Chapter VIII
Conservation, Preservation, and Open Space

Introduction

The Conservation, Preservation and Open Space Chapter is a study of Henniker's environment that includes its open space systems, watersheds, soils, bedrock, topography, rivers, wetlands, forests, drinking water resources, and built environment.

In periods of development, towns tend to be reactive toward development proposals, allowing development without sending a clear message to developers about what the Town really wants. Because of serious growth pressures, it is imperative that a coordinated effort to manage valuable locally and regionally significant environmental areas occurs. This effort would be most effective if municipalities worked across political boundaries to coordinate and plan for natural resource preservation, conservation, and protection.

The vision offered by this Chapter continues to concentrate the growth and development of Henniker within the traditional core areas of the Town. Within the more rural areas, the eventual goal is to protect and interconnect, through a greenway and open space network, tracts of land with important ecological, visual, aesthetic, and community value.

To achieve the goals and recommendations that follow, the Town should focus on critical environmental and resource issues that need to be monitored and better understood. The goal of this Chapter is to build a clear and consistent information base regarding important issues, make that information available to the public and decision makers, and then use that information to develop management plans. It needs to be adaptive in the sense that it can be adjusted as more is learned about the dynamic systems in which we live and work.

Goals and Objectives

Goals and objectives in any plan are intended to provide a policy framework and direction to the plan. Goals are general statements of ideal conditions. Objectives describe desirable projects and programs that will help to achieve the goals. Strategies are steps that need to be taken in order to reach an objective.

Goal - The Town of Henniker desires to conserve, protect, and preserve its natural resources, including but not limited to, ground and surface waters, agricultural and forest land, and wildlife habitat, in order to preserve the character of the community.

Objective - When engaging in development, the Town of Henniker should encourage open space land preservation that retains the natural conditions of the site.

Strategies:

1. The Planning Board, as part of the subdivision review process, shall encourage developments to dedicate land for open space.
2. The Conservation Commission should encourage and solicit the donations of parcels or easements in areas that fit within an open space/land conservation plan.
3. Appropriate open space, agriculture, and forestry uses should be allowed in all areas of Town.

Objective - The Town of Henniker should control development in environmentally valuable and sensitive areas.

Strategies:

1. The Planning Board should review all relevant data, including soil, slope, wetlands, etc., as part of the development review process when site plan and subdivision proposals are made and determine if the proposals are in environmentally sensitive areas.
2. If a development proposal appears to be in an environmentally sensitive area, the Planning Board should request site specific scientific data regarding the current environmental conditions, potential impacts, and proposed solutions, prepared by qualified, licensed professionals.

Objective - The Town of Henniker shall encourage through regulatory powers, incentives, and purchase, the preservation of existing and potentially productive agricultural lands, forest lands, and parcels of open space.

Strategies:

1. Recommend the preservation and conservation of existing and potentially prime agricultural lands, forest lands, and parcels of open space lands.
2. Send information on current use assessment to all property owners who could qualify for the program. Engage in a public education campaign to highlight the benefits and value of the current use program.
3. Henniker should actively pursue funding for the purchase of available agriculture lands, forest lands, and open space parcels. Prior to the acquisition of such land, an evaluation process should be developed that includes an evaluation of needs, cost and benefits.
4. A management plan should be created for all parcels of land that the Town owns to ensure that best management practices are being followed.
5. Henniker should work with the surrounding communities to coordinate an open space protection plan for parcels that abut and/or cross Town lines.
6. Henniker should analyze town-owned property taken for back taxes and look at placing conservation restrictions on this land to keep it as open, protected land.

Objective - The Town of Henniker should continue to work to protect the shoreline of its lakes, streams, ponds, and rivers.

Strategies:

1. Henniker should work to establish a collaborative shoreline policy with its neighboring communities.
2. Henniker should seek acquisition, easements, and/or development rights for parcels of land abutting public water bodies.

Objective - The Town of Henniker should continue to take steps to protect its aquifers and ground water resources.

Strategies:

1. Henniker should identify areas where there is a known or potential water pollution problem and require that neighboring public bodies of water be monitored annually for public health and environmental risks.
2. Henniker should create a public education campaign that would encourage residential well-water users to periodically test their water to ensure its safety.
3. Henniker should create and implement an educational campaign for residents as to the proper maintenance procedures for onsite septic systems.
4. Henniker should create and distribute educational materials for the proper disposal of waste oil, household chemicals, and household hazardous waste.

Objective - The Town should take the appropriate steps to ensure that the geologic formations and resources located in the community are managed in a sustainable fashion.

Strategies:

1. Henniker should seek easements and/or development rights for spent/abandoned gravel pits located in the aquifer areas within the Town.
2. Henniker should continually monitor active sand and gravel pits operating within the Town to ensure all safety and environmental protections are in place.

Objective - The Town of Henniker should coordinate all local land use planning and regulations, such that local planning efforts are enhanced, intra-community conflicts are minimized, and suburban sprawl is limited.

Strategies:

1. Where appropriate, encourage and emphasize the existing Village by channeling commercial and residential growth toward it.
2. Encourage the use of innovative land use controls to provide growth in areas with suitable land characteristics and to discourage development in areas with poor soils, steep slopes, flood hazards, or other environmentally sensitive or unique characteristics.

Objective – Increase cooperation among the Town, New England College, local businesses, and the region to preserve and protect Henniker's natural environment.

Strategies:

1. Invite representatives of New England College and the Henniker Business Development Committee to the monthly Conservation Commission meetings.
2. The Conservation Commission should continue to be involved in the Regional Resource Conservation Committee.

Community Survey Results

A Master Plan Community Survey was distributed to all residential households and non-residential landowners in October 2000. Approximately 1,500 surveys were mailed out with 495 surveys being returned, resulting in a 33% response rate. The following five survey questions relate to this Chapter.

How should Henniker respond to prospects for growth in each of the following areas?

	Encourage	Stay As Is	Discourage
Farms	325	119	4

How would you rate the current adequacy of the following services? Please check all that apply.

Municipal Services	Good	Fair	Poor	N/A
Access to Public Waters	210	113	84	49
General Recreation	250	132	58	23
Land/Wetland Conservation	229	128	36	54
Recreational Trails	242	141	35	36
Recycling	323	96	32	14

How important is each of the following to your choice to live in Henniker? Please check all that apply.

	Very Important	Somewhat Important	Not Important
Farming Opportunity	56	109	264
Rural Quality	384	66	8
Small New England Village	378	63	19
Suburban Area	132	155	132

How important is it to expand, provide, or improve each of the following? Please check all that apply.

	Very Important	Somewhat Important	Not Important
Park/Picnic Areas	215	153	70
Recreational Trails	235	156	55
Wildlife Preservation	306	105	38

Which of the following methods would you support to balance growth with the preservation of sensitive areas? Please check all that apply.

Methods	Responses
Encourage Private Donation of Land and/or Development Rights	295
Current Use Assessment	208
Town Purchase of Land	207
Land Trusts	204
Town Purchase of Development Rights	157
Re-zoning	145
No Opinion	70

These community survey results will help to shape the goals and recommendations of this Chapter. The areas of importance and the concerns of residents will take priority in setting out the policy objectives and vision for the community.

Soils

One of the most important natural resources and determinants of land use is soil. Soils are a renewable resource, but because of the long time period required to be replenished, they can easily be classified as non-renewable. Information about soil characteristics, with other supporting data, allows a community to make sound land planning decisions.

The upper layers of geological materials (rocks and soils) on the bedrock (the crustal rock under the soil) were deposited by the last glaciation (Pleistocene), particularly the Wisconsin stage. As the ice melted, the glacial debris formed two types of deposits:

(1) Direct deposits falling or dumped by the ice as unsorted glacial till (hardpan).
(2) Outwash deposits of sand, gravel, silt, and clay sorted out by the meltwater running off the ice (Glacio-Fluvial). These latter deposits were carried farther by streams and rivers into the valleys. As the ice was melting, the Contoocook River Valley became a temporary lake (Glacial Lake Contoocook) and today contains lake floor deposits of sandy silt and clay.

The following describes the various resulting glacial landscape features:

A. Direct Deposits (till)

1. Ground Moraine -- Mostly till overlying bedrock but includes outcrops of uncovered bedrock. It is the unsorted, glacially ground-up debris of clay, silt, sand, gravel, and boulders dumped under the glacial ice and now covering bedrock. It was not distributed by meltwater. Morphologically, it is a zone of small hills and basins.
2. Drumlins -- Low, humpbacked elliptical hills or mounds of till deposited and shaped by the moving glacier; the long axis is parallel to the ice motion.

B. Outwash Deposits (sand, gravel, silt, and clay)

1. Outwash Plains -- A broad almost flat topped deposit of sorted sand and gravel layers, built up by the streams of glacial meltwater flowing off from the stagnant glacier.
2. Kame and Kame Terraces -- A hill, hummock, or short irregular ridge of stratified sand and gravel deposited in contact with the glacial ice; when the ice melted, the deposit settled to its present form. They range from 5 to 100 feet high. A kame terrace is a body of crudely sorted sand and gravel deposited between the glacier and an adjacent valley wall, thus forming the rather flat-topped terraces.
3. Eskers -- Narrow, sinuous ridges of crudely stratified gravel and sandy gravel 10 to 100 feet high, deposited by meltwater streams flowing beneath the glacier in stream tunnels.
4. Varved Clays -- Glacial clays of alternating sandy silt and silty layers, deposited in glacial lakes.

Since the last glacial ice melted away 14,500 years ago, three other major soil deposits have developed:

Organic Deposits -- Peat and muck soils found in marshes, swamps, bogs, and other wetlands; they represent formerly or presently ponded depressions where plant remains have accumulated and decayed over time.

Flood Plains -- Large areas of sandy or silty alluvium (stream deposits) left by previously muddy flood water; usually broad and flat due to the slow accumulation of this alluvium during the waning stages of each flood.

Topsoil -- Generally less than one foot thick composed of weathered glacial deposits and organic matter (humus).

