TOWN OF BOLTON 2005 OPEN SPACE AND RECREATION PLAN

Submitted to the Executive Office of Environmental Affairs,
Division of Conservation Services
on behalf of the Town of Bolton by

The Bolton Open Space Committee

In association with:

The Board of Selectmen
Conservation Commission
Advisory Committee
Planning Board
Board of Health
Historical Commission
Parks and Recreation Committee
The Town Clerk
Bolton Conservation Trust
Historical Society

Bolton Trails Committee and Bolton Citizens





Prologue

The Town of Bolton is a residential and agricultural community on the uplands east of the Nashua River Valley on an historic east-west corridor. Its geography greatly shaped its history. Bolton has gently sloping hills but no major streams, so the earliest sources of power for manufacturing were not present and the town from its earliest years was primarily an agricultural community with only a small percentage of industry. But Bolton had rich forests and geological deposits of lime which combined to supplement the farming economy. The town had lime kilns and limestone quarries, and produced potash, lime and bricks.

The town was settled early by Europeans, in 1675. It consisted then of prosperous dispersed farms and its population increased very slowly after King Philip's wars. Agricultural uses grew to include orchards and dairy farming by the 19th century. Much of this rural landscape is still intact in a town that is now primarily a residential suburb for surrounding industrial communities and an exurb for the greater I-495 corridor.

(Seals supplied by community. Narrative based on information provided by the Massachusetts Historical commission)

Notable Accomplishments

The Town of Bolton is proud to present its 2005 Open Space and Recreation Plan, an update to the 1998 Open Space Plan. Before the Town can act upon the items presented in this open space update, however, residents must first reflect on the major accomplishments over the last few years. It is important to note that many people from all parts of Bolton's social fabric share credit for the successes listed below. The town owes a debt of gratitude to those community advocates.

The open space committee and the town will use these achievements as a springboard toward executing the actions stated in this 2004 Open Space and Recreation Plan in order to best plan for future development which retains Bolton's rural character and unique natural features.

Agricultural Preservation Restriction (APR)

- By near unanimous consent on town meeting floor, and by a wide margin at the 2004 town election held on May 10th, the residents of the town of Bolton voted to protect in perpetuity 181 acres between the Nicewicz and Schartner farms, two of Bolton's six largest active farms.¹
- 23 acres of Meadow Farm (Coolidge).

Wetlands Protection

 Passed a Wetlands Bylaw, to conserve and protect the wetlands, water resources and natural resource services. Intended to use the Home Rule authority, with additional standards and procedures stricter than those of the Wetlands Protection Act.

Conservation Zoning

- Increased area protected under Central Nashua River Area of Critical Environmental Concern (ACEC) by 70 acres with the Commonwealth's acquisition of Bolton land in the Pine Hill area, west of the Nashua River.
- Utilized Farmland and Open Space Restricted Development (FOSPRD) Bylaw to permanently protect 231 acres of open space in nine new subdivisions².

Core Area Land Protected

• 157 acres in Phillips/Rattlesnake with the Stephenson, Braman, and Atlantic Union purchases, locking up a contiguous conservation block of 444 acres.

¹ As of the publication of this document, this APR has not yet been completed

² As of the publication of this document, 21.93 acres in "The Oaks has not yet been deeded to the town

- 10 acres in Randall Road Area with Savignano purchase.
- 49 acres in Vaughn Hill with 47 acre Moen purchase and 2 acre Cooke/Garneau gift in Mt. Wachusett Estates.
- 76 acres in Northwoods with the Levinson Gift to the Bolton Conservation Trust and with the Northwoods FOSPRD addition of a portion of the Wilruth property.
- 40 acres in Barretts Hill with Wesley purchase.
- 34 acres purchased in Wilder Pond to Forbush Mill for open space and active recreation, including new soccer fields on Forbush Mill Road.

Conservation Restrictions

- 10.81 acre CR on the Reed property on Randall Road.
- 5 acre CR on the Sullivan property, adjacent to Moen conservation property on Vaughn Hill⁴.

Environmental Education

- Expansion of Tom Denny Nature Camp to six week program in 2002, in operation since 1976.
- Expansion in the Environmental Learning for the Future (ELF) Program, now in it's 15th year.

Other

• Formation of the Bolton Trails Committee, led by an active group of citizen volunteers whose primary goal is the creation of a 15-mile loop trail connecting key conservation areas, and linking conservation areas with Stow, Harvard, Lancaster, and Berlin. The Committee also organizes regular trail maintenance and assists the Conservation Commission and Bolton Conservation Trust in land stewardship for publicly owned land.

⁴ As of the publication of this document, the Sullivan CR has been signed by all parties but has not yet been recorded

Section 1. PLAN SUMMARY

Bolton is an exurban community of hills, orchards, and forests located on a ridge separating the Assabet and Nashua River Watersheds. The Town Center is lined with historic homes. Country roads weave amongst hills and streams mixed with trees and farms. Its rural character and relative proximity to Boston, Worcester, and 1-495 continues to attract "commuter families", increasing residential home building, property values, and taxes since the 1970's. In fact, the loss of open space and agricultural land to residential development in support of an exploding population has been happening at a rate far greater than the state and region. From 1985 through 1999, residential development increased 52% and the open space & agricultural land decreased by 22% in support of a population that grew by 32%. While these patterns are articulated in Table 1.1, it is clear that continued growth at this rate will threaten the remaining open spaces that define Bolton.

Table 1.1

	Bolton	Region	State
Mass GIS Data - 1985-99			
Residential Development	52%	20%	23%
Loss of Agricultural Crop Land	-22%	-13%	-9%
US Census Data - 1990-2000			
Population	32%	7%	6%
Housing Units	35%	8%	9%

Two obstacles facing the town in protecting and acquiring open space that did not exist when the 1998 Plan was developed is a weakened economic climate and a quickly rising property assessment tax. 1998 was near the pinnacle of the "Internet Boom", unemployment was low, and money was thought to be in a more plentiful supply. In 2004, the "Internet Bubble" has burst, unemployment remains relatively high, municipal revenues are flat, self-help grant potential appears limited, and though Bolton's key boards have moved off a 2003 stance of "no new debt", proposed expenditures are reviewed with meticulous care. The 2004 town meeting vote and subsequent general election to approve a Proposition 2 ½ override, protect two large farms with an APR, and purchase 89 acres of core conservation land assures an increase from \$13.24/\$1000 in 2004 to between \$14 or \$15/\$1000 in 2005. The potential of limited outside financial support and available free cash will require new and creative approaches in protecting the town's rapidly disappearing open space assets over the next five years.

With the above in mind, the open space planning process galvanized the town to review past goals and objectives, understand current and future land needs, prioritize available open space and recreational lands against those needs, and outline the steps required to effect community goals.

In a 2002 town-wide survey that elicited a high-response rate, the citizens of Bolton said they like the town the way it is, want to continue to protect open space, and encourage commercial development within the current business zones to assist in growing the tax base. With this as the springboard, the goals of 2004 Bolton Open Space Plan are to:

- Update the inventory of social and natural information;
- Outline and prioritize open space and recreation needs;
- Continue to encourage the residents of the town to plan for the future as the community grows and changes through the early part of the 21st century.

This plan recommends that the town focus its efforts towards the following, as these efforts will preserve the qualities that characterize the town of Bolton:

- encourage the Conservation Commission, Bolton Conservation Trust, Board of Selectmen, Master Planning Committee, and other key boards work together to prioritize land acquisition and protection strategies
- support and preserve farms and scenic views
- acquire and/or protect additional conservation land within specific core areas
- look for ways to protect lands on and around identified high-yield aquifers, to protect future town needs
- identify and utilize financially creative means to accomplish above two bullet points
- Emphasize Conservation Restrictions and Agricultural Preservation Restrictions over the use of Chapter 61 to insure permanent protection of key parcels
- continue to improve land management techniques and inventories of biodiversity
- provide access to active and passive recreational opportunities
- safeguard the town's groundwater which every resident depends on
- support methods to increase town revenues and the commercial tax base

Section 2. Introduction

2.A Statement of Purpose

The purpose of this open space and recreation plan is to help assure that future growth in Bolton is accomplished in a manner which conserves and protects the town's open spaces and natural resources and plans for adequate recreational areas for the enjoyment of all its citizens. Given the challenge of the current economic climate, we anticipate utilizing financially creative means to meet these objectives.

This is the Fifth Edition of our Open Space and Recreation Plan, which complements and continues the work of past plans. In 1980, Bolton developed its first open space plan. Subsequent updates to the first plan were completed in 1985, 1991, and 1998. Each plan has been the product of volunteer committees comprised of Bolton citizens. By highlighting the key accomplishments since the 1998 plan (see Introduction), a natural starting point for new planning is established.

The plan provides the basis for open space acquisition and subsequent protection by the Town through the Conservation Commission and in consultation with other town boards and the Bolton Conservation Trust (a local non-profit organization) (see Appendix A, Support Letters from Town Boards and Groups). The plan is also the basis for recreation land acquisition and development by the Selectmen and Parks and Recreation Department. As such, the plan meets Commonwealth of Massachusetts' requirements for open space plans when financial assistance in acquisition is to be provided by the Commonwealth. The plan provides town boards and citizens with inventories, maps, and other natural resource information for use in future integrated town planning. The Plan is also an important reference source for townspeople in learning about open space, land use, and natural resources in Bolton and how they as citizens can contribute to the planning process.

The effort of the many individuals who worked to produce this plan (see Appendix B, members of the Open Space Committee; and Appendix C, meeting dates), combined with the message sent by the citizens through the town-wide survey, is evidence of the groundswell of support for preserving the classic small town New England character of Bolton during a period of burgeoning development.

2.B Planning Process and Public Participation

The Bolton Conservation Commission initiated planning for this Bolton Open Space Plan when it held a Kickoff Meeting at the Bolton Town Hall on February 10, 2003. This public meeting was publicized by drafting an invitation letter that was published in the Bolton Common, Bolton School Newsletters, and sent via email to the following key boards, commissions, and committees: Board of Selectmen, Long Range Planning Committee (now defunct and replaced by a Master Planning Committee), Town Secretary, Bolton Conservation Trust, Historical Commission, Planning Board, Personnel Committee, Board of Health, Advisory Committee, Parks and Recreation Committee, and The Town Clerk. In addition, a public invitation was extended at the Conservation Trust's annual dinner on February 9th. An additional article appeared in the Bolton

Common requesting volunteers to work on the plan. This was followed by a "grass-roots" campaign of contacting contributors of previous Open Space & Recreation Plans via telephone and email.

At the Kickoff Meeting, the following definitions were offered to attendees with the goal of level-setting the audience:

What is "Open Space"

- Conservation, forested, recreation, and agricultural land
- Undeveloped land with particular conservation or recreation interest
- Land used for passive activities
 - Walking, skiing, mountain biking, horse back riding
- Land used for active recreation
 - Soccer, tennis, baseball, skateboard parks

The Recreational and Open Land statue (G.L. Ch. 61B) defines open land as that: "retained in substantially a natural, wild, or open condition, or in landscaped condition in such a manner as to allow to a significant extent the preservation of wildlife and natural resources."

What is an Open Space Plan?

- Powerful instrument to effect community goals
- Impacts and belongs to everyone
- Focuses on natural resource base
- Forests, fields, agriculture, soil, water characteristics, scenic and recreational goals, land use
- Assessment of past, present, and future
- Intelligent, organized, and pro-active approach to land acquisition, education, use, and managing development
- Does not always mean costly acquisitions
- Vehicle to maintain what attracted us to Bolton, while providing sense of control over development

Why it needs an update

- Call out achievement and progress on prior Plan's goals and objectives
- Re-evaluate and update Bolton goals, objectives, needs, growth and population demographics, current land inventory
- Key acquisitions and conservation restrictions
- Open space lost since 1998
- Remain eligible for state's Self Help grant for land acquisition.

Planning Process

- Achieve community consensus about what should be protected and how to do it
- Inclusive process that enriches Bolton

- Rewarding, leading to achievable, clearly visible results
- A source of civic pride
- Educational
- Productive
- Fun!

At the kickoff meeting, copies of the 1998 plan were handed out to attendees, with the request for comments. One of them came from Bolton's Long Range Planning Committee, who had developed a Survey Task Group and issued a Bolton Town Survey between December 2001 and February 2002, for the purpose of providing data for town planning. They suggested reviewing this data to help shape the development of the plan, since the survey had several pertinent questions, including the development of a town center, housing, land use and acquisition, taxes and commercial development, library, and personal priorities. This survey was developed with input from and reviewed by numerous groups and individuals in town, and was designed and analyzed by committee members who do similar work professionally. In the survey, opinions were requested of all household members 18 or over.

In all, 848 surveys were returned, 80% were from head of household. Approximately 43% of all house holds in Bolton were represented in the survey results, well above normal survey results. The demographics of responders closely matched the town census, with 59% of responses coming from the 35-54 age bracket, and 8% coming from 65+. The most relevant and convincing answers are included here to support the town's goals in this Open Space Plan.

- Q1. Do you favor the creation of a town center? 54% agree, 46% disagree
- Q5. A table was presented that showed current land use in the town of Bolton by percentage, and asked residents to list how they'd like this to change in 10 years. The message was "don't change it very much", with the exception of undeveloped open land, where responses indicated that residents would like to increase the percentage of permanently protected land from 11% to 15%. Other increases were in areas of restricted wetlands, developed residential, agricultural, developed business, all in current zones. Decreases were noted in areas of undeveloped residential, municipal buildings, and undeveloped business.
- Q6. Which of the following actions do you think the town should take to preserve open space, if any?
 - A) Encourage landowners to use 61A 75% Do it, 19% Neutral, 6% Don't Do It
 - B) Purchase land for conservation %71% Do It, 13% Neutral, 16% Don't Do It
 - C) Purchase land for recreation and municipal use 74% Do It, 14% Neutral, 12% Don't Do It

D) Encourage development where some open land is set aside: 52% Do It, 15% Neutral, 33% Don't Do It

This was followed up with a series of separate meetings with key groups and personnel including Long Range Planning Committee, Bolton Conservation Trust, Trails Committee, Board of Selectmen, Planning Board, Board of Health, Advisory Committee, and Conservation Commission, in which progress towards 1998 goals were discussed, as well as new objectives and specific action items.

By spring of 2004, the work of the committee was summarized into a presentation, outlining specific achievements, key survey results, land use and demographic changes, and an analysis of needs. This presentation was first distributed to committee members, Conservation Commission, and Metropolitan Area Planning Council (MAPC) for comments. Then a notice was placed in the <u>Bolton Common</u> inviting the town to attend a series of three public meeting to develop Goals, Objectives, and the Action Plan. Presentations were then made to the Board of Health, Planning Board, and Board of Selectmen, requesting comments. Once all comments were received, copies were sent to the Metropolitan Area Planning Council (MAPC) and the Executive Office of Environmental Affairs (EOEA) for comment. Their responses were received on February 8th and March 1st 2005, respectively; EOEA conditionally approved the plan through February 2010 based on letters of review, completion of all maps, and SCORP review, which have been submitted with this final draft.

Section 3. COMMUNITY SETTING

3.A Regional Context

The Town of Bolton comprises nearly 20 square miles and lies within the so-called Worcester Plateau physiographic region of east-central Massachusetts. The town is bordered to the west by the towns of Clinton and Lancaster; to the north by Harvard; to the east by Stow; and to the south by Hudson and Berlin. Interstate 495 is the major north-south route through Bolton; state numbered Route 117 is the predominant east-west artery. Figure 3.1 shows Bolton's location relative to other town in Massachusetts and the 14 Regional Planning Agencies; for planning purposes, Bolton is part of the Metropolitan Area Planning Council (MAPC).

Bolton's landscape is punctuated by numerous rounded hills amidst a generally rolling countryside. The vast majority of the town falls between elevations 300 and 500 feet (MSL). Several prominent hills, (Vaughn Hills, Wataquadock Hill) however, exceed 600 feet and offer exceptional views and rugged terrain. These are unique features in the regional landscape as they represent the highest points between Boston and Mount Wachusett to the west. In fact, on clear days (and most nights), Boston can be seen to the east while Mount Wachusett is clearly visible to the west. Only in the most northwest and northeast portions of Bolton, in the Nashua River valley and Great Brook valley, respectively, do elevations fall below 260 feet.

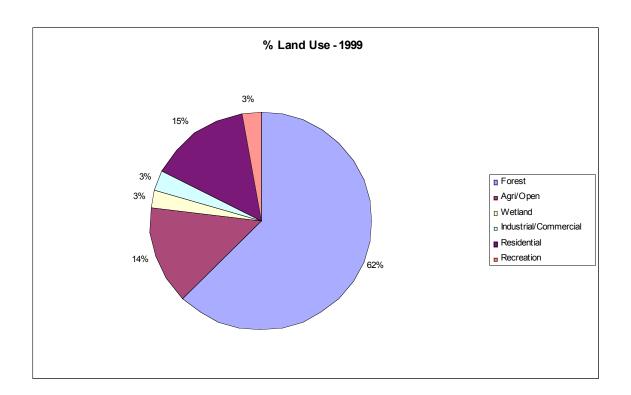
The Shrewsbury Ridge runs southwest to northeast and is formed by Wataquadock Hill and the unnamed hills between Powderhouse and the Vaughn Hills. This ridge comprises the boundary between the Nashua and Assabet Watersheds. Smaller sub watersheds flow from Bolton to each of its neighboring towns. From a regional context, Bolton recognizes that because of its location at the top of the watershed, its activities have a direct impact on the neighboring towns down stream.

Historically, Bolton has been a prominent agricultural community in central Massachusetts. Because early American commerce was dependent upon rivers for power and transportation, rivers became the focal point for growth in inland communities. The town's only major river, the Nashua, was not conducive to port development because of its extensive floodplain. These lands, however, contain extremely fertile soils that gave rise to the development of the agricultural traditions that continue in Bolton up to the present day. Townspeople turned to the productive soils, uplands and occasionally wetlands to raise crops and graze livestock. As of 1999, about 750 acres in Bolton were active crop land with nearly another 250 acres of active pasture. Six farms totaling 550 acres are orchards and Bolton boasts of producing more apples than any other Massachusetts' community. Table 3.2 demonstrates how land use changed between 1971 and 1999, while Figure 3.3 provides a profile of Land Use in Bolton in 1999 (Source MacConnell, 1971, 1985, 1999).

Table 3.2 Land Use/Cover Changes in Bolton

	BOLTON LAND USE - ACRES							
				% Change	% Change	% of		
				1971 to	1985 to	Total	% of Total	
	1971	1985	1999	1999	1999	1999	1985	
Forest	8,539	8,169	8,061	-6%	-1%	63%	63%	
Agri/Open	2,546	2,375	1,844	-28%	-22%	14%	18%	
Wetland	384	384	341	-11%	-11%	3%	3%	
Industrial/Commercial	297	384	388	30%	1%	3%	3%	
Residential	806	1,247	1,892	135%	52%	15%	10%	
Recreation	307	319	351	14%	10%	3%	2%	
Total	12878	12878	12878					
Total Undeveloped	11775	11247	10598					
Percent Open	91%	87%	82%		-5%			

Figure 3.3 Bolton Land Use – 1999



But how is Bolton doing relative to its neighbors? For regional planning purposes, Bolton is part of a twelve-town sub region of the Metropolitan Area Planning Council called "MAGIC" (see Figure 3.4), standing for Minuteman Advisory Group on Interlocal Coordination. The towns include: Acton, Bedford, Bolton, Boxborough, Carlisle, Concord, Hudson, Lexington, Lincoln, Littleton, Maynard, and Stow. Figure 3.5 shows how Bolton's Land Use in 1999 stacks up to both the MAGIC region and the state as a whole:

Figure 3.5 Land Use Comparison 1999 vs. MAGIC region and State (Source MacConnell, 1971, 1985, 1999)

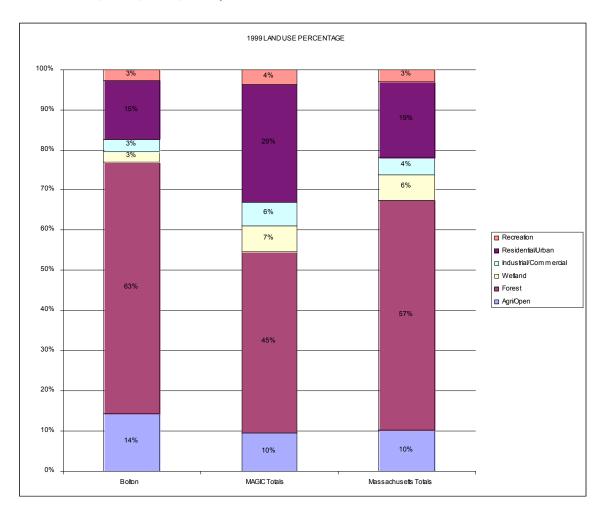


Table 3.6 MAGIC Regional Changes in Land Use, 1985 - 1999

	PERCENT CHANGE OF LANDUSE BY TYPE - 1985 TO					
				Industrial/	Residential/	
TOWN NAME	Agri/Open	Forest	Wetland	Commercial	Urban	Recreation
Acton	-4%	-12%	1%	0%	22%	-26%
Bedford	-40%	-2%	-15%	3%	14%	-6%
Bolton	-22%	-1%	-11%	1%	52%	10%
Boxborough	-3%	-14%	0%	-1%	82%	-62%
Carlisle	-14%	-5%	-13%	-28%	25%	-18%
Concord	-8%	-4%	0%	2%	11%	-6%
Hudson	-22%	-19%	-1%	14%	22%	60%
Lexington	-8%	-7%	0%	3%	4%	-1%
Lincoln	-12%	-4%	0%	-1%	12%	1%
Littleton	-14%	-8%	0%	1%	32%	12%
Maynard	-15%	-9%	-1%	9%	11%	11%
Stow	-8%	-7%	0%	-30%	27%	22%
MAGIC Totals	-13%	-7%	-2%	2%	20%	2%
Massachusetts Totals	-9%	-5%	0%	8%	23%	3%

When reviewing the trends over time in Tables 3.2 and 3.6, it becomes readily apparent that from 1985 to 1999:

- Residential development in Bolton increased 52%, well ahead of region (20%) and state (23%), 2nd only to Boxborough
- Bolton lost 22% of agricultural/crop land, again outpacing region (-13%) and state loss (-9%).
- Bolton also lost an alarming 11% of its wetlands (region lost 2%, state no discernable loss). This loss came from a 45 acre loss of Non-Forested Wetlands. Actual Water increased slightly by just over 2 acres, probably in the creation of several fire ponds in new development as well as increased beaver activity.

Bolton has very few businesses and industries in town. By and large, Bolton is a bedroom community with its working population traveling to jobs as far as Boston, southern New Hampshire, Rhode Island and the Connecticut valley. In fact, nearly half of Bolton's working population travels more than 30 minutes to work, and 99% travel individually by automobile. Because of its proximity to many commercial centers, Bolton's open spaces and farmland continue to give way to residential development. This is also true of other towns in the region. In recent years, several large subdivisions and other projects have been built on former farms and open space in the bordering towns of Stow, Berlin, Lancaster, Harvard, and Hudson. Large million+ square foot, multi-acre malls are being proposed in Lancaster on Rte 117, and at the Berlin/Hudson line on Rte 62, and Bose has purchased the old Digital Equipment facility off 117 in Stow that will employee in excess of 7000 people. These large shopping areas and businesses will likely attract new growth and an increase in road congestion to the region.

With I-495 and the growth of the high-tech industry west of Boston, Bolton has become a unique rural alternative within commuting distance of high paying jobs. The challenge going forward will be to meet the recreational demands and quality of life

expectations of an increasingly young, professional populace while retaining the natural amenities and unique environmental resources which make Bolton the special place it is.

3.B History of the Community

From its beginnings as part of the Nashaway Plantation and then the town of Lancaster, Bolton has been known for its natural features. For example, Whitney's History of Worcester County (1793) described Bolton as "good land, not level, nor yet has it any very high hills ... It is not very rocky, however there are stones sufficient to wall in all their farms. About half a mile from the center of town, to the west, begins the great hill known by the name of Wataquadock Hill, very high." The name Wataquadock is derived from an Indian word meaning "the place of many springs." A number of mills were constructed in the early days along some of the brooks formed by these springs, and the ruins of many of these sites can be seen today.

Two town histories have been written by late resident and town historian Esther Whitcomb: The <u>History of Bolton</u> (1938) and <u>About Bolton</u> (1988). These histories have brought together much information about the town from various sources and were published for the 200th and 250th anniversaries of the founding of the town.

Bolton has long been known for the minerals in the Rattlesnake Hill area. The <u>History of Bolton</u> (1938) says the area contains some 30 minerals. Lime and ochre are two examples of minerals taken from Rattlesnake Hill over the years. The remains of much of the mining activity can be seen near the Lime Kiln.

There were important early roads that passed through Bolton, often on the sites of present day roads. One of these, the Bay Path, passed over Wataquadock Hill "from which the traveler had his first view across the wooded valley to the shapely dome of Wachusett in the west and northward to the sharp cone of Monadnock" <u>History of Bolton</u>, 1938).

With the exception of Route I-495, the roads in Bolton have not been altered very much over time. Although physically similar to its former configuration, Route 117 has seen tremendous growth in traffic volumes during the morning and evening rush hours. Yet Bolton remains a farming and residential community with a rural appearance that most Eastern Massachusetts towns have lost. The History of Bolton notes that:

The natural beauties of Bolton are frequently remarked on by visitors. Brooks, meadows, intervales, and forests are to be found here. The roads are lined with shade trees and many specimen trees of noble proportions grace fields and lawns. The varying terrain invites all kinds of wildlife; birds in particular are abundant, some of rare species. Every kind of native wild flower adorns the woodlands and meadows.

The <u>History of Bolton</u> also described Bolton's "many large hills whose tops are plateau-like and whose slopes are expansive, the view being unsurpassed in the eastern part of the state. From these hills can be seen farms, orchards, streams, forests, valleys, and always in the background various mountain ranges."

The 1794 map of Bolton by surveyors Silas Holman and Nathan Longley show the county roads, Wests Pond and Key's (Little) Pond, Welsh (Welch) Pond, the Nashua

and Still Rivers, two meeting houses, two saw mills, two grist mills, the Lime Kiln, a fulling mill and two "potashes". No residences or farms are shown.

Thirty-seven years later, the 1831 map by Silas Holman (Figure 3.7) shows substantial growth and industry. On this informative map Little Pond has become "South" Pond; woodlands, streams, "fresh meadows and intervales", and Hog Swamp are shown, as well as the major hills - "Wataquadock", Long, "Vaughn's" and Rattlesnake. There are 51 miles of mostly unnamed roads, 188 dwelling houses, eight school houses, two meeting houses, three "burying yards or grounds", the Common, the Powder House, a "goose and fish pond" (the Wilder Pond), a "goose house", saw and grist mills, lime kiln, lime houses, two comb factories, a turning lathe, tan house, poor house, hatters shop, three stores, and one office.

Some of these features, between at least 165 and 200 years old, are now under protection or Town ownership: the Wilder Farm pond, Lime Kiln, burying grounds, the Powder House, Rattlesnake Hill, one of the Vaughn Hills, and parts of Welch and Little Ponds. Apart from the dwelling houses, there are visible remains of the gristmill stonework on Great Road, the gristmill dam on Forbush Mill Road, and the saw and gristmill dam and stonework on Century Mill Road.

One of Bolton's most distinguishing land use characteristics is its agricultural production, established a century ago and still viable in its local and regional distribution. The maps of 1857 and 1898 show additional topography and a growing number of residences and farms. The 1898 Map of Bolton, Mass. shows 18 farms, in addition to many smaller homesteads. Former Town Historian Dorothy Mayo, researching past land use in 1977, found that the 1898 Worcester County Atlas described many of these farms, 9 of which were over 100 acres. Most raised cattle and fruit, supplying dairy products, apples and peaches to neighboring towns and "the Boston market". Other important crops were hay, corn, and asparagus. Two of the farms boarded summer residents, who came to Bolton from city areas to enjoy the rural atmosphere and scenic vistas.

In addition to the local Historical Society, Bolton has a very active and well-informed Historical Commission. The Society works with and supports the Commission, making resources available which include substantive progress on the inventory of town historical sites. In 1997, the Historical Commission worked to have the Bolton Center Historic District accepted in the National Register of Historic Places. Several other important locations are being considered for nomination.

In 1997, the Historical Commission proposed, and the town accepted at Town Meeting, a Demolition Delay Bylaw. The bylaw requires the Building Inspector to forward demolition permit applications for buildings 75 years and older to the Historical Commission for review. The Historical Commission then makes a determination as to whether or not the building is historically significant. If the building is deemed historically significant, a public hearing is held. If it is decided that the building is 'preferably preserved', the demolition is postponed for six months. In that time, the Commission works with the owners, local, state, and federal resources to pursue alternatives to demolition. If no viable alternatives are found, demolition can proceed after the six-month period has elapsed.

At a public forum in October 2002, the Historical Commission introduced the archaeological reconnaissance survey of the prehistoric and historic sites in Bolton. This survey was the result of a grant awarded to the Town from the Massachusetts Historical Commission. The Commission and other Town boards use the survey to evaluate the potential risk to archaeological sites from building and development.

3.C Population Characteristics

Bolton's population grew more slowly in the first half of the 20th century, but has grown at a faster rate since, and especially since 1970. The table below shows the annual growth between 1900-1950 to be .6%, while the growth rate in the 70's was 3.32%, 80's 2.39%, 90's 3.24%, and based on early 2004 estimates, 3.2 % in the early stages of the 21st century.

