

Chapter VI **NATURAL FEATURES**

INTRODUCTION

Over the past fifteen years, since the last Master Plan was written in 1985, the sentiment of conservation and preservation of natural resources has changed little although growth and development in remote areas of Town threaten to overtake the remaining natural environment which is not contained in Bear Brook State Park. Existing agricultural land is scarce. Responses to the community survey indicated that preservation of open space was very important or important. Nearly half indicated that they would favor buying land for conservation purposes. This Chapter examines Allenstown's assets and offers methods to preserve the undeveloped open space and agricultural lands.

Bear Brook State Park, over 51% of Allenstown's total acreage, is owned by the State of New Hampshire and is managed jointly by the NH Department of Resources and Economic Development's Division of Parks and Recreation and Division of Forest and Lands. While any significant changes in the Park need Legislative authority, the fact is that the Park is not permanently protected and may one day be something other than a wild, recreational tract of land. This large area is convenient to I-89, I-93, and the seacoast and may be looked at by the State for its development potential in the future. This Chapter strives to better integrate Bear Brook State Park into the Town's planning process and to hopefully communicate the concerns of the Town to the State.

The Suncook and Merrimack Rivers form the western border of the Town. No public access currently exists for use of the rivers, except below the Suncook Waste Water Treatment Plant, although there is a desire and need for clean access.

This Chapter will allow Allenstown to explore the opportunities available for the protection and preservation of its natural features and encourages the development of an active Conservation Commission for the Town to ensure that these recommendations come to fruition.

OBJECTIVES OF THE CHAPTER AND RECOMMENDATIONS

- To preserve Allenstown's way of life, which is unique in its mixture of a village downtown, open space, convenience to the State Capital, and its rural character.
- ? Create mechanisms for Village Zoning for the Suncook area, and Open Space Design and Cluster Development alternatives within the Zoning Ordinance for the Deerfield Road area.
- ? Preserve open space and public access to the Suncook and Merrimack Rivers.

- To educate residents about the natural resources available in Allenstown.
 - ? Develop and distribute educational pamphlets on water resources.
 - ? Develop and distribute educational pamphlets on the Town Forest, and on Bear Brook State Park's impacts on the Town.
 - ? Get the Town and State to purchase and install "Welcome to Allenstown – Home of BBSP" signs.
 - ? Encourage environmental education in the Allenstown school system, focusing on the natural heritage in Bear Brook State Park.

- To preserve Allenstown's natural resources (air, water, forest, agricultural lands) through smart growth planning.
 - ? Reestablish the Allenstown Conservation Commission.
 - ? Pursue agricultural conservation easements on those remaining properties suitable for agriculture in Town.
 - ? Enact nonpoint source pollution controls, stormwater management, and aesthetics controls within the Subdivision and Site Plan Review Regulations, particularly for the downtown area and for new developments along Route 28.
 - ? Increase and maintain awareness of the Bow PSNH Power Plant and how it affects air quality in Allenstown, as well as support state regulations to reduce emissions from power plants.
 - ? Encourage conservation easements on properties in the northeastern corner of Town where wetlands occur and which are remote from established town services.
 - ? Coordinate development in the northeast corner which does not isolate the Park or fragment the land and encourage easements in those developments.
 - ? Join the Bear-Paw Regional Greenways to enhance the greenway and networking opportunities in the northeast corner of Allenstown.

- To provide for better access to Allenstown's natural resources for all Allenstown residents.
 - ? Develop Suncook River access for non-motorized boating and swimming on town-owned land.
 - ? Promote the Boy Scouts or another youth or volunteer group to map and plan activities for the Allenstown Town Forest.
 - ? Solicit public access to the Suncook River in the design of the new double-decker bridge project.

- To improve the impact Bear Brook State Park has on Allenstown.
 - ? Lobby against motorized recreation in Bear Brook State Park and promote the continuation of passive recreation.
 - ? Pursue increased state financial support to the Town for services provided in Bear Brook State Park.
 - ? Research what other towns with significant amounts of state land are doing to address the impact of the parks within their town (eg, Pillsbury State Forest, Pisgah State Forest).
 - ? Coordinate with Deerfield, Epsom, Hooksett, and Candia to establish a "collective bargaining" advantage for dealings with the State about Bear Brook State Park.
 - ? Seek more local control over the uses of Bear Brook State Park.

COMMUNITY SURVEY RESULTS

The June 2002 Community Survey yielded favorable results supporting the preservation of natural resources. Seventy-four percent (74%) of respondents felt that preserving open space was a “very important” or “important” objective. Forty-seven percent (47%) supported the acquisition of lands to meet this purpose.

Table VI-1

Should the Town appropriate money to protect natural, cultural, and historic resources in Allenstown?

	Total	Percent
Yes	291	61.7%
No	67	14.2%
Unsure	46	9.7%
No Opinion	68	14.4%
Grand Total	472	100.0%

Table VI-3

Do you support the Town buying land for conservation purposes?