Much of Henniker's surficial geology is a result of the latest period of glaciation. Glacially ground-up debris of clay, silt, gravel, and boulders were dumped over the landscape creating a zone of small hills and basins. Evidence of this effect can be seen today on the northeast section of the Town where glacial deposits have formed a drumlin and an esker. The Contoocook River Basin also dictates much of Henniker's surfical geology. It is composed of stratified sand and

silt consisting of glacial outwash and recent stream deposits. Sand and gravel deposits are found in scattered kame terraces, and isolated organic deposits occur in some of Henniker's wetlands.

In general, soils can be grouped into seven main categories: wetland, seasonal wet, sandy and gravelly, shallow to bedrock, hardpan, deep and stony, and clay. Gravel pits and man-made landfills can be included in the "other" category.

There are three levels of important agricultural soils: local, statewide, and prime. Soils of local importance are determined by the local National Resource Conservation Service (NRCS) district. Soils of statewide importance are lands determined by the State to be nearly prime and that economically can produce high yields of crops. Prime soils are defined as land best suited for food, feed, forage, fiber, and oilseed crops; it may be cultivated land, pasture, woodland, or other land. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resource. Farming these soils results in the least damage to the environment. Prime farmland soils have increased significance when these areas coincide with current agriculture use. Unfortunately, soils that are prime for agriculture are also, for the most part, prime for septic systems and development. Thus, these soils are some of the most threatened in Henniker. Once the soil is developed it is essentially lost for agricultural purposes.

It is important for the Town to be aware of the soil conditions, classifications, and limitations in order to have appropriate and suitable land use planning and zoning requirements.

Issues, Goals, Recommendations

Issue: In addition to offering environmental and agricultural benefits, soils are subject to contamination, erosion, and depletion at an alarming rate. Productive soils for farming and forestry are often prime development sites, and once built on, they become unavailable for those essential and desired uses.

Goal: Soils should be respected and protected as a valuable resource. All land use activities should be performed in such a way as to minimize negative impacts and be located on suitable sites.

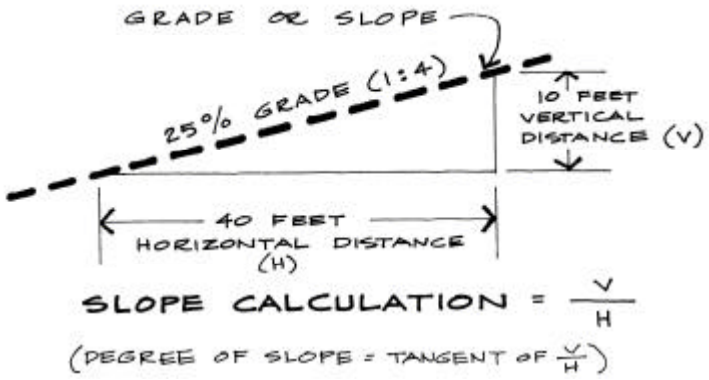
Recommendations:

- Inform and educate land owners who perform soil impacting activities, of recommended best management practices regarding such land use activities.
- Through the Subdivision and Site Plan Review Regulations, the Planning Board should require new developments to submit site specific soil data to ensure that new developments have adequate carrying capacity for such proposed uses. Site plan review submittals should be consistent with the most recent data and recommendations by NH OSP, NH DES, as well as others.
- The Planning Board should research implementing soil-based lot sizing requirements, in accordance with the latest data and recommendations available from NH DES and NH OSP, as well as other sources.

- Site-specific soils data should be required under the following situations: (1) average lot size is less than 2 acres without public water and sewer, (2) average lot size is less than 1 acre with municipal water but without municipal sewer, (3) the contiguous buildable area greater than 20,000 square feet and without municipal water and sewer, or (4) the area is without municipal water and sewer and has multiple soil complexes with dramatically different characteristics on the same lot.

Slope Analysis

Slope is a very critical consideration in land use planning because it affects the capability and suitability of land to support building development, septic systems, building design costs, as well as environmental impacts like runoff, erosion, sedimentation, and pollution. Slope is the ratio of change in vertical elevation in relation to the change in horizontal distance, multiplied by 100 percent. The percent of slope may indicate the potential for environmental problems.



Source: The Illustrated Book of Development Definitions
Harvey S. Moskowitz and Carl G. Lindbloom, 1993

There are five slope classifications, which are described below.

0-3% Flat - Land in this category can be regarded as essentially level. The slope would indicate easy accommodation of almost all types of land use. Much of the land in this category lies within the floodplains of the major rivers. Other flat lands in this category may have drainage problems if the soil proves to be relatively impermeable. Land in this category is generally best restricted to pasture and grazing, public open space, recreational use, farming, or appropriately planned development that takes into consideration the necessary environmental factors and conditions.

3-8% Gently Sloping - Land in this category is suitable for many uses. The slopes are not prohibitive for development and make for excellent natural drainage conditions. Most of the land in this category may be found within the valley floors and river terraces.

8-15% Moderately Sloping - Slopes of this range begin to be restrictive for certain land uses. The slopes may also prove too steep for most farming purposes. Low density residential development may be feasible if carefully planned.

15-25% Steep Slopes - Excavation and grading are almost always required, yet development not intensive in its coverage may be accommodated with limited environmental impact, if carefully planned.

Over 25% Very Steep Slopes - These lands are most subject to adverse environmental impacts and heavy construction costs. Intensive use of land should be done cautiously with the recognition that the interest and amenity provided by such lands makes them a valuable recreational resource and an area for the increasing demand for residential housing "with a view".

According to the Flood Insurance Study conducted in 1977 by the Federal Emergency Management Agency (FEMA), 17% of Henniker has slopes 25% or greater. There are many areas with steep slopes, as can be seen in the table below and on the **Steep Slope and Scenic Vista Map.**

Mountains and Hills	Elevation
Bear Hill	1,380’
Buck Hill	1,020’
Colby Hill	1,256’
Craney Hill	1,402’
Liberty Hill	1,193’
Morrill Hill	1,040’
Mount Misery	1,080’
Mount Hunger	1,350’
Wadsworth Hill	1,160’

Source: 1998 Natural, Cultural, and Historical Resources Inventory of the Central New Hampshire Region, CNHRPC

Whereas much of the easily developable land within the Town has been built upon, developers and home builders will begin focusing on the more sloped terrain. Potential views from such slopes have increased both the demand and value of those sites. This increase has created problems for utility placement, as well as for service roads and driveway location and construction.

Issues, Goals, Recommendations

Issue: Moderately to severely sloped land is subject to erosion during almost any type of land use activity. Development of this land may also create scenic degradation for those residents who viewed such scenic vistas prior to development.

Goal: Create slope development standards that protect the environment and safety in both the short and long term, as well as the aesthetics from both near and far observation points within the Town.

Recommendations:

- Henniker should ensure that required siltation and sedimentation controls are in place prior to the start of any construction activity and that they remain functional during the entire construction process. Erosion and sedimentation control measures shall be in accordance with "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire," as prepared by the New Hampshire Department of Environmental Services (NH DES), Rockingham County Conservation District, and USDA Soil Conservation Service, August 1992.
- Henniker should allow steep slopes to be used for recreation purposes, such as hiking, cross country skiing, and others that do not alter the natural surface configuration or vegetative cover of the land.
- Henniker should encourage land owners to protect steep slopes with slope easements.
- The Site Plan and Subdivision regulations should categorize land with a slope greater than 25% as "Unbuildable" land.

Scenic Views

The landscape of a community defines its cultural, natural, agricultural, and historical heritage and provides residents with a sense of identity. Henniker's identity is marked by the views to and from roadways, bodies of water, and high peaks. Scenic vistas of flat fields, mountains, and water bodies can be seen from Dodge Hill Road, Ray Road, Hemlock Corner Loop, Shaker Hill Road, Mount Hunger Road, and Bear Hill Road, just to name a few.

A scenic resource evaluation, from Vermont's *"Mad River Resource Protection Plan,"* provides a list of key scenic attributes that transfer well to Henniker. These key scenic attributes include:

Physical Features
Hills and hillsides
Rivers, ponds, streams and wetlands
Vegetation, greenery, foliage and wildflowers
Elements of a working landscape such as animals, farm buildings, crops, etc.
Agricultural lands
Wildlife

Important Aspects of Views
Diversity and contrast within a view such as a patchwork of open and wooded land
Location of open space next to historic New England housing, hedgerows and stonewalls
Continuous views that "follow" you as you travel along the road or are deep views
Lack of scattered development or other disturbances in views
Vantage points – the point or area that provides access to the view

Henniker, with its hilly topography, offers numerous scenic views of rolling hills, ponds, and streams. See the **Steep Slopes and Scenic Vista Map** for these locations. As more development occurs within the Town, the scenic views and locations to observe such views will become more scarce.

Issues, Goals and Recommendations

Issue: Most of Henniker's valuable views and vistas are protected only by the willingness and desire of the landowners. No comprehensive inventory or analysis exists of Henniker's scenic views and vistas.

Goal: Identify and develop an educational program that would encourage the protection of scenic viewsheds in Henniker.

Recommendations:

- The Planning Board should consider, and require an analysis of, the impacts that development, such as telecommunication towers, could have on scenic views from within the Town, as well as on those in surrounding communities.
- Henniker should research the idea of using scenic easements to protect desirable viewsheds from development.

Surface Water Resources

Henniker lies within two main watersheds: the Contoocook River Watershed and the Piscataquog River Watershed. These watersheds can be broken down into 16 smaller watersheds, including the Amey Brook watershed, the Colby Brook watershed, and the Liberty Hill watershed, just to name a few.

Like all rivers, the Contoocook River naturally floods, creating water areas where excess water can drain, called floodplains. Flooding is a natural process of the river system that serves to slow floodwaters, thus reducing damage further downstream. Flooding also deposits minerals for the soil and recharges groundwater resources, as well as providing habitat to a wide variety of plants and animals. With the Hopkinton-Everett Dam in place to control flooding, much of the Contoocook River's environmental benefits have been lessened.