Table 3.8 – Changes in Population, 1900 through 2004

	ACTUAL						
	1900 1950 1970 1980 1990 2000 2004 (1)						
Population	770	1000	1900	2530	3134	4148	4680
Annual Population Growth		0.60%	2.10%	3.32%	2.39%	3.24%	3.21%
	(1) 2004 based on early town census estimate						estimates

Studies by the MAPC of the entire Greater Boston area and of the Route 495 area in particular show Bolton to continue its significant population growth through the year 2010. In fact, the trend over the last decade is for the actual population to exceed earlier growth projections, For example, MISER, UMass Amherst predicted growth at a pace above the state average to 3,928 in 2010, yet that figure was actually exceeded by 1997, and the 2000 Census places Bolton's population at 4,148. Predictions from Demographics Now place population in 2008 at 4542, but an unofficial tally from Bolton's Town Clerk places the population of Bolton on January 8th, 2004 at 4680, a 58% increase since 1985. As depicted in Table 3.6 below, Bolton's population growth of 32% from the 1990 to the 2000 Census is second only to Boxborough in the MAGIC region.

Table 3.9 - MAGIC Changes in Population & Housing Units, 1990 – 2000

	1990		2000		Cha	inge	% Change	
		Housing		Housing		Housing		Housing
TOWN NAME	Population	Units	Population	Units	Population	Units	Population	Units
Acton	17,872	6,891	20,331	7,680	2,459	789	14%	11%
Bedford	12,996	4,602	12,595	4,708	-401	106	-3%	2%
Bolton	3,134	1,097	4,148	1,476	1,014	379	32%	35%
Boxborough	3,343	1,485	4,868	1,906	1,525	421	46%	28%
Carlisle	4,333	1,495	4,717	1,677	384	182	9%	12%
Concord	17,076	5,917	16,993	6,153	-83	236	0%	4%
Hudson	17,223	6,685	18,113	7,168	890	483	5%	7%
Lexington	28,974	10,841	30,355	11,333	1,381	492	5%	5%
Lincoln	7,666	2,714	8,056	2,911	390	197	5%	7%
Littleton	7,051	2,691	8,184	3,055	1,133	364	16%	14%
Maynard	10,325	4,211	10,433	4,406	108	195	1%	5%
Stow	5,328	1,853	5,902	2,128	574	275	11%	15%
MAGIC Totals	135,321	50,482	144,695	54,601	9,374	4,119	7%	8%
Massachusetts Totals	6,016,425	2,247,110	6,349,097	2,443,580	332,672	196,470	6%	9%

The character of the population of Bolton has changed as a result of the growth since the 1970s. The existence of Interstate 495 through Bolton and the proximity to other major highways has increased Bolton's role as a bedroom community for workers in eastern Massachusetts. The influx has tended to be upper middle class and the new housing construction has tended to reflect the needs of the upper middle class. The significant increases in real estate and land values since the 1980s remains unabated and has contributed to the construction of large, expensive houses and put increasing pressure on the affordability of housing in Bolton. Though the actual tax rate was reduced to \$12.72 in 2003, the average annual tax bill was \$5,731, based on an average house valuation of \$450,550. The tax rate was increased to \$13.24 in 2004, and will likely increase again in 2005.

Along with the influx of young and middle-aged professionals to Bolton, has come an increase in median family income. As of the 2000 federal census, Bolton's median family income was \$108,967, compared to \$61,664 for Massachusetts and \$58,394 for Worcester County. Just over 1% of Bolton's families fell below the federal poverty level in 2000, whereas 6.8% of Worcester County and 6.7% of Massachusetts families were considered below poverty. However, the unemployment rate since the 2000 Census has increased from 2.6% to 5.1% as of December, 2003 for Bolton, reflecting a nation-wide trend. Unemployment for Worcester County and Massachusetts at the end of 2003 was 6.1% and 5.4% respectively. A total of 97.6% of Bolton residents 25 or older had completed high school in 2000, and 67.3% had completed at least four years in college, well above both the Worcester County (83.5% and 26.9%) and Massachusetts (84.8% and 33.2%) statistics. The increase in families has produced a need for particular town services, most notably education. The town's school budget has increased in recent years to more than \$8 million, and the Department of Environmental Protection (DEP) is requiring that a new waste water treatment system be built for the Emerson School.

New Bolton residents choose the town because of the uncluttered, rural character and lifestyle that exist in the town, compared with the suburbs closer to Boston. The new homes must be built on 1.84-acre lots. This represents a considerable reduction in lot size

from older existing homesteads away from the center of Bolton. One "new" resident who bought a home and 12 acres in 1980 was considered to have a small parcel of land outside of the immediate town center. Comparatively, 12 acres is considered to be a large parcel of land today. Consequently, the existing open spaces, both private and public, in Bolton represent an important asset to new residents. These new residents place increasing demands on the town for passive and active recreational opportunities and, in general, bring to Bolton a desire to maintain its rural atmosphere and appearance. Similar to the problems faced by our nation's National Parks, the qualities that attract so many people to Bolton are the qualities that Bolton is quickly losing.

3.D Business Development (See Figure 3.10 for Bolton's Zoning Map)

Bolton has an Industrial zone at the east end of town on both sides of Route 117. Originally GenRad, the current use of the complex on the north side of Route 117 is offices and a distribution center for Future Electronics. Across 117 are two office building/laboratories currently owned by Atlantic Microwave. The Skinner auction gallery is a pre-existing business on the north side of 117 before Route 85 and Skinner expanded to its present size in 1984. Across from Skinner's sits Great Brook Farms, a garden center also offering a small delicatessen and coffee shop.

Just beyond Route 85 to the west are business zones that contain a gasoline station and the Country Cupboard convenience store and retail complex. Between Country Cupboard and Interstate 495 is privately-owned business zone land that was proposed for a hotel in the early 1990s.

There is Limited Business zoned land to the west of 495 which contains Hebert Candy's retail operation (1981), and the Flatley Company's Bolton Office Park. Currently under construction is the HUD Senior Housing Project, consisting of 28 affordable housing units. On the north side of 117 is Fred Freidus's Bolton Corner professional building (1988), and some currently undeveloped limited business land in that area on both Sugar Road and Route 117. Three houses (two of which are for sale at this publication) exist in this zone on the south side of Route 117.

The Salt Box retail complex is in the Business zone on the south side of 117 just before the center. In the center at the intersection with Wataquadock Hill Road are several pre-existing businesses including Smith Motors and the Cracker Barrel, which now is home to a realtor. Further on across from the library, the site of the former post office houses an insurance company and a dentist's office. Smith Motors has recently made inquiries into the town's interest in purchasing this 8-acrre parcel.

There is a business zone at the intersection of 117 and Forbush Mill Road that includes a restaurant and liquor store. Further on is the current post office building which is in the Limited Business zone and includes additional retail and office space, currently housing an engineering firm. At the intersection with Route 110 is Bolton Orchards retail store along with two pre-existing businesses.

Agriculture and retail sales of agricultural products continue to be the dominant business in Bolton. In addition to Bolton Orchards, there are orchards and a retail store at Bolton Spring Farms on the opposite side of town near East End Road. In between lie the Shartner and Nicewicz farms, two orchards recently protected by an Agricultural

Preservation Restriction.⁵ Both offer pick-your-own and seasonal farm stands along West Berlin and Sawyer Roads. The Nashoba Valley Winery and orchard on Wataquadock Hill Road has become a major attraction in Massachusetts and changed ownership in 1995. The operation has been revitalized and also includes an Agricultural Preservation Restriction on the orchard land.

There are numerous pre-existing nonconforming businesses in the residential zone in various parts of the town including Sylvester's restaurant (now closed and for sale), numerous antique shops, and other owner-operated businesses. Several of these involve construction equipment and repair businesses operated by the owner of the property. These have not detracted from the rural image and character of the town, but during 1995 and 1996 two of them became issues to the expanding residential neighborhood as the businesses expanded from recent levels, but within allowable pre-existing limits.

The 1997 town meeting approved congregate and assisted living uses in the Limited Business zone. The change was proposed by the owner of Limited Business undeveloped land on Sugar Road. Expansion of buildings and businesses is possible on both the Freidus and Flatley parcels. There is also undeveloped Business land at Forbush Mill Road. By and large however, there is relatively little business-zoned land remaining in Bolton. This means that significant developments of businesses in the future will require zoning changes, something that has been relatively hard to obtain in the past.

New provisions of the National Telecommunications Act are imploring communities to set aside suitable areas for telecommunication companies to erect towers for public access of cellular telephones. Since Bolton is bisected by 1-495, the town has come under pressure from companies to establish services along the interstate and perhaps at other high areas of town. Because Bolton lies on the highest ridge between Boston and Mt. Wachusett, areas outside of the highway corridor are also desirable to telecommunication companies.

One tower was built in the 1990's on town-owned land just southwest of the I-495/Rt. 117 interchange. The town purchased 4+ acres on West Berlin Road at the top of Wataquodoc Hill and placed a 2nd tower in 2002. New proposals for towers on both the Girl Scout land⁶ and the Boy Scout land on Rte 85 are currently being reviewed.

Interestingly, although an unsightly blotch on the rural landscape of town, the towers could be utilized for conservation purposes. If an appropriate piece of land were identified, a tower could be placed on conservation land and the revenues could be used for open space acquisition. In addition, towers could be placed on privately owned land, and if defined in a bylaw, the existence of the tower could restrict building from a certain amount of adjacent land. These options are made more palatable by experts that suggest the communication towers may be obsolete, and thus disbanded in the near future, as satellites become more widely utilized for daily communication purposes.

⁵ Not completed as of this publication

⁶ Tower has been completed on Girl Scout property

3.E Growth and Development Patterns

3.E.1 Patterns and Trends

Agriculture has always been important to Bolton. Early settlers farmed the land and there have been important dairy farms and orchards that have lasted through two and one half centuries. Today, apple orchards are among Bolton's claims to fame. Though disappearing faster than forested land, lands in active agriculture remains in Bolton while the more easterly towns such as Acton, Sudbury and Concord have lost much of theirs to urbanization. Over the years, development has occurred along major roads such as Routes 117, 110 and 85, inter-town roads such as Harvard Road or Wilder Road, and in gradual development of large tracts of open land or former farms. This trend is likely to continue.

Development is currently occurring more rapidly in Bolton than in any other town in the MAGIC region, measured by land lost to residential development, population growth and an increased number of homes. There were 451 dwellings in 1967, 819 in 1980, and by the 2000 census there were 1,476, a 35% increase from 1990. The reasons for this continued growth are a strong real estate market and a sharp increase in land value that has made the construction of multi-lot subdivisions an economically viable prospect. These are either developed as conventional subdivisions with a new town road, or through the use of either a shared or common driveways, accessing up to two and five homes respectively. It is not uncommon for a 2-acre buildable lot to fetch \$200,000 or greater on the open market.

Subdivision proliferation has been steadily increasing in Bolton over recent years with strong peaks in the mid-1980s and 1990s. A 15-house subdivision and new road - Coventry Wood Road- were developed off Sugar Road in 1969-1970 as the first subdivision under the subdivision control regulations. A 6-house subdivision on a cul de sac off Vaughn Hill Road -Woodside Drive- was constructed in 1980. A 26-house subdivision was approved by the Planning Board in 1978 and a new road -Nashaway Road- between Vaughn Hill Road and Still River Road was accepted by the Town in May 1980. A 50-house subdivision off Still River Road was approved in June 1985 and another new road -Kettlehole Road- was created. One large development of 30 homes known as Wilder Farms used backland lots and a series of common driveways to develop neighborhoods. In 1995, the Sugar Mill subdivision was approved, with 26 houses and a new road off Sugar Road. Table 3.11 shows the 9 most recent subdivisions that are still in the process of being built out.

Table 3.11

Subdivision Name	Nearest Main Road	# of lots	Open Space Acres set aside for Conservation
Danforth Brook	Hudson	24	43.98
Rocky Dundee	Randall	10	37.00
Northwoods	Harvard/Warner	38	32.96
Great Brook Estates	Main	8	27.90
Meadow Farm	Berlin	7	23.02
The Oaks*	Ballville	34	21.93
Quail Run	Golden Run	10	21.46
Butternut Farms	Sugar	16	16.10
Fox Run	Main	48	6.65
* = not yet deeded to town			
Total		195	231.00

Another possible 110-unit subdivision is in the planning stages between Century Mill, South Bolton, and Hudson Roads which is an example of how a creative developer can work with multiple land owners of large parcels, many with no frontage, to develop a site using technological advances to make subdivision development more efficient. The use of sophisticated computer programs to maximize lot layout in larger developments results in increased density and can render marginal developments economically viable because of the ability to increase the number of lots and associated revenues. This further reduces open space.

3.E.2 Affordable Housing

As property values rise in Bolton, there is a strong concern in town about the availability of affordable housing. The townspeople have signified the importance that the town remains diverse and that there is adequate housing for both lower income families and for long-time residence and fixed-income retirees who may no longer be able to afford to live in their family homes. In addition, Bolton continues to come up short against the state's "anti-snob" development rule, 40B, which requires 10% of a town's housing stock be set aside as affordable. Outside of the senior housing complex currently being built on Main Street next to the Flatley building, the town is seeing numerous "Comprehensive" permits, including a 42-unit development on Sugar Road across from Hebert's⁷, a 66-unit on the current site of Crystal Springs Campground on Main Street, and a portion of the Century Mill project. A goal of the Open Space and

⁷ Now approved and under construction

Recreation Plan is to work with these developers to set aside potential space for active and passive recreation, greenway corridors, etc.

3.F Transportation System

Interstate 495 divides the town from north to south and is a major thoroughfare to connecting Interstates to Worcester and points east and west on the Massachusetts Turnpike. Northbound traffic exiting onto Route 117 often backs up onto 495 during rush hours. Interstate 495 helped make it easier for commuters to get to their jobs to the east as far as Boston and at the many high technology companies along Interstate 495. The highway has played a major role in the residential development of Bolton in the last 30+ years.

Automobile traffic on Route 117 continues to be a major problem as Bolton and central Massachusetts grow. As the main artery from Routes I-190 to the west and 2 and 495 to the north and east to high technology firms in Stow, Maynard, and other surrounding towns, Route 117 has traffic which chokes the two-lane roadway each morning and evening rush hour. It is not uncommon for westbound traffic to be stop-and go from Great Brook Farms to the blinking yellow light in the center of town during the evening rush hour during the school year. Trucks of all sizes use Route 117 as a shorter route from 495 to Route 2 in Leominster. The high volumes of traffic destroy the serenity of the center of the town and produces increased noise and air pollution.

In addition, traffic flow on connecting roads is adversely affected by the rush hour traffic on Route 117. There are now two traffic signals on Route 117; one at Route 110 near the Lancaster line, and one at Sugar Road and the Southbound off ramp of 495. Other signals have been proposed at various times for the center of town and at the northbound exit ramp of Interstate 495. The congestion on Route 117 has caused numerous out-of-town commuters to seek alternate routes on the back roads of Bolton. This leads inevitably to excessive speed on the back roads and complaints from residents. There have been numerous requests for lower speed limits, truck exclusions, and other measures to reduce the speed hazard to local residents, but such exclusions are not possible under state laws and safety regulations.

Bolton has no public transportation of any kind. There are no current rail lines through the town, although commuter rail stations are within 15 minutes in Littleton and Acton. There is also no bus service. This means that virtually all movements within Bolton and to and from shopping, work, and recreation must be by automobile. Of the 2,015 people from the 2000 census commuting to work, only 21 take public transportation, and they drive to the train line. Nearly 1,100 of those commuting drive over 30 minutes to work. Local volunteers provide shopping and other transportation to senior citizens; the Council on Aging sponsors entertainment and shopping buses for seniors. Most commuting to Bolton's businesses is also by individual cars; in general, the traffic to local businesses has minor impacts on traffic compared with commuters traveling through Bolton.

Commuter parking is a problem in Bolton. If a spot could be found near the 495 interchange, it would be a logical and worthwhile location for carpool parking. A study was completed by the Metropolitan Area Planning Council in 1983 which examined demand and possible sites for commuter parking. There are no appropriate state or town

properties near 495 for commuter parking. Federal rules prohibit the use of land within the 495 right of way including the land within the on and off ramp areas. The study could not identify a specific site, but did suggest future business or industrial development on the business-zoned land near the interchange. While sharing of parking lots at the Flatley development was considered, nothing was developed.

Bolton conducted a major corridor traffic study in 1988-89 that made a number of recommendations about safety-related improvements at some intersections along Route 117. Some of the inexpensive recommendations were implemented and a left turn lane was installed at the Flatley complex in part based on recommendations in the study. One of the problem intersections addressed in the study and considered by the town in later years was the Sugar Road intersection with Route 117 and its proximity with the Interstate 495 ramps. In 1995, the town obtained approval -and funding- from the state to relocate the end of Sugar Road slightly to the west so that it aligns with the southbound ramp of 495. Also approved was a traffic signal to control the traffic movements at this critical intersection. This work was completed by the year 2000, which also included a general widening and straightening of route 117 from route 495 east to the Stow line.

3.G Sewage Systems and Water Supplies

Bolton is one of only 50 of the 351 cities and towns in Massachusetts that has no public water supply of any kind. Each of the more than 1500 residences and businesses in Bolton has its own private well. Nor does Bolton have a town sewer system. Each house or building has its own onsite sewerage disposal system, usually with leaching field.

Currently, there are three treatment plants in town; at Future Electronics, Nashoba Regional High School, and the International Golf Club. Several current proposals for high density development are including shared septic systems or treatment facilities. It is anticipated that other 40B-type projects will come before the various town boards with shared drinking water and septic systems.

Board of Health regulations have incorporated the State's Title 5 revisions, updated in 1995, which provides for a more stringent review of septic systems, while also accepting the use of alternative technologies in areas where traditional septic systems may not perform properly. Changes in Title 5 will have substantial long-term effects on development. The use of soil mottling to more accurately estimate high groundwater levels is resulting in subsurface disposal systems which are more protective of groundwater resources. As development pressures increase with associated increase in land values, disposal systems that were prohibitively expensive to install and maintain may become more economically feasible.

The redraft of Title 5 in the mid 1990's places strict scrutiny over the performance of existing septic systems by requiring septic system inspections and improvements, if necessary, in conjunction with all home sales. With low historic interest rates and a rapid appreciation in house and land values, there has been high turnover in the housing market over the last five years, leading to a substantial number of septic inspections. Additionally, a good number of public hearings held by the ConCom on a weekly basis are either Requests for Determination or Notices of Intent for replacements of failed systems that are proposed for buffer zones. Required upgrades and repairs are generally

designed and placed in such a way that will result in continued protection of groundwater resources as well as wetland and buffer areas.

Open spaces are essential to the private water supplies because of the continual danger to the private wells from pollution such as septic leachate, road salt, and agricultural runoff. Bolton's Board of Health regulations requires that septic systems be 100 feet from wells. The increase in minimum lot zoning to 1.84 acres is one method of protecting private water and sewer systems. This zoning and the separation of houses from each other help assure the integrity of wells. Soil limitations necessitate low house density. There is a strong feeling among residents that large lot zoning and private water and sewerage systems are the keys to the rural character of Bolton.

In 1984, steps were taken to further protect the important groundwater resource through passage of a Groundwater Protection bylaw (a general bylaw rather than a zoning bylaw), including underground tank testing requirements. This bylaw is considered to be weak and ineffective, and as a result, has not been utilized by the Board of Health. Though current offsets and lots sizes discussed in the above paragraph may achieve similar goals, an action item for the Board of Health may be to consider changes to the bylaw that could provide increased groundwater protection.

In the late 1980's, minor losses of fuel were noted from the town's storage facility at the DPW barn on Forbush Mill Road. Further investigation found that the pipes between the tank and the pumps had a small leak that resulted in small amounts of gasoline leaking into the ground. The dirt and pipes were removed and replaced, the area was cleaned up, and monitoring wells were placed in several locations to monitor the plumes of as they slowly migrated with the ground water. Today, only minute traces of MTBE are showing up in the groundwater, and are staying within an acceptable threshold (see Section 4, Environmental Problems). Geological Services Corporation (GSC) of Hudson reviews the data and submits regular reports to Bolton's DPW.

Bolton's unlined landfill has not, as of yet, negatively impacted the surrounding areas which are currently monitored through groundwater wells. Closed and capped at the end of the decade, the Board of Health initiated water sampling programs around the landfill, and through an engineering study installed said monitoring wells that are reviewed by GSC and the DPW (see Section 4, Environmental Problems section).

Several large scale projects near the center of Town, namely the construction of the new Florence Sawyer Elementary School and the two affordable housing projects, have again pushed to the forefront the issue of a public water supply. A committee was formed to explore the town's options for such a supply, and it was determined that though today's water needs could be adequately met through the continued practice of private wells and septic, future needs based on projected growth and maximum build-out and population density were uncertain. Specific recommendations to maintain ground water quality and quantity through this projected growth included 1) the desire for larger, higher density projects to utilize shared septic and wastewater treatment plants, and 2) the town's interest in acquiring or protecting parcels of land that sit over high-yield aquifers which could serve the long-term water needs of Bolton. The highest yield aquifers currently identified in Bolton are shown on Figure 3.12, and run along Route 110 in the Bolton Flats area under land primarily owned by the Commonwealth of Massachusetts,

and in the Great Brook area near East End Road, primarily on the Commonwealth's Delaney Watershed Project. The purchase of land for water supply purposes is currently a high priority in Bolton.

3.H Long-Term Development Patterns

Zoning bylaws were introduced in Bolton in 1972. Industrial, business, and residential zones were created. Industrial and business zones were created primarily at locations of existing businesses and included both sides of the frontage roadways at those locations. In the residential zone lot sizes were established to assure protection of individual water supplies and sewerage systems. Bolton's Comprehensive Plan (1971) noted the importance of larger size lots in retaining private water supplies and sewerage systems. Bolton's Comprehensive Plan (1971) noted the importance of larger size lots in retaining private water supplies and sewerage systems. Various federal, state and regional studies (USDA soil Conservation Service, Massachusetts Audubon Society, Metropolitan Area Planning Council) have also stressed the importance of such lots for private water supplies.

In 1973 the town changed the minimum required lot size from 40,000 square feet and 150-foot frontage to 1.5 acres and 200 foot frontage. Subdivision control regulations originally introduced in 1968, were updated by the Planning Board in January 1970 to regulate the development of new roads and houses without frontage on existing roads. The regulations were revised again in 1996 requiring a lot have 80,000 square feet (1.84 acres) with 200 feet of frontage.

For a number of years, there have been discussions in Bolton of "creative" residential zoning to increase the flexibility developers have in providing housing and maximum value from the land while protecting open spaces. One such proposal, backland zoning (sometimes referred to as hammerhead or "porkchop" lots) was approved at the May 1985 town meeting. The zoning allows reduced road frontage (50 feet) with larger acreage (4.5 acres) under special permit from the Planning Boards. The backland zoning is intended to be used with standard 80,000 square foot lots to increases developer flexibility while reducing the cost to the developer and the town of new roads. In 1987, the town increased allowable common driveways from two houses (with a special permit) to as many as five houses with a special permit. The more flexible, yet controllable common driveways have been used in conjunction with frontage and backland lots to develop parcels of land that might otherwise have seen subdivisions with town roads.

Another creative zoning mechanism utilized by the town is the Farmland and Open Space Planned Residential Development (FOSPRD). A FOSPRD plan allows for reduced frontage and set backs in order to set-aside open land to be held by the town under a conservation restriction or other means. In 1988, a FOSPRD bylaw was passed by town meeting. The FOSPRD concept proved successful through the acceptance of a FOSPRD plan at the Great Brook Estates subdivision which produced a set-aside of 22 acres of conservation land adjacent to a 100 acre parcel of existing conservation land. The failure of the bylaw, however, was that developers had the choice as to whether or not a FOSPRD plan would be submitted. As a result, the aforementioned subdivision was the only FORSPRD filed under the 1988 FOSPRD bylaw.

In an effort to get more developers to use the FOSPRD concept, the Bolton Conservation Trust filed several changes to FORSPRD bylaw in conjunction with the increase in conventional lot size to 80,000 square feet at the 1996 Town Meeting. The major change under the 1996 subdivision bylaw is the requirement that large subdivisions file both a FOSPRD plan and a conventional subdivision plan for consideration by the Planning Board. The Planning Board then decides which plan is in the best interest of Bolton. The changes seemed to have worked, as several subdivisions have been built under these regulations, with the town receiving deeded acreage. However, the Conservation commission is in discussion with several other town boards to try to improve the language by requiring the developer to place permanent bounds, clearly identifying the space deeded to the town, as there has been at least once instance where a common driveway was built on deeded Open Space.

Bolton's current zoning map is shown in Figure 3-10. Several small industrial zones were established in the zoning bylaws around and across from the existing businesses such as Future Electronics (previously known as GenRad). A limited business zone was added in 1978 in place of an existing industrial zone. This allowed retail establishments, multiple structures and businesses on the same parcel, and provided for special permit approval by the Selectmen of the proposed developments. There have been discussions and proposals for increasing industrially zoned land to accommodate high technology growth which has occurred throughout the Greater Boston- I-495 area. None of these proposals has been adopted. Continued pressure from developers and landowners to rezone land for commercial/industrial development, especially near 495, is expected.

An important addition to the zoning bylaws came in 1983 with the approval of a Site Plan Approval bylaw for commercial or industrial property. The site plan must be submitted to the Selectmen and is reviewed by that Board, the Planning Board and other town boards with an interest in the development. The site plan deals with such topics as driveway and parking locations, screening vegetation between the buildings and the road or abutters' property, landscaping and other vegetation around the site, and the location of open spaces in conjunction with the development.

Bolton has several overlaying zoning districts that are important to open spaces. These deal primarily with wetlands and the flood plain of the Nashua River. The Flood Plain District definition and boundary line were changed during 1980's as a result of a flood study by the Federal government as part of its flood insurance program. The floodplain now extends to include the major brooks in Bolton as well as the Nashua River itself. While the intent of the Federal study and of the revised town bylaw is primarily to define the areas and premium rates for Federal flood insurance, the new bylaw acts as protection of open space by regulating potential development in floodplains. Any development in the flood plain requires protective measures to the dwelling and a replacement of the flood area taken.

A Water Resource Protection District (WRPD) was included in the zoning bylaws in 1973 to protect wetlands near watercourses. This was an extremely important bylaw for the protection of open spaces and of lands that should not be developed. The WRPD, established as the wetland resource plus the 25 foot buffer area surrounding the resource, providing additional local protection of wetlands and streams already regulated under provisions of the state's Wetlands Protection Act. Complications occurred, however,

when administrating the two provisions because while the Wetlands Protection Act was a non-zoning authority under the jurisdiction of the Conservation Commission, the WRPD was managed by the Board of Selectmen through a special permit approval process.

At the Annual Town Meeting in May 1998, some modifications were made to the WRPD in order to improve its administration. Authority for implementing the provision was transferred from the Board of Selectmen to the Conservation Commission, who had been for the most part administering it in practice before. The definition of the WRPD was also clarified. Although it has always been defined as the area 25 feet from the wetlands since it is a zoning bylaw, only those 25 foot areas delineated on a map were considered to be WRPD by the letter of the law. The new definition omitted the necessity of showing all WRPD areas on the zoning map. In addition, the WRPD is also defined to include the wetland area inside the 25-foot area. This clarification was important for making calculations that require information on protected wetlands areas for assessing buildable area in backland lot zoning and upland protected areas in FOSPRD.

The town also approved a wetland bylaw in recent years in order to provide greater local control over wetlands protection. This bylaw increases the resource area by 25 feet, and presumes a 100-foot buffer zone to be important in protecting the resource. Individuals requesting work to be done within the 25 foot resource as well as in the buffer zone now must file under the Bolton bylaw. An issue that has recently been identified by the Commission is that in some instances, the WRPD language and the Bylaw language conflict; the Commission is currently working with town council to amend the language appropriately so it can be brought to Town Meeting for a vote.

In 1996, the Conservation Commission began implementing both the Rivers Act and the new Storm water Management Policy. A few cases have already brought these new regulations and policies into consideration. Commissioners from Bolton have been attending workshops sponsored by state agencies and regional groups that are aiding commissions in the implementation of these new measures.

Many of the zoning mechanisms necessary to preserve open space, while promoting appropriate development are currently in place. While residential development is expected to grow, the FOSPRD bylaw will be an effective mechanism for setting aside open space as compensation. Likewise, the selectmen have some control over business development in town. Growth pressures are sure to continue particularly near the Interstate 495 interchange, which will impact the character of the town.

Section 4. Environmental Inventory and Analysis

Bolton is rich and somewhat unique in its natural history and diversity, owing in large measure to its geologic past. Due to folding and faulting many millions of years ago, the various bedrock formations have been aligned in a generally north-northeast to south-southwest orientation forming the Vaughn Hills, Wataquadock and Rattlesnake hills. Amidst the compressed and metamorphosed rock persisted several lime-rich deposits - quite uncommon in eastern New England. The soils that have developed atop these deposits have given rise to numerous floral species, many of which are very unusual in central and eastern Massachusetts. The geology of the town has also created many seasonal habitats, most notably vernal pools. These unique ecosystems harbor many rare and threatened amphibian species.

In the extreme northwest comer of town is the Nashua and Still River valley. Hundreds of acres of floodplain provide habitat to a diversity of mammals including otter and white-tailed deer, and to several rare and endangered avifauna. The Still River is home to several uncommon reptiles and amphibians as well.