	Total	Percent
Yes	218	46.9%
No	137	29.5%
Unsure	80	17.2%
No Opinion	30	6.5%
Grand Total	465	100.0%

Table VI-2

Please indicate how important the preservation of open space in Allenstown is to you.

	Total	Percent
Very Important	188	39.6%
Important	163	34.3%
Somewhat Important	61	12.8%
Not Important	34	7.2%
No Opinion	29	6.1%
Grand Total	475	100.0%

Table VI-4

What are the most important natural features in Allenstown (please check all that apply):

	Total	Percent
Fields/Open Space Lands	243	14.1%
Water Bodies	266	15.4%
Farms	180	10.4%
Scenic Views	175	10.1%
Ground Water Supplies	250	14.5%
Fish/Wildlife	268	15.5%
Forests	314	18.2%
Other	30	1.7%
Grand Total	1726	100.0%

INVENTORY OF NATURAL RESOURCES

In order to establish the need for preservation, it is necessary to inventory the resources that define Allenstown’s character. The majority of this information was taken from the 1999 CNHRPC *Natural, Cultural, and Historical Resources Inventory* and from mapped sources. A series of maps was developed which depict these resources of the Town.

Water Resources

The *Water Resources Map* details the water resources as noted here in this section. The comprehensive map includes the hydrographic features, aquifer transmissivity (how much water flows), wetlands, watershed, public water supply, and well locations.

Water Supplies

Pembroke, Hooksett, and Allenstown all depend on the Pembroke Water Works for their public water supplies. Municipal water lines bring water to all of Allenstown's urban streets lying west of Route 3. Other major lines exist along River Road, Bartlett Street, Sargent Street, Route 28 to Suncook Business Park and Granite Street to Chester Turnpike. Municipal water is tapped from wells next to the Suncook River. Other public water supplies include three at Bear Brook Villa (serving 385), two at Bear Hill 4-H Camps (serving 125), two at Holiday Acres (serving 375), and one at Bear Brook Gardens (serving 225).

Between 1983 and 1997, the NHDES issued seventy-two well permits to residents of Allenstown. Many of these private wells are located in the northeast corner of Town on roads leading north off of Deerfield Road. Other private wells serve housing units located along the Suncook River.

Ponds

Bear Hill Pond is 33 acres in size with an average depth of 11 feet. It serves as a tributary to Boat Meadow Brook.

Catamount Pond has an area of 16 acres with an average depth of eight feet. It is also called Bear Brook Pond and it serves as a tributary to Bear Brook.

Allenstown shares Hall Mountain Pond and marsh with Hooksett and Candia. Twenty-five acres of this water area lie within Allenstown. It has an average depth of only three feet and serves as a tributary to Bear Brook.

Smiths Pond is another swampy pond with an average depth of two feet. This nine-acre pond is located in Bear Brook State Park.

Hayes Marsh is impounded in BBS Park as a Fish and Wildlife Management Area. The Marsh has an earthen dam.

Rivers

The Suncook River forms the border between the towns of Allenstown and Pembroke. The river meanders in a southwesterly direction for 6 miles as the Allenstown-Pembroke border starting near the intersection of Route 28 and North Pembroke Road and ending at the confluence of the Suncook and Merrimack Rivers. The river is dammed at three locations on this stretch: (1) the Buck Street Dam near the Route 28 and Deerfield Road intersection; (2) the Webster Mill Dam behind the Post Office on Glass Street; and (3) the China Mill Dam at Main Street in downtown Suncook Village. The latter two dams were created to power the mills that dominated the economy of Allenstown and Pembroke during the industrial revolution.

The headwaters of the Suncook River are the Suncook Lakes in Barnstead NH at an elevation of 700 feet above sea level. Flow in the river is seasonal. The U.S. Geological Survey monitors the flow in the river at one station in North Chichester NH. Flow at this station (gage 01089500) averages between 49 cubic feet per second (cfs) in August to 737 cfs in April. The drainage area at this gage is 157 square miles. Both the flow and the total drainage area will be higher for the portion of the Suncook River in Allenstown because it is farther downstream.

The banks of the Suncook River in Allenstown are a shallow and wide floodplain. There is currently no public access to the river for swimming or boating anywhere in Allenstown.

The Merrimack River, formed upstream by the confluence of the Pemigewasset and Winnepesaukee Rivers in Franklin, flows past Allenstown for one-half mile. The river is the far western border of the town. On the opposite side of the river are the towns of Bow and Hooksett.

The section of the river flowing past Allenstown is regulated by large dams upstream at Garvins Falls and downstream at the Hooksett Hydro Dam. Upstream at Garvins Falls (gage 01088500), the flow of the Merrimack River has been monitored. The flow varies with the seasons, ranging from 1,700 to 10,300 cfs in September and April, respectively.

The wide (1/4 mile) floodplain created by this large river is excellent for agriculture. These land are currently used for agriculture, a boat launch on Ferry Street, and Allenstown's municipal wastewater treatment facility.

Brooks

Several named brooks are located in Allenstown. The majority are located in the Bear Brook State Park area.