The Contoocook River drainage area covers about 766 square miles, not all of which is in Henniker. River systems, like the Contoocook River, link communities; one community's actions can affect the downstream water quality and quantity for other communities. The water quality of Henniker ponds was assessed as part of the Natural Resource Inventory with regard to eutrophication and acidification. This included the results of two water quality surveys conducted in the fall of 2000 and the fall of 2001. Samples and measurements were taken in 11 ponds for dissolved oxygen, temperature, clarity, total phosphorus, chlorophyll A, specific conductivity, pH, and turbidity. These results are compared with water quality data from 132 lakes and ponds across New Hampshire in 2000. In addition, major changes in historic land use

are identified based on aerial photographs and USGS topographic maps from 1929, 1946, 1953, 1975, 1988 and 1998.

The following chart gives information on the size of the rivers, streams, and ponds that are located throughout Henniker. These resources can also be seen on the **Surface Water, Wetlands, and Floodplain Map**.

Name	Area/Length
Blaisdell Pond	2.2 acres
Carr Pond	11 acres (1.9 acres in Henniker)
Colleague Pond	7.0 acres
Craney Pond	36.5 acres
French Pond	38 acres
Grassy Pond	13.4 acres (2.9 acres in Henniker)
Keyser Pond	17.6 acres
Long Pond	91.1 acres
Middle Pond	7.2 acres
Morrill Pond	9.3 acres
Mud Pond I	7.8 acres
Mud Pond II	10.8 acres
Pleasant Pond	85.1 acres
Unnamed Pond I	17.7 acres
Unnamed Pond II	3.8 acres
Upper Pond	26.7 acres
Amey Brook	6.1 miles
Bean Brook	2.2 miles
Black Brook	2.3 miles
Brown Brook	1.9 miles
Cascade Brook	1.4 miles
Chase Brook	2.4 miles
Colby Brook	2.7 miles
Contoocook River	10.8 miles

Source: Natural Resource Inventory (NRI), 2000 and 2001
Henniker Conservation Commission

The Town has an obligation to protect the water quality for the benefit of human and wildlife use. Conservation efforts in the past have begun to help protect these resources through Town Ordinances and through the acquisition of conservation land and easements. It is important for the Town to continue to take proactive steps to ensure that the quality and aesthetic value of the Town's surface water resources are protected and enhanced.

Issues, Goals and Recommendations

Issue: Septic systems and wastewater treatment plants are potential local sources of point source pollution into surface water resources.

Goal: Ensure that septic systems and the Henniker wastewater treatment plant are efficiently operating and properly managed to minimize all adverse effects on the water quality.

Recommendations:

- Henniker should initiate a public education campaign regarding the proper maintenance of septic systems.
- Henniker should investigate the possibility of creating or expanding the public sewer system into existing areas with marginal leachfield capacity.

Issue: Buffers adjacent to shoreland reduce the adverse effects of human activities on these resources by protecting water quality, protecting and providing wildlife habitat, reducing direct human disturbance, maintaining aesthetic qualities, and providing potential recreational value. The loss of buffers through variances/waivers and through illegal activities should be minimized.

Public education is needed to raise awareness of the sensitivity of the water bodies and the importance of careful land management. This is especially critical because landowner education, understanding, support, and cooperation will be much more effective than the enforcement of misunderstood or unsupported regulations. In addition, a well-educated constituency advocating the appropriate development of waterbodies will more likely support and adhere to the regulations made by Town decision makers.

Goal: The Town should provide for the comprehensive protection of shoreland through regulatory, educational, and voluntary efforts.

Recommendations:

- The Conservation Commission should facilitate the distribution of information for waterfront property owners to encourage voluntary shoreland protection.
- Realtors and the Town should work to help new landowners understand the importance of protecting their shoreland, setting houses back from water bodies, retaining vegetative screening, and preserving natural buffers along the water for wildlife.
- Henniker should institute an education system for owners of property with shoreland. Under such a system, when a permit involving land disturbance (e.g., building, septic, etc.) is applied for on a property with shoreland, the applicant would receive a packet of information. The packet would include information about the Town's ordinances, State laws, and the reasons for these protective measures of shorelands.

Issue: The transport of sediments, pollutants, and nutrients associated with stormwater runoff is the largest contributor to non-point source pollution in New Hampshire. Watersheds with less than 10%-15% impervious coverage do not experience adverse water quality and biological impacts, while watersheds with greater than 15% impervious coverage tend to show higher degrees of impairment and degradation, due to runoff.

Goal: The Town of Henniker should update its ordinances and regulations to adequately address the issues of stormwater management, erosion, and sediment control to improve the quality of the Town's waterbodies.

Recommendations:

- Henniker should integrate into its ordinances a requirement for erosion and sediment control plans and stormwater management plans for projects that involve the disturbance of more than 1 acre of land and that will create more than 15% of impervious surface cover. These plans should be required for those areas that drain directly into a waterbody.
- Henniker should update its zoning regulations to require the maximum impervious coverage to be 15%, which includes the building footprint, driveway, parking, and accessory structures, in areas with numerous water bodies or water quality concerns. There should be a provision to increase impervious surface by variance.

Issue: Public awareness of the negative environmental impacts of incremental changes and development within the watershed needs to be strengthened within the community.

Goal: A public education campaign regarding the negative environmental impacts of incremental development, changes to the landform, and variances/waivers to regulations and ordinances needs to be conducted.

Recommendations:

- Public awareness should be raised regarding the importance of water bodies in the Town and ways to protect them. Volunteer watershed/waterbody advocacy groups should be encouraged to work with landowners and monitor water quality.
- Educate the Zoning Board of Adjustment, Conservation Commission, Planning Board, and other Town Committees and Departments about the negative local impacts caused by continual incremental variances, special exceptions, and waivers to wetland and water protection ordinances/regulations. This education program should also include information about how the laws and ordinances are constructed and enforced, as well as information about the reasons and justification for the water protection measures that are in place.

Issue: Henniker needs to preserve surface water quality and mitigate existing problems with French Pond.

Goal: The Town should maintain a water quality monitoring program of Henniker ponds and streams.

Recommendations:

- Support the Conservation Commission's annual water quality monitoring of Henniker ponds.
- Establish streamflow monitoring stations for measuring streamflow and monitor water quality.
- Establish a publicly accessible web-based data base of the water quality of Henniker surface waters.
- Continue work on addressing the eutrophication of French Pond.
- Monitor for the presence of exotic aquatic species in Henniker's ponds.

Wetlands and Floodplains

Two potential problems caused by human development near the water's edge include the loss of property and degradation to wildlife. The two types of land are most susceptible to degradation are floodplains and wetlands, both of which are quite extensive in Henniker.

After the torrential rainfall and considerable snowmelt in 1936 and the hurricane of 1938, both of which caused severe flooding in New Hampshire, the US Army Corps of Engineers created several flood control areas and dams in the region to protect property owners and their land. The Hopkinton-Everett Reservoir is approximately 10,018 acres and protects communities all along the Contoocook, Merrimack, and Piscataquog Rivers from future flooding, with the exception of Henniker. Henniker is protected not by the reservoir itself, but by an easement that prevents the building of homes and businesses in areas that would be inundated if the reservoir were to reach full capacity.

By slowing and storing floodwaters, floodplains reduce downstream flood damage. Floodplains are relatively flat areas of land bordering a river or stream that result from the accumulations of sediment deposited by the river during times of flooding. By trapping sediments and reducing erosion, undeveloped floodplains play an important role in preventing pollution of rivers and streams.

As development occurs upstream in a watershed, runoff volume and rate are increased by the larger area of paved and other impervious surfaces (e.g. roofs and driveways). Flooding can consequently become more frequent and floodwaters more damaging since they are moving faster. Preserving floodplains becomes increasingly important as uplands are developed, as does attention in local ordinances to minimizing the amount of impervious surfaces.

A floodplain, in its natural state, is the most cost-effective way to reduce flood damages, and has been found to be far less expensive than dams, channelization, and other structural methods. Undeveloped floodplains also trap sediments and pollutants and reduce erosion. Protecting floodplains helps to reduce water pollution; conversely, development in the floodplain leads to more rapid movement of pollutants into the stream channel, which degrades the quality of the water.

Wetlands are typically defined by three parameters: drainage, soil type, and vegetation. The National Wetlands inventory defines wetlands by hydrology, hydric soils, and vegetation, including trees and plants that dominate wetland areas and require wet conditions to grow. The definition in the New Hampshire Code of Administrative Rules for the State of New Hampshire Wetlands Board for Wt 101.01 Freshwater Wetlands is: "Freshwater wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Wetlands are also defined as poorly or very poorly drained soils by the Natural Resources Conservation Service. Very poorly drained soils have a layer of muck or peat overlaying material such as sand, silt, and clay. The thickness of the muck or peat may vary depending on the soil forming process. The soil series and land types commonly associated with very poorly drained soils include Marshy, Mixed Alluvial, Saco, Muck and Peat, and Scarboro. Poorly drained soils that are slightly better drained due to a thinner layer of muck or peat and include the following soils: Augres, Rumney, Limerick Variant, Ridgebury. Of the total land acreage in Henniker (28,352 acres), 7.6% is comprised of hydric soils, as can be seen in the chart below.

Hydric Soils	Acreage	Total Percent of Town
Poorly Drained	1,279	4.5
Very Poorly Drained-organic base	638	2.3
Very Poorly Drained-mineral base	101	0.4
Marsh	128	0.5
Totals	**2,146**	**7.6**

1998 Natural, Cultural, and Historical Resources Inventory of the Central New Hampshire Region, CNHRPC

Wetlands have been viewed as areas with little economic value and have been subjected to filling, draining, and dumping with little regard for the consequences. However, science has shown that wetlands provide a number of benefits to the community. Wetlands serve seven purposes: flood control, water storage and ground water recharge, erosion and sedimentation control, pollution filtration, wildlife habitat, education and recreation, and environmental health and diversity.