Across town, Bolton's streams flow into Great Brook, Danforth Brook, and Forbush Mill Brook which eventually enter the Assabet, Still and Nashua Rivers. Unlike the large, slow flowing river on the west of town, Great Brook and Mill Brook are much smaller, relatively high gradient, cold water streams which at one time supported several small mills. Today, the clear flowing streams are popular trout waters.

4.A Geology, Soils, and Topography

Bolton has an interesting and well-documented geological history which has produced many of the town's natural features and has helped to shape the kind of growth and rate of development which has taken place. Bolton's geology has greatly influenced the town's land use and open space patterns.

The literal foundation of Bolton is its bedrock that is exposed in numerous road-cuts and as "ledge" along the slopes of most of the town's prominent hills and ridges. The majority of rock underlying Bolton is comprised of meta-sedimentary deposits called gneiss and schist that are roughly 500 million years old. These banded layers are part of the Nashoba Formation, which extends from Lowell to Connecticut. Bolton's hills and ridges, along with others in New England, are now believed by geologists to have been formed approximately 250 million years ago when the continent of Africa collided with North America, compressing and folding the rock layers, creating the Appalachian mountains of which Bolton's hills are part of a northern extension. The best-known relict in the Bolton area of this continental collision is the so-called Clinton-Newbury fault zone, which occurs along the northwestern-most part of town, in the Nashua River valley. The general soil composition found in Bolton and surrounding towns is found on Figure 4-1.

At the time of their formation, the Bolton hills were considerably higher in elevation than at present. The force primarily responsible for eroding the one-time Alplike mountains of New England, was continental glaciation which, in geologic terms,

occupied Bolton fairly recently. Geologists estimate that 15,000 years ago there was a one-mile thickness of glacial ice over Bolton.

During glaciation, ice movement was generally southerly, with the glacier's terminus coinciding with Cape Cod and Long Island. As the ice "retreated" during its melting, enormous amounts of water further eroded and smoothed the landscape. Mountains were rounded and valleys were filled with sediment. Boulders, which the glacier had carried from the north, dropped to the land surface as the ice melted and are numerous today in the hills and ridges.

Though only stumps of their one-time prominence, Bolton's hills and ridges are still impressive. The Vaughn Hills and Wataquadock Hill form part of a residual ridgeline, much of which exceeds 550 feet in elevation. This ridge and associated hills offer many spectacular views to Mount Wachusett and beyond looking west and, on a clear day, to the Boston skyline some 40 miles east. At the right moment, one might catch the red fire of the setting sun reflecting off the John Hancock tower far across the horse pasture at the junction of West Berlin and Wataquadock Roads.

In addition to its effect on topography, the glacier has shaped Bolton's drainage patterns. It appears that before the glaciers, Great Brook flowed south into Danforth Brook along Hudson Road; Mill Brook at one time flowed northeast to the Great Brook, but was diverted into Danforth Brook and separated from Great Brook by glacial debris at the sites of Little Pond and West Pond. These pre-glacial streams were filled with loose sorted glacial deposits as the glaciers retreated, and are now buried valleys of sand and gravel and important sources of ground water.

Similarly, near the end of the last glaciation, a large lake (Glacial Lake Nashua) occupied an area larger than Quabbin Reservoir. The eastern shoreline of Glacial Lake Nashua lay just west of the Vaughn Hills and Nashoba Regional High School. Today, remnants of the lake are observed in the several large gravel pits that occupy the eastern wall of the Nashua River valley. The valley and associated sand and gravel deposits comprise, potentially, Bolton's richest aquifer. All of Bolton's existing natural ponds, swamps and marshes were also formed by the glaciers.

Among the unique geological features in Bolton are the bedrock outcroppings on the two peaks of the Vaughn Hills (including a type of rock named the Vaughn Hill member by Hansen because it is best exposed at that location), garnets in outcrop on Pine Hill, and the marble and lime deposits near Rattlesnake Hill, the type locale for the mineral "Boltonite." There are numerous old quarries in that area which were worked in the 18th and 19th centuries. Today the quarries are important sources of study for geology students and are of historical value to the town. There are also many boulders and small cliffs where exposed bedrock was broken away by glaciers and deposited up to three miles away.

The soils that have developed in Bolton since the last glaciation 15,000 years ago reflect the underlying geology. The majority of the town is underlain by glacial till-derived soils. These soils occupy virtually all land above an elevation of 400 feet in Bolton, with various forms of stratified deposits (ice contact, outwash, terraces and alluvium) occurring in the valleys and plains. Deposits associated with wetlands account for about 8% of the town.

Bolton's soils have played a major role in the development pattern of the town. Though the USDA Natural Resources Conservation Service (formerly the Soil Conservation Service) lists only 16.5% of the town's soils as prime agricultural, history has shown that Bolton's soils have been, and continue to be, well suited for a variety of agricultural pursuits, with apple growing heading the list. The Bolton Preservation Plan, completed by a consultant for the Historical Commission, has an excellent summary of Bolton's Geological history.

4.B Landscape Character

Bolton is somewhat distinctive among east-central Massachusetts communities in that it still retains much of the openness of colonial times. This is due to the fact that there remain a number of large, active farms that have held firm against the invasion of both suburbia and forest. Nevertheless, subdivision and backland lot development is increasingly visible. However, the vast floodplain of the Nashua and Still Rivers and the opportunities for scenic views from numerous prominent, positive topographic features offer natural opportunities to appreciate Bolton's openness.

It is, in large measure, this diverse variety of land cover types which typifies Bolton's landscape character. The admixture of both deciduous and coniferous woodlands, wetlands of virtually all inland variety, expansive floodplains, high gradient streams, rolling orchards, pastures, hayfields, minor amounts of cropland, proper colonial homes, several white church spires - all smattered like a patchwork quilt on a three-dimensional surface - is what characterizes Bolton's landscape.

A major component of Bolton's open space is held privately in its viable agricultural industry. Approximately, 1,500 acres are owned by local farmers of which 1,000 acres are in active agriculture. Bolton's major agriculture lies in six commercial orchards totaling 550 acres.

The typical signs of a changing community character are increasing in Bolton. Interstate 495 is the most prominent feature of the town's landscape. Several large office buildings and numerous nondescript commercial establishments are distractions among an otherwise most appealing landscape.

The concerns for Bolton's landscape future are several. Hodge-podge, strip commercial development along Main Street would cut the heart out of a charming town. Standard tract development, replacing woodland, orchard or meadow is incrementally destroying Bolton's landscape diversity. Too many ill conceived "improvements" to Bolton's infrastructure, such as road widening, road straightening, road leveling, signalization, and public sewering would reduce the town's ability to protect the landscape and community character.

So far, Bolton has been fortunate. Due mostly to many capable and hard working volunteer town board members, growth in Bolton has fit in. Recognition of, and respect for, landscape and architectural integrity have by and large, been the rule in the town's residential and some business development over the last decade or two. Hopefully, Bolton will continue to be blessed with quality leadership, talented local boards and conscientious developers.

4.C Water Resources Surface Waters

The streams of Bolton are tributary to two primary river systems, the Assabet and the Nashua. Wataquadock Hill and the peaks of the Vaughn Hills form the predominantly north- south divide from which surface waters flow to the cast and west through three major perennial streams-Great Brook, Danforth Brook and the Still River. Figure 4-2 shows surface waters in Bolton.

Both Great Brook and Danforth Brook flow east/southeast to eventually join the Assabet River in Hudson and Stow. Great Brook rises from tributary streams east of Harvard Road and south of Great Road, which flow a combined distance of over 10 miles through 37 percent of the town's northeastern and central areas before entering Delaney Pond at the Stow boundary. The eastern slopes of Wataquadock Hill are drained by several small watercourses that merge in the wetlands of Sunk Meadow to form Mill Brook, tributary to Danforth Brook. Hog Swamp lies on Bolton's southern boundary with Berlin, also contributes to Danforth Brook. The watershed to the Danforth Brook system encompasses 21 percent of the land surface in the southern section of Bolton.

The third major stream, the Still River, is fed by brooks originating in the Vaughn Hills and on the western slope of Wataquadock, draining one quarter of the town land surface. The Still River converges with the Nashua River in the northwest corner of Bolton. Other unnamed streams to the south also flow to the Assabet River; to the north, Bowers Brook flows to Bare Hill Pond in Harvard.

Great Brook, Forbush Mill Brook and Branch Still River, the latter two both tributaries to the Still River, as well as the Still River itself, are all actively used for recreational fishing. The Still and Nashua Rivers are popular for canoeing. The Still River also supports a small amount of ice fishing. Hunting takes place both along the Still and Nashua Rivers within the Bolton Flats Wildlife Management Area and within the Delaney Flood Control Project, through which Great Brook flows. All of the rivers and streams in Bolton are accessible from roadways, and several offer multiple access points from conservation land.

While the state classification of streams in Bolton is not known, Class B status is assumed, with the exception of portions of the Nashua River. In the case of the fishable streams, the presence of brook trout may indicate higher water quality.

Bolton has few open water resources; the two major ponds are West Pond and Little Pond, both located in close proximity in the center of the town. Bowers Springs Conservation Area contains two small dammed ponds while Fyfeshire Conservation Area includes small and large dammed ponds. Welch Pond lies on the western side of Wataquadock Hill, and has a small central area of open water surrounded by shrub swamp. Several smaller water bodies exist within the town including old millponds and farm ponds. Some of these are shallow depressions characterized by seasonal flooding and include vernal pool habitat.

West Pond waterfront property includes that of Camp Virginia, owned by the Girl Scouts of America. The pond itself is included in the State list of Great Ponds. Although no formal public access has been established, many residents of the town use the pond for ice skating and fishing. Little Pond is extensively used by the Boy Scouts of America at

Camp Resolute, a part of which is also used as the town beach. The town owns a summer cottage on a five acre parcel of land with frontage on Little Pond. Town boards and citizens are currently discussing recreation and conservation options for the land and uses for the cottage.

The ponds at Bowers Springs are used in the summer by the Bolton Conservation Trust for its Tom Denney Nature Camp. During all seasons the ponds are used by residents of Bolton and Harvard for passive recreation, although no swimming is allowed. The smaller ponds at Fyfeshire and the more remote Welch Pond are less used except in the course of hiking and cross-country skiing, due to dense vegetation around the edges. New scout project improvements have made the Fyfeshire ponds more accessible. Both of these areas offer valuable wildlife habitat due to the variety of vegetational communities.

Flood Hazard Areas

Definition of the major floodplain and floodway areas are contained in the Flood Insurance Rate Maps (FIRM) and the Flood Boundary and Floodway Maps for the Town of Bolton (see Figure 4-3). These maps are published by the Federal Emergency Management Agency (FEMA), dated June 18, 1980. These indicate extensive areas subject to the 100-year and 500-year floods within the town. The Massachusetts Wetlands Protection Act includes jurisdiction over the 100-year floodplain and therefore, those lands are also under the jurisdiction of the Bolton Water Resource Protection District. The Massachusetts Rivers Protection Act includes jurisdiction over lands adjacent to waterways that flow year-round (perennial) to protect important buffer zones.

Preservation of floodplain areas is critical to the town and given that Bolton's floodplains exist within two major watersheds, the Nashua River/Still River and the Assabet River, preservation is important to the region. The FIRM maps for Bolton identify the 100-year floodplains and floodways in association with the following perennial water courses and their tributaries:

- Great Brook
- Nashua River
- Mill Brook
- Still River
- Danforth Brook

Floods in Bolton, associated with excessive rainfall, snowmelt, hurricane and tropical storms have resulted in localized damage in certain low-lying areas of the town. The most significant flooding is usually associated with the Nashua and Still Rivers that occasionally overtop Route 117 at the western end of town. Fortunately, the extensive natural flood storage provided by the State-owned Bolton Flats Wildlife Management Area which incorporates portions of these two rivers, results in the ability to absorb and contain flood waters, thereby minimizing flood damage to populated areas. Great Brook, Mill Brook and Danforth Brook are higher gradient streams with smaller tributary watersheds and thus do not exhibit the extreme flooding that is associated with the Nashua and Still Rivers. Furthermore, portions of Great Brook occur within existing

town-owned conservation land that provides a buffer during flooding events to adjacent developed parcels. Acquisition of properties for conservation land adjacent to Mill and Danforth Brooks would be desirable as these parcels could also provide a buffer during flooding events.

Wetlands

Bolton is fortunate to contain extensive wetland areas, significant not only for their scenic beauty, but for the integral role wetlands play in water supply and filtration, flood control, storm damage prevention, pollution prevention and wildlife habitat.

In Massachusetts, activities in wetlands are regulated under the Massachusetts Wetlands Protection Act (MGL Ch. 13 1, s. 40) which is locally overseen by the Conservation Commission. The Bolton Water Resources Protection District (WRPD) Bylaw also provides considerable protection for wetlands and portions of the buffer zone, setting a strict standard for work within these areas. It is becoming more widely recognized that wetlands are a valuable resource to a community primarily for the reasons stated above.

In Bolton, the most predominant wetland type is a forested wetland with red maple being the most common tree species. As described above, most of these wetlands are contiguous to streams or linked to them and are thus constituents of the floodplain. Notable forested wetlands include Hog Swamp in the southeastern comer of Bolton that forms the headwaters of Hog Brook, a tributary of the Assabet River in Hudson. Sunk Meadow, off South Bolton Road, is another large red maple dominated forested wetland which is hydrologically connected to Mill Brook downstream. Just east of I-495 Great Brook floods a large forested wetland north of West pond. Another noteworthy wetland system that contains a diversity of wetland types is the Bolton Flats Wildlife Management Area. Although only approximately one-half of this state owned area exists in Bolton, it is a highly significant wetland system along the Nashua and Still Rivers.

The Flats provide Bolton with its only true riparian habitat, much of which is bordered by scrub-shrub and emergent wetland types. These habitats provide a haven for wildlife as evidenced by state-listed rare amphibian and bird species that have been documented to breed in Bolton within the Management Area. As described in the Floodplain section above, Bolton Flats provides a critical natural flood storage area that serves to protect adjacent developed areas in Bolton and Lancaster. Although much of Bolton Flats would be classified as wetlands it is very popular with hunters, birdwatchers, cross-country skiers and hikers. During summer and autumn months, much of it is dry enough to be accessible to the public. It is a noteworthy and much appreciated wetland in Bolton. The recently designated ACEC (Area of Critical Environmental Concern) includes the Bolton Flats Wildlife Management Area and lands to the north and west located in the towns of Bolton, Lancaster, Harvard, and Leominster. The total acreage of this extensive protected riparian system is 12,900 acres.

In 1978, the Wetlands Restriction Program of the Department of Environmental Protection (DEP) had aerial photographs taken of Bolton and other towns within the upper Nashua River watershed. The purpose of this state-directed program was to place strict limitations on any encroachment upon areas designated as inland wetlands by the

Inland Wetlands Restriction Act (MGL Ch. 13 1, sec. 40A). Section 40A includes "inland wetlands and is that portion of any bank which touches any inland waters or any freshwater wetlands and any freshwater wetland subject to flooding." Delineation of major wetland systems within Bolton was completed during this inventory on aerial orthophotos at a scale of I -inch equals 600 feet. Although the baseline inventory was completed for Bolton, funding was eliminated for the Wetland Restriction Program. Thus, regulatory goals for protecting these wetlands were never implemented by the state DEP. More recently, the DEP has instituted the Wetlands Conservancy Program to extend mapping of Massachusetts wetlands.

Aquifer Recharge Areas

Aquifer and recharge area data exist for the town in the form of maps prepared by Goldberg-Zoino Associates, and can be found in Figure 3.12. There is one high yield aquifer covering several hundred acres on the west end of the town, some of which is preserved, some already developed into single family homes, and other land which might be set aside. For example, the aquifer lies under the International Golf Course, recently re-zoned away from development as recreational open space, and under Bolton Flats, State preserved open space. It also lies under the Town Dump, soon to be capped, the Eastwood Cemetery, and under Bolton Orchard, privately owned farmland. This same aquifer also underlies another 65 acres of privately owned open space. Additional land under the aquifer is sub-divided into individual single-family house lots.

There is a medium yield aquifer near the center of Bolton in the area of Nashoba Regional High School. Some open fields will remain around the high school, but most of this area is already being developed into individual single-family house lots.

There is another smaller medium yield aquifer in the east end of town, underlying the Delaney parcel of State preserved land. This is also where Great Brook flows through an orchard (Bolton Springs Farm) and into the Delaney land. There are a number of single-family homes above the aquifer on Sugar and East End Roads.

4.D VEGETATION

Forest Land

Typical of the south central New England area, Bolton's upland forests are characterized by a mixed deciduous community. Red, black and white oaks are interspersed with hickory, cherry, maple and ash, in varying association with white pine, which also occurs in small groves at lower elevations. Examples of white pine stands are to be found along Forbush Mill Road, in the Fyfeshire and Vaughn Hills Conservation Areas, and at the base of Pine Hill.

Cooler, more mesic areas are dominated by beech, birch and hemlock, all of which are less common species in Bolton. Some species, such as sycamore, silver maple, basswood and tupelo, occur here toward the northern limit of their ranges, with higher and cooler elevations just 35 miles away lacking significant populations. The larches, firs and spruces of more northern parts of the state are for the most part absent in Bolton.

Forested wetlands are comprised of red maple, ashes and elms. Floodplains along the Nashua and Still Rivers in some sections support continuous forest with silver maple and sycamore among the more interesting species.

Of the nearly 13,000 acres in Bolton, slightly less than 2000 acres are currently under the Chapter 61 tax incentive program for either forestry or agricultural purposes. It should be noted, however, that Chapter lands are not protected in perpetuity; in fact, several lands have recently been removed from Chapter status and have been developed. Some examples include Coolidge and Perham. Some very significant woodland areas are protected in perpetuity through state or local ownership. All forested areas are in second or third growth, but are approaching maturity in some locales.

Of far more influence is the current tendency to utilize existing frontage for house lots, and to design long driveways extending into single-family backland house lots. This design alternative seldom results in the large scale clearing or logging operations common to subdivision design and construction. Many non-conventional subdivisions, result in significant amounts of lost forest, in part to create views. This trend has continued with successive subdivisions and the Planning Board and Conservation Commission are working with developers to limit tree cutting where possible.

Upland forested areas coincide with the major hills and adjacent slopes, including Powderhouse, Spectacle, Rattlesnake, Barrett, Pine and the Vaughn Hills areas. The exceptions to this pattern are Wataquadock and Long Hills, which include large areas of cleared agricultural land. Between the hills, roadways usually follow the bases of the slopes, leaving the summits and upper elevations in continuous cover or agricultural use.

One can easily see the impact that subdivisions have on large undisturbed forested tracts by reviewing the 1998 Open Space & Recreation Plan which counts 1) Powderhouse Hill between Great Road and Golden Run Road, and the woodlands north of Golden Run to the Harvard line comprise the largest undisturbed forested tract west of Route 495 in Bolton, followed by 2) Pine-Barretts-Spectacle Hill. By 2004, Quail Run and Sugar Mill subdivisions have already been built, and though the town will be deeded 28 contiguous acres of woodland, the Northwoods subdivision will take about 50 acres of woodland from the 1st woodland tract. And though the town acquired 40 acres on Barretts Hill and had another 43 set aside for Open Space, the Danforth Brook development and the potential Century Mill development have and will decreased the size of the 2nd largest previously undisturbed forest.

The largest remaining areas containing significant forest resources include Rattlesnake Hill, Vaughn Hill, and Wataquodoc Hill/Randall Road. Smaller forested areas lie between virtually all other roadways, and cover most undeveloped land, with the exception of agricultural, mowed and landscaped areas. The largest protected areas are the Rattlesnake/Phillips (444 acres), the Powderhouse Hill (75 acres), and the Vaughn Hills (162 acres). Major wooded swamp areas include Sunk Meadow and Hog Swamp, the Vinger properties off of Berlin Road, the wetlands bordering Danforth and Great Brooks, and the floodplains and wetlands bordering the Nashua and Still Rivers.

Much of the forested land in Bolton is accessible to the recreational user, as most landowners do not post their properties, and many welcome residents engaged in passive recreation, some even clearing trails for these users. With the exception of the Bolton

Flats Wildlife Management Area and the Delaney Flood Control Project, hunting in Bolton is prohibited without the landowner's permission, and is not permitted on townowned land. In the permitted areas, hunting is extremely popular.

The extensive areas of till underlying forested areas increase the importance of erosion and sedimentation control, as in developments where clear-cutting has taken place, the poor permeability has resulted in the loss of topsoil down hillsides, and damage to understory communities adapted to shade from the tree layer.

Economic impacts from forest land has been realized mostly by the individual landowner contracting with logging companies for land clearing under the Forest Practices Act, and site preparation for residential development. During the early 1980's, a successful woodcutting program was managed on several parcels of conservation land, including Vaughn Hill and Powderhouse Hill. Despite this activity, there remain many areas of public land suitable for such harvesting. In recent years, the concept of "healthy" forests through forest management have come into question, since many wildlife species depend upon dense protected forests and dead and dying trees or snags for food and shelter.

General Inventory

The overall vegetational community characteristics are determined to a great extent by the forest cover. Within the separate forest types occur smaller plant communities of special interest. Forest cover types common to Bolton are described above in the Forest Land section.

The importance of the Nashua River floodplain as a composite of wetland community types is related both to geologic and hydrologic influences, and is further affected by agricultural use and land management practices for the benefit of wildlife. The area includes the previously mentioned bottomland hardwoods, extensive sedge meadows and shrub swamp, and intensively used agricultural fields. Harvesting in these areas is managed so as to leave a portion of the harvest for wildlife, most importantly the migratory waterfowl. Similarly, hedges, shrub areas and open water are managed for a balance of fruit and seed bearing plants. As a result, the area has a vast potential for wildlife habitat and varied recreational opportunities related to wildlife and scenic values, to include hunting, fishing, trapping, bird-watching, cross country skiing and hiking.

A second extremely unusual vegetational community exists in the Rattlesnake Hill area, where the limestone substrate creates soil conditions required by lime-loving species. Fortunately, most of this area is under protection, except for some isolated and adjacent parcels. The challenge remains to encourage recreational uses while protecting the plant communities established there. A flora of this area has been started, and includes several hundred species of wildflowers and other herbaceous plants, with a section on trees and shrubs being planned. Another management objective is to regulate shrub and tree growth in a wet meadow supporting a station of Gentianesis crinita (fringed gentian), which is on the "watch list" of the Massachusetts Natural Heritage and Endangered Species Program.

Bolton has three areas that support bog vegetation: Cranberry Meadow, Welch Pond and the small pond on the Gould Conservation Area. Both the latter host communities of Cephalanthus occidentalis (buttonbush), and the Gould parcel also contains a colony of Woodwardia virginica (Virginia chain fem). All three fortunately are included in Bolton's list of protected areas, and require no management objectives other than monitoring of adjacent land use.

Other herbaceous plants of interest are colonies of Lobelia cardinalis (cardinal flower) at the Fyfeshire Conservation Area and along Sugar and Meadow Roads. The latter station is presently threatened by intensive agricultural use. The Hansen Conservation Area and adjoining Turner land contain an area of shrub swamp and open marsh with a sizeable stand of Decodon verticillatus (water willow), protected both by its presence in bordering vegetated wetland and by its location between conservation land and a donated trail easement.

A pine forest off South Bolton and Wheeler Roads includes a very unusual colony of Linnaea borealis (twinflower), common in northern New England but possibly at the southern limit of its range in this area. Landowners have been approached to encourage protection of the plants.

An area off Bare Hill Road supports a small colony of Isotria verticillata (whorled pogonia), also uncommon in this region. The plants are currently threatened by development plans, and the owner has been requested to provide an undisturbed buffer for the station. A second smaller community of verticillata exists east of Nourse Road.

The presence of these plants in widely separated sections of the town indicates both that varying climactic and ecological conditions exist within Bolton, and that sufficient undisturbed areas remain to reduce immediate threat to a diversity of vegetational plant communities. Preliminary work has been done to locate interesting plants both in a floristic list and on a USGS quad sheet of Bolton.

Larger areas of unusual vegetation communities exist within the framework of the mixed deciduous forest, to include:

- Isolated pine knoll on the east bank of the Nashua River
- Hemlock stands off Forbush Mill Road, Old Sawyer Road, Annie Moore Road, and Old Bay Road
- Tupelo stand on the shores of West Pond
- Rock ravine community off Annie Moore Road
- Swamp white oak surrounding a possible vernal pool off Whitcomb Road

Economically the most important native plants are the oaks and white pine, both existing in places as commercially harvestable resources; most woodlot management in the town has been exercised as selective cutting, preserving the areas' renewable potential.

The agricultural planted areas are most notable for fruit and vegetable crops, with apple orchards covering a significant amount of land. The inclusion of this resource is due to its long-standing nature as a feature of the vegetational landscape.

Rare and Endangered Plant Species

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) has records of two rare plant species occurrences in Bolton. Both species are within the Orchis Family that comprises several genera of orchids. Arethusa (Arethusa bulbosa) is listed as threatened by NHESP. This species is a spring flowering orchid that usually inhabits sphagnum bogs. The second listed species, autumn coralroot (Corallorhiza odontorhiza), a saphrophytic plant, is rated as a species of special concern by NHESP. This orchid usually flowers in late summer and fall and is found in woodland areas. Coralroots are so named due to the short, stubby-branched root that resembles coral. The fringed gentian GentianEsis crinita), occurring at the Lime Kiln Conservation Area, is also listed as a species of special concern. The sensitivity of the area within which these two species occur, prevents their disclosure to the public. This is to prevent damage to sensitive populations through collection or vandalism.

4.E Fish and Wildlife

Inventory

The diversity of woodlands, open fields, orchards and wetlands in Bolton provide ideal habitat for supporting many wildlife species. Wetlands in association with undeveloped upland areas have long been recognized as important and necessary habitat for a variety of wildlife. At present, Bolton has 41 certified vernal pools. Areas such as Bolton Flats Wildlife Management Area along the Still River in Bolton and the extensive undeveloped land along Great Brook in the Rattlesnake Hill area offer superb habitat for fisheries and wildlife.

The wooded swamps and marshes commonly found adjacent to the Still River support large number of migrant and nesting game birds, waterfowl and songbirds, many forms of water dependent mammals, such as muskrat, mink and otter, and upland mammals as white-tailed deer, red fox and skunk. The Still River wetlands and floodplain within Bolton Flats are also home to state-listed rare species such as Blanding's turtle, American bittern, least bittern and the pied-billed grebe, as designated by the Massachusetts Natural Heritage and Endangered Species Program.

The Rattlesnake Hill area offers habitat for numerous resident and migratory songbird species, upland game birds such as ruffed grouse and ring-necked pheasant, and recently, wild turkey. Large mammals, such as white-tailed deer, and vernal pool species such as spotted salamanders also inhabit this interesting area of town. Two additional state-listed species, the blue-spotted salamander and marbled salamander occur in several wetlands across town. Other notable areas in Bolton for wildlife due to size of undeveloped areas, interspersion of vegetative types and proximity of open or flowing water include Vaughn Hills, Wataquadock Hill, Spectacle Hill and Long Hill.

A small portion of the extensive Delaney Wildlife Management Area, owned by the State Division of Fisheries and Wildlife is found in east Bolton off of East End Road. This large flood impoundment area is located between the towns of Bolton, Stow and Harvard. The Delaney parcel as well as Bolton Flats are stocked with ring-necked

pheasant by the Division of Fisheries and Wildlife in October of each year for hunting purposes, as part of the ongoing game management program.

Bolton's significant fishery resources are found within the Still River, Great Brook, Danforth Brook and the two ponds Little Pond and West Pond. The Still River supports a warm-water fishery with the principal game fish being large-mouthed bass with some brown trout. Other species such as bluegill, sunfish, and perch are also present. The Division of Fisheries and Wildlife stock both Great Brook and Danforth Brook with brown trout in the spring. Little Pond and West Pond are popular warm-water fishing areas. Public access is not available at either pond for fishing as there are no boat launching areas and no motorized boats are allowed on either pond. Ice fishing is very popular in the winter months (although there is no public access) and species such as carp, large-mouthed bass and bluegill are found in both ponds.

Corridors

Wildlife and fish populations cannot survive within restricted habitat confines. Wildlife habitat corridors extend in a linear direction beyond limits of conservation lands and town boundaries. Rivers and streams form the basis of many natural corridors through which fish and wildlife travel, breed, feed, and rest during migration. Protecting and managing these streamside corridors is necessary for wildlife protection and management.

In Bolton, the most significant corridor for wildlife and fisheries exists along the Still River, and in the Bolton Flats Wildlife Management Area. This State managed preserve is the second most important stopover in Massachusetts for migratory waterfowl. This 698 acre conservation area is an important component of a greenway system along the Nashua River that extends for nearly 70 miles and encompasses over 8,000 acres of land protected local, state and federal agencies and private entities. Bolton Flats is within proximity to the federally owned Oxbow National Wildlife Refuge downstream in Harvard. In addition, the U.S. Fish and Wildlife Service recently obtained 4,830 acres of the South Post of Fort Devens that will be added to the Oxbow National Wildlife Refuge. Much of this land is also part of the recently designated Central Nashua Area of Critical Environmental Concern (ACEC).

Another natural wildlife corridor in Bolton is the Vaughn Hills/Bowers Springs complex that extends from the Nashoba Regional High School on State Rte 117 northeast, across the Vaughn Hills Conservation Area and to the Bowers Springs Conservation area which extends between Bolton and Harvard. More than 270 acres is permanently protected through acquisitions and conservation restrictions. This linkage of conservation lands extends further north into Harvard as Bowers Springs interconnects to other open space parcels in the town of Harvard. This corridor allows wildlife to migrate through the open space system that is of greater value to maintaining regional animal populations than separate and isolated conservation lands.