- ? Catamount Brook connects Catamount Pond with the Suncook River.
- ? Little Bear Brook flows across the northern part of Allenstown.
- ? Boat Meadow Brook connects Bear Hill Pond with the Suncook River.
- ? Bear Brook flows out of Catamount Pond and into Bear Brook State Park.
- ? Pease Brook flows in the northeast corner of Allenstown, just west of the Deerfield-Allenstown town line.

Hydric Soils

According to the 1965 Merrimack County soil survey, 13.4% of the total land acreage of Allenstown is comprised of hydric soils. The Natural Resource Conservation Service is currently working on publishing an updated soils survey for the County.

Watersheds

A watershed is an area of land drained by streams or rivers and is a hydrologic system in itself, although it is always part of a larger watershed. Disturbances which affect the groundwater of an area can have an impact on the entire watershed. Allenstown lies almost entirely within the Suncook River watershed. It also falls within the larger Merrimack River watershed, which encompasses most of the State.

Aquifers

According to studies by the US Geological Survey, 27% of Allenstown (5.4 square miles) is underlain by stratified drift aquifers. By far the highest yielding aquifer is located near the convergence of Bear Brook and the Suncook River in the northern corner of town. A municipal well owned by the Pembroke Water Works (which supplies water to Allenstown and Pembroke residents) currently draws from this aquifer. Other locations in Allenstown with high yielding aquifers are along Boat Meadows Brook, along the Suncook River near the Suncook Convenience Store, and in the floodplain of the Merrimack River.

Wetlands and Marshes

Wetlands inventoried, field-checked, and mapped by the US Fish and Wildlife Service between 1986 and 1990 dot the entire Town. Large areas of mapped wetlands which do not co-occur with ponds or marshes are found along Catamount Brook and Boat Meadow Brook. Hayes Marsh within Bear Brook State Park is the predominant wetland in Allenstown and is host to a number of species.

Dams

The NHDES maintains an inventory of dams within the State:

Suncook River

China Mill Dam – operated by Thomas Hodgson & Sons

Webster Mill Dam – operated by National Hydro

Buck Street Dams – operated by NH Water Resources Council

Bear Brook State Park

Catamount Pond – operated by NHDRED

Bear Hill Pond – operated by NHDRED

Catamount Brook – operated by NHDRED

Hayes Marsh – operated by NHF&G

Archery Pond – operated by NHF&G

Cold Spring Brook – operated by NHF&G

Hall Mountain Marsh – operated by NHF&G

Philie Recreational Pond – operated by John Philie

Protection from Nonpoint Source Pollution

The greatest threat to Allenstown's waterways is perhaps nonpoint source (NPS) pollution, also known as polluted runoff, in the downtown/Suncook area and off of Route 28. Nonpoint source pollution (NPS) is pollution that cannot be traced back to any specific source; it is the accumulated pollution resulting from everyday activities. Its effects are magnified by impervious surfaces, such as building roofs and paved surfaces. Water cannot infiltrate these surfaces, causing more water to run off over the land. As water washes over the land, it picks up oil, pesticides, nutrients, sediment, and other pollutants that have been placed into the environment by everyday activities. The runoff water flows into storm drains and sewer systems or directly into water bodies, carrying the pollutants that have been deposited. Sewers and storm drains are not the answer to this problem; they are direct lines to waterways, meaning that polluted runoff is being poured right into surface waters. As little as 10% impervious surface on a lot can begin to negatively impact a waterway. Thus, the more intensively used a piece of land is, the more nearby waterways are negatively affected by polluted runoff.

The downtown area of Allenstown, surrounded on two sides by the Suncook and Merrimack Rivers, poses the greatest threat to non-point source pollution. The compact downtown, with its miles of road and parking lot asphalt and buildings, is a concentrated area of NPS pollution that runs off into the rivers or storm drains directly, or into the aquifer which underlies the town indirectly. Because the area is already built up, there are fewer options available for protecting the water supply.

One simple way to help reduce the effect of NPS is to create a street tree program where sapling trees are planted along rights-of-way and are maintained yearly. Road improvement projects that allow for drainage swales instead of a paved asphalt shoulder or curbing will also assist.

Along Route 28, there are more alternatives available. In addition to those noted above for the downtown, techniques include requiring stormwater management plans for new developments, limiting parking lot size and providing alternative parking areas, limiting each lot's impervious surface coverage, and designing driveways to be shorter, narrower, and which flow with the topography of the land.

Land Resources

The *Conservation and Public Lands Map* depicts the conservation lands noted here in this section.

Bear Brook State Park

Bear Brook State Park (BBSP) covers nearly 10,000 acres of land. Most of the park is located in Allenstown (6,564), with smaller acreage in Candia (290), Deerfield, (1,938) and Hooksett (793). The park receives approximately 50,000 visitors yearly for hiking, mountain biking, and horseback riding on the trails, as well as for day use of the beach and picnic area on Catamount Pond. BBSP is also home to a busy park campground on Spruce Pond, a 4-H camp on Bear Hill Pond, and Americorps/Student Conservation Association facilities on Beaver Pond. The New Hampshire Fish and Game Department has a waterfowl management area in Hayes Marsh. The park also boasts the state's only public archery range and has several stocked fishing ponds. During the winter, the park is a popular destination for cross-country skiers and snowmobile riders.