1) Flood Control - Because of wetland soils and vegetation, wetlands act as a giant sponge during periods of high run-off or flooding and then release this stored water slowly during drier periods. Therefore, flood levels are lowered during heavy rains and water levels are maintained during drier months. Wetlands often absorb water that would otherwise run directly downstream and cause increased flooding and property damage.

2) Water Storage and Groundwater Recharge - The water absorbed in the wetlands can move up by means of evaporation, laterally by flowing in streams, and downward, thus recharging groundwater. All three movements may occur simultaneously, but one movement may dominate over the others depending generally on the season and such factors as rate of evaporation and plant uptake. Wetlands underlain by stratified sand and gravel will have the highest yielding wells. Water will percolate down through the sand and gravel more than glacial till and will recharge ground water supplies.

3) Erosion and Sediment Control - Because wetlands absorb and slow down the rate of runoff, the water's erosive powers are lowered. Dense vegetation also acts as natural catches for any eroded materials. However, the general cause of erosion control is the reduced rate of runoff.

4) Pollution Filtration - Wetland vegetation absorbs pollutants, such as organic material, bacteria, nitrates, and phosphates found in water. Nitrates are converted to atmospheric nitrogen or into plant nutrients. Phosphates are used in plant tissue. However, not all pollutants are absorbed by vegetation. In addition, wetland vegetation has a limited absorption ability and should not be overloaded with pollutants, as high levels of pollutants present numerous severe health hazards and can render such areas useless.

5) Wildlife - Wetlands offer a wide variety of vegetation. The diversification of vegetation consists of many producers in natural food chains and provides food for numerous animal species. The wetlands vegetation and water provide food, habitat, and breeding grounds for a wide variety of wildlife and fish.

6) Education and Recreation - Wetlands provide natural areas of study for all ages as they offer innumerable flora, fauna, and wildlife habitat. Also, wetlands provide excellent opportunities to study successional patterns and the effects of pollution or land use. Wetlands often represent the only remaining natural lands left in a town and serve as excellent sites for photography, canoeing, snow-shoeing, hiking, fishing, and hunting.

7) Environmental Health and Diversity - Generally, only wetland plants can tolerate the high levels of water and only certain types of animals and wildlife can tolerate such an environment. Because the wetlands offer a diversity of vegetation and animal life, they create a more stable environment in the surrounding area.

Henniker has thirty-four wetlands, a significant number considering that four of them are larger than 25 acres. Henniker is dotted with wetlands that were inventoried, field-checked, and mapped by the US Fish and Wildlife Service, between 1986 and 1990.

Wetlands and floodplains have a multitude of values that include flood control, wildlife habitat, pollutant removal, recreation, groundwater protection, and erosion control. Controlled floodplains create areas for wildlife, as well as protect the community from developing in areas with excess water flows. These systems that provide significant water quality and wildlife benefits can be found throughout the Town. See the **Surface Water, Wetlands, and Floodplain Map** for more information.

Issues, Goals and Recommendations

Issue: The primary impact facing wetlands in Henniker today is the effects of development within their buffers and within the wetlands themselves.

Goal: Maintain the current variety and quantity of wetlands in Henniker and ensure that wetlands retain their functional values. The Town should provide for the comprehensive protection of the wetlands through regulatory, educational, and voluntary efforts.

Recommendations:

- Henniker should identify wetlands for protection and/or acquisition based on their ecological importance, unique nature, or because of their location in the Town.
- The Conservation Commission should institute an education system for owners of property with wetlands. Under such a system, when a permit involving land disturbance (e.g., building, septic, etc.) is applied for on a property with wetlands, or may impact property with wetlands, the applicant would receive a packet of information. The packet would include information about the Town's ordinances, State laws, and the reasons for these protective measures of wetlands.
- The Wetlands Ordinance should be revised to use the new site specific standards from the Society of Soil Scientists of Northern New England (SSSNNE). Based on scientific justification, additional levels of protection through the Wetland Ordinance should be considered to address the specific resources found in Henniker.
- The careful and strict enforcement of the Wetlands Ordinance should be a high priority for the Town.

Issue: Wetlands in undisturbed blocks of habitat or in close proximity to other wetlands are often more valuable than wetlands in disturbed settings or fragmented landscapes. Therefore, the functional value of wetlands depends, to some degree, on their land usage context.

Goal: Protect wetlands as part of the broader ecosystem.

Recommendations:

- When evaluating development proposals that affect wetlands, the landscape-level context and impacts should be considered. Rather than focusing on gross wetland acreage, consider fragmentation, upland habitats, buffers, stormwater effects, and other such impacts.
- Identify landscapes, habitat blocks, corridors, or other areas deserving protection based on the value of the wetlands and the landscape context. Take steps to protect these areas.

Issue: Large areas of Henniker (2,414.75 acres) are not owned or controlled by the Town, but are managed and owned by the Federal government (Army Corps of Engineers) and managed by the NH Department of Resources and Economic Development (DRED).

Goal: Maximize the benefit and use of this flood control area for Henniker residents.

Recommendations:

- Henniker should continue to use the flood control land for recreation and educational purposes. Educate the public on the environmental, educational, and recreational benefits of the area.

- Henniker should work more cooperatively with the Army Corps of Engineers and NH DRED in order to encourage the use and activities within the flood control area that will be both beneficial and productive to all parties.

Drinking Water and Aquifer Protection

Groundwater is found below the land surface within cracks and fractures in bedrock, or in the spaces between particles of soil and rocks. Saturated zones in sand and gravel, and in fractured rock formations that receive, store, and transmit water to wells and springs are called aquifers. Rain and melting snow percolate downward into this zone as groundwater recharge. The land surface that is principally involved with a specific groundwater recharge is called the recharge area. As the water moves down, plants consume a portion, some is evaporated, and some is retained in the soil. The remaining water percolates down, usually very slowly, to recharge aquifers. Some of this water will eventually discharge to streams, lakes, and wetlands.

Aquifers serve three essential functions: filters, transmitting devices, and reservoirs. Impurities are filtered out of the water as they pass through the soil and rock. Suspended material is filtered out by surface soil and as the groundwater moves through the aquifer, other impurities are removed by numerous processes. Aquifers transmit water to and from surface lakes, streams, and wetlands through subsurface locations. This is important because aquifers may supply a base flow to water bodies during dry periods, in addition to acting as natural storage reservoirs for domestic, agricultural, and industrial water usage.

The most productive aquifers in New Hampshire are in the deeper deposits of sand and gravel that were deposited by glacial streams or subsequent water flow, and are located near streams or lakes, which can augment the surface recharge of rainfall and snow melt. Also important are the area, extent, and thickness of the aquifer. Most of the highly productive aquifers in New Hampshire consist of unconsolidated deposits of gravel and sand, flood plains, abandoned river beds, and alluvial valleys.

An extensive high-yield stratified drift aquifer underlies the Contoocook River Valley in east Henniker Village. Two medium-yield aquifers also exists in Henniker: one is located in West Henniker along the Contoocook River and the other lies along the west side of Route 114, just before the Bradford Town Line. Henniker depends on the high-yield aquifer for its drinking water supply. Two gravel packed wells, located on the south side of Route 114, supply water to Henniker Village. Other wells are found on Depot Hill Road and off of Foster Hill Road Extension. The Town does not use any surface water bodies for its public drinking water supply. Most of the households outside of the Village have their own private wells for their drinking water source.

Because aquifers are such a valuable natural resource, they should be protected. Extensive filling or placement of abutments and retaining walls may obstruct groundwater flow, raise the water table, and affect recharge characteristics. Extensive highway cuts and the increase in impervious surface may divide aquifers, destroying shallow water supplies, or allow

groundwater to flow out along the excavation, thus creating even lower water tables, reduced volumes of stored water, and a decline in well yield.

The recharge of the underlying aquifers becomes inhibited if these areas are covered by development and impervious material. The surface of the soil would be physically sealed by various materials, which would not allow any water to permeate the substance. Not only would the aquifer's ability to yield stored water be impaired, but there would most likely be increased surface runoff and, therefore, an increased possibility of flooding.

Those areas with the highest water quality and quantity should have the least development, whether they are residential or industrial. The areas where there is the least potential for aquifer recharge to exist are the more desirable and suitable areas for development, if there are no other development concerns in place.

At some point, the rate of water removal from the aquifer may be equivalent to the rate of water entering the aquifer (safe yield). If greater amounts of water are withdrawn than the amounts of water entering the aquifer, there will be an overall lowering of the water table, which may lead to a number of undesirable consequences. Consequently, it is important to protect and know the safe yield and the location of large quantities of groundwater so as not to damage the quality and quantity of the groundwater supply.

Because of the necessity of clean, safe, and available drinking water for the residents of Henniker, there needs to be an awareness and emphasis placed on protecting this important resource. See the **Aquifer and Drinking Water Map** for more information on these resources.

Issues, Goals and Recommendations

Issue: Drinking water resource protection is currently done on a community by community basis, despite the fact that the resource transcends political boundaries.

Goal: Create a regional drinking water resource protection program that is adopted by all communities that share the resource.

Recommendations:

- A regional initiative for aquifers and surface watersheds should be pursued and include partnerships with towns adjacent to Henniker, the Department of Environmental Services, and non-profit conservation organizations. This initiative should include a strategy of water resource protection using scientific methods of identification of strategically located and important lands, followed by appropriate protective measures, including conservation easements, which may restrict development within those critical areas. Measures should also be created to ensure that development within the source-water protection areas is conducted in a way that protects the water resource.
- The adequacy of the drinking water resource must be assessed in reference to the regional demands on the resource.

Issue: The Town of Henniker should research the possibility of creating an Aquifer Protection District.

Goal: Develop an Aquifer Protection District.

Recommendations:

- Henniker should research the possibility of creating an aquifer protection district that would provide comprehensive protection for the aquifer resource based on scientific findings, while at the same time ensuring the provisions are reasonable and enforceable.
- To complement comprehensive regulatory protections, the Town should identify landowners within the proposed Aquifer Protection District. This approach should inform landowners that they are within this District and explain to them how they can properly manage their land to protect the resource.