The Rattlesnake Hill area, encompassing the Lime Kiln/Quarry Conservation Area, the Phillip Phillips Family Conservation Area, the Rattlesnake Hill Conservation Area, the Harris Farm Conservation Area and extending northeast to the Delaney Wildlife Management Area, provides several hundred acres of interconnected

conservation lands which extends into Stow and Harvard through the Delaney property. As with the Vaughn Hills area, the Rattlesnake Hill complex is a priority area in Bolton for additional land acquisition, to extend the existing wildlife corridors and to provide permanently protected open space for its citizens. Local, state, and federal partners should establish a land acquisition plan for the region which would connect the Oxbow/Bolton Flats Complex on Bolton's western boundary with the Great Meadows National Wildlife Refuge Complex in the Towns of Wayland, Concord, Sudbury, and Hudson to the east and south.

Rare, Threatened and Endangered Animal Species

The Massachusetts Natural Heritage and Endangered Species Program (MNHESP) currently lists ten rare animal species occurrences in Bolton, as listed in the following table.

Common Name	Scientific Name	Status*
Marbled Salamander	ambystoma opacum	Threatened
Blue-spotted Salamander	ambystoma laterale	Special Concern
Four-toed Salamander	Hemidactylium scutatum	Special Concern
Eastern Box Turtle	Terrapine carolinum	Special Concern
Blanding's Turtle	Emydoidea blandingii	Threatened
Spotted Turtle	Clemmys guttata	Special Concern
Wood Turtle	Clemmys unsculpta	Special Concern
American Bittern	Botaurus lentiginosus	Threatened
Least Bittern	Ixobrychus exiles	Threatened
Pied-billed Grebe	Podilymbus podiceps	Threatened

^{*}Listed pursuant to the Massachusetts Endangered Species Act, MGL Chapter 131

Three of the 52 current state records for the marbled salamander are in Bolton. This species was first noted here in 1969.

As with rare vegetation, the sensitivity of these animal populations prohibits their locations from being publicized. The Conservation Commission is especially interested in protecting these populations, and their habitats are priorities for town acquisition.

Vernal Pools

Vernal pools have received a considerable amount of attention in recent years due to their ecological and hydrological importance. These pools typically form in the spring and fall during periods of high rainfall and elevated water tables. During drier periods of mid to late summer, they will often be completely devoid of water. Because vernal pools dry up, they cannot support fish species. For this reason, many amphibian species have

adapted to breeding in vernal pools where their offspring have a greater chance of survival. A few of these species are listed under the State's Endangered Species Act, notably the blue-spotted and marbled salamanders, both recorded in Bolton.

Vernal pool habitats are highly at risk from development. Because of their temporary nature, they can become filled during development, unless they have been certified. If certified by the State Division of Fisheries, vernal pools receive protection under the State Wetlands Protection Act. As a result, many towns and local groups are looking for vernal pools each spring to certify and protect.

A number of listed amphibian species have been recorded in Bolton and several of these depend on vernal pools for breeding habitat. The Bolton Conservation Trust has held a number of workshops to educate school children and the general public about vernal pools and to enlist volunteers to look for and certify pools in town. Through these efforts, the number of certified (and thus protected) vernal pools has grown over the past few years. Approximate locations of certified vernal pools are displayed on Figure 4-4.

Along with certifying additional vernal pools, the town hopes to work with the Division to inventory which species are using the vernal pools. Thus far, Marbled Salamanders have been found in the Lime Kiln quarries and adult marbled salamanders have been found near the Country Cupboard. In addition, blue-spotted salamanders have been found in the other pools in town.

Bird List

See Appendix G for Division of Fisheries and Wildlife's "Birds of the Bolton Flats Wildlife Management Area."

Mammal List

See Appendix H for a list of mammals commonly found in southern New England.

4.F Scenic Landscapes, Unique Areas and Historical Features

Scenic vistas have been inventoried by the state through the Massachusetts Landscape Inventory. Figure 4-5 shows important scenic areas identified by the inventory in Bolton. Distinctive areas are noted with a "D", and other notable areas with an "N."

Scenic vistas noted in the inventory and others well known to residents in town include:

- Long Hill road looking west over rolling hills, grassy meadows and forested areas. Also at Annie Moore Road there is an impressive scenic view to the north, looking at Great Brook and the Delaney area.
- Wataquadock Hill Road looking east over apple orchards, pasture land and the towns lying beyond.
- Nourse Road looking west to grasslands, forest and many distant hills, including land in agricultural use.

- Vaughn Hill Road looking west over Bolton Flats conservation area and the Still
 and Nashua Rivers. From the Southern peak of the Vaughn Hills, now the site of a
 private residence, there is a spectacular view to the west and northwest to Mount
 Wachusett and Mount Monadnock.
- West Berlin and Sawyer Roads looking east over farmland and forests to the Boston skyline on a clear day.
- Wilder Road looking west over apple orchards, fields and forest to Mt. Wachusett, Mt. Watatic, Mt. Monadnock, and beyond.
- Old Bay Road east of Wataquadock Hill Road overlooking rolling farmland.
- Kettle Hole and Still River Roads with views to the west over Bolton Flats Wildlife Management Area and the Nashua River Valley to Mount Wachusett.

Figure 4-6 shows many of the unique areas of Bolton discussed in this section and the ones that follow.

Major Characteristics or Unusual Geologic Features

Among the unique geological features in Bolton are the bedrock outcroppings on the two peaks of the Vaughn Hills. The predominantly quartzitic rock of the Worcester Formation has been named the "Vaughn Hill member" in this area.

Another interesting geologic site in Bolton is the kettle hole, left in the terrain by the receding glaciers of the last glaciation. It is located on a loop trail just off Kettle Hole Road. Although there are other fine examples of ice contact deposits in Bolton, this kettle hole is most noteworthy due to its size and the fact that it is dry and can be walked.

The marble and lime deposits near Rattlesnake Hill also constitute unusual geological features of Bolton. The lime kiln and quarry areas are preserved on conservation land and date back to the early 1700's, when limestone was quarried and burned in the kiln to make lime for plaster. The unique grey plaster is still found in many of the old homes in the area. The quarry area was purchased from Gertrude Anderson in 1974 and, with the help of a state bicentennial grant and generous efforts of many in the town, the lime kiln was restored in 1976. Boltonite is also found in the quarry, an unusual mineral named for the town. Thirty other minerals can also be found in this area. The adjacent Rattlesnake Hill conservation land is covered with glacial age rock formations, including huge boulders, small caves and small kettlehole ponds.

Another unusual geologic feature is the Spectacle Hill esker and the deep gorge between Spectacle Hill Road and South Bolton Road created by the glaciers. There is also a brook running through the gorge, although this area is well hidden by the surrounding woods.

There is an esker on Parcel A of the Vinger land recently donated to the town as conservation land. This lies off Berlin Road near the Bolton/Berlin boundary. It is a ridge of high land created by the deposition of sediments associated with a glacial stream. Another esker can be found just to the west of Sugar Road near the intersection with Main Street.

Drumlin hills can also be found, predominantly on the eastern side of Bolton. Examples of Drumlin hills are Barretts and Stratton Hills in the southern eastern part of town, Spectacle Hill and Long Hill.

Pine Hill is also mentioned in Hanson's "Geology of the Hudson and Maynard Quadrangles" because of the continuous beds of garnet occurring here in association with amphibolite.

Cultural and Historic Areas

The Powder House on Powderhouse Hill dates back to 1812. It was restored in 1957 by the Lions Club. The almost four acres surrounding it were given to the town in 1916 by George B. Newton, and another adjoining acre was given by his sister Fidelia Newton in 1930.

The Whitcomb Garrison House is noted as the oldest house in town, built in 1681. While the house, is no longer standing, the foundation of the house has been uncovered and protected and remains one of the most important historical artifacts in town.

The area between Wilder Road and Forbush Mill Road includes the foundation of an old ice house, lovely stone walls along an abandoned cart road, and several scenic fields and wetland areas. This section was cited in the Shrewsbury Ridge Report as being of prime scenic importance. In addition, the Forbush Mill Brook and two old darn sites exist as historical remains of water-powered mills of colonial Bolton.

In the Whitcomb Road area there is also a pond and mill site, both scenic and providing a buffer from Rte. 495 for residents of the Whitcomb and Sugar Roads. The dam site and mill pond on Century Mill Road at South Bolton Road is among the first in Bolton.

David Whitcomb's Inn on Old Sugar Road is the oldest house in Bolton dating from 1700. It was once the private home of Dr. Phillips, who donated 75 surrounding acres as conservation land.

There is an old railroad bed that is of both scenic and historic interest, running from Lancaster through Bolton. It was built in the early 1870s, but only one train passed over the line before service was abandoned. In many areas through which the rail line passes the bed is several feet higher than the surrounding terrain and provides a natural path for a trail. In the Wilder Road area some stone work from railroad underpasses still remains. One of the best areas to see the old railroad bed is just west of Hudson Road as in runs north to south along Danforth Brook.

Areas of Critical Environmental Concern (ACEC)

Part of Bolton was included in the Central Nashua River Valley Area of Critical Environmental Concern (ACEC). Figure 4-7 shows the boundaries of this area. This ACEC, announced in January 1996, totals 12,900 acres of land in the towns of Lancaster, Leominster, Harvard and Bolton. The area in Bolton is nearly identical to the boundaries of the Bolton Flats State Wildlife Management Area, with the only exception being that

the ACEC boundary is Route 110 while the Management Areas boundary is slightly west of Route 110. The total acreage in Bolton included in the ACEC is 700 acres.

The next step for the ACEC is to develop a management plan so that specific regulations can be adhered to. This will be a major process. While the ACEC program was created in the mid- I 970's and the total number of ACECs is currently 25, only one, the Neponset River, has a management plan. A second ACEC, Pleasant Bay, will also soon have a management plan. Both plans were developed with considerable State and local resources. A long-term goal of Bolton and its neighboring ACEC communities should be to develop an ACEC management plan for the Central Nashua River Valley.

Environmental Problems

The closed Landfill and DPW underground leaks were discussed in Section 3.G, as were the potential need for a central water supply and waste treatment plant in the center of town.

Beavers have become a constant nuisance and threat to human safety and health in Bolton. The Massachusetts legislature recently amended G.L. c.131, s80A, with the passage of "An Act Relative to Foothold and Certain Other Devices." This new law became effective on July 21, 2000 making it easier for citizens to alleviate threats caused by flooding from beaver and muskrat activity.

Anyone may apply to the Bolton Board of Health for an emergency permit to <u>immediately alleviate</u> a threat to human health and safety from beaver and muskrat activity. The law includes a list of activities that may constitute a threat to human health and safety. The list may be found at http://www.state.ma.us/dep.

Whereas most ways to alleviate these threats to human health and safety will occur within the resource area of a wetland, the issuance of a permit from the Bolton Conservation Commission is also required, prompting the Bolton Conservation Commission to adopt a set of guidelines to help with the overall process, which can be found in Appendix I – Beaver & Muskrat Management Guidelines.

The Department of Environmental Management (DEM) has set forth that trapping of the beaver or muskrat is only to be done as a last resort and that control flow devices should be installed first to alleviate any public health and safety threat.

Currently the Bolton Conservation Commission has installed several control flow devices on several parcels that are town owned, in an attempt to follow the Department of Environmental Management.

Bolton's private water wells and private sewage disposal require the town and its residents to be ever vigilant to avoid contamination and malfunctions. Board of Health regulations and careful enforcement of Title V by the Board of Health help to assure continued environmentally safe operation of wells and septic systems. The new requirements for septic system testing in conjunction with sale of a house, while inconvenient in some cases and an unexpected homeowner expense in other cases, helps assure continued safe operation of systems and the resultant protection of the

groundwater. There are some concerns about the age and concentration of septic systems in the center of Bolton and the possibility of development of senior housing on town land near the center. Preliminary discussions amongst town boards in 1995-6 dealt with future sewage disposal in this section of town and the alternatives were multiple septic systems to fail. A study committee was discussed, but was never officially appointed. This remains a probable study as plans for senior housing gel. Although the likely solutions of a sewage treatment plant for the area or tying into neighboring towns' sewers will be expensive, environmental protection will be improved.

Section 5. Inventory of Lands of Conservation and Recreation Interest

This section contains a complete listing of land parcels in town that are of interest for conservation. Bolton's Open Space Inventory Map, including all existing publicly-owned conservation lands, private conservation lands, and properties with development restrictions (including zoning restrictions) are summarized in Table 5-1, and can be viewed in Figure 5.A.

Table 5.1

	PERCENT OF BOLTON PROTECTED BASED ON 2004 ASSESSOR'S DATA										
			1998				2004		Change		
				% of				% of			
	# of		% of Protected	Bolton	# of	Total	% of Protected	Bolton	# of		
Land Type	Parcels	Total Acres	Open Space	Protected	Parcels	Acres	Open Space	Protected	parcels	Acreage	Increase
Town or Trust Owned Conservation Land Only (1)	42	1448.98	12.46%	11.25%	67	1280.22	11.65%	9.94%	25	-168.76	-11.65%
Conservation Restrictions & APR's (not counted above)	18	426.16	3.66%	3.31%	46	591.38	5.38%	4.59%	28	165.22	38.77%
Limited Recreational Business District (not counted above)	5	472.40	4.06%	3.67%	5	472.40	4.30%	3.67%	0	0.00	0.00%
Other Municipal Land					47	961.79	8.75%	7.47%	47	961.79	
Total Protected in perpetuity	65	2347.54	20.18%	18.23%	165	3305.788	30.09%	25.67%	100	958.25	40.82%
Chapter Lands (not in perpetuity)	55	2189.55	18.83%	17.00%	70	1914.12	17.42%	14.86%	15	-275.43	-12.58%
Total Open Space (2)		11630.96				10986.00		Net Loss of	Open Spa	ce:	-644.96
Bolton Land Total		12878.00				12878.00					-5.55%
Percent of Total Open		90.32%				85.31%					
Percent of Unprotected Open Space		79.82%				69.91%					
(1) For 1998, Other Municipal Land is included in this line											
item											
(2) Open Space as defined by MacConnell GIS data in 1985											
and 1999, respectively											

Distinguishing Between Protected and Unprotected Open Space

Permanently Protected Open Space

As shown in Table 5-1, about 25% of Bolton is permanently protected, or about 3,300 acres, either through acquisition, gift, CR's, APR's, and Limited Recreational Business Zoning. Note, this number includes nearly 1,000 acres of Municipal Land, which is not necessarily permanently protected (discussed below). Through the achievements listed in Section 2 of this plan, this represents more than a 958 acre increase from 1998, and although 644 acres of previous open space were lost to development (a 5.5% decline of available open space since 1998), 85% of Bolton remains undeveloped. This open space can be found along roadways as fields, forests, wetlands, surface waters, and mining operations, providing the rural character that defines Bolton. Consider, however, that 75% of Bolton's remaining open space remains privately held and unprotected, including all Chapter 61 parcels. The future uses of this unprotected privately-held open space is uncertain, which is why it is important to define and distinguish between "protected" and "unprotected" open space.

Open spaces are protected in perpetuity when a parcel of land or the future uses of a parcel of land is owned and reserved specifically for conservation. This is accomplished by acquiring the development rights restricting certain activities on the property, by purchasing or receiving as a gift or donation the entire parcel in the name of conservation. Both public agencies and private institutions may purchase property or the development rights, known as fee simple; however, in order to receive legal protection in the future as conservation, these lands must be protected under State Statutes and by the appropriate legal documentation.

A municipality that plans to acquire a property for conservation purposes must state so in the article language proposed at Town Meeting. The article must state that the land is being acquired for conservation purposes under Massachusetts Chapter 40, Section 8C. The municipality may acquire land for purposes other than conservation, including, schools, infrastructure, cemeteries, etc. It is important to distinguish that all municipally owned properties are not permanently protected open space; a good example is the new senior housing complex being built on a previously open 12 acre parcel next to the Flatley property. While certain uses may be restricted on other municipal land purchases, the land receives permanent protection in the name of conservation only if it is protected under Massachusetts Chapter 40. Bolton's key conservation lands are protected under Chapter 40, including Fyfeshire, Vaughn Hills, Bowers Spring, Rattlesnake Hill, and Powderhouse Hill, to name a few. In addition, properties, such as the Lime Kiln, that were purchased with state financial assistance for conservation lands, must be purchased under Chapter 40.

Both municipalities and private institutions may purchase or receive in gift the development rights to a particular parcel of land. This is also known as a Conservation Restriction ("CR") or Agricultural Preservation Restriction ("APR"). A legal document known as a conservation restriction must be appropriately developed and signed by the owner (or purchaser) of a property and the entity (either municipality or private institution) that will hold the development rights to the property. This legal document is authorized under Massachusetts Chapter 184 Sections 31-33. Private institutions may also place a CR onto a property that it purchases to ensure that the property is permanently protected, even beyond the life of the institution or past its ability to own the property.

With the Agricultural Preservation Restriction (APR) Program, the state (and town) purchase the "development rights" to farmland from the farmer so that the land will remain in an undeveloped condition suitable for farming in perpetuity. The land is appraised by the state as farmland and as residential development and the landowner receives the difference while retaining full ownership of the land. The Conservation Commission began an intensive effort in 1984 to bring some of Bolton's farms and orchards under the APR Program. After 11 years, the town was successful in securing an APR for the Nashoba Winery. A second conservation restriction on a farm, the Schultz farm, was gifted to the town. In 2004, Bolton teamed with the Commonwealth of Massachusetts, Bolton Conservation Trust, and the Trust for Public Land to acquire development rights through the APR Program on two other farms, Nicewicz and Schartner, totaling nearly 300 acres to stay in active agriculture.

It's important to note that though many of these private lands contain significant open space and agricultural activities, they also contain homes, barns, and other structures not normally associated with open space, and may not be accessible to the public.

Temporarily Protected Open Space (Not in Perpetuity)

Some lands in Bolton currently receive temporary protection under the Chapter 61 Program. Landowners may be eligible to receive property tax breaks under the Chapter 61 Program if they agree not to develop their land. Landowners may qualify if they are farming the land (Chapter 61A), managing forested land (Chapter 61), or if using land for recreational purposes (Chapter 61B). Landowners are not permanently bound to the program, however, and may depart the program upon giving the municipality a "right of first refusal" to purchase the property and paying the back taxes for the last five years. Although these lands are not permanently protected, the Chapter 61 Program provides landowners with incentives not to sell for development and allows a mechanism where the municipality has a 120-day "right of first refusal" window to match any purchase price on the land before it changes hands for development. However, when land values increase significantly as has been the case in recent years, there is considerable financial pressure to exit the program even with the financial penalties, and the town may have difficulty matching the developer's price. Therefore, we recommend working with current owners holding high priority conservation lands under Chapter 61 to migrate these parcels to CR's or APR's.

Table 5.2

Land Type	# of Parcels	Total Acres
Table 5.2.A. Town or Trust Owned Conservation Open Space	67	1280.22
Table 5.2.B. Privately Owned CR's and APR's (not included above)	46	591.38
Table 5.2.C. Land Zoned as Limited Recreational Business District (not included above)	5	472.40
Table 5.2.D. Publicly Owned Municipal Land	47	961.79
Table 5.2.E. Chapter 61 Lands	70	1914.12

Table 5.2.A.1 - Publicly Owned Conservation Open Space: Lands Owned by the Bolton Conservation Trust -233.81 acres, 15 parcels

PARCEL_ID	STREET	ACRES DESCRIPTION	CORE AREA
034/005.D-0000-0050.0	SUGAR RD	75.02 Phillips	Phillips/Rattlesnake
034/006.D-0000-0065.1	WARNER RD	44.30 Levinson	Northwoods
034/005.D-0000-0058.0	MAIN ST	27.90 Great Brook Open Space	Phillips/Rattlesnake
034/005.C-0000-0075.0	QUAIL RUN	21.46 Quail Run Open Space	Powderhouse Hill
034/008.B-0000-0015.0	RTE 110 TOWN LINE	15.90 Harvard Line, abuts Sullivan and Moen	Vaughn Hill
034/003.C-0000-0004.0	BERLIN RD	15.60 Coolidge Farm	
034/005.D-0000-0041.0	MAIN ST	10.57 Rattlesnake/Lime Kiln	Phillips/Rattlesnake
034/003.C-0000-0073.0	BERLIN RD	7.42 Coolidge Farm	
034/005.C-0000-0042.0	HARVARD RD	6.00 Sullivan - adjacent to Quail run	Powderhouse Hill
034/003.B-0000-0064.0	RANDALL RD	3.23 McGourty	Randall Road Area
034/003.B-0000-0065.0	WATTAQUADOC HILL RD	3.00 Ela - Maiden's Leap area	Wataquodoc Hill
034/006.D-0000-0083.0	OLD SUGAR RD	1.90 Phillips	Phillips/Rattlesnake
034/007.C-0000-0028.0	WARNER RD	0.75 Smith - Northwoods	Northwoods
034/007.B-0000-0012.A	STILL RIVER RD	0.71 Dunnells - Corner Nashaway & 110	
034/005 D-0000-0055 A	SUGAR RD	0.05 Toth - Historic site	

Table 5.2.A.2 - Publicly Owned Conservation Open Space: Lands Owned by the Town of Bolton, protected under Chapter 40-1,046.41 acres, 52 parcels

(Note: Wallie parcel co-owned by Town of Bolton and Bolton Conservation Trust)

PARCEL_ID	STREET	ACRES DESCRIPTION	CORE AREA
034/007.C-0000-0001.0	VAUGHN HILL RD	100.60 Vaughn Hill	Vaughn Hill
034/005.D-0000-0026.0	OLD SUGAR RD (REAR)	77.00 STEPHENSON	Phillips/Rattlesnake
034/005.D-0000-0022.0	BURNHAM RD	67.90 Atlantic Union	Phillips/Rattlesnake
034/004.E-0000-0035.0	ANNIE MOORE RD	66.25 Annie Moore	Annie Moore/Long Hill
034/005.C-0000-0022.0	REAR OF TOWN HALL	60.75 Philbin Land Powderhouse Hill	Powderhouse Hill
034/005.E-0000-0044.0	SUGAR RD	55.54 Harris Land	Phillips/Rattlesnake
034/007.C-0000-0018.A	BOWER'S SPRING	48.10 Bowers Springs	Bower Spring
034/007.B-0000-0022.1	VAUGHN HILL RD	44.46 Moen	Vaughn Hill
034/005.E-0000-0002.0	ANDERSON PURCHASE	42.36 Anderson/Lime Kiln	Phillips/Rattlesnake
034/003.E-0000-0001.0	LONG HILL RD	40.00 Barretts Hill	Barretts Hill
034/006.D-0000-0064.0	HARVARD RD NORTH OF	32.96 Northwoods Open Space - partially deeded ~ 33 acres of 41	
034/006.C-0000-0058.0	HARVARD RD	31.28 Sochalaski	Northwoods
034/003.A-0000-0044.0	WATTAQUADOC HILL RD	31.00 Fyfeshire	Wataquodoc Hill
034/003.R-0000-0044.0	ROCKY-DUNDEE RD	20.80 Rocky Dundee Open Space	Randall Road Area
034/002.B-0000-0003.0	RANDALL RD	17.94 White	Randall Road Area
034/006.C-0000-0024.0	GREEN RD	17.40 Hanson	Vaughn Hill
034/003.C-0000-0066.0	BERLIN RD	17.05 Millbrook Open Space	vaagiiirriiii
034/003.B-0000-0078.0	ROCKY-DUNDEE RD	16.20 Rocky Dundee Open Space	Randall Road Area
034/005.A-0000-0017.0	FORBUSH MILL RD	15.79 Lot 2. Purchased with Lot 3 - soccer fields	Wilder Pond to Forbush Mill
034/002.D-0000-0049.0	DANFORTH LN	13.45 Danforth Brook Open Space - top of lane to barrett's hill	Barretts Hill
034/002.D-0000-0049.0 034/002.D-0000-0051.0	DANFORTH LN	12.52 Danforth Brook Open Space - top of faile to barrett's filling	Barretts Hill
	MAIN ST OFF	12.32 Daniorth Brook Open Space - hudson rd to daniorth rd 12.20 Goodrich - Powderhouse Hill	Powderhouse Hill
034/004.C-0000-0028.0			
034/002.D-0000-0050.0	DANFORTH LN	12.07 Danforth Brook Open Space - backlot	Barretts Hill
034/005.D-0000-0035.0	MAIN ST	12.00 BRAMAN	Phillips/Rattlesnake
034/005.E-0000-0017.0	ANNIE MOORE RD	11.91 Bolton Woods Way Open Space	Annie Moore/Long Hill
034/002.B-0000-0043.0	BERLIN RD	11.50 Vinger Parcel A	Randall Road Area
034/005.A-0000-0018.0	FORBUSH MILL RD	11.11 Lot 1. Purchased with Municipal Lots 1 & 2 on Plan 85	Wilder Pond to Forbush Mill
034/003.B-0000-0037.0	WELCH POND	11.03 Welch Pond	Wataquodoc Hill
034/003.B-0000-0043.1	RANDALL RD	10.07 Savignano	Randall Road Area
034/002.B-0000-0042.0	BERLIN RD	9.36 Vinger Lot 5	Randall Road Area
034/006.E-0000-0043.0	BUTTERNUT LN	8.55 Butternut Open Space	
034/002.B-0000-0045.0	BERLIN RD VINGER GIF	7.76 Vinger Lot 1	Randall Road Area
034/006.D-0000-0054.0	SUGAR RD	6.81 Plante - North of Sugar Road	
034/003.B-0000-0047.0	W BERLIN RD	6.77 Gould	Randall Road Area
034/006.B-0000-0172.0	FOX RUN RD	6.65 Fox Run	
034/005.B-0000-0083.0	WILDER GOOSE POND	5.63 Wilder Pond	Wilder Pond to Forbush Mill
034/003.D-0000-0020.0	HUDSON RD	5.50 Persons Park	Boy Scout Area
034/003.A-0000-0043.0	WATTAQUADOC HILL RD	5.25 Haynes-Wheeler	Wataquodoc Hill
034/003.C-0000-0009.0	BERLIN RD	5.20 Richards	Randall Road Area
034/002.D-0000-0048.0	DANFORTH LN	5.12 Danforth Brook Open Space - trail link to barretts hill	Barretts Hill
034/006.E-0000-0038.0	BUTTERNUT LN	4.31 Butternut Open Space	
034/006.E-0000-0056.0	BUTTERNUT LN	3.24 Butternut Open Space	
034/007.C-0000-0070.0	MT WACHUSETT LN	2.19 Backland lot abutting Held CR and Vaughn Hill Conservation	n Vaughn Hill
034/002.D-0000-0003.0	HUDSON RD	1.70 Leduc - Rt 85	Danforth Brook/Century Mill
034/002.B-0000-0024.0	RANDALL ROAD OFF	1.40 Tenney-Slader - wet backland lot	Randall Road Area
034/004.D-0000-0038.0	BURNHAM RD	1.27 Cranberry Meadow	Phillips/Rattlesnake
034/003.D-0000-0044.0	HUDSON RD	1.11 Backland Lot off Rt 85	Barretts Hill
034/002.D-0000-0052.0	DANFORTH LN	0.82 Danforth Brook Open Space - hudson rd	Barretts Hill
034/003.B-0000-0025.0	RANDALL RD	9.60 Wallie	Randall Road Area
034/004.A-0000-0007.0	OAK TRAIL	18.36 The Oaks Open Space- not deeded	Wataquodoc Hill
034/004.A-0000-0014.0	OAK TRAIL	8.14 The Oaks Open Space- not deeded	Wataquodoc Hill
034/004.A-0000-0049.0	OAK TRAIL	0.43 The Oaks Open Space- not deeded	Wataquodoc Hill
33 30 1 (0000 0040.0	O TIVIL	one me dano opon opaco not accuca	

Table 5.2.B.1 - Privately Owned CR's and APR's (not included above): Conservation Restrictions – 372.56 acres, 41 parcels