It is hard to overstate the importance of BBSP to the town of Allenstown. The park covers over half the land area of the town, making Allenstown one of the few towns in the state with the such a high percentage of public lands. The park's 40 miles of trails provide recreational opportunities for the residents of the town as well as for the thousands of visitors from the nearby cities of Manchester, Concord, and Portsmouth, as well as many out of state visitors. BBSP is known regionally as one of the best locations for mountain biking in New England. Much of the wellhead protection area around the Allenstown/Pembroke public water supply is located within the park.

One of the new threats to BBSP are Off Highway Recreational Vehicles (OHRVs). OHRVs are currently permitted in the park only when the ground is frozen. However, there is considerable illegal use of the park by OHRV riders during other times of the year. Expanded legal OHRV use in the park would degrade the existing uses of the park through trail erosion and noise. Increased OHRV use would also require the Town of Allenstown and other towns abutting the park to expend more resources on law enforcement and emergency response within the park. This issue will be discussed again in the "Natural Feature and Resource Concerns" section at the end of this chapter.

Conservation Lands

In this context, tracts of land under conservation can be permanently protected from future development under the parcel's deed or they can be under temporary conservation where no such permanent restrictions are placed upon the future use of the land. In Table VI-5, there are no parcels in Allenstown which have been permanently protected from development.

Table VI-5
Conservation Lands

Conservation Land	Held by	Acres	Permanently Protected?	Public or Private Ownership
Allenstown Town Forest	Town	15.0	No	Public-Town
Bear Brook State Park	NH DRED	6564.4	No	Public-State

Source: 2001 Digital Tax Maps; Subcommittee Input; Bear Brook State Park Management Plan, 1994

Current Use

Property owners can file for reduced property taxes through the Current Use Taxation program. The current use value is the assessed valuation per acre of open space land based upon the income-producing capability of the land in its current use— not its real estate market value. This valuation shall be determined by the Town's assessor in accordance with the range of current use values established by the Current Use Board (CUB) and in accordance with the class, type, grade, and location of land. Owners of parcels of land which are not anticipated to be used for a different type of use in the future can apply at the Town Office for the following categories:

- ✍ "Farm land" means any cleared land devoted to or capable of agricultural or horticultural use as determined and classified by criteria developed by the Commissioner of Agriculture, Markets, and Food and adopted by the CUB.

- ✍ “Forest land” means any land growing trees as determined and classified by criteria developed by the State Forester and adopted by the CUB. For the purposes of this paragraph, the CUB shall recognize the cost of responsible land stewardship in the determination of assessment ranges.
- ✍ “Open space land” means any or all farm land, forest land, or unproductive land as defined by this section. However, “open space land” shall not include any property held by a city, town or district in another city or town for the purpose of a water supply or flood control, for which a payment in place of taxes is made in accordance with RSA 72:11.
- ✍ “Unproductive land” means land, including wetlands, which by its nature is incapable of producing agricultural or forest products due to poor soil or site characteristics, or the location of which renders it inaccessible or impractical to harvest agricultural or forest products, as determined and classified by criteria developed by the CUB. The CUB shall develop only one category for all unproductive land, setting its current use value equal to that of the lowest current use value established by the CUB for any other category.
- ✍ “Wetlands” means those areas of farm, forest and unproductive land that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

A land use change tax shall be levied when the land use changes from open space use to a non-qualifying use.

Table VI-6
Current Use Acreages by Land Type, 1990-2001

CU Acreage by Land Type	2001	2000	1999	1998	1997	1996*	1995	1994	1993	1992	1991*	1990*
Farm Land	138.16	126.66	132.98	166.31	0	149.19	149.19	143.19	99.77	99.77	99.77	99.77
Forest Land	2,016.84	1,835.92	1,841.61	1,587.77	2,608.64	1,538.93	1,518.20	1,480.92	1,340.06	1,303.97	1,270.42	1,270.22
Unproductive Land**	204.67	212.67	211.94	1.0	0	289.91	289.91	298.65	470.72	514.01	514.01	514.01
Wet Land***	677.00	712.68	738.04	811.65	14.26	812.65	786.85	756.69	732.94	732.94	768.90	768.90
Total CU Acres	3,036.67	2,887.93	2,924.57	2,566.73	2,622.90	2,790.68	2,744.15	2,679.45	2,643.49	2,650.69	2,653.10	2,652.90

*Sources: Allenstown Annual Reports, *data discrepancy in Town Reports;
includes productive land for 1990 and 1991 *includes flood land;*

It should be noted that Bear Brook State Park comprises approximately 6,700 acres (according to the tax maps, although NH DRED’s figures are 6,564 acres) of the Town. Out of a total town acreage of 12,998 (while again sources differ, the tax map acreage is used), there are approximately 3,400 acres (26%) in Allenstown which are not in current use or part of Bear Brook State Park.