Sand and Gravel Deposits

Large deposits of sand and gravel can be valuable sources of construction materials. Because of their permeability (the ability to allow water to flow through), sand and gravel deposits also tend to be good sites for aquifers and wells. Permeability also makes sand and gravel deposits very vulnerable to contamination, which can spread quickly once spilled or dumped. Therefore, special attention should be given to regulating land uses that occur over sand and gravel deposits.

The Town of Henniker issues permits for commercial sand and gravel excavation under the authority of RSA 155E and the Henniker Earth Moving Ordinance. These regulations, along with the process of reviewing permit applications for gravel removal areas, should be designed to ensure that environmental resources and quality will not be negatively impacted.

There are currently ten privately owned and two Town-owned sand and gravel excavation sites in Henniker. See the **Water Resources and Excavation Site Location Map** for the locations of these existing excavation sites in Town.

Issues, Goals and Recommendations

Issue: The Town currently has in place an Earth Moving Ordinance, but it does not require, in all cases, scientific site-specific data.

Goal: Update and modify the ordinance so that it will be a comprehensive, science-based set of regulations that will work to protect the water quality and environmental resources located in the Town.

Recommendations:

- It is recommended that the Town update it's Earth Moving Ordinance to be based upon a geologic study to ensure that any mining that occurs will not adversely affect local aquifers and wells.

- The Earth Moving Ordinance should be included in the Henniker Zoning Ordinance.
- Excavation from granite quarries should not be exempt from the regulations outlined in the Earth Moving Ordinance.

Issue: There are currently 10 privately-owned and 2 Town-owned, active sand and gravel pits that will eventually need to be reclaimed once all of the financially viable deposits have been removed. Reclamation means the restoring of an excavation site to a standard at least equal to those outlined in Town regulations.

Goal: As part of reclamation of the sand and gravel pits located within the Town, develop reuse plans for the sites.

Recommendations:

- Any reuse of the sand and gravel pits located within the Town should be evaluated as to the appropriateness for the proposed activity, and best management practices should be used to prevent contamination of subsurface water bodies, as well as adjacent streams, ponds, rivers, and wetlands.
- The spent gravel pits should be managed to their fullest and best potential, while placing environmental quality and protection in the forefront.
- An evaluation process should be undertaken by the applicant, which will include an evaluation of needs, costs, and benefits of the gravel pits once they are reclaimed and prepared for reuse.
- Encourage the incremental reclamation of the site throughout the excavation process so as not to leave large areas of disturbed land open.

Solid Waste

Henniker, like most towns in the central New Hampshire region, disposes of its trash at the Wheelabrator Incinerator in Penacook. In 2000, 2783.29 tons of trash were disposed of in Henniker, which is an increase from 2579.35 tons in 1999. In 2000, 15% of Henniker's trash was recycled, saving the Town in disposal costs. Although 15% is an admirable recycling rate, it dropped from the previous year's 18.6% rate of recycling. The table below highlights Henniker's 2000 recycling results.

2000 Recycling Results

Item	Weight in Tons
Used Clothing	12.4
Plastics	7.9
Cardboard	97.5
Newspapers/Magazines	119
Glass	55 (estimate)
Aluminum Cans (Lions Club)	4.4
Metal and Tin Cans	193.5
Auto/Household Batteries	1.5
Propane Tanks – 20 lb.	220 tanks
Propane Tanks – 1 lb.	200 tanks
Used Oil	2,200 gallons
Swap Shop	5.0 (estimate)
Leaves	3
Total	**499.2**

Source: 2000 Annual Henniker Report

All residential, business, and New England College trash and recycling can be disposed of at the Town transfer station.

Issues, Goals, Recommendations

Issue: Solid waste disposal has high financial and environmental costs associated with it. Individuals and businesses have the ability to reduce these costs through regulatory and voluntary measures.

Goal: To reduce the amount of waste generated and disposed of by Henniker residents and businesses, as well as to increase the amount of recycling in Town.

Recommendations:

- Increase public education about the methods and benefits of reducing, reusing, and recycling waste through providing information on: backyard composting, proper disposal of household hazardous waste, and existing recycling options.
- Research "Pay-As-You-Throw" and mandatory recycling disposal options for the Town of Henniker.
- Continue to work with educational institutions and the local business community to create a recycling and solid waste system that is beneficial to all parties.
- Work with other communities to increase the types of recyclable materials accepted at the Henniker transfer station by pooling resources and the amount of material collected.

Farmland

The Town of Henniker Zoning Ordinance defines agriculture as "pertaining to all operations of a farm, such as cultivation, conserving and tillage of the soil, dairying, greenhouse operations, the production, cultivation, growing and harvesting of any agricultural, floricultural, sod or horticultural commodities, the raising of livestock, bees, fur-bearing animals, fresh water fish or poultry or any practices on the farm as incident to or in conjunction with such farming operations."

Over the years, there has been a substantial change in agricultural land use in New Hampshire. Much of this change is due to the increased pressure placed on landowners for residential and commercial development. The increase in the acreage of farmland from 1992-1997 may be due, in part, to alternative type of agriculture and the conversion of forestland into agricultural land.

Acreage of Farmland in Merrimack County

Year	Acreage
1953	86,900 acres
1974	63,345 acres
1992	46,610 acres
1997	63,417 acres

Source: 1997 USDA Census of Agriculture

Farmlands provide much more than a place to produce crops and livestock. In a state as heavily forested as New Hampshire, fields and other farmland provide habitat for a variety of wildlife species and are important elements of scenic views. Farmlands also provide an important historic link with the past. Henniker's agricultural heritage is no longer as prominent a symbol of the community as it once was; however, a number of continually operating farms remain in Henniker.

These farms contribute significantly to the character of the community and provide an economically beneficial use of the land, for both the Town and the landowner, and should be encouraged and supported. The State has taken steps to promote farming through RSA 672:1, III-b and RSA 432:33, both of which are described below.

> RSA 672:1, III-b: provides "Right-to-Farm" protections by stating that farming "…shall not be unreasonably limited by use of municipal planning and zoning power." Best Management Practices (BMPs) developed by agricultural and natural resource professionals that address public health and safety concerns should be employed. By referring to standards of performance embodied in BMPs, Henniker can identify when a nuisance is occurring on a farm.
>
> RSA 432:33: provides that "No agricultural operation shall be found a public nuisance as a result of changed conditions in or around the locality of the agricultural operation, if such agricultural operation has been in operation for one year or more and if it was not a nuisance at the time it began operation."

The Town needs to ensure that potential conflicts between farming and residential uses are minimized and that agriculture is seen and treated as a welcome and integral part of the community.

Issues, Goals and Recommendations

Issue: Henniker continues to lose farms to increased development pressures, economic pressures, and an aging farming population.

Goal: Try to encourage the retention of current farmland and the development of new farm operations in Town as a preferred type of economic development.

Recommendations:

- Active farmland should be targeted for conservation and farmland easements. The NRCS Farmland Protection Program and other programs through the USDA and the State should be promoted in the farming community as a means to continue farming operations.
- Proposed residential developments abutting existing farms should be required to meet certain criteria that will serve to minimize impacts on both the farm and residential development.
- Establish clear criteria that would allow new agricultural and livestock uses in residential zones and ensure that nuisances to the residential areas are avoided. Restrictions should include, but not be limited to, a minimum lot size established for each of the various types of agricultural and livestock uses, restrictions on the types of agricultural operations, additional setback requirements, a requirement for waste management plans, animal density restrictions, and other requirements that will serve to minimize impacts on residential neighborhoods, and yet ensure that the agricultural operations are viable.
- Henniker should continue to offer and support the current use tax program.
- Henniker should support, through zoning and possibly annual recognition programs, the farmers in the community. The Town should also encourage alternative agricultural operations and local farm stands, in order to promote the preservation of farms and farmland in the community.
- Henniker should work with the area farms/farmers in creating a public education campaign for local community residents focused on the environmental, societal, historical, and cultural benefits of retaining and preserving farmland in the community
- The Planning Board should research the possibility of providing flexibility in zoning, subdivision, and site plan review regulations for agricultural uses and/or related activities.

Forests

Forests serve a number of functions in the community and region, including: protecting water supplies and watersheds, serving as an energy source, providing lumber, enhancing wildlife and their habitat, providing recreational opportunities, and contributing to the rural character of the community.

Both the State and the Town manage forests in Henniker. The Town forest system contains 3 forests that total approximately 74 acres. They range in size from 5.5 to 52 acres and are managed by the Town. The State forest system has a total of four forests in Henniker totaling 182.36 acres. Henniker has 224.1 acres of designated forests. The Town forests are managed as a multi-use resource, including timber harvesting, recreation, and wildlife habitat. There are also twelve tree farms in Town totaling 1,754 acres, or approximately 6.3% of the land area.

The total number of acres of forest land, including Town and State forests and tree farms are listed below. This list only contains lands designated as State Forests, Town Forests, or tree farms. There are many other forested lands in Henniker but they do not fall into these three categories.

Forest Lands in Henniker

Forest Land	Acres
Buehler/Salmen Town Forest	52
Craney Pond Road Town Forest	5.5
Preston Memorial Town Forest	16.5
Ames State Forest	16.6
Craney Hill State Forest	20
Totten Trails State Forest	109
Vincent State Forest	4.5
Tree Farms (12)	1,754
Total	**1,978.1**

Source: 2000 Henniker Town Report "New Hampshire's Vanishing Forests" SPNHF 4/01

In addition to providing recreation, wildlife habitat, and open space, forests provide revenue to the community through a timber tax, which is assessed and collected by the Town when timber is commercially harvested from all land in Town, not just designated forests. As can be seen below, since 1995, Henniker has collected $137,772 from this tax, which goes into the general fund.

Year	$ Collected
1995	$21,014
1996	$40,578
1997	$15,422
1998	$16,414
1999	$17,077
2000	$27,267
Total	**$137,772**

Source: 1995-2000 Henniker Town Reports

Forests provide Henniker with areas of recreation, wildlife, open space, and rural character that can not be easily replicated once destroyed.