PARCEL ID	STREET	OWNER	ACRES DESCRIPTION	CORE AREA	CR ACRES
034/005.D-0000-0025.0		HOEFFLER MICHAEL M & KARIN I	61.92	Phillips/Rattlesnake	61.92
034/003.A-0000-0060.0	SAWYER RD & WATTAQUA	ARKLOW LIMITED PARTNERSHIP	58.80	Wataquodoc Hill	58.80
034/003.A-0000-0056.0	BALLVILLE SAWYER & W	ARKLOW LIMITED PARTNERSHIP	48.44	Wataquodoc Hill	48.44
034/005.B-0000-0078.0	WILDER RD	DAVIS FARM TRUST	27.30 Fields next to Wilder mansion	Wilder Pond to Forbush Mill	27.30
034/005.C-0000-0006.0	HARVARD RD	NORSEEN NW & HN MCCLENNEN & EL	26.56	Powderhouse Hill	26.56
034/007.C-0000-0003.0	BARE HILL RD	HELD JOHN R	23.00	Vaughn Hill	23.00
034/004.B-0000-0017.0	OLD BAY RD	CALCAGNI DAVID	13.10	Wataquodoc Hill	13.10
034/005.C-0000-0003.0	NOURSE RD	JAMES DAVID R	12.32		12.32
034/007.C-0000-0040.0	BARE HILL RD	HELD JOHN R & LUCILLE L	11.56	Bower Spring	11.56
034/006.D-0000-0086.0	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	11.31	Phillips/Rattlesnake	11.32
034/003.B-0000-0021.B	RANDALL RD	REED BRADLEY I & NANCY W	12.54 Reed CR	·	10.81
034/008.B-0000-0027.0	RTE 110 TOWN LINE	LAMATTINA THOMAS B	8.43	Vaughn Hill	8.43
034/008.B-0000-0014.0	VAUGHN HILL RD	SULLIVAN RICHARD W, SR, ESTATE O	28.50	Vaughn Hill	5.00
034/003.C-0000-0056.0	MILLBROOK LN	CARLSON SARAH A	4.51 Millbrook CR (estimate)	-	4.50
034/003.C-0000-0057.0	MILLBROOK LN	DALY DANIEL F & NORA T	4.51 Millbrook CR (estimate)		4.50
034/005.C-0000-0005.0	HARVARD RD	HOOKER WN ANITA	4.31		4.31
034/008.B-0000-0004.0	AUTUNN LANE	KHANI MOHSEN TR	5.94 Khani CR (estimate)	Bolton Flats	3.76
034/008.B-0000-0028.0	RTE 110 TOWN LINE	MCDERMOTT MERCEDES & CRAIG	3.53	Vaughn Hill	3.53
034/005.C-0000-0076.0	HARVARD RD	THOMPSON KRISTIN D & RICHARD C G	3.43		3.43
034/003.C-0000-0055.0	MILLBROOK LN	RUCINSKI PETER & SUZANNE	3.86 Millbrook CR (estimate)		3.40
034/008.B-0000-0022.0	AUTUMN LANE	PREVOST MICHAEL J	4.55 Khani CR (estimate)	Bolton Flats	3.04
034/008.B-0000-0023.0	AUTUMN LANE	BETTEZ ERIK H & NANCY L	4.57 Khani CR (estimate)	Bolton Flats	2.92
034/006.D-0000-0085.0	OLD SUGAR RD	DAVIES PATRICIA P	2.83	Phillips/Rattlesnake	2.83
034/005.C-0000-0006.1	HARVARD RD	NORSEEN,NW & HN MCCLENNEN & EL	2.68		2.68
034/005.C-0000-0007.0	HARVARD RD	FERGUSON FRED E	2.03		2.03
034/005.C-0000-0077.0		HILL ELAYNE MARIE & ROBERT LOU	2.03		2.03
034/005.C-0000-0008.0	HARVARD RD	COVINO WILLIAM M & KAREN R OVER	1.80		1.80
034/004.E-0000-0066.0	ANNIE MOORE RD	ROBIDOUX TINA	4.63	Annie Moore/Long Hill	1.75
034/003.C-0000-0058.0		JIANG QI & YI ZHAO	1.50 Millbrook CR (estimate)		1.50
034/004.E-0000-0067.0	ANNIE MOORE RD	CARVALHO DAVID A & ELIZABETH A	4.66	Annie Moore/Long Hill	1.10
034/002.C-0000-0085.0		BICHAO JOHN JR & SABRINA BICHAO	4.53 Millbrook CR (estimate)		0.70
034/002.C-0000-0082.0		HOOVER PETER L & MICHELLE A	5.25 Millbrook CR (estimate)		0.70
034/002.C-0000-0084.0	QUAKER LN	MARTINEK ROBERT J & LAURIE B	4.52 Millbrook CR (estimate)		0.70
034/007.B-0000-0065.0	STILL RIVER RD	ATWOOD DONALD G & CAROLYN C	1.99		0.60
034/006.D-0000-0069.0		DAVIES PATRICIA P	1.73	Phillips/Rattlesnake	0.60
034/006.D-0000-0059.0	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	1.77	Phillips/Rattlesnake	0.40
034/005.E-0000-0003.0	MAIN ST	ROEMER ROBERT E & MARY ALICE, T	1.57	Phillips/Rattlesnake	0.39
034/005.D-0000-0051.0		HOEFFLER MICHAEL M & KARIN I	1.64	Phillips/Rattlesnake	0.30
034/008.B-0000-0021.0		BRANDVOLD PAAL & KAREN M	1.63 Khani CR (estimate)	Bolton Flats	0.25
034/008.B-0000-0019.0		BURNHAM BRIAN L	1.51 Khani CR (estimate)	Bolton Flats	0.25
034/008.B-0000-0020.0	AUTUMN LANE	COLOSI JAMES A	1.54 Khani CR (estimate)	Bolton Flats	0.25

Table 5.2.B.2 - Privately Owned CR's and APR's (not included above): Agricultural Preservation Restrictions – 218.82 acres, 5 parcels

PARCEL ID	STREET	OWNER	ACRES DESCRIPTION	CORE AREA	APR ACRES
034/003.A-0000-0064.1	SAWYER RD	NICEWICZ VERA & DAVID J & KENNETH*	82.50 Nicewicz APR (in process)	Wataquodoc Hill	82.50
034/003.B-0000-0008.1	W BERLIN RD	GRALA LOIS L & ROBERT F SCHARTNER*	57.70 Schartner APR (in process)	Randall Road Area	57.70
034/004.C-0000-0049.0	WATTAQUADOC HILL RD	NVW LTD	39.16	Wataquodoc Hill	39.16
034/003.B-0000-0007.1	W BERLIN RD	GRALA LOIS L & ROBERT F SCHARTNER*	37.50 Schartner APR (in process)	Randall Road Area	37.50
034/004.C-0000-0051.0	BERLIN RD	NVW, LTD	3.05	Wataquodoc Hill	1.96

Table 5.2.C - Parcels included in Limited Recreational Business Zone (not included above) – 472.4 acres, 5 parcels

Note: The LRBD includes 2 other parcels totaling 107.24 acres, but they are included in Privately Held Conservation Restrictions

PARCEL_ID	STREET	ACRES DESCRIPTION
034/005.A-0000-0002.0	WILDER RD	329.00 International Golf Course - LRBD
034/004.A-0000-0005.0	BALLVILLE RD	59.40 International Golf Course - LRBD
034/004.A-0000-0001.0	LANCASTER RD	54.20 International Golf Course - LRBD
034/005.A-0000-0005.0	WILDER RD	26.50 International Golf Course - LRBD
034/003.A-0000-0059.0	SAWYER RD	3.30 Schultz Farm

IGC and Twin Springs Golf Courses - There is an impressive 18 hole private course as part of the International country club complex and a 9 hole public course. It is highly desirable for these areas to remain as golf courses for the benefit of open spaces in Bolton and the recreational value they provide. If the present owners ever decide to sell the courses, it would be useful for the town to pursue more public operation of the International although the country club in its present form is an important open space resource for Bolton. Because the IGC is the largest property tax payer to the town and because of the potential impacts of future residential of the property, the town should aid the IGC in continuing as a golf enterprise and plan for its future. The town rezoned this 575 acre property for recreational uses in 1997.

Table 5.2.D.1 - Publicly Owned Municipal Land – Town of Bolton: 262.77 acres, 35 parcels

PARCEL_ID	STREET	OWNER	ACRES DESCRIPTION	CORE AREA
	MAIN ST	BOLTON SENIOR HOUSING CORP	11.45 Over 55 housing - Main Street	Sawyer School Area
034/006.B-0000-0012.0	MAIN ST	NASHOBA REGIONAL SCHOOL	47.61 Nashoba Regional High School	
034/004.C-0000-0038.0	MAIN ST	TOWN OF BOLTON	53.02 Cell Tower and Horse Ring Fields next and behind Flately	Sawyer School Area
034/004.C-0000-0004.0	BERLIN RD	TOWN OF BOLTON	40.98 Derby field	Sawyer School Area
	MECHANIC ST	TOWN OF BOLTON	19.76 Sawyer School	Sawyer School Area
	FORBUSH MILL RD	TOWN OF BOLTON	11.38 Municipal Lot 1 on Forbush, Closed Landfill area	
034/004.C-0000-0012.0	CHARLES MACE PUR	TOWN OF BOLTON	10.53 Memorial Field	Sawyer School Area
	FORBUSH MILL RD	TOWN OF BOLTON	8.06 Town Gravel Pit	Wilder Pond to Forbush Mill
034/005.A-0000-0009.0	FORBUSH MILL RD	TOWN OF BOLTON	7.37 Soccer Fields - Lot 3. Purchased with Lot 2	Wilder Pond to Forbush Mill
034/001.0-0000-0029.0	MAIN ST	TOWN OF BOLTON	7.19 Emerson School	Sawyer School Area
034/003.C-0000-0028.A	S BOLTON RD	TOWN OF BOLTON	6.00 cemetary	
034/002.0-0000-0009.0	MAIN ST	TOWN OF BOLTON	5.72 Town Hall	Powderhouse Hill
034/006.A-0000-0016.0	FORBUSH MILL RD	TOWN OF BOLTON	4.50 Municipal Lot of Forbush, behind Lot 2 Frontage	
034/004.B-0000-0018.0	W BERLIN RD	TOWN OF BOLTON	4.13 Cell Tower	Wataquodoc Hill
034/005.A-0000-0020.0	FORBUSH MILL RD	TOWN OF BOLTON	2.82 Municipal Lot 2 on Forbush, frontage next to Gravel Pit	
034/006.D-0000-0048.0		TOWN OF BOLTON	2.63 West of Corn Rd, Abuts Harvard Conservation Land	
034/006.B-0000-0013.0	GREEN RD	TOWN OF BOLTON	2.61 cemetary	
034/001.0-0000-0040.0	MAIN ST	TOWN OF BOLTON	2.55 Library	
034/006.A-0000-0037.0	MAIN ST	TOWN OF BOLTON	2.31 Corner 110 & 117	
034/001.0-0000-0030.0	MAIN ST	TOWN OF BOLTON	1.85 Emerson School - Skating Pond Park	Sawyer School Area
034/004.D-0000-0014.0	MAIN ST	TOWN OF BOLTON	1.80 cemetary	
034/001.0-0000-0006.0	MAIN ST	TOWN OF BOLTON	1.50 Police Station	
034/004.C-0000-0013.0	WATTAQUACOC HILL RD	TOWN OF BOLTON	1.50 Firestation	
034/006.B-0000-0001.0	FORBUSH MILL RD	TOWN OF BOLTON	1.16 Town Garage	Wilder Pond to Forbush Mill
034/005.B-0000-0091.0	MAIN	TOWN OF BOLTON	0.92 Can't locate	
034/004.E-0000-0038.0	ANNIE MOORE RD	TOWN OF BOLTON	0.75 End of Annie Moore Rd	Annie Moore/Long Hill
034/002.B-0000-0012.0	BERLIN RD	TOWN OF BOLTON	0.60 Quaker Cemetary	
034/005.E-0000-0089.0	SUGAR RD	TOWN OF BOLTON	0.32 Can't locate	
034/005.E-0000-0096.0	MAIN ST	TOWN OF BOLTON	0.25 stow border-Old Bolton Rd/117 triangle	Annie Moore/Long Hill
034/005.E-0000-0095.0	MAIN ST	TOWN OF BOLTON	0.25 stow border-Delaney Rd/117 triangle	Delaney
034/005.B-0000-0092.0	MAIN ST	TOWN OF BOLTON	0.25 Wilder Pond Parking area on 117	Wilder Pond to Forbush Mill
034/001.C-0000-0044.0	LIVELY RD	TOWN OF BOLTON	0.25 Hudson Line - Raild Road	
	BERLIN RD	TOWN OF BOLTON	0.25 Quaker Park, corner Frye & Berlin Rd	
034/003.A-0000-0078.0	WATTAQUADOC HILL RD	TOWN OF BOLTON	0.25 Railroad bed - Clinton Line	
004/000 4 0000 0070 0	WATTAQUADOC HILL RD	TOWN OF BOLTON	0.25 Railroad bed - Clinton Line	

Table 5.2.D.2 - Publicly Owned Municipal Land - Commonwealth of Mass and other Municipalities: 699.02 acres, 12 parcels

PARCEL_ID	STREET	OWNER	ACRES DESCRIPTION	CORE AREA
034/007.B-0000-0001.0	BOLTON FLATS	COMMONWEALTH OF MASSACHUSETTS	303.20 Bolton Flats - N117	Bolton Flats
034/006.A-0000-0019.0	RTE 117	COMMONWEALTH OF MASSACHUSETTS	95.00 Bolton Flats - N117	Bolton Flats
034/005.E-0000-0021.0	EAST END RD	COMMONWEALTH OF MASSACHUSETTS	71.22 Delaney	Delaney
034/006.A-0000-0017.0	BOLTON FLATS	COMMONWEALTH OF MASSACHUSETTS	44.00 Bolton Flats - S117	Bolton Flats
034/005.A-0000-0008.0	FORBUSH MILL RD	COMMONWEALTH OF MASSACHUSETTS	23.00 Lancaster Prison corn fields	Wilder Pond to Forbush Mill
034/006.A-0000-0018.0	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	14.00 Bolton Flats - S of Davis, W 110	Bolton Flats
034/008.B-0000-0007.0	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	13.00 Bolton Flats - N117 w building	Bolton Flats
034/007.B-0000-0090.0	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	6.80 Bolton Flats - N117	Bolton Flats
034/005.A-0000-0010.0	WILDER RD WEST O	COMMONWEALTH OF MASSACHUSETTS	6.60 Pond between Forbush & Wilder	Wilder Pond to Forbush Mill
034/005.E-0000-0097.0	MAIN ST	COMMONWEALTH OF MASSACHUSETTS	6.20 Delaney	Delaney
034/008.A-0000-0002.0	PINE HILL	COMMONWEALTH OF MASSACHUSETTS*	70.00 Pine Hill - based on Rona Balco	Bolton Flats
034/005.A-0000-0007.0	WILDER RD	TOWN OF LANCASTER	46.00 cemetary	Wilder Pond to Forbush Mill

Table 5.2.E.1 - Chapter 61 Lands – Forestry – 221.65 acres, 9 parcels

PARCEL_ID	STREET	OWNER	ACRES DESCRIPTION
034/003.D-0000-0033.1	LONG HILL RD	HENRY DUANE G & JEAN L	47.02
034/006.D-0000-0065.1	WARNER RD	LEVISON ANN R TR	44.30
034/005.A-0000-0006.1	WILDER RD	VESPA MARY E	34.00
034/006.D-0000-0068.1	WARNER RD	FIREFLY FARM LLC	30.10
			Abuts Butternut Open
034/006.E-0000-0001.1	WHITCOMB RD	DAMAN STEPHEN J & DEBORAH J	26.47 Space and Harvard Line
034/006.D-0000-0071.1	WHITCOMB RD	MCAFEE ROBERT E	17.10
034/006.D-0000-0058.1	WHITCOMB RD	SANTINI DAVID R & RUTH J, TR	10.66
034/005.A-0000-0004.0	WILDER RD	VESPA DONATO	9.00
034/005.A-0000-0015.1	WILDER RD	VESPA DONATO	3.00

Forest land remains Bolton's largest undeveloped natural resource. The vegetation analysis in Section 4 indicates that from 70 to 75% of Bolton's land area remains in forest cover. While some of this woodland now lies within individual house lots, under current zoning these parcels may be quite large and are often contiguous with larger backland wooded acreage.

The following table lists those parcels retained in forest management under the provisions of Chapter 61 and are not protected permanently under a Conservation Restriction

Table 5.2.E.2 - Chapter 61B Lands – Recreation – 188.63 acres, 11 parcels

PARCEL_ID	STREET	OWNER	ACRES DESCRIPTION
034/003.B-0000-0031.0	W BERLIN RD	SCHECTER JULIE & WILLIAM HAPGOOD	47.11 Central to Core Area - existing trails
034/005.A-0000-0005.0	WILDER RD	ARKLOW LIMITED PARTNERSHIP	26.50
034/004.E-0000-0039.0	ANNIE MOORE RD	VELARDOCCHIA DAVID L & CATHIE L	15.08
034/004.E-0000-0037.0	ANNIE MOORE RD	CONFER CHARLES L	15.00
034/005.E-0000-0052.0	ANNIE MOORE RD	MARTIN NAOMI L	15.00
034/004.E-0000-0017.0	ANNIE MOORE RD	SCUDIERE MARGARET J	14.93
034/006.C-0000-0061.0	HARVARD RD	DEMERS CHRISTOPHER & LESLIE A	14.07
034/007.C-0000-0041.0	BARE HILL RD	BARTSCH NOEL R	11.57
034/003.A-0000-0055.0	BALLVILLE RD	SWANTON KENNETH R	11.52
034/008.B-0000-0006.0	STILL RIVER RD	SILVER KEITH H & MARCY	11.00
034/003.B-0000-0016.0	RANDALL RD	MAURO PAUL J & LINDA M	6.85

During the 1980s, a program for non-agricultural open space assessment was established by the state known as Chapter 61B. Intended primarily for active recreation land such as golf courses, the program has been used by one landowner for a relatively large open parcel.

Table 5.2.F.3 - Chapter 61A Lands - Agriculture - 1,503.84 acres, 50 parcels

DADOEL ID		0144150	AGDEG DEGGEDERAL
PARCEL_ID	STREET	OWNER	ACRES DESCRIPTION
034/005.B-0000-0004.1	WILDER RD FARM	DAVIS FARM TRUST	202.70 Top of Old Bay/Wilder
			Townsend Horse Farm - Corner of
024/004 B 0000 0012 1	OLD BAY RD	ELA DOCED E ESTATE OF	Old Bay & Ballville fields excellent for 141.17 Active Recreation
034/004.B-0000-0012.1		ELA ROGER E ESTATE OF	103.93 Lord Farm
034/004.E-0000-0007.0		LORD CHARLES H	
034/005.E-0000-0011.1		STEPHENSON JOHN H & JOAN M, TR	96.00 Bolton Spring Farm
034/003.E-0000-0003.0		ETTINGER DORIS E	74.00
034/003.A-0000-0010.1	SARGENT RD	VATTES WILLIAM F ESTATE OF	58.31
004/004 B 0000 0000 4	OLD DAY DD	ELA DOOED E ESTATE OF	Townsend Horse Farm - Summit Eas
034/004.B-0000-0006.1		ELA ROGER E ESTATE OF	57.80 of Old Bay
034/004.C-0000-0005.1		STEPHENSON JOHN H & JOAN M TR	57.61
034/005.E-0000-0011.0		STEPHENSON JOHN H & JOAN M, TR	57.30 Bolton Spring Farm
034/006.C-0000-0023.1		GROUSE HILL REALTY TRUST	49.60
034/003.C-0000-0032.1		SLADE MARK E & VICTORIA HASKELL	47.00
034/004.B-0000-0004.0		TAYLOR EDWARD L	42.16 Fields behind Old Bay
034/004.B-0000-0005.1	WATTAQUADOC HILL RD	ELA ROGER E ESTATE OF	39.00 Townsend Horse Farm - Barns
004/000 0 0000 0000 4	OFNITUDY/MUL DD	CANTU DEALTY/TRUCT CANTU A LED	Century Mill Horse Farm - abuts Boy
034/003.C-0000-0039.1		SMITH REALTY TRUST, SMITH A LED	36.00 Scouts
034/004.D-0000-0037.1		WILSON WARREN E	32.80 Long Hill - Pumpkin Farm
034/004.D-0000-0060.0		SLATER SE, JH MARTIN, BA SLATER	28.14
034/003.C-0000-0043.1		SLADE SCOTT C	24.93
034/005.A-0000-0003.0		BUTLER FRANCIS J	23.12
034/006.C-0000-0006.0		CRISPEN DAVID	21.42
034/007.C-0000-0010.0		WEATHERBEE PAUL L & BARBARA E	21.00
034/004.B-0000-0032.1	W BERLIN RD	TAYLOR ROBERT M	19.50 Central to Core Area - existing trails
			Century Mill Horse Farm - abuts Boy
034/003.C-0000-0040.1		SMITH REALTY TRUST, SMITH A LED	19.03 Scouts - Now has house on it
034/003.B-0000-0012.0		HILLS WARREN S	18.41 Farm on Old Bay - existing trails
034/006.A-0000-0002.0		DAVIS FARM TRUST	16.50 Aquifer
034/003.C-0000-0020.1		SLADE PAUL H & MARY EVELYN	16.00
034/003.C-0000-0026.2		SLADE PAUL H & MARY EVELYN	15.13
034/003.B-0000-0030.1		TAYLOR EDWARD L	15.00
034/006.C-0000-0027.1		GROUSE HILL REALTY TRUST	14.75
034/007.B-0000-0020.0		FULLER JAMES M & LORRAINE N	13.19
034/002.B-0000-0025.0		HATCH ROBERT R & PAULA G	12.84
034/006.C-0000-0023.0		COLBY HERBERT W & LORI H	11.90
034/002.B-0000-0006.1		BEMIS EDITH H & ALBERT F BEMIS JR	11.90
034/003.C-0000-0026.0		SLADE CHALONER B, ESTATE OF	10.87
034/005.E-0000-0007.0		STEPHENSON JOHN H & JOAN M, TR	10.50
034/006.C-0000-0038.1		ZAYKA PAUL R	10.42 Greenway to Vaughn Hill
034/003.C-0000-0031.1		SLADE MARK E & VICTORIA HASKELL	8.00
034/002.B-0000-0017.0		BEMIS EDITH H & ALBERT F BEMIS JR	8.00
034/006.C-0000-0053.1		ZAYKA PAUL R	7.63
034/003.C-0000-0041.1		SMITH A LEDYARD JR	7.37
034/005.E-0000-0008.1		STEPHENSON HOWARD W ESTATE OF	7.37
034/003.A-0000-0010.0		VATTES WILLIAM F ESTATE OF	6.61
034/003.C-0000-0071.0		REZAC RONALD J	5.40
034/004.D-0000-0070.0		HASTINGS SUSAN, TRUSTEE	4.05
034/007.C-0000-0017.1		WEATHERBEE PAUL L & BARBARA E	4.00 3.25
034/006.C-0000-0072.0		COLBY HERBERT W & LORI H	
034/004.D-0000-0037.A		HASTINGS SUSAN, TRUSTEE	3.23
034/007.C-0000-0022.1		WEATHERBEE PAUL L & BARBARA E,	3.00
034/006.C-0000-0018.1		ZAYKA PAUL R	2.50 Bowers Springs
034/003.C-0000-0031.A		SMITH A LEDYARD JR & JACQUELINE	2.00 Century Mill Horse Farm - wood lot
034/006.C-0000-0019.1		ZAYKA PAUL R	1.50
034/005.B-0000-0004.0	WILDER RD FARINS	DAVIS FARM TRUST	0.00 Top of Old Bay/Wilder

Agriculture has always been important to Bolton. Early settlers farmed the land and there have been important dairy farms and orchards in town which have lasted through two and one half centuries. Today, apple orchards are among Bolton's "claims to fame." Farmland remains in Bolton while more easterly towns such as Acton, Sudbury and Concord have lost much of theirs to urbanization. There have been, however, continuing pressures to remove the choice open fields and aesthetically pleasing hillsides of apple trees in favor of housing development.

The Commonwealth of Massachusetts through its Department of Agriculture has shown its concern for the decline in agriculture throughout the state and has worked to establish programs and policies that promote agriculture and the retention of agricultural lands. Through its efforts and those of the Legislature, there exist important tax

assessment and preservation programs designed to provide financial assistance to farmers so that the land they farm will remain in agricultural use.

The most important State program outside of the APR is the farmland assessment program under General Laws Chapter 61 and 61A. Farmland is taxed at a much lower level (Chapter 61A) than normal commercial or residential property, providing important incentives for landowners to continue to use their land for agriculture, however modest the farm may be in terms of production. There is a similar program for forested land that is in a state-approved Forest Management Program (Chapter 61). In both of these cases, assessment rates are set by the town's Board of Assessors based on guidelines from a state-appointed committee.

The loss of farms to development is a primary concern as land values continue to soar. Though the town has "right of first refusal" on lands being removed from Chapter status, the town is struggling to match the developer's offer, as the value of developed land is higher than that kept for conservation purposes. Many farms have been in Chapter status for decades, yet the land owner only needs to pay the last five years of back taxes as a penalty. Though it is encouraging that many farms remain in 61 and 61A, people interested in preserving the farms in Bolton should be discussing ways to permanently protect key agricultural parcels with the owners that farm the land, such as with an APR.

It is encouraging that in the face of development pressures and the decrease in farming in general throughout the region, that some of Bolton's land is being returned to active agriculture by new and competitive enterprises. The Nashoba Valley Winery purchased and began using the nearly abandoned Clemens orchard on Wataquadock Hill Road in 1983. A "pick your-own" program was added to those already successfully being conducted in Bolton. The Winery has added a variety of trees and bushes to its orchard to produce other fruits for its vines. The winery has won several awards for its fruit wines.

A number of the farmers in Bolton have farm stands, the most prominent being Bolton Spring Farm (Stephenson) and Bolton Orchards (Davis). These stands sell products grown and processed elsewhere in addition to their own produce. They thus combine agriculture with commercial operations and carry the additional products in order to cover facilities costs. The Nicewicz and Schartner Farms grow all their own produce sold at their stands on Sawyer and West Berlin Road, respectively. Most of the harvest from the Lord orchards on Annie Moore Road is grown for the commercial market. In general, most of Bolton's farms do not have extensive production, storage, and transportation facilities to move the produce to market. Markets for produce have become more difficult and costly for farmers to find. These situations make it difficult for the farms to compete while relying on their own produce and adds further pressures to place the farmland in more financially attractive use.

Table 5.2.E.3 lists the farmland presently under the Agriculture Assessment of Chapter 61 A of the General Laws. There is additional land being farmed that is not in Chapter 61 A, although these are small-scale enterprises. Unfortunately, areas of prime farm soils have been uncultivated for some time on other properties. Ideal husbanding of agricultural resources would attempt to bring together new agriculture endeavors and remaining prime soils.

Major Institutional Holdings

None

Areas of Conservation Interest

A fundamental purpose of this open space plan is to list the town's priorities for open space acquisition in the near future. These priorities are provided in this section.

The rationale for the Town's acquisition priorities is consistent with the overall purpose of the open space plan. First and foremost, these priorities are established based on the broad goals of the Open Space and Recreation Plan as listed in Section #9, the Action Plan. The goals are:

- 1) Preserve Rural and Historical Character of Bolton
- 2) Protect the Water Resources of Bolton
- 3) Preserve and Encourage Agriculture
- 4) Protect Natural Resources and Wildlife Habitat
- 5) Conserve Open Space Areas for Public Use
- 6) Provide Active Recreation Opportunities to Bolton Citizens

Land acquisition or protection proposals that meet any of the above goals are broadly considered to be priorities. These include acquisitions which contribute to the rural and historical appearance in town, protect known high-yield aquifers and wetlands, preserve farms, protect unique natural resources (i.e., geologic formations, endangered species), expand and connect existing trail networks, and enhance active recreation opportunities.

In addition, land acquisition actions will also depend upon priority, opportunity and circumstance. Therefore, while the acquisition areas are presented, the selection of which specific parcels to purchase will greatly depend upon the availability of resources and the opportunities presented in each situation. Given opportunity and circumstance, the town's conservation and open space priorities include:

Priorities

- Focus on core areas
- Protect farms and encourage agriculture
- Known high-yield aquifer protection
- Linkage with greenways and wildlife corridors
- Important wetland buffer acquisition
- Lands that serve multiple interests
- Historical landscape protection
- Protection of wildlife habitat

Parcels of interest are those parcels that will meet any of the six broad goals of the plan. Higher priority is placed upon those parcels that either (1) contribute to achieving more than one of the goals; and/or (2) are able to multiply the benefits for any one goal because of size, uniqueness or other special attributes, or is deemed to be of particular temporal importance to the town in the following tiered priority ranking. Figure 5.B combines the current Open Space Inventory with Chapter 61 lands, plus parcels with one of the 4 priority labels described below:

- #1 Priority) Protect active farms, known high-yield aquifers, and parcels central to core areas, or those areas considered highly and uniquely scenic
 - Active Farms A number of farms in town are high priorities for preservation because they offer the most abundant open space in town in terms of fields and meadows, and because agriculture is historically significant in Bolton. Nicewicz and Schartner Farms were recently protected under an APR, but Bolton Spring Farm, Bolton Orchards, Townsend Horse Farm, Lord Farm, Wilson Farm and other key farms remain only under Chapter 61A. Because farms are always in immediate danger to development, the town considers all remaining farms to be a top priority for acquisition. Preserving agriculture is Goal #3, and is also a major part of achieving Goal #1, preserving rural and historical character.
 - Known high-yield aquifers Though Bolton is currently served by private wells, water remains a most precious resource. Based on current growth trends and forecasted population density, it makes sense to protect private parcels that sit above known high-yield aquifers to insure the towns' water needs will be taken care of in the future.
 - Parcels Central to Core Areas This plan has identified 15 core areas (See Figure 5.3) of open space in Bolton that currently hold great preservation value. They contain farms and open fields; forest reserves; wetlands, brooks and ponds; wildlife habitat; vegetative and scenic variety, and; provide numerous recreational opportunities. They constitute sections of town where considerable land has already come under public domain as protected Open Space under Chapter 40 Section 8C of Mass. State law, or offer unique conservation opportunities. Adjacent parcels of privately held land are very valuable for enhancing the conservation values of these areas.