Table VI-7
Land Use Change Tax Collected, 1990-2001

	Land Use Change Tax Collected
1990	\$500
1991	0
1992	0
1993	0
1994	0
1995	\$9,395
1996	0
1997	0
1998	0
1999	\$1,300
2000	0
2001	\$2,500

Sources: *Allenstown Annual Reports and Town Files*

As shown from the amount of land use tax collected over the past 12 years, few parcels have dropped the current use status. In fact the total collected by the Town is only \$13,695.

Table VI-8
Current Use Acreages Statistics, 1990-2001*

Acreage Statistics	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Total Acres in CU	3,036.67	2,887.93	2,924.57	2,566.73	2,622.90	2,790.68	2,744.15	2,679.45	2,643.49	2,650.69	2,653.10	2,652.90
Removed from CU	0	N/A	N/A	0	0	0	6.61	0	0	0	0	
Receiving 20% rec. discount	0	N/A	N/A	968.13	0	0	23.50	0	0	0	0	

Sources: *Allenstown Annual Reports; *discrepancies exist in the Town Reports*

Agricultural Resources

Prime farmland soils, soils of statewide importance, and soils of local importance to Merrimack County are depicted using the 1965 Soil Conservation Service (now Natural Resources Conservation Service, the NRCS) Survey. A comprehensive update to the Merrimack County Soil Survey by the NRCS is underway, with an anticipated completion date of 2003 and a publication/printing date to be determined. This update should include a change from the alpha-categorization of soils, as shown here, to a numeric categorization. At the time of this Master Plan, maps have not been published.

Prime farmland soils are described nationally as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and are also available for these uses.

Categorized soils of Statewide importance have properties that exclude them from the prime farmland list. However, they are important to agriculture in the State of New Hampshire. They produce fair to good crop yields when properly treated and managed. As a general rule, erosion control and irrigation practices are necessary to produce high-yield crops.

Soils of local importance are identified by County agencies within the State. These soils also support the production of food, feed, fiber, forage, and oilseed crops. These soils produce fair to good crops when managed properly.

The following is a list of identified active farms in Allenstown which are extremely important to protect from development or other change of use:

Table VI-9
Active Farms in Allenstown

Name	Location	Products or Use
McNamara Farms	7 Main Street	Dairy cows
Blake's Farm	River Road	Corn, vegetables

Source: Subcommittee input

The best agricultural soils in Allenstown are located in the fertile floodplain of the Merrimack and Suncook Rivers. While the downtown areas rest on the majority of these soils, several large undeveloped parcels that are privately owned could potentially serve as farms. They are located west of Main Street and south of Ferry Street and are displayed on the ***Scenic Vistas and Farms Map***.

Forest Resources

The largest forest resource in Allenstown is Bear Brook State Park which covers approximately 6,564 acres (from the Bear Brook State Park Management Plan) of the town. The NH Department of Resources and Economic Development selects areas of the park to be logged based on the Bear Brook State Park Management Plan. Foresters from DRED mark and tally the trees to be cut. A contractor is awarded the right to harvest the trees through a competitive bid process. The revenue from the sale of the lumber to the contractor is mostly deposited in the State's General Fund, with a small portion going to DRED's Forest Management and Protection Fund. The stumpage tax for the sale goes to the Town, just as if the timber sale had occurred on private property. On average there is one timber sale in Bear Brook State Park each year.

Table VI-10
Timber Tax Collections, 1990-2001

	Timber Tax Collected
1990	\$507
1991	\$2,243
1992	\$497
1993	\$4,484
1994	\$4,469
1995	\$6,554
1996	0
1997	\$16,920
1998	0
1999	0
2000	0
2001	\$12,087

Sources: *Allenstown Annual Reports and Town Files*

Some privately-owned lots conduct timber harvests, although the majority of the forestry activities are undertaken by the State on the Park.

Geologic Resources

The *Construction Materials Map* and the *Development Constraints Map* of the **EXISTING AND FUTURE LAND USE CHAPTER** depict the location of permitted gravel operations and slopes greater than 15%.

Surficial and Bedrock Geology

Allenstown has varying topography, ranging from the flat floodplains along the Suncook and Merrimack Rivers to the hilly regions of Bear Brook State Park. Four named promontories were identified in Table VI-11.

Table VI-11
Hills and Mountain

Name	Description or Location
Hall Mountain	925'
Bear Hill	800'
Catamount Hill	700'
Pinkney Hill	700'

Sources: *CNHRPC 1999 Natural, Cultural and Historical Resources Inventory*

Excavation Materials

All of the excavation operations within Allenstown are grandfathered and thus no permitting is necessary. There are four known pits in Town:

Table VI-12
Excavation Operations (all Grandfathered)

Name	Description or Location
Plourde	Between Route 3 and Chester Turnpike
Tamchar Aggregate	Granite Street/New Quarry Road
Verville	Dodge Road
Wasson	Deerfield Road at Deerfield Town Line

Sources: Existing and Future Land Use Chapter

The specific locations and tax map and lot numbers can be found in the **EXISTING AND FUTURE LAND USE CHAPTER** as well as specific details about excavation law.