Issues, Goals, and Recommendations

Issue: The Town Forests, and many of the forest lands in the Town, are managed under the multiple-use concept. As the local population increases, demands placed on the forests will also increase. The selling of timber from Town Forests can supply the income necessary for the purchase and protection of additional open space, as well as provide a permanent source of forest products, recreational trails, and wildlife habitat.

Goal: The Town Forests should continue to provide undeveloped "open space" to help the Town maintain a rural ambiance and character, while at the same time protecting cultural, ecological, historical, and other unique features found in the forest.

Recommendations:

- Henniker should hire a Town Forester to assess the three Town Forests and make recommendations as to their management.
- A Town Forest Management Plan should be created and updated at least every ten years in order to assess the Plan's effectiveness and adjust the management to the changing demands on the forest resource.
- Forest management information should be made available by the Town to private woodland owners to encourage long-term planning and consideration of all aspects of the forest ecosystem, including wildlife and watershed concerns.
- In order to reduce misunderstandings regarding the forest management activities on Town land, the public should be informed as to the timing and reasons for the activities that are taking place within the Town Forests.
- The Town forests should be used as recreational areas by the Town for formal and informal activities and programs.

- Consider using the timber tax collected by the Town to fund conservation programs, education, and land protection efforts.

Greenways and Trails

Greenways are corridors of open space managed for conservation and recreational purposes. Greenways often follow natural land or water features, and link nature reserves, open space, farms, forestland, parks, cultural features, and historic sites with each other, as well as with populated areas. Some greenways are publicly owned, some are privately owned, and some are the result of public/private partnerships. Some appeal to people, while others attract wildlife. In more developed areas, greenways can encompass natural or built features and can be managed primarily for resource conservation or recreation.

In more rural areas, greenways are natural corridors linking large unfragmented natural areas that preserve wildlife habitats, and migration routes. Greenways serving as wildlife corridors can be virtually any type of traversable land, preferably of at least 200 feet in width. Common tracts of land that can be used as greenways include Class VI roads, railroad right-of-ways, and buffer areas along agriculture lands, forests, or bodies of water. Creating and maintaining a greenway system will help ensure that parcels of open space, which include forest, wetland, and agricultural lands, do not become isolated islands, detached from one another by development.

Trails that make up the greenway system, as well as those that are located within Town forests and conservation lands, need to be maintained and expanded. Whether these trails are used for walking, bicycling, horseback riding, cross-country skiing, snow-shoeing, or some other form of recreation, they help to form an important link between the natural environment and development by allowing people to access and enjoy nature in a low-impact manner.

Henniker has a large system of both public and private trails that may be used for many motorized and non-motorized activities. The *Open Space Trail System Plan: Henniker, N.H.* (1999) has detailed information regarding use of trails and the locations. This publication also has reference maps in the appendix. The **Class VI Roads and Trails Map** in the Transportation Chapter also contains some of this information.

Issues, Goals and Recommendations

Issue: The Town needs to take a proactive approach to officially create this informal greenway system to link the Town's conservation and open space lands.

Goal: Create, expand, strengthen, and promote a Henniker greenway trail system.

Recommendations:

- Identify existing and potential greenways in the Town, as well as those in abutting Towns that run along the Henniker border.
- Expand and strengthen the Henniker greenway system through acquisition of conservation easements on important lands through donation, purchase, or partnership

with public and private conservation groups. A conservation fund should be maintained to allow matching funds for Town participation as opportunities arise.
- For all streams in Town, maintain setbacks in the Zoning Ordinance and reclaim areas where setbacks have been compromised. This is essential for the maintenance of this important relationship between nature and human habitation.
- Investigate the use of Class VI roads and discontinued rail beds as greenway/trail/wildlife corridors that could be used to link existing open space and recreational lands.
- A priority should be given to protecting land that would link key conservation parcels that the Town already owns or has easements on for greenway creation.
- The Town should investigate reclassifying Class VI roads that link important parcels of open space, recreation lands, and forest lands to Class A trails.
- The Town should implement the recommendations that were made in the July 1999 *"Open Space Trail System Plan: Henniker, NH."*
- Priority should be given to acquiring parcels of land that would help to connect and expand current trails, as well as the proposed trail network throughout the Town.
- Outreach should be done to work with private land-owners to allow Town-sponsored trails to cross their land if it would help link important pieces of the trail network.

Recreation

Recreational use of land ranges from organized sports teams using fields and courts, to simply walking down a scenic roadway or using trails for snowmobiling. Henniker has a vast amount of land, offering a wide variety of recreational opportunities and facilities. The following is a partial list of publicly and privately owned land and facilities used for recreation by residents, schools, and businesses in Henniker.

Recreation Lands in Henniker

Recreation Areas	Type	Location
Brown Way	Public	From Old Hillsboro Rd., the north side of the Contoocook River to the Hillsborough T/L
Buehler/Salmen Forest	Public	East side of Craney Pond
Ames State Forest	Public	North of Old Route 114, close to the Hopkinton T/L
Amey Brook Park	Public	On the North side of Old Concord Road
Azalea Park	Public	Between stone bridge and covered bridge on the north side of the river
Colby Hill Forest	SPNHF	Off of Colby Hill Road
Community Center Park	Public	In front of Masonic Hall
Contoocook River Access	Public	River Road
Craney Hill Fire Tower	Public	Craney Hill
Craney Pond Town Forest	Public	Along Craney Pond
Craney Hill State Forest	Public	Off of Old Concord Road
Devil's Den Natural Area	Public	Off of Route 114, on Mink Hills Road
Preston Memorial Forest	Public	Warner Road
Foster Conservancy	SPNHF	Off of Dodge Hill Road
French Pond Boat Launch	Public	At French Pond, off of Dodge Hill Road onto French Pond Road
Henniker Community School Grounds	Public	Western Avenue
Hopkinton-Everett Reservoir	Public	River Road and Old Concord Road
Keyser Pond Fishing Area /Boat Launch	Public	Keyser Pond, just south of Route 202/9, close to the Hopkinton Town Line
Leather Board Bridge Trails	Private	Off of Rt.114, left onto Ramsdell Rd., by steel bridge
Lee Clement Arena	Private	Off Route 114 on Grove Street
Memorial Park	Public	In front of Town Hall
Mount Liberty Natural Area	Public	Off of Liberty Hill Road
New England College Fields	Private	Henniker Village
Old Concord Road Trails	Public	Off of East Main Street, on Old Concord Road
Pat's Peak Ski Area	Private	Off of Flanders Road
Pleasant Pond Fishing and Boat Launch	Public	Off of Western Avenue, on Quaker Road at its intersection with Dudly Pond Road
Pleasant Pond Picnic Area	Public	Before Pleasant Pond boat launch
New England College Proctor Hills Trails	Private	Behind NEC Lee Clement Ice Arena
Upper Pond Boat Launch	Public	Upper Pond, off of Ray Road
Totten Trails State Forest	Public	At junction of Butter Road and Chase Road
Vincent State Forest	Public	T/L with Weare
Woodman Park	Public	Triangle at Main Street and Ramsdell Road

Source: 1998 Natural, Cultural, and Historic Resources Inventory of the Central NH Region Conservation, Preservation, and Open Space Chapter Subcommittee, 2001

A variety of recreational opportunities and resources exist in Henniker, some of which are stated above, as well as in the Forest, Greenway and Trails, and the Conservation Lands sections of this Chapter. Giving residents the opportunity and availability to enjoy and use these resources is important in placing a high value on the natural environment.

Issues, Goals and Recommendations

Issue: Henniker currently has a wide range of locations for recreation, both on public and private land. However, many of these resources are underutilized, while others are simply not widely recognized as recreational areas.

Goal: Provide outdoor recreation activities that are accessible and made available to the public.

Recommendations:

- Create a brochure and map of the recreational facilities located in Henniker with the locations and the types of recreation allowed on the property.
- Contact the US Army Corps of Engineers for trail and recreational information on the Henniker portion of the Hopkinton-Everett flood control land. Compile a list of all trails and recreational uses of the facility for public distribution.
- Henniker should work with NH Fish and Game to provide and improve access to public water bodies for swimming, fishing, and boating activities, where feasible and appropriate, to increase the utilization of these resources.
- Expand upon the existing recreational areas in Town with activities and uses that complement them.
- Explore the creation of a Town beach/swimming area and an ice skating area.

Conservation Lands

Henniker has a significant amount of conservation and public lands that afford various levels of conservation, preservation, and open space. Knowing where Henniker's conservation lands are will help identify potential needs and opportunities for expanding these areas to provide links between protected areas or to add protected buffers to sensitive areas. There are two types of conservation lands: those temporarily protected from development (Current Use) and those permanently protected from development (easement or ownership).

Current use is one of the easiest and most popular method of preserving undeveloped land, forests, and agricultural fields. Current use is a preferential tax program in which the land is taxed on its potential to generate income in its existing or current use. Henniker residents have continually participated in this program, as can be seen by the figures below.

Current Use Acreage for the Town of Henniker for 1998-2001

Type of Acreage	1998 Acreage	1999 Acreage	2000 Acreage	2001 Acreage	% Change 1998-2001
Farmland	1,405	1,389.53	1,345.59	1351.63	- 3.8%
Forest Land	14,032	14,399.14	14,469.59	14,494.58	3.3%
Unproductive Land/Wetlands	614	614.95	660.78	666.58	8.6%
Total	**16,051**	**16,403.62**	**16,475.96**	**16,512.79**	**2.9%**
% of Town in Current Use	**55.9%**	**57.21%**	**57.46%**	**57.59%**	**-**

Source: 1998-2001 Annual Town Reports

In its simplest definition, open space is land that has not been developed. Open spaces include forests, fields, river corridors, wetlands, wildlife habitats, and greenway corridors, as well as agricultural lands and Town parks. These areas can be used for commercial, recreational, and relaxation activities.

The total number of acres held for permanent conservation or public open spaces is about 11.2% of the entire Town. The following table lists protected, open space parcels that are restricted from development through ownership, deeds, easements, or other legal measures. See the **Current Land Use Map** for the location of these lands.