The fifteen core areas include:

- Annie Moore/Long Hill
- Barretts Hill
- Bolton Flats
- Bower Spring
- Boy Scout Area
- Danforth Brook/Century Mill
- Delaney
- Northwoods
- Phillips/Rattlesnake
- Powderhouse Hill
- Randall Road Area
- Sawyer School Area
- Vaughn Hill
- Wataquodoc Hill
- Wilder Pond to Forbush Mill

Bolton is fortunate that several large tracts of privately-held, undeveloped land still exists in town, some of it contiguous with other privately-held parcels of conservation interest along with already protected open space. The largest parcels exist near the Boy Scout Area, Danforth Brook/Century Mill, Northwoods, Powderhouse Hill, Randall Road Area, Sawyer School Area, and Wilder Pond to Forbush Mill, though a large development is in the works for Danforth Brook/Century Mill. Opportunities exist for gaining financial assistance through the intermodal Surface Transportation Enhancement Act (ISTEA) Program under the Federal Highway Administration for lands associated particularly with the Phillips property due to its location near Interstate 495. It is of primary importance that a single land group be formed to work together to create a plan of working with land owners before these tracts are developed.

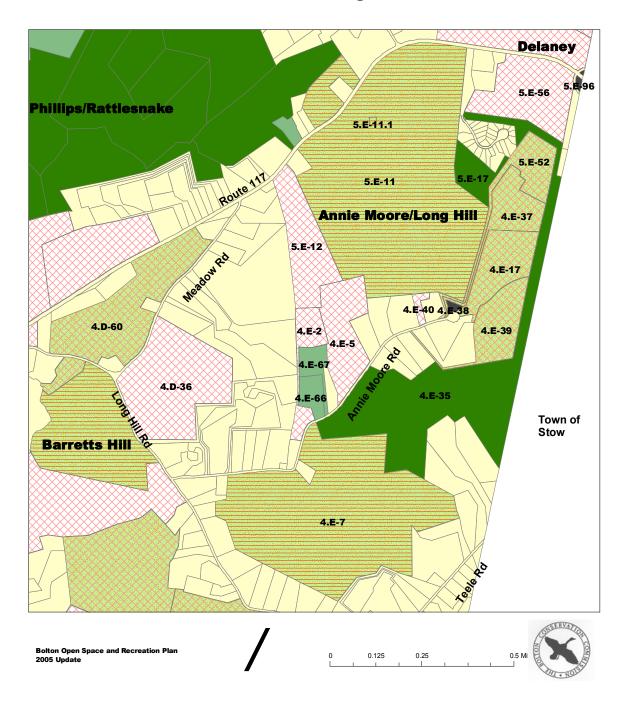
- #2 Priority) Protect large interesting parcels or those that abut core areas creating larger blocks of contiguous open space
- #3 Priority) Protect portions of large house lots, improved lots, or other parcels that would provide greenways and wildlife corridors, link core areas, or could serve multiple interests, including historical, wetland buffer, key wildlife habitat, and municipal needs. One of the long-term goals for acquisition which would satisfy many of this plan's objectives would be to link these major core areas with each other, and with core areas in neighboring towns to establish regional greenways that could link the large federally-protected

areas of Great Meadows to the East and Oxbow/Bolton Flats complex to the west. Some of this work should be in conjunction with completing the Bolton Loop trail project, and may be done with a mixture of purchases, trail easements, conservation restrictions, FOSPRD open space, and gifts. Other Priority # 3 items include:

- Major wetland buffer acquisitions and protection of land near aquifers are top priorities for protecting water resources. Areas of town that would fit into this priority include aquifer recharge areas on the eastern and western borders of town, and the major hydrologic corridors in town, notably the Great Brook, Mill Brook, and the Forbush Mill systems.
- Identifying areas that serve multiple interests. As Bolton grows and more subdivisions are proposed and built, the need for small neighborhood parks, active recreation fields, municipal buildings, affordable housing, and passive recreation areas will increase. There should be an opportunity to prioritize lands that would be able to service all of these interests, in a similar fashion to #2 above.
- Through coordination with the Historical Commission and their draft Preservation Plan, historical landscapes have been identified as important for preserving the rural and historical character of Bolton. Several of these areas also connect with core areas. The historical areas reflect villages within Bolton, such as East End Road and the Shaker Cemetery, that retain many buildings and the landscapes from the nineteenth century. Other areas contain geological features unique to Bolton, such as Bolton Flats and Forbush Mill Road.
- Protection of diverse natural habitats is also a top priority. Areas for consideration include sites of rare animal and plant species. Geologic formations associated with the several hills in town should also be considered a top priority. Some of the most unique areas are discussed more in-depth in Section 4, Environmental Inventory.

#4 Priority) Assist in identifying, acquiring and protecting those lands that provide primarily municipal interests, such as schools, active recreation, affordable housing, police, fire, library, with limited conservation areas. The interest from the Open Space and Recreation Plan here is primarily in identifying areas for suitable for active recreation, but also in potential open space set-asides to create buffer zones and potential trails to link other areas.

Figure 5.3.1 Core Conservation Areas
Annie Moore/Long Hill



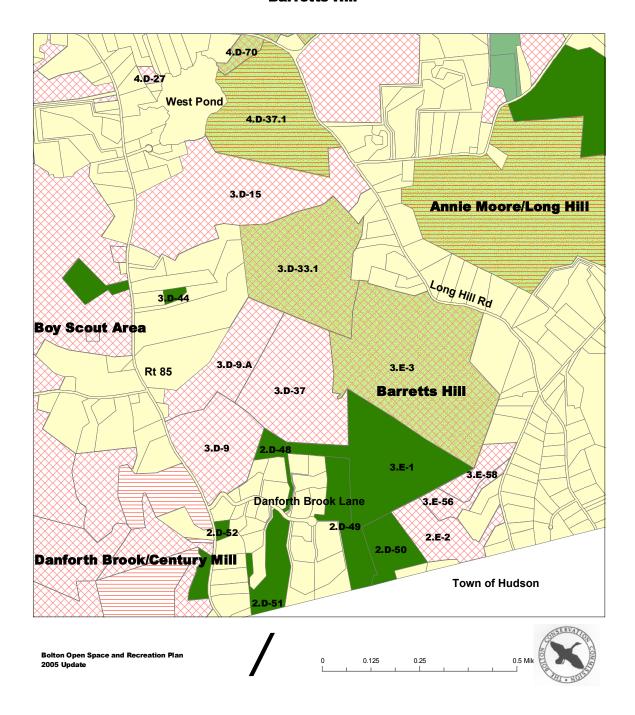
Properties lying generally along Annie Moore Road and across the broad shoulder of Long Hill. Bounded by Rte 117 to the North, Town of Stow to the East, Teele Road to the South, and Long Hill to the West.

Table 5.3.2 - Annie Moore/Long Hill

							CR
LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61	ACRES
4.E-7	ANNIE MOORE RD	LORD CHARLES H	103.93	Lord Farm	1	61A	
5.E-11.1	MAIN ST	STEPHENSON JOHN H & JOAN M, TR	96.00	Bolton Spring Farm	1	61A	
5.E-11	MAIN ST	STEPHENSON JOHN H & JOAN M, TR	57.30	Bolton Spring Farm	1	61A	
4.D-36	LONG HILL RD	WILSON DOROTHY L	36.00		2		
4.D-60	LONG HILL RD	SLATER SE, JH MARTIN, BA SLATER	28.14		2	61A	
5.E-12	MAIN ST	MENTZER BEVERLY J	32.62	Greeway to Long Hill	3		
4.E-5	ANNIE MOORE RD	DONATO JOSEPH B & BARBARA	26.45		3		
4.E-39	ANNIE MOORE RD	VELARDOCCHIA DAVID L & CATHIE L	15.08		3	61B	
4.E-37	ANNIE MOORE RD	CONFER CHARLES L	15.00		3	61B	
5.E-52	ANNIE MOORE RD	MARTIN NAOMI L	15.00		3	61B	
4.E-17	ANNIE MOORE RD	SCUDIERE MARGARET J	14.93		3	61B	
4.E-2	ANNIE MOORE RD	CARVALHO ANTONIO & MARIA S	9.74		3		
				Access to Stephenson Land from			
4.E-40	ANNIE MOORE RD	STEPHENSON JOHN H	1.45	Annie Moore Road	3		
5.E-56	MAIN ST	117 INDUSTRIAL ASSOCIATION	28.40		4		
4.E-35	ANNIE MOORE RD	TOWN OF BOLTON	66.25	Annie Moore	Conservation Land		
5.E-17	ANNIE MOORE RD	TOWN OF BOLTON	11.91	Bolton Woods Way Open Space	Conservation Land		
4.E-67	ANNIE MOORE RD	CARVALHO DAVID A & ELIZABETH A	4.66		Private CR/APR		1.10
4.E-66	ANNIE MOORE RD	ROBIDOUX TINA	4.63		Private CR/APR		1.75
4.E-38	ANNIE MOORE RD	TOWN OF BOLTON	0.75	End of Annie Moore Rd	Town Municipal Land		
5 F 00	MAINICT	TOWN OF BOLTON	0.05	stow border-Old Bolton Rd/117	Taura Municipal Land		
5.E-96	MAIN ST	TOWN OF BOLTON	0.25	triangle	Town Municipal Land		

Two of Bolton's largest unprotected farms exist on this area, providing scenic views along Route 117 as well as from the hilltop on Long Hill Road. Though a long finger of land along the Stow Border connects conservation land, another greenway could be achieved to provide a conservation loop trail through this area connecting with the Phillips/Rattlesnake and Barretts Hill areas.

Figure 5.4.1 Core Conservation Areas
Barretts Hill



Properties in the vicinity of Barretts Hill, and includes West Pond and scouting land. Bounded by Rte 117 to the North, Long Hill Road to the East, Town of Hudson to the South, and Rte 85 to the West.

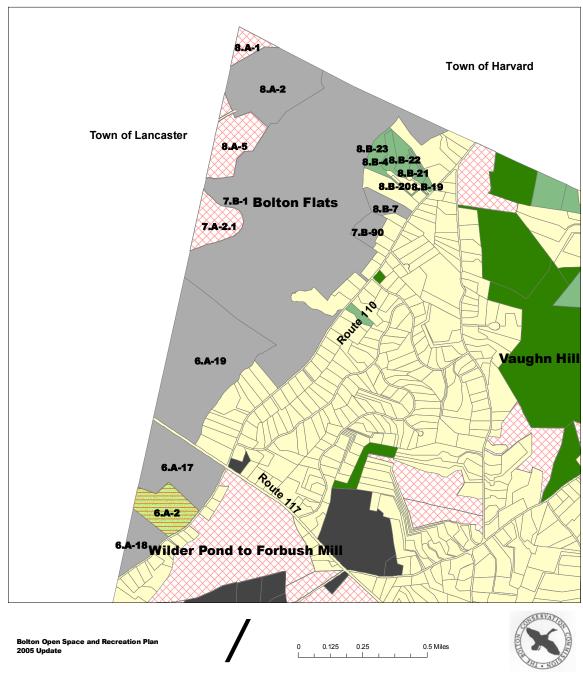
Table 5.4.2 - Barretts Hill

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61
4.D-37.1	LONG HILL RD	WILSON WARREN E	32.80	Long Hill - Pumpkin Farm	1	61A
3.E-3	LONG HILL RD	ETTINGER DORIS E	74.00		2	61A
3.D-15	HUDSON RD	PATRIOTS TRAIL GSC INC	63.90	Girl Scouts	2	
3.D-33.1	LONG HILL RD	HENRY DUANE G & JEAN L	47.02		2	61
3.D-37	LONG HILL RD REAR	ETTINGER CRAIG L	44.00		2	
3.D-9.A	HUDSON RD	BONAZZOLI PRINO	22.50		2	
4.D-70	LONG HILL RD	HASTINGS SUSAN, TRUSTEE	4.05		2	61A
2.E-2	LONG HILL RD	RIZZI LAUREL E	14.66		3	
3.E-58	LONG HILL RD	POKORNEY THOMAS R	7.10		3	
3.E-56	LONG HILL RD	ALZAPIEDI ROBERT A	5.32		3	
3.D-9	HUDSON RD	BONAZZOLI AUGUST G JR & DEBORAH	31.80		4	
4.D-27	HUDSON	FLETCHER BERNARD A	1.00		4	
3.E-1	LONG HILL RD	TOWN OF BOLTON	40.00	Barretts Hill	Conservation Land	
				Danforth Brook Open Space - top		
2.D-49	DANFORTH LN	TOWN OF BOLTON	13.45	of lane to barrett's hill	Conservation Land	
				Danforth Brook Open Space -		
2.D-51	DANFORTH LN	TOWN OF BOLTON	12.52	hudson rd to danforth rd	Conservation Land	
				Danforth Brook Open Space -		
2.D-50	DANFORTH LN	TOWN OF BOLTON	12.07	backlot	Conservation Land	
2.D-48	DANFORTH LN	TOWN OF BOLTON	5 12	Danforth Brook Open Space - trail link to barretts hill	Conservation Land	
3.D-44	HUDSON RD	TOWN OF BOLTON		Backland Lot off Rt 85	Conservation Land	
			1	Danforth Brook Open Space -	TTTT. TTTT.	
2.D-52	DANFORTH LN	TOWN OF BOLTON	0.82	hudson rd	Conservation Land	

The water resources, wildlife and natural beauty of West Pond, the largest pond in Bolton, should be protected. The antique brick house, farmland, meadows and old stone walls on the East side make this one of the most beautiful and historic areas of Bolton. Agricultural production and pasturing should be continued and encouraged with careful buffering and minimal pesticide use. Controlled public access to the pond would be appropriate for future recreational uses compatible with agriculture and wildlife. Several new homes have been built on the west side of the pond, but far back from the shoreline.

Though Bolton has made great strides in this core area since 2001 with the purchase of the Wesley parcel and the deeded open space from Danforth Brook, there are still several large unprotected parcels in excess of 20 acres that border these lands making this an area with interesting conservation possibilities.

Figure 5.5.1 Core Conservation Areas
Bolton Flats



Properties lying along the Nashua River, dominated by lands owned by the Commonwealth, and stretching into Harvard and Lancaster. Bolton properties bounded by Rte 117 to the East and South, Town of Harvard to the North, and Town of Lancaster to the West.

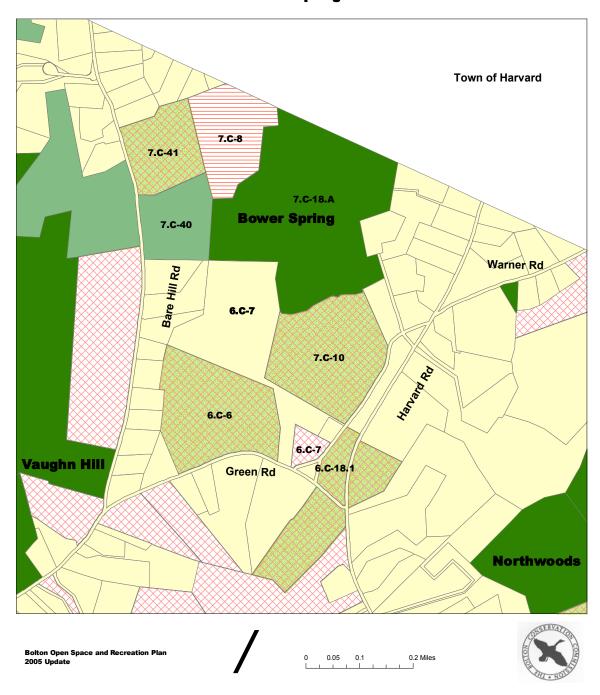
Table 5.5.2 - Bolton Flats

							CR
LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61	ACRES
6.A-2	RTE 110 -FORSYTH	DAVIS FARM TRUST	16.50	Aquifer	1	61A	
8.A-5	PINE HILL DISTRI	KANIS JOHN E	27.00		2		
7.A-2.1	NASHUA RIVER	KANIS JOHN E	15.00		2		
8.A-6	PINE HILL	CULLEY ROBERT L	7.40		2		
8.A-1	PINEHILL STILL RIVER	LANDRETH LOIS W	5.00	We filed Tax Taking - in land court	2		
8.B-4	AUTUNN LANE	KHANI MOHSEN TR	5.94	Khani CR (estimate)	Private CR/APR		3.76
8.B-23	AUTUMN LANE	BETTEZ ERIK H & NANCY L	4.57	Khani CR (estimate)	Private CR/APR		2.92
8.B-22	AUTUMN LANE	PREVOST MICHAEL J	4.55	Khani CR (estimate)	Private CR/APR		3.04
8.B-21	AUTUMN LANE	BRANDVOLD PAAL & KAREN M	1.63	Khani CR (estimate)	Private CR/APR		0.25
8.B-20	AUTUMN LANE	COLOSI JAMES A	1.54	Khani CR (estimate)	Private CR/APR		0.25
8.B-19	AUTUMN LANE	BURNHAM BRIAN L	1.51	Khani CR (estimate)	Private CR/APR		0.25
7.B-1	BOLTON FLATS	COMMONWEALTH OF MASSACHUSETTS	303.20	Bolton Flats - N117	State or Other Municip	al Land	
6.A-19	RTE 117	COMMONWEALTH OF MASSACHUSETTS	95.00	Bolton Flats - N117	State or Other Municip	al Land	
8.A-2	PINE HILL	COMMONWEALTH OF MASSACHUSETTS	70.00	Pine Hill - based on Rona Balco	State or Other Municip	al Land	
6.A-17	BOLTON FLATS	COMMONWEALTH OF MASSACHUSETTS	44.00	Bolton Flats - S117	State or Other Municip	al Land	
6.A-18	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	14.00	Bolton Flats - S of Davis, W 110	State or Other Municip	al Land	
8.B-7	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	13.00	Bolton Flats - N117 w building	State or Other Municip	al Land	
7.B-90	STILL RIVER RD	COMMONWEALTH OF MASSACHUSETTS	6.80	Bolton Flats - N117	State or Other Municip	al Land	

Parts of the Still River pass through areas under private ownership. The Commonwealth of Massachusetts and Friends of the Oxbow Society are working acquiring all the parcels on the Lancaster side of the river. The Nashua River Watershed Assoc. is supporting and assisting communities in developing river greenway areas. Owners of Still River frontage are working together toward the establishment of a Still River Greenway. A medium size high yield aquifer underlies the Still River basin, and buffer areas should be created for protection in perpetuity for the aquifer.

The private parcels listed as having a Private CR/APR under the Priority Column are under a single Conservation Restriction (Khani), and the CR acres listed per parcel are an estimate against the total.

Figure 5.6.1 Core Conservation Areas
Bower Springs



Lands including and surrounding the Bower Spring Conservation Area. Bounded by Town of Harvard to the North, Harvard Road to the East, Green Road to the South, and Bare Hill Road to the West.

Table 5.6.2 - Bower Springs

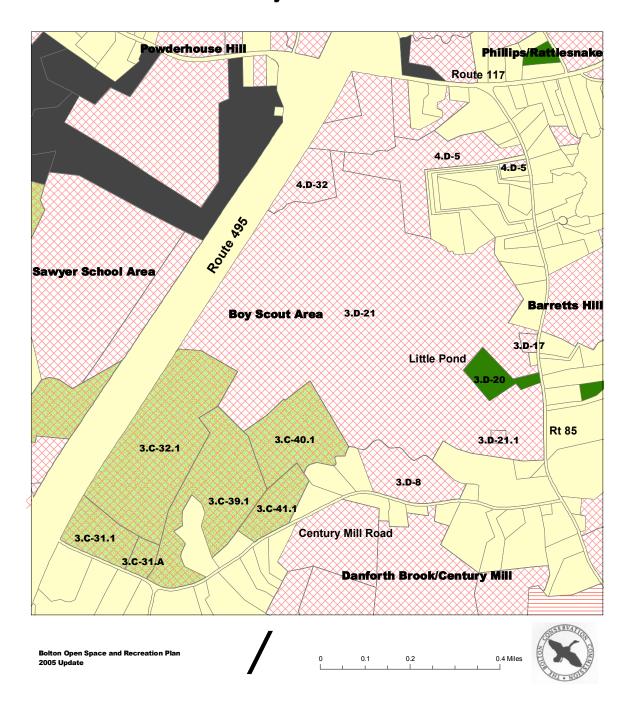
	OTDEET	OWNER	40050	DESCRIPTION	PRIORITY	011.04	CR ACRES
LOT	STREET	OWNER			PRIORITY	CH. 61	ACRES
7.C-8	BARE HILL RD	BARTSCH NOEL R & JULIE A	15.05	Private Residence in Harvard	1		
6.C-18.1	GREEN RD	ZAYKA PAUL R	2.50	Bowers Springs	2	61A	
6.C-7	OLD HARVARD RD	ZAYKA METROPHANE JR	26.37		3		
6.C-6	GREEN RD	CRISPEN DAVID	21.42		3	61A	
7.C-10	HARVARD RD	WEATHERBEE PAUL L & BARBARA E	21.00		3	61A	
7.C-41	BARE HILL RD	BARTSCH NOEL R	11.57		3	61B	
7.C-18.A	BOWER'S SPRING	TOWN OF BOLTON	48.10	Bowers Springs	Conservation Land		
7.C-40	BARE HILL RD	HELD JOHN R & LUCILLE L	11.56		Private CR/APR	61	11.56

Assessor's map in error: parcel 6.C-7 actually includes (via "hooks") the large polygon between 6.C-6, 7.C-10, and 7.C-18.A.

Opportunities may exist to expand current footprint of Bower's Springs Conservation Area, or create corridors or trail easements to Northwoods.

Figure 5.7.1 Core Conservation Areas

Boy Scout Area



Properties primarily owned by different scouting groups and a horse farm, and includes Little Pond and the Town Beach. Bounded by Rte 117 to the North, Rte. 85 to the East, Century Mill and South Bolton Roads, and Rte 495 to the West.

Table 5.7.2 - Boy Scout Area

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61
3.D-21.1	HUDSON RD E SHOR	ALGONQUIN CNCL BSA	146.50	Boy Scout Land	2	
3.C-32.1	S BOLTON RD	SLADE MARK E & VICTORIA HASKELL	47.00		2	61A
				Century Mill Horse Farm - abuts		
3.C-39.1	CENTURY MILL RD	SMITH REALTY TRUST, SMITH A LED	36.00	Boy Scouts	2	61A
				Private Residence adjacent to Boy		
4.D-5	HUDSON RD	ASCHETTINO PAULA	20.48	Scout Land	2	
				Century Mill Horse Farm - abuts		
3.C-40.1	CENTURY MILL RD	SMITH REALTY TRUST, SMITH A LED	19.03	Boy Scouts - Now has house on it	2	61A
4.D-31	MAIN ST	KNOX TRAIL COUNCIL INC	16.00	Boy Scouts	2	
				Century Mill - wet, but abuts Boy		
3.D-8	CENTURY MILL RD	SLADE PAUL H	10.20	Scouts	2	
4.D-32	ADJ 495	KNOX TRAIL COUNCIL INC	8.60	Boy Scouts	2	
3.C-31.1	S BOLTON RD	SLADE MARK E & VICTORIA HASKELL	8.00		2	61A
3.C-31.A	S BOLTON RD	SMITH A LEDYARD JR & JACQUELINE	2.00	Century Mill Horse Farm - wood lot	2	61A
3.C-41.1	CENTURY MILL RD	SMITH A LEDYARD JR	7.37		3	61A
3.D-17	HUDSON RD	KNOX TRAIL COUNCIL, INC	1.00	Boy Scouts	4	
3.D-21	HUDSON RD	ALGONQUIN CNCL BSA	0.01	boyscouts	4	
3.D-20	HUDSON RD	TOWN OF BOLTON	5.50	Persons Park	Conservation Land	

This is defined as a Core Area not because of current conservation holdings, but because of the potential of a large corridor connecting Barretts Hill and Danforth Brook/Century Mill with the Sawyer School Area due to the large Boy Scout parcel.

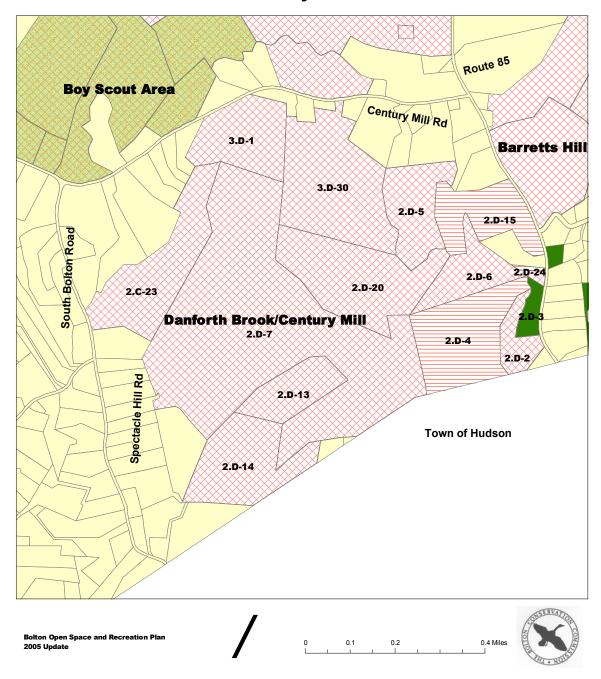
The Town's Beach is on Little Pond, but the land is owned by the Boy Scouts. No plan is currently in place for its acquisition should the Boy Scouts discontinue their use. The pond is lovely and quite large with some areas of sandy shore and some vegetated banks with woods behind. The Town owns a 5.5-acre shore front parcel of land containing a small cottage by the Persons estate.

Nearer to the junction of South Bolton Road and Rte 495, lies Pine Hill, There are garnet outcroppings on the hillside above an old mill site and millpond. This site has scenic and historic interest. It would also make an attractive place for fishing and picnicking.

Figure 5.8.1 Core Conservation Areas

Danforth Brook/

Century Mill



The area under the most development pressure of this writing, and includes Danforth Brook and rare or endangered habitat species habitats. Bordered by Century Mill Road to the North, Rte 85 to the West, Town of Hudson to the South, and South Bolton Road and Spectacle Hill Roads to the West.

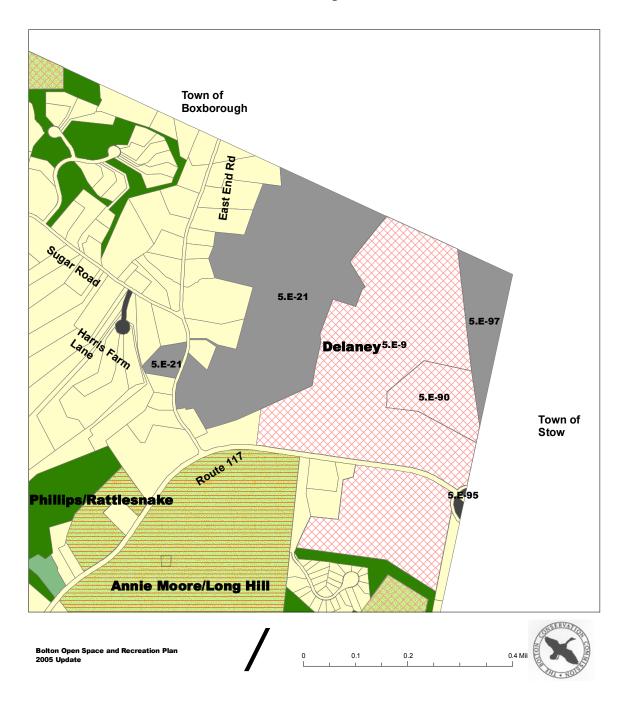
Table 5.8.2 - Danforth Brook/Century Mill

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY
2.D-4	RT 85 NEAR HUDSON	DAVIS FARM TRUST	28.00	Part of Century Mill Development	1
2.D-15	HUDSON RD	BONAZZOLI AUGUST G JR & DEBORAH	13.99	Fields on 85	1
2.D-24	HUDSON RD	K&L HOLDING LLC	0.40	Rare Wildlife Species Area	1
2.D-7	SPECTACLE HILL RD	BONAZZOLI PRINO	110.50	Part of Century Mill Development	2
3.D-30	CENTURY MILL RD	HUNT ALISON E & ROBERT G COLCLA		Abuts Century Mill Development - Former Timberlake & Chapter 61B	2
2.C-23	S BOLTON RD	FULLAM HARLAND O	29.50	Abuts Century Mill Development	2
2.D-20	HUDSON RD	BONAZZOLI AUGUST G JR & DEBORAH	29.06	Part of Century Mill Development	2
2.D-14	HUDSON LINE	LARKIN LUMBER CO	21.00	Part of Century Mill Development	2
2.D-5	HUDSON RD	JOHNSON H&L KEEFE&B PASCOE&R J	20.00	Landlocked by Bonazolli, Hunt & Others in Danforth Brook area	2
3.D-1	CENTURY MILL RD	CENTURY MILL LTD	19.20	Part of Century Mill Development	2
2.D-6	HUDSON RD	STEWARTIA LLC	14.62		2
2.D-13	NEAR HUDSON LINE	LAMSON HELEN D	9.80	Part of Century Mill Development	2
2.D-2	HUDSON RD	JOHNSON CHARLOTTE L	6.00	Danforth Brook - Hudson Line	2
2.D-3	HUDSON RD	TOWN OF BOLTON	1.70	Leduc - Rt 85	Conservation Land

A 110-unit development is being proposed on 6 parcels on over 200 acres. Even with that, there is an opportunity to protect around 100 acres for Open Space by working with the developer, including some areas immediately along Danforth Brook. It is important for the Bolton Loop Trail to either go across Open Space in this section, or across the Boy Scout Area.