Ecological Resources

NH Natural Heritage Inventory (NHI)

Several outstanding plant and animal species have been identified in Allenstown since the 1930s, as well as one outstanding natural community, and recorded NHI program's database. It is known that other species and communities do presently exist in Allenstown, and efforts should be made to report the information to the NHI.

- ? Small Whorled Pogonia
- ? Sweet Goldenrod
- ? Bald Eagle
- ? Great Blue Heron rookery
- ? Blanding's Turtle

Strong anecdotal references have been made to the existence of timber rattlesnakes in Bear Brook State Park, although no formal report has been filed.

Corridors

Corridors and greenways are typically used not only by people for recreation or transportation, but also by wildlife to travel from one habitat to another. Maintaining viable and undeveloped corridors ultimately measures the biological success of the animals, particularly larger mammals, within an area.

The Bear-Paw Regional Greenway has identified a greenway corridor in the northwest corner of Allenstown which would connect with Bear Brook State Park and also form a network of corridors connecting Northwood Meadows State Park, Pawtuckaway State Park, and other private conservation lands. Bear-Paw Regional Greenway is a land trust established by local resident volunteers. Their mission is to establish a series of greenways comprised of private and public lands that connect large conservation areas and safeguard important wildlife habitat and travel routes, scenic resources, and recreational opportunities. Bear-Paw provides assistance to municipalities and community groups to identify and protect important lands and in locating funding sources for land conservation.

Currently, the Towns of Epsom, Deerfield, Northwood, Strafford, Nottingham, Raymond, and Candia are members of Bear-Paw. While Allenstown is unique in the amount of conservation land it already has (in the form of Bear Brook State Park), there are valuable corridor opportunities presented in the northwest corner of the town which should be explored, particularly given the remoteness of the area from town services. Membership in the Bear-Paw Regional Greenway could help the Town to preserve these corridor opportunities.

Natural Communities

Other special, mostly undisturbed lands are essential for the biological diversity of plants and animals. The more biodiversity found within an area, the more valuable and self-sustaining the community becomes from both ecological and economic perspectives. The following natural communities are important in Allenstown:

- ? Suncook River (fish, birds)
- ? Bear Brook State Park (large mammals, reptiles, songbirds)
- ? Hayes Marsh (birds)

Viewsheds

Two viewsheds have been identified on the *Scenic Vistas and Farms Map*. One just south of Wing Road offers 360 degree panoramic views of the surrounding Park and countryside. The second identified view can be found from Catamount Pond and looks south toward Catamount Hill. In Allenstown, scenic view preservation is less of an issue because of the large amount of undeveloped acreage in most directions.

Air Resources

Downtown Allenstown is located one mile downwind of the Bow Power Plant, a coal-fired electricity generation station. The smoke plume from the plant is visible from all areas of town. Residents of the downtown area have been concerned about adverse health impacts due to the chronic exposure to the emissions. In August 2002, the NH Department of Environmental Services installed an air quality monitoring station at Memorial Field in Pembroke. This station monitors the air for toxic contaminants, sulfur oxides, and particulate matter every 12 days. The NH Department of Health and Human Services, under cooperative agreement with the US Agency for Toxic Substances and Disease Registry, began a health study of residents in Pembroke and Allenstown in 2001. The results from this study should be available in 2003.

NATURAL FEATURE AND RESOURCE CONCERNS

In summary, Allenstown is blessed with abundant natural resources but these resources are under threat. The greatest environmental challenges we face as a community are:

- ? Air pollution from the Bow Power Plant. The downtown is located immediately downwind of the plant. The NH Department of Health and Human Services is currently (2002) conducting a study on the impact that pollution from the plant could be having on the health of Allenstown residents. The Town should support this study and cooperate with any recommendations made by NHDHHS.

- ? Contamination of water resources. The number of gas stations in Allenstown increased from one to three in the past year. There are also dozens of small automotive repair shops in town. While these companies provide a service to residents, they also threaten to release gasoline containing MTBE into the aquifers that all town residents rely upon for drinking water. As the Town tries to attract new light manufacturing companies to Allenstown, every effort should be made to ensure that these new companies do not pollute the water, land, or air. The increase in OHRVs and vehicle traffic will impact the quality of the aquifer if the ATV trails open.
- ? Off Highway Recreational Vehicles in Bear Brook State Park. OHRVs can damage the trails in the park that are heavily used by residents and visitors for non-motorized recreation. These vehicles also strain the town's resources to provide law enforcement and emergency response in the park. The town should oppose any plan for expanded OHRV use in the park.
- ? Loss of agricultural lands. Allenstown has few agricultural lands and those that are left are at risk for development. Targeted agricultural easements are needed to preserve these lands. The highest priority should be to protect agricultural lands next to the Merrimack River.
- ? No public access to the Suncook River. The Suncook River has historically been the heart of Allenstown. However, there is currently no public access to the river. Unless town residents can enjoy this resource, they are unlikely to respect and care for it. A town-owned parcel on Albin Avenue (at the end of Pine Acres) should be developed as a picnic area with a launching area for non-motorized boats. An additional town-owned parcel on Riverside Avenue should also be explored for its potential to serve as public access to the River.
- ? Non-point source pollution in downtown Allenstown. The downtown area of Allenstown is densely settled with impervious surfaces (e.g., pavement, buildings) covering a large proportion of the land area. Stormwater runoff can wash pollutants and bacteria into the Suncook River during storms. Stormwater runoff is an important issue everywhere but it is especially important in the downtown area because of the large amount of impervious surface and the age of the storm sewer infrastructure.
- ? Sprawling development along Deerfield Road. The northeast corner of town abutting Bear Brook State Park is a beautiful place to live – and the rate of development along Deerfield Road is booming. It is important to preserve the rural character of this part of town through smart growth strategies and to maintain wildlife corridors in this area.