Protected Conservation Land in Henniker

Property	Ownership	Acreage
Wells Easement	SPNHF	10.8
Marshall Fund Easement	SPNHF Easement	108
Meadow's End Ltd. Easement	SPNHF Easement	19.2
Foster Conservancy	SPNHF	151
Colby Hill Forest	SPNHF	107
Buehler/Salmen Forest	Town	52
Craney Pond Road	Town	5.5
Preston Memorial Forest	Town	16.5
Ames Forest	State	16.6
Brown Way	NH Fish & Game	17
Craney Hill Forest	State	20
Trotten Trails	State	109
Vincent State Forest	State	4.5
Hopkinton-Everett Flood Control	Army Corps. of Engineers	2,414.75
Keyser Pond Access	NH Fish & Game	0.1
Long Pond	NH Fish & Game	NA
Ray Road ROW	NH DOT	NA
French Pond Access	NH Fish & Game	0.4
Total		**3,052.35**

Source: 2000 Henniker Town Report; 1998 Natural, Historical, and Cultural Resources of the Central NH Region

Identifying unfragmented blocks of land can also be helpful to those communities working on open space plans, conservation plans, or land protection. Maintaining areas of open space in rapidly developing environments is becoming increasingly significant as those areas diminish. Unfragmented blocks can also provide important recreation areas for people. Knowing the location and size of unfragmented tracts can help communities identify areas that may be threatened, or which are priorities for protection. Communities need to be aware of the importance of keeping unfragmented lands intact.

One of the most important reasons to plan for open space is to set a course for the Town of coordinated development that maintains the Town's quality of life. Many times decisions are made on land use without the benefit of a unifying plan to coordinate the actions. The result is haphazard development that disregards the Town's and/or Region's unique characteristics and sense of place.

Issues, Goals, and Recommendations

Issue: Federal, State, and Town agencies, as well as non-profit conservation groups own and control land in Henniker for the purposes of conservation, recreation, and flood control.

Goal: A multi-agency/group effort should be undertaken to conserve areas identified as having important values to the community.

Recommendations:

- Henniker should encourage agencies and non-profit organizations to pursue acquisition of conservation easements or ownership of properties in Town for conservation.
- Henniker should investigate partnering with conservation organizations in an effort to develop a scientific basis for specific land acquisition recommendations, with an emphasis directed toward greenway enhancement or water resource protection.
- Henniker should identify and prioritize potential parcels of land the Town feels should be protected because of important cultural, ecological, historical, or recreational value.
- Henniker should establish a fund to purchase land or easements for conservation purposes. The money for the fund should come from the land use change tax and be managed by, or with the assistance of, the Conservation Commission.
- Establish a stewardship program to monitor all Town-held easements.

Wildlife Habitat Management

New Hampshire’s natural resources provide habitat for an abundance and diversity of native wildlife. People tend to be conscious of rare or endangered species, but are unfamiliar with the complex ecosystems in their own neighborhood. Incorporating wildlife needs into community planning is a critical component that is often missing from the process.

The challenge of conserving enough habitat to support healthy, native wildlife populations is complicated by the varying habitat requirements of the diverse species. Some species require less than an acre of undisturbed forest, while others need territories covering more than a thousand acres. In addition, many species require several different habitat types through the course of the year. The more habitat diversity within the Town, the more likely it will support a diverse and abundant wildlife population.

A major concern for wildlife diversity is sprawling development patterns that cover the rural landscape and cause habitat fragmentation. Wildlife that is sensitive to human encroachment is restricted to islands of undisturbed land and they may die out if an area becomes too small. The fragmentation of wildlife habitat also causes damage and loss of native plants from overgrazing, a reduced breeding gene pool, loss of natural predators, and increased susceptibility to disease.

Unfragmented blocks often encompass many habitat types, supporting a diverse array of native wildlife. Large tracts with diverse habitats support wide-ranging animals that can not survive in small, less diverse habitat areas. Unfragmented areas that are largely forested are important for a number of wildlife species, provide safe travel corridors, and migratory pathways. For optimum wildlife habitat, blocks of unfragmented land should be void of significant human activity or development. An area of 250 acres should be considered a minimum for unfragmented habitat, with 500 acres being the best measure. Henniker has many areas of unfragmented land greater than 500 acres in size, as can be seen on the Natural Resource Inventory Land Use Map, which was compiled by the Conservation Commission.

The size of a species' population is usually dependent on the amount of suitable habitat. Animal populations can often be manipulated by varying the amount of available habitat. However, unless a species is rare and endangered, one species should not be favored over another. Providing a variety of habitats and protecting them from development and negative environmental impacts will increase the diversity of wildlife in Henniker.

Issues, Goals and Recommendations

Issue: The Town should work to prevent the loss of wildlife habitat and manage land for wildlife conservation.

Goal: Decrease the loss of large parcels of unfragmented land in Henniker and encourage property owners to manage their properties for wildlife habitat, where appropriate.

Recommendations:

- Identify and catalogue parcels of unfragmented land in the Town of Henniker, with a special emphasis on lands that abut other parcels of conservation land, water bodies, or established recreation areas.
- Create a Conservation Subdivision approach in the Subdivision Regulations, particularly within those areas identified as unfragmented. This approach will recognize the right and ability of a landowner to use his/her land, but minimize the fragmentation of the habitat.

- Develop and implement a Henniker Wildlife Habitat Protection Program using the data gathered by the Conservation Commission in the Natural Resource Inventory, using the methods outlined in "Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups" by NH Fish and Game (2001).
- Publicize information to landowners about voluntary wildlife habitat conservation programs, such as the New Hampshire Coverts Project and the Wildlife Habitat Incentives Program (WHIP).
- The school system and wildlife conservation groups should develop a hands-on public education campaign to educate and promote wildlife conservation in Henniker.

Goal: Preserve wildlife corridors that currently exist within the Town from development, which would further protect prime wildlife areas from fragmentation.

Recommendations:

- Map the existing wildlife corridors being utilized by the various forms of wildlife in Henniker.
- Educate landowners as to where wildlife corridors exist and what conservation and land maintenance they can employ to help preserve and protect these areas.
- Henniker should, where possible, acquire conservation easements or purchase the land where wildlife corridors exist. Special priority should be given to those corridors that connect already acquired or protected parcels of land in the Town or abutting towns.

Species of Special Concern

The Natural Heritage Inventory (NHI) is a State program in the Division of Forests and Land. The NHI finds, tracks, and facilitates the protection of New Hampshire's plant and animal species of concern, and exemplary natural communities. Exemplary natural communities are distinctive communities of forests, wetlands, grasslands, etc., that are found in few other places in New Hampshire, or are very old communities that are in good condition. Species of concern are those species listed as threatened or endangered under the New Hampshire Endangered Species Conservation Act of 1979 or under the New Hampshire Native Plant Protection Act of 1987.

NHI also keeps information on the relative quality of rare species populations and natural community occurrences. Quality is an important consideration when assessing an area's conservation importance. The NHI data represents the best available information for locations and status of species of concern and natural communities in New Hampshire, but there are certainly occurrences that have not yet been found since a comprehensive inventory of the State and Town has not been done.

NHI tracks rarity at both the state and federal levels using a scale from 1 to 5, with 1 indicating "Critically Important," 3 denoting "Uncommon," and 5 indicating "Common." The Table below shows the most recent listing of species of special concern located in Henniker.

Flag	Species or Community Name	Listed		# Locations Reported in the Last 20 Years	
		Federal	State	Town	State
**	SNE Acidic Level Fen			1	14
**	SNE Basin Shrub Swamp			1	2
**	SNE Level Bog			1	19
	Farwell's Milfoil		Threatened	Historical	10
	Great Blue Heron rookery			Historical	37
**	Wood Turtle			1	24

** Very High Importance Source: NH Natural Heritage Inventory, 1/01

These Flags are based on a combination of: (1) how rare the species or community is
(2) how large or healthy its examples are in the Town

Henniker does not have any known occurrences of Federally or State listed endangered species or Federally listed threatened species. However, the State has listed one species as Threatened that is located in Henniker. In order to protect both the species of concern and the rights of property owners, the NHI places an un-centered 0.75 mile buffer around known occurrences of a species, to make it more difficult to detect the exact location of the species of concern. A map of the known occurrences can be found in the Natural Resource Inventory, prepared by the Henniker Conservation Commission.

As much as it makes sense to protect open space to benefit the species of concern living in Henniker, it makes just as much sense to protect open space for other species. Such common animals as deer and beavers are important for maintaining the natural health of the community. Other carnivores and raptors help to keep the herbivores in a stable population. Preserving open space for these "common" animals also helps to guarantee habitat will remain to keep these endangered and threatened species populations stable for years to come.

Issues, Goals and Recommendations

Issue: Henniker has a number of flora and fauna species of concern listed on the Natural Heritage Inventory that landowners developing or making changes to their property may not be aware of.

Goal: Make Henniker residents more aware of possible occurrences of sensitive species on their property and within Town to ensure that development is designed in such a way to protect these sensitive species.

Recommendations:

- As part of the Site Plan and Subdivision Regulations submission requirements, require all applicants proposing construction on undeveloped properties to contact the Natural Heritage Inventory Program to find out if species of special concern are known to be located on their property. If such species are located on the site, encourage the property owner to voluntarily work with the Natural Heritage Program to help protect them.

- A public education campaign should be carried out and/or combined with other efforts as to the presence of endangered, threatened, and/or species of special concern located within the Town of Henniker, and the environmental and societal benefits of such species.
- Work with the Natural Heritage Inventory to do a comprehensive inventory of the Town for species of special concern.

Strategies to Meet Conservation Needs

Conservation and open space lands, which includes greenways, agricultural land, forests, and wetlands, are a very important part of any community. These provide aesthetic and recreational opportunities, wildlife habitat, and help to minimize the "urban sprawl" appearance. The Town has experienced sporadic periods of intense development and it is extremely important to protect these areas because they offer residents a place to enjoy the desirable qualities that originally attracted them to the Town. The following strategies can and should be seriously looked at by Henniker as potential opportunities to meet the conservation, preservation, and open space goals set out in this Chapter of the Master Plan.