Figure 5.9.1 Core Conservation Areas

Delaney



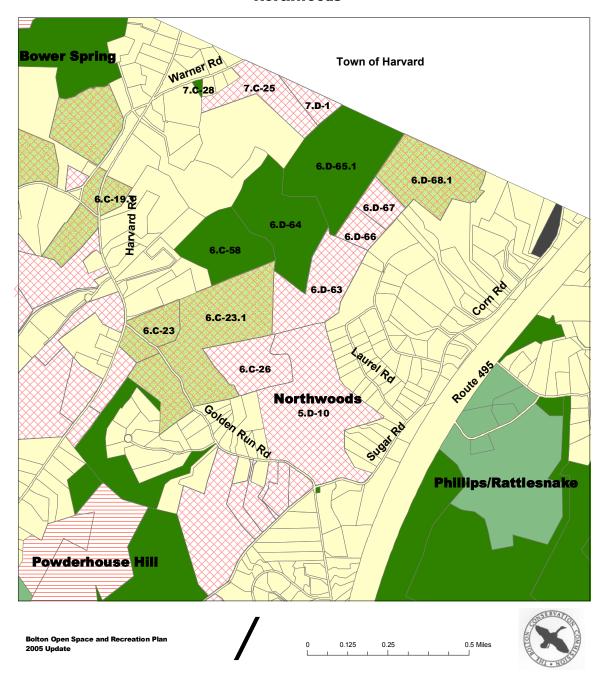
Properties including and abutting the Commonwealth's flood plain property which covers parts of three towns. Bolton properties bounded by Town of Boxborough to the North, Town of Stow to the East, Rte 117 to the South, and East End Road to the West.

Table 5.9.2 - Delaney

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY
5.E-9	MAIN ST	RGM HOLDINGS CORP	72.39		4
5.E-90	MAIN ST	GEN RAD INC	10.78		4
				stow border-Delaney Rd/117	
5.E-95	MAIN ST	TOWN OF BOLTON	0.25	triangle	Town Municipal Land
5.E-21	EAST END RD	COMMONWEALTH OF MASSACHUSETTS	71.22	Delaney	State or Other Municipal Land
5.E-97	MAIN ST	COMMONWEALTH OF MASSACHUSETTS	6.20	Delaney	State or Other Municipal Land

Future Electronics land divides the two parcels owned by the Commonwealth as part of the Delaney Flood project, though the majority of the state's land lies in Boxborough and Stow. Future Electronics has recently made inquiries to the Town to see if the Town has interested in purchasing the property for schools or other municipal needs; a sale price near \$17 million has been mentioned.

Figure 5.10.1 Core Conservation Areas
Northwoods



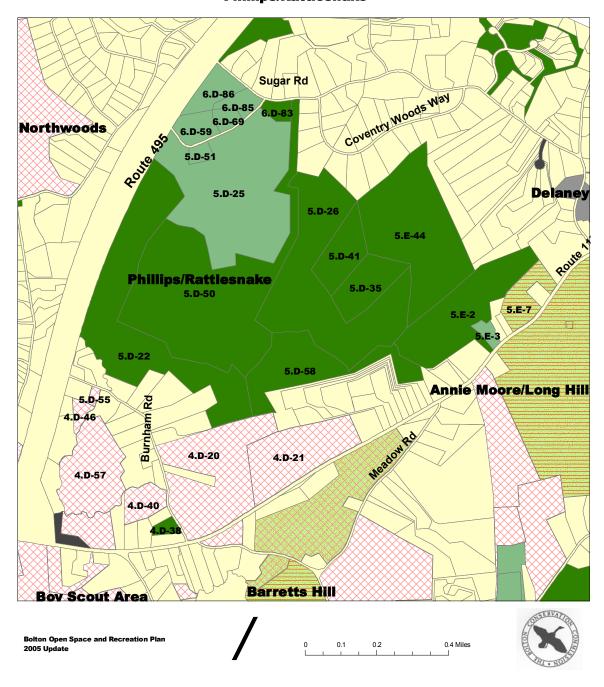
Though a large development is currently being built, an area that has tremendous potential. Bordered by Warner Road and Town of Harvard to the North, parcels with frontage on Corn, Sugar, Laurel, and Pinewoods Roads to the East, Golden Run Road to the South, and Harvard Roads and the new Northwoods Development to the West.

Table 5.10.2 - Northwoods

					CR	APR
LOT	STREET	OWNER	ACRES DESCRIPTION	PRIORITY	ACRES	ACRES
6.D-67	WARNER RD	EDEN ELAINE L	8.80	2		
6.D-68.1	WARNER RD	FIREFLY FARM LLC	30.10	2		
6.C-23.1	GOLDEN RUN RD	GROUSE HILL REALTY TRUST	49.60	2		
7.C-25	WARNER RD	HAZEL ROBERT W &DARLENE M	17.00	2		
6.D-63	LAUREL ROAD	NEW ENGLAND POWER CO	31.70	2		
6.C-26	GOLDEN RUN RD RE	NEW ENGLAND POWER CO	21.60	2		
7.D-1	WARNER RD SE OF	OWNER UNKNOWN (BELIEVED TO BE	3.00 Harvard Owner	2		
6.D-66	N ZINK SAWMILL	POWERS LILLIAN E	8.80	2		
5.D-10	SUGAR RD	TOTH WILLIAM E & ALBERTA M	64.70	2		
6.C-19.1	HARVARD RD	ZAYKA PAUL R	1.50	2		
6.C-23	GOLDEN RUN RD	COLBY HERBERT W & LORI H	11.90	3		
6.D-65.1	WARNER RD	BOLTON CONSERVATION TRUST	44.30 Levinson	Conservation Land		
7.C-28	WARNER RD	BOLTON CONSERVATION TRUST	0.75 Smith - Northwoods	Conservation Land		
6.C-58	HARVARD RD	TOWN OF BOLTON	31.28 Sochalaski	Conservation Land	31.2	3
	HARVARD RD NORTH		Northwoods Open Space - partially deeded ~ 33			
6.D-64.0	OF	TOWN OF BOLTON	32.96 acres of 41. Other land has 5 house lots	Conservation Land		

The Bolton Conservation Trust recently received a gift of the 44 acre Levinson property, and combined with the 32 acre Northwoods Open Space and 31 acres already owned by the Town, creates a contiguous conservation area of over 100 acres.

Figure 5.11.1 Core Conservation Areas
Phillips/Rattlesnake

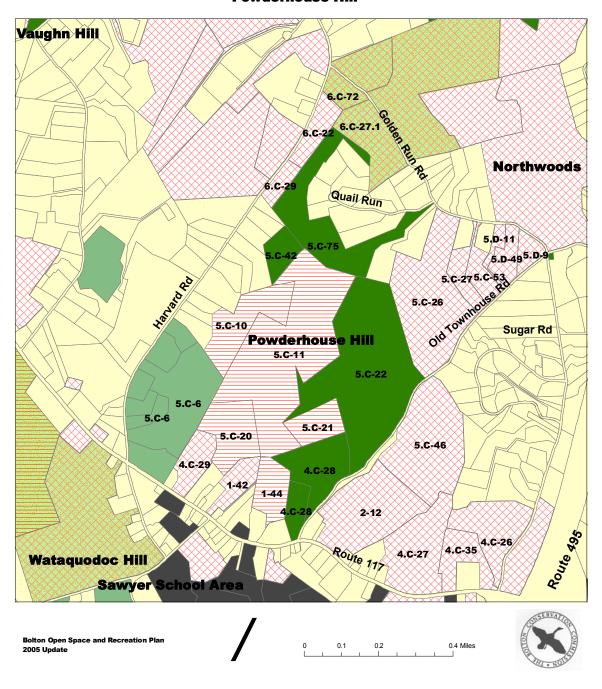


Becomes one of the most completely contiguous blocks of conservation land in town with the recent purchases of the Braman and Stephenson properties. Bordered by Sugar and parcels along Coventry Woods Road to the North, parcels along Harris Lane and East End Roads to the East, Rte 117 to the South, and Rte 495 to the West.

Table 5.11.2 - Phillips/Rattlesnake

LOT	STREET	OWNER	ACRES DESCRIPTION	PRIORITY	CR ACRES	APR ACRES
5.E-7	MAIN ST	STEPHENSON JOHN H & JOAN M, TR	10.50	1		
4.D-57	OFF BURNHAM RD	HORTON ELIZABETH A	20.44	2		
4.D-20	MAIN ST	SKINNER NANCY R	35.13	3		
4.D-21	MAIN ST	SKINNER NANCY R	15.80	3		
4.D-46	BURNHAM RD	ATLANTIC UNION COLLEGE	4.30	4		
5.D-55	BURNHAM RD	ATLANTIC UNION COLLEGE	1.00	4		
4.D-40	BURNHAM RD	WOODBURY MARY E ESTATE OF	7.50	4		
5.D-50	SUGAR RD	BOLTON CONSERVATION TRUST	75.02 Phillips	Conservation Land	75.02	2
5.D-58	MAIN ST	BOLTON CONSERVATION TRUST	27.90 Great Brook Open Space	Conservation Land		
5.D-41	MAIN ST	BOLTON CONSERVATION TRUST	10.57 Rattlesnake/Lime Kiln	Conservation Land		
6.D-83	OLD SUGAR RD	BOLTON CONSERVATION TRUST	1.90 Phillips	Conservation Land		
5.D-22	BURNHAM RD	TOWN OF BOLTON	67.90 Atlantic Union	Conservation Land		
5.E-44	SUGAR RD	TOWN OF BOLTON	55.54 Harris Land	Conservation Land		55.54
	ANDERSON					
5.E-2	PURCHASE	TOWN OF BOLTON	42.36 Anderson/Lime Kiln	Conservation Land		
4.D-38	BURNHAM RD	TOWN OF BOLTON	1.27 Cranberry Meadow	Conservation Land		
	OLD SUGAR RD					
5.D-26	(REAR)	TOWN OF BOLTON	77.00 STEPHENSON	Conservation Land		
5.D-35	MAIN ŚT	TOWN OF BOLTON	12.00 BRAMAN	Conservation Land		
6.D-85	OLD SUGAR RD	DAVIES PATRICIA P	2.83	Private CR/APR	2.83	3
6.D-69	OLD SUGAR RD	DAVIES PATRICIA P	1.73	Private CR/APR	0.60)
5.D-25	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	61.92	Private CR/APR	61.92	2
6.D-86	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	11.31	Private CR/APR	11.32	2
6.D-59	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	1.77	Private CR/APR	0.40)
5.D-51	OLD SUGAR RD	HOEFFLER MICHAEL M & KARIN I	1.64	Private CR/APR	0.30)
5.E-3	MAIN ST	ROEMER ROBERT E & MARY ALICE, T	1.57	Private CR/APR	0.39)

Figure 5.12.1 Core Conservation Areas
Powderhouse Hill



An area with great possibility. Bordered by Golden Run Road and properties along Quail Run Road to the North, Old Townhouse Road and Sugar Road to the East, Rte 117 to the South, and Harvard Road to the West.

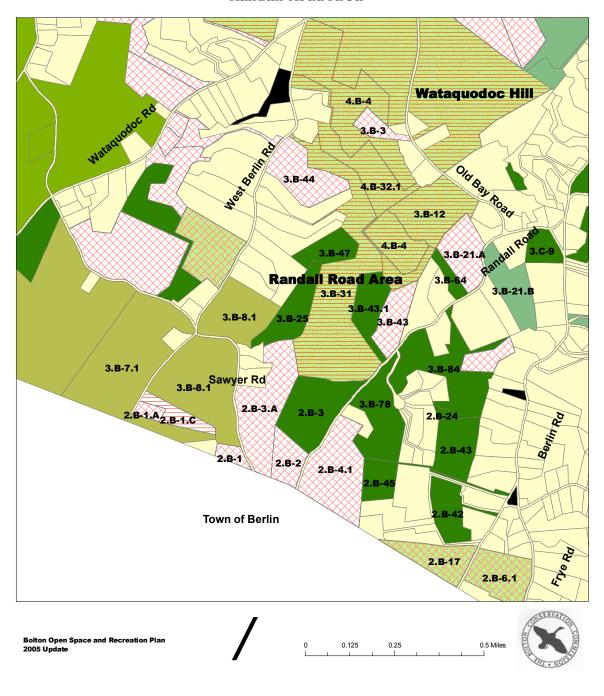
Table 5.12.2 - Powderhouse Hill

						CR	APR
LOT	STREET	OWNER		DESCRIPTION	PRIORITY	ACRES	ACRES
1.0-44	MAIN ST	FEDERATED CHURCH OF BOLTON		Church Back-land Lot	1		
5.C-21		ZINK HARRY C ESTATE OF		Landlocked, Adjacent to Callahan	1		
5.C-20		PLANTE EDMOND H, TR		Landlocked, Adjacent to Callahan	1		
5.C-10	HARVARD RD EAST O	KEBLIN FAMILY REALTY TRUST	14.40	Landlocked, Adjacent to Callahan	1		
				Landlocked by Town, Church,			
5.C-11		CALLAHAN JEREMIAH P		Plante, Murphy, Keblin	1		
5.C-53		BECHARA CHRISTOPHER & MARGRIT	4.75		2		
6.C-27.1		GROUSE HILL REALTY TRUST	14.75		2		
4.C-27	MAIN ST	JOHNSON R ARLEN, TR	19.01		2		
5.C-46	MAIN ST OFF/GOLDEN	LEDLE INC	27.80		2		
5.D-11	GOLDEN RUN RD	HOUGHTON KENNETH R, BARBARA L	1.00		3		
6.C-72	GOLDEN RUN RD	COLBY HERBERT W & LORI H	3.25		3		
5.D-9	GOLDEN RUN RD	NEAL JEFFREY B & KAREN	3.50		3		
5.D-49	GOLDEN RUN RD	CASCO PAUL G	4.13		3		
5.C-27	GOLDEN RUN RD	GILLI PATRICK & LAURENE	4.85		3		
6.C-29	HARVARD RD	GROUSE HILL REALTY TRUST	5.59		3		
6.C-22	HARVARD RD	CUSSEN JOHN E & BETSY F	7.28		3		
2.0-12	MAIN ST	POWERS JOHN C & LILLIAN E	28.50		3		
5.C-26	GOLDEN RUN RD	MCCLURE KENNETH L	29.80		3		
4.C-29	MAIN ST	MURPHY D FRANCIS INS AGENCY INC	5.85		4		
1.0-42	MAIN ST	J L S FAMILY TR	6.38		4		
4.C-35	MAIN ST	FREIDUS FREDERIC J, TR	9.20		4		
4.C-26	SUGAR RD	SWEENEY KEVIN B, TR	14.86	Bolton Manor	4		
5.C-42	HARVARD RD	BOLTON CONSERVATION TRUST	6.00	Sullivan - adjacent to Quail run	Conservation Land		
4.C-28	MAIN ST OFF	TOWN OF BOLTON	12.20	Goodrich - Powderhouse Hill	Conservation Land		
5.C-75	QUAIL RUN	BOLTON CONSERVATION TRUST	21.46	Quail Run Open Space	Conservation Land		
5.C-22	REAR OF TOWN HALL	TOWN OF BOLTON	60.75	Philbin Land Powderhouse Hill	Conservation Land		
5.C-6	HARVARD RD	NORSEEN NW & HN MCCLENNEN & EL	26.56		Private CR/APR	26.56	
2.0-9	MAIN ST	TOWN OF BOLTON	5.72	Town Hall	Town Municipal Land		

Figure 5.13.1

Core Conservation Areas

Randall Road Area



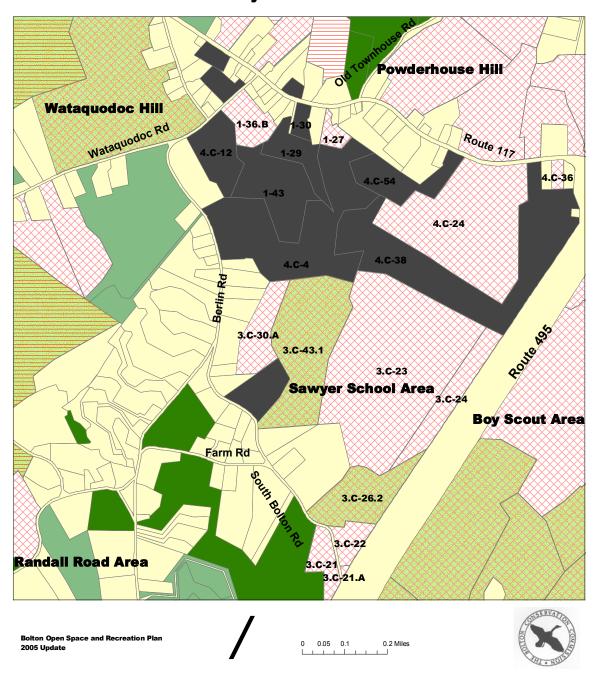
An area with numerous trails, rocky slopes, vernal pools, and active agriculture that can become a large contiguous block with a few key acquisitions or restrictions. Bordered by Wataquodoc Hill and Old Bay Roads to the North, Berlin Road to the East, Town of Berlin to the South, and West Berlin Road to the West.

Table 5.13.2 - Randall Road Area

3.B-31 W 4.B-4 W 4.B-32.1 W	V BERLIN RD V BERLIN RD	SCHECTER JULIE & WILLIAM HAPGOOD	ACRES	DESCRIPTION	PRIORITY	CH. 61	ACRES	
4.B-4 W 4.B-32.1 W	V BERLIN RD						ACRES	ACRES
4.B-4 W 4.B-32.1 W	V BERLIN RD							
4.B-32.1 W				Central to Core Area - existing trails	1	61B		
		TAYLOR EDWARD L	42.16	Fields behind Old Bay	1	61A		
		TAYLOR ROBERT M	40.50	Central to Core Area - existing trails		61A		
		HILLS WARREN S		Farm on Old Bay - existing trails	1	61A		
				Schartner (Not under APR)	1	DIA		
		GRALA LOIS L*		Schariner (Not under APR)	1	 		
		BERLIN COUNTRY CLUB RE TRS	24.57		2	014		
		BEMIS EDITH H & ALBERT F BEMIS JR	8.00		2	61A		
		CALDERWOOD JAMES D CALDERWOO	7.89		2			
		LARKIN LUMBER CO	7.50		2	1		
		WHEELER BARBARA G TR	20.00		3			
		DOERR KENNETH J & EVELYN	16.47		3			
		HOMAN GARY	10.20		3			
		SAVIGNANO JOSEPH JR ESTATE OF	9.22		3			
		WOLENSKI JOSEPH H	4.14		3			
2.B-1.A W	V BERLIN RD	GRALA LOIS L	2.00		3			
2.B-6.1 BE	ERLIN RD	BEMIS EDITH H & ALBERT F BEMIS JR	11.90		4	61A		
3.B-84 R0	OCKY-DUNDEE RD	TOWN OF BOLTON	20.80	Rocky Dundee Open Space	Conservation Land			
2.B-3 R/	RANDALL RD	TOWN OF BOLTON	17.94	White	Conservation Land			
3.B-78 R	ROCKY-DUNDEE RD	TOWN OF BOLTON	16.20	Rocky Dundee Open Space	Conservation Land			
2.B-43 BE	BERLIN RD	TOWN OF BOLTON	11.50	Vinger Parcel A	Conservation Land		11.50	
3.B-43.1 R/	RANDALL RD	TOWN OF BOLTON	10.07	Savignano	Conservation Land			
3.B-25 R/	RANDALL RD	TOWN OF BOLTON AND BCT		Wallie	Conservation Land			
2.B-42 BE	BERLIN RD	TOWN OF BOLTON	9.36	Vinger Lot 5	Conservation Land		9.36	
2.B-45 BE	ERLIN RD VINGER G	TOWN OF BOLTON		Vinger Lot 1	Conservation Land		7.76	
3.B-47 W	V BERLIN RD	TOWN OF BOLTON		Gould	Conservation Land	1		
		TOWN OF BOLTON		Richards	Conservation Land	1		$\overline{}$
	RANDALL RD	BOLTON CONSERVATION TRUST		McGourty	Conservation Land	1	-	
		TOWN OF BOLTON		Tenney-Slader - wet backland lot	Conservation Land			
		REED BRADLEY I & NANCY W		Reed CR	Private CR/APR	61B	10.81	
		GRALA LOIS L & ROBERT F SCHARTNER		Schartner APR (in process)	Private CR/APR-In Process	UID	. 5.01	57.70
		GRALA LOIS L & ROBERT F SCHARTNER		Schartner APR (in process)	Private CR/APR-In Process	 	-	37.50

The Ela, Taylor, and Hills properties consist of a highly scenic, pastoral hillside, with views east and south that include the sky scrapers of Boston and Blue Hill. Deer, turkey, and coyote are abundant, and numerous rocky springs and brooks trickle down from their source on Wataquodoc Hill.

Figure 5.14.1 Core Conservation Areas
Sawyer School Area



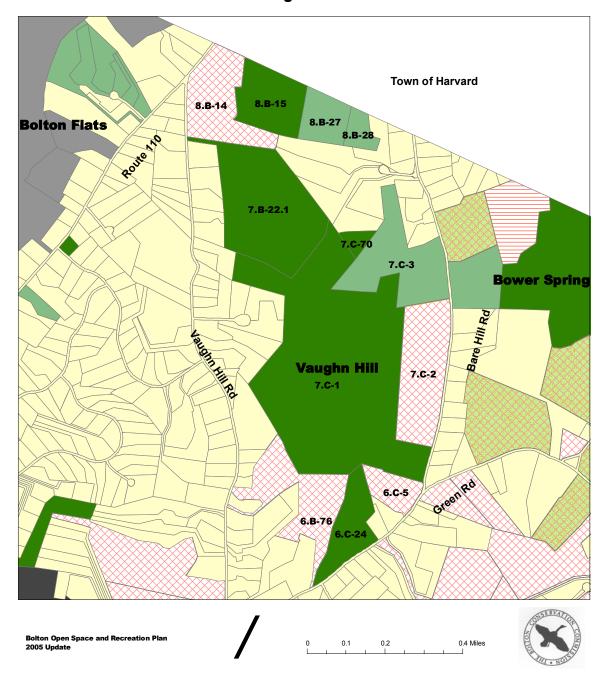
Properties include Florence Sawyer and Emerson Schools, along with Bolton Senior Housing and Flatley area. Bordered by Rte 117 to the North, Rte 495 to the East, South Bolton Road to the South, and Berlin and Wataquodoc Hill Roads to the West.

Table 5.14.2 - Sawyer School Area

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61
3.C-23	ADJ 495	LAMSON HELEN D	64.00		2	
3.C-20.1	S BOLTON RD	SLADE PAUL H & MARY EVELYN	16.00		3	61A
3.C-26.2	S BOLTON RD	SLADE PAUL H & MARY EVELYN	15.13		3	61A
3.C-24	S BOLTON & RT 495	NEW ENGLAND POWER COMP	10.30		3	
3.C-21	S BOLTON RD	WHITNEY ROBERT I	8.30		3	
3.C-22	S BOLTON RD	NEW ENGLAND POWER COMP	4.00		3	
3.C-21.A	S BOLTON RD	SLADE PAUL H	0.10		3	
4.C-24	MAIN ST	FLATLEY JOHN J & GREGORY D STOY	39.00		4	
3.C-43.1	S BOLTON RD	SLADE SCOTT C	24.93		4	61A
3.C-30.A	S BOLTON RD	SLADE CHRISTOPHER S	10.75		4	
1.0-36.B	WATTAQUADOC HILL	TRINITY CONGREG CHURCH	6.90	Church next to Memorial field	4	
1.0-27	MAIN ST	BOLTON HISTORICAL SOC	3.70	Historical Society	4	
4.C-36	MAIN ST	556 REALTY TRUST TJ MURTHA 3RD	1.08		4	
				Cell Tower and Horse Ring Fields		
4.C-38	MAIN ST	TOWN OF BOLTON	53.02	next and behind Flately	Town Municipal Land	
4.C-4	BERLIN RD	TOWN OF BOLTON	40.98	Derby field	Town Municipal Land	
1.0-43	MECHANIC ST	TOWN OF BOLTON	19.76	Sawyer School	Town Municipal Land	
4.C-54	MAIN ST	BOLTON SENIOR HOUSING CORP	11.45	Over 55 housing - Main Street	Town Municipal Land	
4.C-12	CHARLES MACE PUR	TOWN OF BOLTON	10.53	Memorial Field	Town Municipal Land	
1.0-29	MAIN ST	TOWN OF BOLTON	7.19	Emerson School	Town Municipal Land	
				Emerson School - Skating Pond		
1.0-30	MAIN ST	TOWN OF BOLTON	1.85	Park	Town Municipal Land	

The pond on Flatley Field is of scenic value to the town, and adjacent wetlands are part of the extensive Sunk Meadow. The majority of Bolton's municipal land lies in this area, comprising an elementary school, a ball field, and excellent open meadows which are used for recreational purposes (and formerly the Bolton Fair Grounds). The land is not conservation restricted but a plan for its use was developed by the Selectmen, Parks and Recreation Dept., the Bolton Fair Committee, and several other interested groups. The new Senior Citizen Housing is being developed on a portion of the property.

Figure 5.15.1 Core Conservation Areas
Vaughn Hill

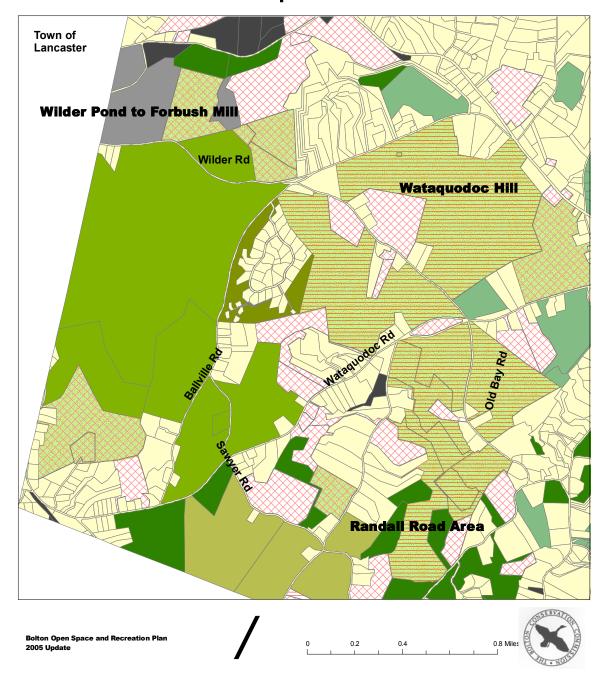


Largely already conservation lands, with some additional possibilities. Bordered by Town of Harvard to the North, Bare Hill Road to the East, Green Road to the South, and Vaughn Hill Road to the West.

Table 5.15.2 - Vaughn Hill

			1			CR	APR
LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	ACRES	ACRES
8.B-14	VAUGHN HILL RD	SULLIVAN RICHARD W, SR, ESTATE O	28.50		2		
6.C-5	GREEN RD	TURNER IRA, TR	9.64		3		
6.B-76	VAUGHN HILL RD	LEIGHTON CHARLES M	27.09		3		
7.C-2	BARE HILL RD	PAYSON BRIAN D & JOHN C LARRABE	30.00		3		
				Backland lot abuting Held CR and			
7.C-70	MT WACHUSETT LN	TOWN OF BOLTON	2.19	Vaughn Hill Conservation Area	Conservation Land		
				Harvard Line, abuts Sullivan and			
8.B-15	RTE 110 TOWN LINE	BOLTON CONSERVATION TRUST	15.90	Moen	Conservation Land	15.90	
6.C-24	GREEN RD	TOWN OF BOLTON	17.40	Hanson	Conservation Land		
7.B-22.1	VAUGHN HILL RD	TOWN OF BOLTON	44.46	Moen	Conservation Land		
7.C-1	VAUGHN HILL RD	TOWN OF BOLTON	100.60	Vaughn Hill	Conservation Land		
8.B-28	RTE 110 TOWN LINE	MCDERMOTT MERCEDES & CRAIG	3.53		Private CR/APR	3.53	
8.B-27	RTE 110 TOWN LINE	LAMATTINA THOMAS B	8.43		Private CR/APR	8.43	
7.C-3	BARE HILL RD	HELD JOHN R	23.00		Private CR/APR	23.00	

Figure 5.16.1 Core Conservation Areas
Wataquodoc Hill

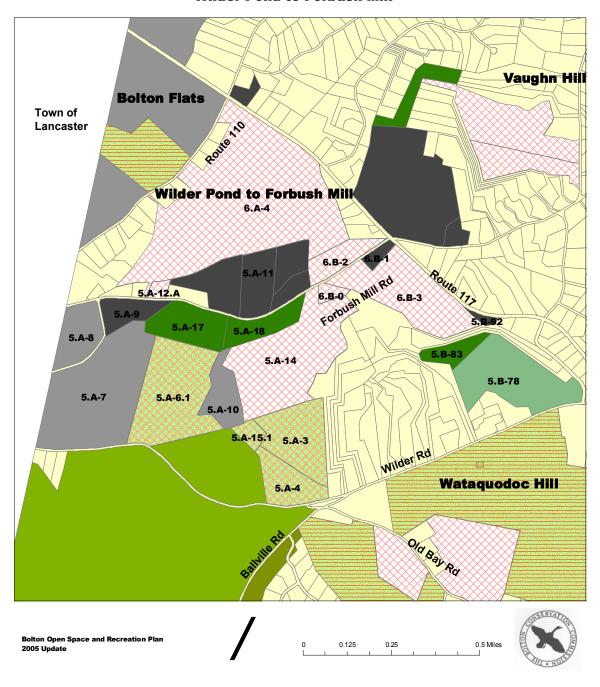


A broad expanse of lands lying along Wataquodoc Hill and Old Bay Roads in a variety of uses, including several key farms and some of Bolton's best views. Bordered by Rte 117 and Wilder Road to the North, properties lying along the eastern side of Wataquodoc Hill Road and West Berlin Roads to the East and South, Town of Berlin to the South, Town of Clinton and Ballville Road to the West.