PROPOSED REGULATORY PRESERVATION MEASURES

There are many techniques available to assist with conserving natural resources. Regulatory protection measures are an important part of a Town's preservation toolkit.

Primary Methods

Although all of the methods listed in this Chapter can be used by Allenstown, the techniques listed in this section are the most important regulations to develop. They should be among the first considered by the Planning Board and the Town to address Allenstown's immediate conservation planning issues.

Aesthetics-Based Land Use Regulations

Area: Entire Town

Because the appearance of the community, including views of simple things like tree-lined streets, mixed farm land, forests, historic buildings and water resources that largely define Allentown's traditional landscape, is so important to the fabric of the community, there must be a priority placed on preserving them. Planning regulations addressing lot size, placement of buildings, signage, as well as landscaping are typically used to address aesthetic elements of the community.

Environmental Science-Based Regulations

Area: Entire Town

Environmental science-based land use regulations are based directly upon measurable characteristics of the land-base of the community, rather than on possibly arbitrary standards established by people. Regulations based on the characteristics of the land may reflect the actual ability of the land base to sustain development and are often easier to defend against legal challenges than those arbitrarily created.

Urban Growth Districts

Areas: Downtown

An urban growth district allows the community to define one or more areas where growth and development will be concentrated. This typically includes a downtown area and, sometimes, existing areas with higher concentrations of development. Desired growth will take place inside of the district, thus preserving open space in other parts of the Town. Development within the urban growth area can still be regulated by various zoning standards, but density regulations should be adjusted to accommodate a denser development pattern.

Cluster (Open Space) Development Zoning

Areas: Woodridge Road and developments along Deerfield Road

An answer to the sprawling landform created under conventional cookie cutter subdivisions is a new approach to subdivision design for rural areas, as outlined in the book entitled *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*, by Randall Arendt (Island Press, 1996). Figures in the **EXISTING AND FUTURE LAND USE CHAPTER** show graphics from Arendt's book depicting the typical scenario for the development of a parcel under the conservation development design process. In its most basic form, the conservation development process can be broken into six logical steps, which are not the typical steps taken for a conventional subdivision.

Under this approach, use existing minimum lot sizes as the basis for conventional residential density on the best soils, with reduced densities according to declining soil quality. The current minimum lot sizes for residential uses should represent the maximum aggregate density on the best soils under the soils-based lot sizing approach. Lower quality soils should require lower density development. Primary conservation areas may include wetlands, steep slopes, aquifer recharge zones, and floodplains. Secondary conservation areas may include stonewalls, viewsheds, prominent vegetation, prominent landforms, prime agricultural soils, historic sites and features, archeological sites, and communities and species identified in the Natural Heritage Inventory.

Secondary Methods

Other ways to help Allentown “grow smart” to balance new development with its rural character are discussed.

Large Lot Forestry and Agricultural Zoning

Areas: Merrimack River Floodplain, east of Granite Street, and North of Deerfield Road

Planning theory states that dividing developing land, or potentially developing land, into larger lots will slow development and preserve open space and rural character. The goal of these two types of zoning is to provide large enough blocks of land that they can be managed for a specific resource value. If this technique is used, lot sizes that truly reflect the amount of land needed to allow for commercially viable use of the land and are related to the reality of the use of the land in the area must be established.

Overlay Districts

Areas: (varies, Downtown)

Overlay zoning 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.

Ground Water Protection Districts
Mountain Conservation Districts
Steep Slope Districts

Historic Districts
Forestry Districts
Agricultural Districts

Flexible Zoning

Areas: Downtown and Route 28

Flexible zoning is an alternative to traditional fixed zoning regulations. It allows for more latitude in adapting proposed land use changes to the desires of the community, the wishes of the developer, and the characteristic of the resource base. Extra care must be taken in designing these regulations, to ensure that both the intent of the zoning and the conditions that must be met to qualify for it are clear to the Planning Board, developer, and residents.

Phased Growth Plan

Areas: Deerfield Road

Towns may adopt regulations to control the rate of development. In certain rapid growth situations, slowing the rate of development can be a way to retain some open space from development for a short period of time, during which it may be possible to determine if there is a need or mechanism to preserve it permanently.

Limitations to the Number of Building Permits

Area: Entire Town

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 avoid the perception of creating “snob zoning.” Allentown currently restricts the number of new manufactured housing permits issued to one permit for every fifteen traditional housing permits issued.