Aesthetics Based Land Use Regulations: Because visual aspects are so important to the fabric of the community, there must be a priority placed on preserving them. Also, resources that largely define Henniker's traditional landscape such as, tree lined streets, farms, forests, historic buildings, and other resources, and should be preserved. Planning regulations addressing lot size, placement of buildings, signage, and landscaping are typically used to address aesthetic elements of the community.

Conservation Easement***:*** A conservation easement is a permanent, legally binding agreement that ensures certain uses will never be allowed on that property. Typically conservation easements prevent development of land uses such as construction, subdivision, and mining, but allow uses such as agriculture, forestry, wildlife habitat, scenic views, watershed protection, and education. The agreement exists between a willing land owner and a qualified recipient, which can be the Town, State government, or various conservation organizations. Each conservation easement is custom tailored to the interests of the land owner, the receiving entity, and the unique characteristics of the property. The land can be sold or deeded by the original owner and subsequent owners, but the restrictions of the easement are binding on all future owners.

Conservation Subdivision Design: Rather than filling all available space with similar sized houses centered on uniformly sized lots, this development strategy focuses the construction in a smaller portion of the total land being developed, and provides for permanent protection of the open space not used for construction. The land selected for permanent open space protection should be designed to fulfill the open space interests of the entire community.

Current Use Tax Program: Current use is a property tax approach to encourage land owners to keep open space undeveloped. Land that is participating in the current use program is taxed on its potential to generate income in its existing or current use - frequently as a farm or wood lot. This is a type of preferential tax program. Land owners who have qualifying land must apply to the Town in order to participate in the program. Lands that typically qualify for the current use program include farm land, forest land, tree farms, certain wetlands, and other undeveloped areas.

When land that has been participating in this program is removed and is changed to a more developed use, a land use change tax is charged. The land use change tax is set at 10% of the assessed market value of the land after development.

Deed Restrictions**:** Deed restrictions are restrictions placed in a property's deed at the time of sale and represents an agreement between the buyer and seller about the future use of the land. Unlike conservation easements, there is no third-party to enforce and defend the restrictions if the original owner does not.

Environmental Science-Based Regulations***:*** Environmental science-based land use regulations are based directly on the measurable characteristics, rather than on possibly arbitrary community standards. Regulations based on the characteristics of the land may reflect the actual ability of the land base to handle development and are often easier to defend against legal challenges than those arbitrarily created. An example of this technique includes soil-based lot zoning.

Fee Simple Acquisition: Sometimes the best and simplest way to protect a key parcel of land is through outright acquisition and management. Acquisitions may be through gift or purchase and ensures that the property stays in the use the purchaser prefers.

Conservation Funds - Many towns have created separate conservation funds or open space acquisition funds specifically for the purpose of paying for land acquisition. Money for these funds may come from Town budget appropriations, land use change taxes, or proceeds from managing or selling Town property, just to name a few.

Appropriation from Town Budget - The Town can regularly set aside money for a conservation fund in their annual Town budgeting process. The Town should consider funding a capital reserve account, through the Capital Improvements Plan (CIP), to fund the acquisition of easements and conservation lands. These funds could also be used for match requirements when opportunities arise in which other agencies are funding most of the cost.

Land Use Change Tax - When a property that has been paying the lower Current Use Tax rate is removed from that program, the land use change tax penalty is paid to the Town. The penalty is 10% of the full market value of the land when it leaves the current use program. Many Towns put all of this money directly into the conservation fund. Henniker currently puts this money in the general fund.

Proceeds from Managing or Selling Surplus Town Property - Towns that have property or resources they manage, often can provide income to the Town, as well as the Conservation Fund. This is frequently through timber harvesting operations on mature forest land owned by the Town. The proceeds from the sale of surplus Town property can also be dedicated to the Conservation Fund.

"Municipal Bill Round-Up" - An additional funding source for a variety of activities, such as greenway acquisition, easement acquisition, and creating bike trails and sidewalks, is the use of a "round up" program for tax bills, utility bills, and registration fees. Under such a program, the taxpayer could voluntarily round his/her bill payment up to a designated amount above the actual bill and designate it to any of the desired programs listed.

Timber Tax – By definition, timber is considered real estate and since New Hampshire has a real estate tax, the timber is taxable. Timber is only taxed at the time it is cut. Timber on all land ownership is taxable at 10% of the stumpage (standing timber) value at the time of cutting, with a few exceptions. This tax is currently placed in the general fund for the Town.

Bond Issue - The Town may agree to borrow money for a conservation project through a municipal bond issue.

Town Surplus Funds - The Town can apply funds, if they are available, that are left over from prior years' budgets to fund conservation projects.

Land and Water Conservation Fund - The Land and Water Conservation Fund is a Federally funded program administered through the Department of Resources and Economic Department. Eligible projects must be outdoors and can include land acquisition for conservation, open space, or the development of an active recreation area, and the expansion or rehabilitation of existing areas. Approximately $600,000 is available each year with a $100,000 cap per project.

Land and Community Heritage Investment Program (LCHIP) - This State fund is designed to assist communities that want to conserve outstanding natural, historic, and cultural resources. Towns must match the State money from this fund with a 50% match from other sources, some of which can be an "in kind" match, as well as funds from other sources.

Land Trust - The Town should support non-profit land trusts that accept and pursue property and easements for land of local concern.

Grants from Foundations - The Town would need to research available grants and develop proposals to seek funding to conserve a particular piece of property or type of resource within the Town. Funding could be sought from foundations at the local, state, regional, and national level.

Cooperative Ventures with Private Organizations - When the interests of the Town to conserve open space match the interests of a private organization, the potential for a cooperative partnership to protect land exists. This tactic will require some creative thinking and introductory discussions by Town officials with area organizations that have, or could develop, an interest in conserving open space.

Landowner Education***:*** A brochure could be developed focusing on landowners with large acreage or acreage containing critical resources. The brochure would provide information on the advantages to the landowner and to the community of conserving the land and the opportunities available for property owners to conserve the property via conservation easements or sale. This brochure could be developed by the Conservation Commission.

Limitations on the Number of Building Permits***:*** One way to help conserve open space, in the short-term, in a community is to establish a maximum number of new building permits that will be allowed in any given year. The number of permits allowed annually needs to be correlated in some meaningful way with the growth pressure on the community. This type of growth control strategy needs to be carefully crafted to accurately reflect the goals of the community and to meet the requirements in the NH statutes and can only be implemented at Town Meeting.

Management Agreement: These management agreements are conservation easements applied to particular land uses. Each focuses on a particular open space value; a management agreement can be custom tailored to any specific situation.

Right of Way for Trails - The Town may protect open space along a recreational trail corridor area. The right of way could be arranged and exist as a legal agreement between the Town/nonprofit organization and the owner of the land where the trail is located.

Wildlife Corridors - Open space can be protected for its value in allowing wildlife to travel safely from one place to another. Working with maps indicating where certain species can be found, probable travel corridors could be recognized. Once areas are recognized, the Town could then create plans to acquire, protect, and/or manage these important corridors.

Buffers Between Uses - Buffers between incompatible land uses can ensure that development and growth within the Town do not have a negative impact on the rural and scenic qualities that the Town values.

Overlay Districts***:*** Overlay districts can be used by communities to define and apply special regulations to a particular resource. Once resource areas of concern are identified, the Planning Board must establish what kind of special regulations apply to that particular resource. Some examples of overlay districts include:

Ground Water Protection Districts	Historic Districts
Forestry Districts	Agricultural Districts
Steep Slope Districts	Wetland Districts
Aquifer Protection Districts	Telecommunications Districts

Summary

The primary focus of this Chapter is to identify the natural and man-made resources in Town, recognize the role they play in giving the Town of Henniker its character, and decide what strategies would best maintain that character. Our natural resources include soil, geologic formations, water, forests, open space, and wildlife. Our man-made resources include agricultural lands and recreational facilities, such as trails and swimming areas. Most of the Town's resources are interconnected and any change to one can and will have a significant impact on the others. As the population increases, demands on many of these resources will increase, some to the point of threatening the quality and quantity of the resource. It is the goal of this Chapter to help develop a balance between development and resource protection within the Town.

Some of our natural resources are considered renewable, such as forest land, while others, like soil, are not. Appropriate measures need to be taken to prevent contamination, erosion, depletion, and large scale overuse and misuse of resources that are non-renewable, and even those that are considered renewable. The Town contains several bodies of water within its borders, and shares others with neighboring towns. Since water is essential for ecological, industrial, commercial, agricultural, and residential purposes, it is the most critical and vulnerable resource in the Town. Such varying uses increase the risk of contamination. There needs to be a recognition that many natural resources do not stop at the Town's boundaries and that a regional approach in dealing with their protection may be the preferable alternative.

Agriculture has long played an important role for the Town and the State of New Hampshire as a whole. Unfortunately, traditional farming practices have been in decline for many years. This decline can be related to poor site conditions, poor market situations, development pressures, increased local controls placed on farmers, and the loss of interest among younger generations. This decline has been somewhat offset in Town with a rise in the number of small agricultural operations. It is important that the Town continues to encourage such endeavors, especially with appropriate zoning, incentives, education, and other land use ordinances.

The Town's existing open space, other than farmland, consists mainly of forests, wetlands, and flood control areas. There are no management requirements for privately owned land other than what are found in the Current Use regulations. Forests are one of the few renewable resources, that if managed properly, can provide forest products, wildlife habitat, watershed protection, and offer tremendous aesthetic, educational, and recreational appeal. Most of the development pressure that is currently being felt by the Town is focused on privately owned open space. Because such land is being targeted for development, it is important that the Town identify critical habitats, greenways, and corridors that should be protected through purchase, easements, or other means. These actions will help to reduce land fragmentation and help maintain the rural, cultural, and historic character that makes Henniker the place it is today and the vision of what it wants to be tomorrow.