brooks, farms, forestland, wetlands and scenic views. All of these combinations of features represent open space. Therefore, if the assumption is made that Conway's quality of life is, in some form or fashion, associated with the abundance of environmental features, preserving open space areas must be considered important in maintaining the town's quality of life.

Figure 5-4. White Horse Ledge and Echo Lake



Map 5-7 Wetlands

According to the data provided by the University of New Hampshire Complex Systems Research Center, Conway has 62 parcels totaling approximately 8,610 acres protected for conservation purposes, representing approximately 20% of the town's land area. The protected land parcels range from two (2) acres to over 2,700 acres in size. It should be noted that the Town of Conway owns numerous parcels of land throughout Conway that are used for recreation, municipal infrastructure, utilities, and common uses. However, it is unclear whether these parcels are protected through conservation mechanisms. Therefore, due to these unknown factors, it is assumed that these parcels potentially could be developed for other uses in the future and are not considered protected or conservation lands.

As shown in Map 5-8, most of the protected land is located in the northern portion of Conway, with the largest parcels contained within the Mountain Conservation District as defined by Conway's Zoning Ordinance. The vast majority of these areas represent portions of the town with elevations over 800 feet.

Conway is also home to a portion of the White Mountain National Forest (WMNF). Federal legislation mandates that the National Forests be managed for multiple uses, including timber harvesting, wildlife management and recreation. Land and resource management plans must also be prepared by the federal government to guide this multi-purpose management.

In addition to the mechanisms used by public organizations to protect and conserve publicly owned lands, private landowners may also undertake specific activieis to protect their land from future development. Options include: 1) sell the development rights of their land to a conservation organization who will protect and manage the land; 2) initiate a conservation easement on their land; and, 3) sell or donate their land to a local governing authority with the stipulation that the land be protected in perpetuity. It should be noted that the protected lands indicated in Map 5-8 are a combination of both public and privately protected lands.

9. Forest Resources

As Conway has become more urbanized, increasing pressure has been exerted to convert undeveloped areas of the town into a variety of man-made land uses. Forested land is one of the resources that is continually being transformed into the developed land areas of the town.

Aside from its economic benefit as a scenic resource for seasonal residents and tourists and recreational activities, forestland provides a host of environmental benefits such as:

- Stabilization of soil which prevents erosion and slows water runoff;
- Absorbs carbon dioxide and provides oxygen to the air;
- Acts as a dust filter;
- Stabilizes the water table which protects watersheds and drinking water supplies;
- Provides support and protection for numerous wildlife species;
- Provides shade in summer and wind protection in winter; and,
- Provides scenic beauty.

As shown in Map 5-9, the majority of Conway is covered by deciduous forest with coniferous and mixed forest stands making up the remainder.

In terms of forest management, the Conway Conservation Commission and the State of New Hampshire both manage public forest lands. Private land owners can take advantage of a variety of forest management programs which encourages private foresters to implement sustainable forestry practices including weeding and thinning of young timber, wildlife enhancement, tree cropping, forest fire protection, and erosion control. Information and forest programs for private land owners are available through the USDA Forest Service and the University of New Hampshire Cooperative Extension Service (Carroll County).

10. Implications for the Future

The natural resource findings discussed in this chapter provide insights as to how Conway has historically developed. The following are potential implications of the natural resource findings on the future growth and development in Conway. Since Conway's economic base relied heavily on the capture of spending from tourists attracted by the area's environmental features, how the Town of Conway chooses to balance economic development and natural resource protection will be the one of the most important issues facing the community over the next decade.

As so much of Conway's character, quality of life and economic base is associated with the abundance and accessibility of environmental features, it is important that the town encourage the permanent protection of environmentally significant lands. Failure to encourage the permanent protection of these lands could lead to the incremental deterioration of qualities which have historically made Conway a desirable community in which to live and work.

Map 5-8 Protected Lands

Map 5-9 Forest Cover

The influence of topography on Conway's natural form has created a situation where the most desirable and feasible development locations for residential, non-residential and roadways are flat parcels at relatively low elevations with gradual slopes. Coincidentally, these same locations contain a large portion of the town's

wetland areas. In order to ensure that development does not compromise environmental integrity, the town should adopt development guidelines and policies which ensure that the development of wetlands is avoided. In order to reduce the chance of wetland development, it may be necessary to incorporate comprehensive wetland surveys of potential residential and non-residential sites over three acres in size as a condition of development or subdivision.

Although Conway enjoys the benefits of having an adequate supply of municipal water, future development will no doubt place pressure on water resources. To protect groundwater resources, the town should also consider reviewing existing policy efforts concerning aquifer protection and water conservation.

^[4] As defined by the Carroll County Soil Survey of Carroll County, New Hampshire prepared by the U.S. Department of Agriculture Soil Conservation Service and Forest Service.

^[1] Prepared by HMM Associates, Inc. for the New Hampshire Department of Transportation in 1991.

^[2] Prepared by the Audubon Society of New Hampshire, The New Hampshire Office of State Planning, The University of New Hampshire Complex Systems Research Center for the Town of Conway Conservation Commission in 1996.

^[3] Transmissivity is the measure of the rate at which water is transmitted through the saturated thickness of an aquifer. Higher transmissivity values mean a greater water yield from the aquifer.