Open Space/Village Design Planning

Area: Deerfield Road Development

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.

NON-REGULATORY PRESERVATION MEASURES

Volunteer efforts to conserve land are recognizable and are often more appreciated than regulatory requirements. Hand in hand, regulatory and non-regulatory methods work together to serve the community’s preservation interests.

Conservation Easements

Area: Northeast corner of Town (North of Deerfield Road)

A conservation easement is a permanent, legally binding agreement that ensures that 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 landowner and a qualified recipient, which can be the Town or State government or various conservation organizations. Each conservation easement is tailored to the interests of the landowner, 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 an easement is binding to all future owners.

Agricultural Conservation Easements

Area: Floodplain

Conservation easements can be written to accommodate the special needs and interests of farms. In Allentown, landowners of the remaining agricultural parcels in Town (specifically of McNamara’s and Blake’s farms) should be contacted to discuss the benefits easements.

Management Agreement

Area: Entire Town

These management agreements focus on a particular open space value and 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 from one place to another safely. 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, or manage these important corridors.

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

Dollars and Sense of Open Space

Area: Entire Town

This is an educational workshop that can be held in Allenstown. New Hampshire studies, such as the *Dollars and Sense of Open Space* by the NH Wildlife Federation and *Does Open Space Pay* by the UNH Cooperative Extension show that open space brings in more revenue to a town than it requires in services. The general consensus is that less development, particularly residential development, means lower taxes. More houses require, among other community services, additional roads to maintain and the providing of more schooling for children. In Chester, it cost the community \$449,206 more to educate children from 117 new homes than those new residents paid in taxes. In Peterborough, the 188-home Pine Ridge Development cost the town \$128,124 more than it brought in taxes.

POTENTIAL FUNDING SOURCES FOR CONSERVATION PROJECTS

While the list of choices for funding conservation and preservation endeavors is ever-changing with respect to local, regional, state, and federal grant programs, municipal "income" opportunities remain relatively stable. In addition, a municipal dollar-match is most often required in order to obtain any type of grant funding.

Municipal Contributions to the Conservation Fund

Many Towns have created a separate Conservation Fund or an open space acquisition fund, through vote at Town Meeting, specifically for the purpose of paying for land acquisition or easements. 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 land use change tax allocation to the Conservation Fund is an additional tool provided by a vote at Town Meeting.

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

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.

Tax Liens - When the Town acquires property because the owner has not paid all of the taxes on the property, the Town can keep and manage the land and include it in as part of the Town's conservation plan. On the other hand, if there is little resource value in the land, it could be sold and the revenue placed into the Conservation Fund.

Fines - Fines imposed for misuse of Town property could be allocated to the Conservation Fund by a vote at Town Meeting.

Land and Community Heritage Investment Program

This State fund is designed to assist communities that want to conserve outstanding natural, historic, and cultural resources. There is a requirement that the Towns match the State money from this fund with a 50% match from other sources, which can include an "in kind" match, as well as funds from other sources.

State of New Hampshire Funding Sources

The Departments of Environmental Services, Agriculture, Transportation, Resources and Economic Development, and many other State agencies offer grants on a matching basis to assist with conservation-related projects. Although not in a centralized listing, research can yield a number of grant opportunities to help offset the municipal costs of a project.

Federal Funding Sources

There are many potential funding sources at the federal level. Depending on the type of project to be undertaken, the federal government has an updated register of hundreds of grant programs located in the Catalog of Federal Domestic Assistance, currently at www.aspe.os.dhhs.gov/cfda/ialph.htm. The US Department of Agriculture office in Concord offers numerous free or low-cost services to municipalities.

In-Kind Services or Mini-Grants from Quasi-Public Entities

The UNH Cooperative Extension and the Central NH Regional Planning Commission offer a variety of free or very low-cost services to municipalities within their respective areas. They may be able to provide technical assistance to help a town pursue grant funds, research potential grant opportunities, or perform training or site inspections.

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 correspond with 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 who have, or could develop, an interest in conserving open space.

SUMMARY

The natural features section of the master plan focuses heavily on Bear Brook State Park, as it must, given the area of town consumed by the park. The natural features section recommends that the Town work to improve the impact the park has on the Town by lobbying against motorized recreation in the park, pursuing additional state funding to reimburse the town for park-related services expenses, and coordinating with neighboring communities to increase bargaining power with the state. The section also recommends that the town work educate residents about the park and work to connect the park to the local system of greenways and wildlife corridors.

Through the community visioning process, residents indicated that access to the Suncook and Merrimack Rivers was important, and this chapter makes recommendations relative to accomplishing that goal. Although Allenstown is unusual in regards to open space preservation due to the amount of open space land in the park, it is important to coordinate future development, particularly in the Deerfield Road area, to maximize the value of the park as a piece of the regional greenway. It is recommended that the Town re-establish the conservation commission to help accomplish some of these goals as well as to monitor air and water pollution prevention measures.

- Respectfully Submitted, Judy Silva