Table 5.16.2 - Wataquodoc Hill

LOT	STREET	OWNER		DESCRIPTION	PRIORITY	CH. 61
5.B-4.1	WILDER RD FARM	DAVIS FARM TRUST	202.70	Top of Old Bay/Wilder	1	61A
				Townsend Horse Farm - Corner of		
				Old Bay & Ballville fields excellent		
4.B-12.1	OLD BAY RD	ELA ROGER E ESTATE OF	141.17	for Active Recreation	1	61A
				Townsend Horse Farm - Summit		
4.B-6.1	OLD BAY RD	ELA ROGER E ESTATE OF		East of Old Bay	1	61A
4.B-5.1		ELA ROGER E ESTATE OF		Townsend Horse Farm - Barns	1	61A
5.B-4	WILDER RD FARMS	DAVIS FARM TRUST		Top of Old Bay/Wilder	1	61A
3.A-10.1	SARGENT RD	VATTES WILLIAM F ESTATE OF	58.31		2	61A
3.A-63	SAWYER RD	NICEWICZ VERA & DAVID J & KENNETH		Nicewicz Farm (not under APR)	2	
3.B-30.1	W BERLIN RD	TAYLOR EDWARD L	15.00		2	61A
4.B-36	OLD BAY RD	CLOUTER MARY L TR CLOUTER ONE	3.61		2	
4.B-35	OLD BAY RD	CLOUTER MARY L TR CLOUTER ONE	1.94		2	
4.B-21	OLD BAY RD	BETHKE DOUGLAS A	37.40		3	
4.B-15	WATTAQUADOC HILL		26.99		3	
5.B-84	OLD BAY RD	CAISSE MARK E	14.50		3	
4.B-8.B		CACCIOLA MARIO & MARY P, TR	11.54		3	
3.A-36	WATTAQUADOC HILL	STEED MARTIN J	11.10		3	
3.B-80	WATTAQUADOC HILL	GATELY VINCENT J, TR	10.14		3	
4.B-16	WATTAQUADOC HILL	HEINOLD ROBERT D	10.00		3	
4.B-8.D	WATTAQUADOC HILL	PLANTE EDMOND H	8.83		3	
3.A-10	SARGENT RD	VATTES WILLIAM F ESTATE OF	6.61		3	61A
3.B-81	WATTAQUADOC HILL	GATELY VINCENT J, TR	5.45		3	
3.B-82	WATTAQUADOC HILL	GATELY VINCENT J, TR	2.10		3	
3.B-83	WATTAQUADOC HILL	GATELY VINCENT J, TR	2.01		3	
4.C-5.1	WATTAQUADOC HILL	STEPHENSON JOHN H & JOAN M TR	57.61		4	61A
4.B-12	WATTAQUADOC HILL	ELA ROGER E ESTATE OF	5.50		4	
5.C-44	MAIN ST	ST FRANCIS XAVIER	2.94	Church	4	
3.A-44	WATTAQUADOC HILL	TOWN OF BOLTON	31.00	Fyfeshire	Conservation Land	
3.B-37	WELCH POND	TOWN OF BOLTON	11.03	Welch Pond	Conservation Land	
3.A-43	WATTAQUADOC HILL	TOWN OF BOLTON	5.25	Haynes-Wheeler	Conservation Land	
3.B-65	WATTAQUADOC HILL	BOLTON CONSERVATION TRUST	3.00	Ela - Maiden's Leap area	Conservation Land	
3.A-60	SAWYER RD & WATTA	ARKLOW LIMITED PARTNERSHIP	58.80	·	Private CR/APR	
3.A-56		ARKLOW LIMITED PARTNERSHIP	48.44		Private CR/APR	
4.C-49	WATTAQUADOC HILL	NVW LTD	39.16		Private CR/APR	61A
4.B-17	OLD BAY RD	CALCAGNI DAVID	13.10		Private CR/APR	
4.C-51	BERLIN RD	NVW. LTD	3.05		Privately Held CR/APR	61A
4.B-18	W BERLIN RD	TOWN OF BOLTON	4.13	Cell Tower	Town Municipal Land	
			10.26	The Oaks Open Space, not decided	·	
4.A-7	OAK TRAIL	TOWN OF BOLTON*		The Oaks Open Space- not deeded		
4.A-14	OAK TRAIL	TOWN OF BOLTON*	8.14	The Oaks Open Space- not deeded	Conservation Land-In Process	
4.A-49	OAK TRAIL	TOWN OF BOLTON*		The Oaks Open Space- not deeded		
3.A-64.1	SAWYER RD	NICEWICZ VERA & DAVID J & KENNETH*	82.50	Nicewicz APR (in process)	Private CR/APR-In Process	

Figure 5.17.1 Core Conservation Areas
Wilder Pond to Forbush Mill



An area that has interesting possibilities, generally lying along Forbush Mill and Wilder Roads. Bordered by Rte 117 to the North, Sampson and Wilder Roads to the East and South, and the Town of Lancaster and Rte 110 to the West.

Table 5.17.2 - Wilder Pond to Forbush Mill

LOT	STREET	OWNER	ACRES	DESCRIPTION	PRIORITY	CH. 61
5.A-14	FORBUSH MILL RD	TAGGART GANSON P	37.00		2	
5.A-6.1	WILDER RD	VESPA MARY E	34.00		2	61
6.B-3	MAIN & FORBUSH M	MARDIROSIAN MILTON	30.06		2	
5.A-3	WILDER RD	BUTLER FRANCIS J	23.12		2	61A
5.A-4	WILDER RD	VESPA DONATO	9.00		2	61
5.A-15.1	WILDER RD	VESPA DONATO	3.00		2	61
6.A-4	RTES 110 & 117	DAVIS FARM TRUST	105.40	Bolton Orchards	4	
6.B-2	FORBUSH MILL RD	NASHOBA VALLEY RTY INC	3.36		4	
5.A-12.A	FORBUSH MILL RD	NASHOBA VALLEY REALTY INC	2.15		4	
6.B-0	FORBUSH MILL RD	HAMILL CREIGHTON TR	2.00		4	
				Lot 2. Purchased with Lot 3 -		
5.A-17	FORBUSH MILL RD	TOWN OF BOLTON	15.79	soccer fields	Conservation Land	
				Lot 1. Purchased with Municipal		
5.A-18	FORBUSH MILL RD	TOWN OF BOLTON	11.11	Lots 1 & 2 on Plan 85	Conservation Land	
5.B-83	WILDER GOOSE PON	TOWN OF BOLTON	5.63	Wilder Pond	Conservation Land	
5.B-78	WILDER RD	DAVIS FARM TRUST		Fields next to Wilder mansion	Private CR/APR	61A
5.A-11	FORBUSH MILL RD	TOWN OF BOLTON	8.06	Town Gravel Pit	Town Municipal Land	
				Soccer Fields - Lot 3. Purchased		
5.A-9	FORBUSH MILL RD	TOWN OF BOLTON	7.37	with Lot 2	Town Municipal Land	
6.B-1	FORBUSH MILL RD	TOWN OF BOLTON	1.16	Town Garage	Town Municipal Land	
5.B-92	MAIN ST	TOWN OF BOLTON	0.25	Wilder Pond Parking area on 117	Town Municipal Land	
5.A-7	WILDER RD	TOWN OF LANCASTER		cemetary	State or Other Municipal Land	
5.A-8	FORBUSH MILL RD	COMMONWEALTH OF MASSACHUSETTS		Lancaster Prison corn fields	State or Other Municipal Land	
5.A-10	WILDER RD WEST O	COMMONWEALTH OF MASSACHUSETTS	6.60	Pond between Forbush & Wilder	State or Other Municipal Land	

This is an area of major scenic interest, prime agricultural soils, historic landmarks, and a source of Forbush Mill Brook. The property has elicited praise for many years for its unique combination of features. The area is adjacent to the Forbush Mill Brook and two historic dam sites. It includes the foundation of an old icehouse, the remains of water-powered mills of colonial Bolton, lovely stone walls along an abandoned cart road, and several scenic fields and wetland areas. There are fishable sections of the brook, and the ponds behind the larger of the two dams could also provide water for fire protection.

This area was cited in the Shrewsbury Ridge Report as being of prime scenic importance. Recent development in the area was combined with agricultural restrictions of 3+ acres, under the Mass. Farm Conservation Land Trust. The Conservation Commission owns a 5 acre parcel including a pond. There is a public access trail from Wilder Rd. and from Main St. to the pond and then over to Forbush Mill Rd.

On State owned land, there is a pond currently used by the Correctional Institution in Lancaster for recreational purposes. In the event that the State discontinues its current use, the Town should be ready to assume it for fire protection and potential recreational use.

Table 5.18 - Other Parcels of Interest Not in Core Areas

							CR	APR
LOT	STREET	OWNER	ACRES	DESCRIPTION Abuts Butternut Open Space and	PRIORITY	CH. 61	ACRES	ACRES
6.E-1.1	WHITCOMB RD	DAMAN STEPHEN J & DEBORAH J	26.47		2	61		
3.B-85	RANDALL RD	OWNER UNKNOWN (ACREAGE IS GUE	5.00		2			
6.C-10	HARVARD RD	CALESS ARTHUR G	40.00		3	_		
6.C-49 6.C-17	GREEN RD HARVARD RD	LAFFERTY ANNALISA P,BRIAN C TR HARVARD RD REALTY TR, BRADFORD	28.06	Greenway to Vaughn Hill Greenway to Vaughn Hill	3	+		
6.B-65	VAUGHN HILL RD	MURTHA THOMAS J	18.07		3	+ -		
6.C-15	HARVARD RD	SMITH THEODORE H, TR		Greenway to Vaughn Hill	3	1		
6.C-38.1	GREEN RD	ZAYKA PAUL R	10.42	Greenway to Vaughn Hill	3	61A		
6.C-16.A	HARVARD RD	HARVARD RD REALTY TR, BRADFORD	9.04	Greenway to Vaughn Hill	3			
6.C-46	TWIN MAPLE RD	KANE MICHAEL W & PAMELA P		Greenway to Vaughn Hill	3			
6.C-11	HARVARD RD	BROWN HAROLD E		Greenway to Vaughn Hill	3			
6.B-105	GREEN RD	MURTHA THOMAS J	5.50		3	_		
6.C-36 6.C-35	GREEN RD GREEN RD	ZAYKA JOHN & DEBORAH A ZAYKA GRISHA		Greenway to Vaughn Hill Greenway to Vaughn Hill	3	_		
5.B-18	MAIN ST	DOUCETTE WILLIAM T		Crystal Springs	4	+ -		
2.C-3	QUAKER LN	MALECKI JOHN		Backlot 495-Berlin Line	4			
4.D-33	MAIN ST	KANE SHIRLEY M TR	13.20	Main Street	4	+ -		
4.D-1	SUGAR RD	GELRAW REALTY INC		Heberts	4			
1.C-1	HOG SWAMP	PARAMOUNT DEV ASSOC IN		Backlot 495-Berlin Line	4			
4.D-16	MAIN ST	KANE SHIRLEY M TR		Main Street	4			
1.C-2	HOG SWAMP	LAMSON HELEN D	8.10		4			
4.D-71	MAIN ST	KANE SHIRLEY M TR	7.68		4			
1.C-3	HOG SWAMP	WELCH FORBES & GOODHUE		Backlot 495-Berlin Line	4			
2.C-8	QUAKER LN	SARGENT J D ASSOC INC		Backlot 495-Berlin Line	4			
	MAIN ST	KANE SHIRLEY M TR		Main Street	4			
	MAIN ST	KANE SHIRLEY M TR		Main Street	4			
4.D-23	MAIN ST MAIN ST	ESTABROOK ROBERT R & OLIVIA E ST FRANCIS XAVIER		Main Street Church	4	_		
	MAIN ST	ST FRANCIS XAVIER ST FRANCIS XAVIER		Church	4	_		
3.C-66	BERLIN RD	TOWN OF BOLTON		Millbrook Open Space	Conservation Land	+ -		
3.C-4	BERLIN RD	BOLTON CONSERVATION TRUST		Coolidge Farm	Conservation Land	+		15.60
	BUTTERNUT LN	TOWN OF BOLTON		Butternut Open Space	Conservation Land	1		10.00
	BERLIN RD	BOLTON CONSERVATION TRUST		Coolidge Farm	Conservation Land	1		7.42
6.D-54	SUGAR RD	TOWN OF BOLTON		Plante - North of Sugar Road	Conservation Land			
6.B-172	FOX RUN RD	TOWN OF BOLTON	6.65		Conservation Land			
6.E-38	BUTTERNUT LN	TOWN OF BOLTON	4.31	Butternut Open Space	Conservation Land			
6.E-56	BUTTERNUT LN	TOWN OF BOLTON	3.24	Butternut Open Space	Conservation Land			
				L				
7.B-12.A	STILL RIVER RD	BOLTON CONSERVATION TRUST	0.71		Conservation Land			
5.D-55.A	SUGAR RD	BOLTON CONSERVATION TRUST	0.05	Toth - Historic site	Conservation Land	_	12.32	
5.C-3 2.C-82	NOURSE RD QUAKER LN	JAMES DAVID R HOOVER PETER L & MICHELLE A	12.32	Millbrook CR (estimate)	Private CR/APR Private CR/APR	_	0.70	
2.C-85	QUAKER LN QUAKER LN	BICHAO JOHN JR & SABRINA BICHAO		Millbrook CR (estimate)	Private CR/APR	+ -	0.70	
2.C-84	QUAKER LN	MARTINEK ROBERT J & LAURIE B		Millbrook CR (estimate)	Private CR/APR	+	0.70	
3.C-56	MILLBROOK LN	CARLSON SARAH A		Millbrook CR (estimate)	Private CR/APR		4.50	
3.C-57	MILLBROOK LN	DALY DANIEL F & NORA T		Millbrook CR (estimate)	Private CR/APR	1	4.50	
5.C-5	HARVARD RD	HOOKER WN ANITA	4.31		Private CR/APR		4.31	
3.C-55	MILLBROOK LN	RUCINSKI PETER & SUZANNE	3.86	Millbrook CR (estimate)	Private CR/APR		3.40	
5.C-76	HARVARD RD	THOMPSON KRISTIN D & RICHARD C G	3.43		Private CR/APR		3.43	
5.C-6.1	HARVARD RD	NORSEEN,NW & HN MCCLENNEN & EL	2.68		Private CR/APR		2.68	
5.C-7	HARVARD RD	FERGUSON FRED E	2.03		Private CR/APR		2.03	
5.C-77	HARVARD RD	HILL ELAYNE MARIE & ROBERT LOU	2.03		Private CR/APR	1	2.03	
7.B-65	STILL RIVER RD	ATWOOD DONALD G & CAROLYN C	1.99		Private CR/APR		0.60	
5.C-8	HARVARD RD	COVINO WILLIAM M & KAREN R OVER	1.80 1.50		Private CR/APR Private CR/APR	+	1.80 1.50	
3.C-58 6.B-12	MILLBROOK LN MAIN ST	JIANG QI & YI ZHAO NASHOBA REGIONAL SCHOOL	47.61				1.50	
U.D-12	IVIAIIN OT	INAGI IODA REGIONAL SCHOOL	47.01	Municipal Lot 1 on Forbush, Closed	Town Municipal Land	+ -		
5.A-19	FORBUSH MILL RD	TOWN OF BOLTON	11.38	Landfill area	Town Municipal Land			
	S BOLTON RD	TOWN OF BOLTON		cemetary	Town Municipal Land	1		
2.3 20.7			3.00	Municipal Lot of Forbush, behind				
6.A-16	FORBUSH MILL RD	TOWN OF BOLTON	4.50		Town Municipal Land			
				Municipal Lot 2 on Forbush,		1		
5.A-20	FORBUSH MILL RD	TOWN OF BOLTON	2.82	frontage next to Gravel Pit	Town Municipal Land	<u> </u>		
				West of Corn Rd, Abuts Harvard				
6.D-48	CORN RD	TOWN OF BOLTON		Conservation Land	Town Municipal Land			
6.B-13	GREEN RD	TOWN OF BOLTON		cemetary	Town Municipal Land			
	MAIN ST	TOWN OF BOLTON		Library	Town Municipal Land			
	MAIN ST	TOWN OF BOLTON		Corner 110 & 117	Town Municipal Land			
	MAIN ST	TOWN OF BOLTON		cemetary	Town Municipal Land	 		
1.0-6	MAIN ST	TOWN OF BOLTON		Police Station	Town Municipal Land	+		
	WATTAQUACOC HILL MAIN	TOWN OF BOLTON TOWN OF BOLTON		Firestation Can't locate	Town Municipal Land	+		
ו ש-ם.ט	IVICALIN	TOWN OF BULTUN	0.92	Carri IUGale	Town Municipal Land	ı		

1) Great Brook: An intensive effort is needed to establish buffer protection for this scenic, fishable brook. Some sections pass through areas already under protection, but most of the brook is threatened by repeated culverting, poor forest husbandry, and potential impacts to headwater wetlands. The new town wetlands bylaw helps in guaranteeing long-range protection.

- 2) Hog Swamp: This large swamp lying to the south of South Bolton Rd. on both sides of Rt. 495 needs protection for water resource purposes, both for the wetlands and for the ground water deposits in the area. A new development of 11 homes has already been built off Wheeler Rd. in an area no one thought could be developed.
- 3) Nashoba Regional High School Area: There are trails for team training in this area which are part of privately owned lots, but hold a conservation restriction. Fox Run Estates is in the process of being developed, and the existing trail easements that provide access to other conservation areas will need to be actively defended.
- 4) Whitcomb Road Area, pond and mill site: Mill sites in Bolton should be protected for their historic and scenic value. The pond in this area is also quite scenic. The area should be protected as it provides a buffer from 495 for the residences in the Whitcomb Road and Sugar close to the area. It represents a possible connection for trails into Harvard.

Table 5.19 - Other large land owners

AUDIT AUDI						
RECON LIMITED PTRNSHP \$34,00 International Golf Course - LRED LRED RESPONSIVE \$4,00 LIMITED PTRNSHP \$54,00 International Golf Course - LRED LRED LRED LRED RESPONSIVE \$4,00 International Golf Course - LRED LRED RESPONSIVE RESPONSI						
RKLOW LIMITED PARTNERSHIP \$4.20 International Golf Course - LRBD LRBD RBD			PRIORITY	ACRES	ACRES	
SKLOW LIMITED PTENSHP 54.20 International Golf Course - LRBD School Town Municipal Land Town Municip						
AFF. Nashoba Regional High School Town Municipal Land		*****				
ACCORDANCE AURIE, TR 42.04						LRBD
MESS ARTHUR G	NASHOBA REGIONAL SCHOOL	47.61 Nashoba Regional High School	Town Municipal Lan	d		
SEPERTY ANNALISA P, BRIANN C TR 28,06 Greenway to Vaughn Hill 28,85 26,50 LRBD 26,50 LRBD 26,50 LRBD 26,50 LRBD 26,50 LRBD 26,47 Abuts Butternut Open Space and Harvard Line 2 26,50 LRBD 26,47 Abuts Butternut Open Space and Harvard Line 2 2 2 2 2 2 2 2 2	DUCHARME LAURIE, TR	42.04				
ICCIERO THOMAS J & CARCILYN M 28.85 S.50 International Golf Course - LRBD 26.50 LRBD MANN STEPHEN J & DEBORAH J 26.47 Abuts Butternut Open Space and Harvard Line 2 2 2 2 4 2 4 2 4 2 4 2 4 2 4 4	CALESS ARTHUR G	40.00 Greenway to Vaughn Hill	3			
ICCIERO THOMAS J & CARCILYN M 28.85 S.50 International Golf Course - LRBD 26.50 LRBD MANN STEPHEN J & DEBORAH J 26.47 Abuts Butternut Open Space and Harvard Line 2 2 2 2 4 2 4 2 4 2 4 2 4 2 4 4	AFFERTY ANNALISA P,BRIAN C TR	28.06 Greenway to Vaughn Hill	3			
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Access to Conservation and Recreation Lands

The Section 504 Self-Evaluation as it applies to Bolton's park, recreation and conservation land reveals the fact that few accommodations exist within these areas for the handicapped. The reasons for this situation derive from Bolton's semi-rural character, and from the emphasis that has been placed in Town acquisition efforts on securing areas of natural resource interest and maintaining them primarily for wildlife habitat and passive recreation. Funding over the past five years, from both State and local sources, has dropped markedly, with support for maintenance and improvement available only for addressing public safety concerns.

The checklists, while useful for parks and other areas with existing improvements and heavy public use, may not serve to target those areas in Bolton most suitable for improvements as part of the action plans. Further, recreational facilities, such as ball fields, have been maintained and improved to serve as traditional athletic areas. With these facts in mind, the following assessment is made through a listing of the Section 504 Administrative Requirements and how Bolton meets those requirements, followed by a listing of facilities with handicapped and general public services.

Section 504: Administrative Requirements

- The Town Selectmen appointed Frank Krysa as 504 Coordinator on August 25, 1998.
- The Personnel By-Law and Grievance Procedure is included as Appendix J
- Notice of all vacancies shall be posted on each department's bulletin board and at the Town Hall prior to public advertising. Advertising is to be done in area newspapers for a maximum of two weeks. All positions must be classified and all interviews must be held after the advertisement period has ended. Bolton Town jobs are always advertised without discrimination as to age, sex, marital status, race, color, creed, national origin, handicap, veteran status, or political affiliation.

Recreation Facilities Access

1) Memorial Ball Field

The parking area is gravel and dirt. The playing fields are grass. There is paving over the basketball area and a few other patches. The area is wheel chair accessible based on grade level. There is also a handicap accessible water fountain.

2) Leatherwood Playground

Parking is from a paved road surrounding the Florence Sawyer School and there is a handicapped access ramp from which a portion of the playground can be reached.

3) Town Beach

The parking area is gravel and grass; the slope to the water is hard sand becoming softer at waters edge. The swimming area is probably not wheelchair accessible.

4) Derby Soccer Field

The field is level and accessible by vehicle. It is considered handicap accessible.

5) Forbush Mill Field

This brand new field opened in the spring of 2004, is level, and accessible by vehicle. It is considered handicap accessible.

Conservation Facilities Access

Bolton is a rural community and all of our conservation areas are unimproved natural lands. Many are very small. They are grouped for purposes of the following inventory. Doing a separate report on each would not add value.

1) Bolton Flats and Delaney

These are large state owned conservation areas with parking for at least 20 vehicles, including handicap vans. They afford beautiful views of the land and water from the parking area. Some of the trails are wide and flat enough to afford access to a motorized or pushed wheelchair. None are paved. 68

2) Pond Park, Persons Park, Mentzer, Partridge, Le Due, Wilder Pond, Vinger, and Dunnell Kettlehole.

These sites are all view accessible from a paved or gravel road, so a person without the ability to walk could see the sights from a vehicle. There are new picnic facilities at Pond Park.

3) Phillips Conservation Land

This site is entered from a hard dirt road at one location, which would admit to wheelchair access for some distance into the property. There is a bench located for viewing, accessible through this route.

4) Fyfeshire

This site has handicap accessible parking and a 10 foot long bench located near one of the ponds for viewing.

5) Bower Springs and Lime Kiln

These areas have parking for at least five vehicles and are wheelchair view accessible.

6) Vaughn Hill and Moen

These areas have parking for a few vehicles. Moen offers a gravel, though level lot which is wheelchair accessible

7) Annie Moore, Goodrich, Harris, Hansen, White, Wallie, Sochalski, Richards, Smith and Sullivan.

These areas are wooded, with narrow trails, or in some cases as yet incomplete trails, and are not very accessible to any but agile hikers. They are, however, excellent wildlife habitat areas, a primary reason for preserving them.

Other Public Facilities -

<u>Public Telephones</u>: Bolton has two public telephones on Rt. 117 in the town center near Smith's gas station and there are three more phones near the 1-495/Rt. 117 juncture: two at the Country Cupboard Store and one at the Mobil gas station.

<u>Drinking Fountains</u>: The only public drinking fountains in Bolton are located at Camp Resolute, by the swimming area which the Boy Scout camp provides for Town use. A

pump for drinking and washing was installed at Bowers Springs by the Conservation Trust, but has not been consistently operational. The Trust is continuing improvement of this facility.

<u>Toilet/Bathing Facilities</u>: This type of facility exists only at Camp Resolute, which is a private facility. Since Bolton has no public water or sewer systems, improvements in this category are not practical at this time.

<u>Picnic Areas</u>: Picnicking is allowed on all park, recreational and conservation land. No amenities exist, however, except for trash barrels at Bowers Springs. Open fires and grills are not permitted on Town land except by individual permit. Improvements in this area should initially focus on properly sited and constructed picnic tables.

Boat Docks: There are no areas suitable for public boating within the Town. The Still River is accessible by canoe only for a short distance. The one section of the Nashua River located within Bolton adjoins private land. Informal access to West Pond off of Long Hill Road is used by boaters.

Fishing Facilities: Several areas in Town offer opportunities for fishing; most are along streams, with access from the roadside or over existing trails. The areas most suitable for a significant number of fishermen are the Still River, the Delaney Project and Little and West Ponds. The Still River frontage is primarily in private and State ownership; fishing at Delaney is located primarily at a small roadside pond. Little and West Ponds are accessible by permission of the landowner. West Pond has been classified as a Great Pond, but the only point of public access is at Long Hill Road, where room does exist for formal entry. Ice fishermen generally reach the pond through private property. The best attempt at compliance with this category would most likely be made at the Bolton Flats Wildlife Management Area through Fish and Wildlife. An appropriate location is by the Still River Road entrance, where a parking lot exists, and where level ground leads to the river.

Section 6. COMMUNITY GOALS

6.A Description of Process

The community goals for the Open Space and Recreation Plan presented in the following sections were produced through a number of interactive strategy sessions and developed through a phased approach. Cultivating an accurate representation of the needs of town citizens began with the issuance of a Long Range Planning questionnaire referenced in previous sections, with a handful of questions on land use and open space issue (see appendices A & B). Then a series of meeting were held with private citizens and different town boards to assess progress made against action items listed in the 1998, and to validate if the same goals should apply "as is", modified slightly, new goals developed, or no longer pertinent. A notice was placed in the paper requesting participation in the review activity. In addition, an email note was sent out to all members of the various boards in town requesting participation.

The committee represented an accurate cross-section of town. Members included representatives from the Board of Selectmen, Board of Health, Conservation Commission, Parks and Recreation Committee, Planning Board, Historical Commission, Bolton Conservation Trust, and other private citizens. The committee met a number of times over a 16-month period to mesh questionnaire and individual board responses with previous goals and present aims stated by the varying interests. The draft plan was then released to the public for comment and a public meeting was convened.

6.B Statement of Open Space and Recreation Goals

Bolton's unique landscape of hills, streams, forests, farmland, and colonial homes are important qualities to be retained as the town is developed. While it is amazing that many special areas of town have been protected, it is equally incredible the number of cultural sites, scenic views, and unusual natural areas are still unprotected. The goal of this open space plan is to identify, prioritize, and permanently protect those remaining special places and link together the town's protected space for the preservation of wildlife and for the enjoyment of the town's citizens.

Goal # 1: Preserve the rural and historical character of Bolton.

New residents are attracted to Bolton by the open space and rural nature of the town. The intent of this plan and primary open space goal is to protect that character. Bolton's open spaces, agricultural lands, forested lands, historic sites, and low housing density contribute to its character. It is of paramount importance to the town residents that this character be protected and that Bolton remain a rural town. This can be achieved only through long-term planning efforts similar to the process followed every five years in updating an open space plan.

Goal # 2: Protect the water resources of Bolton

This goal is particularly important since Bolton currently has individual private wells as its water supply, since it has no surface water resources suitable for a supply, and since it is far from possible hookups with any metropolitan or regional water supplies. The town desires to maintain its private system. Looking to the future, it needs to protect watershed areas and currently known high-yield aquifers both for private wells and for potential public water supplies.

Goal # 3: Preserve and encourage agriculture

Farmland is an essential and declining natural resource which needs protection. One of the key goals of this Open Space Plan is to protect existing agricultural and forest lands and to encourage additional agriculture in Bolton, particularly on designated prime soils. This can help to meet the growing need for locally produced food and will also protect existing open spaced in the Town. Town support for those engaged in agriculture is part of the goal.

Goal # 4: Protect natural resources and wildlife habitat

The woods, fields, wetlands, floodplains, vernal pools, orchards, and scenic views of Bolton combine to form a diverse natural resource base which includes habitats for many species of birds, reptiles, amphibians, and mammals. Protection of this habitat is an important goal of the Open Space Plan. Particular attention will be paid to rare and endangered species of plants and animals. Plants and wildlife are integral to the rural nature of Bolton and contribute to insect control, water purification, and other balances within the ecological system. It is important that this heritage be preserved now, so that it can be enjoyed by future generations.

Goal # 5: Conserve open space areas for public use

The passive recreational potential of Bolton is exceptional due to the hilly nature of the terrain, the number of woodlot roads, and the existence of large amounts of undeveloped backland. This goal relates to providing open spaces for such passive recreation as nature study, cross country skiing, snow shoeing, hiking, horseback riding, non-motorized mountain cycling, running, etc. These activities are available to the general public and offer inexpensive opportunities for enjoying nature close to home and help to give Bolton residents a better appreciation for their town. Where possible, public access to connect open spaces for passive recreation could be gained from individual landowners through trail easements and conservation restrictions. Purchase of land by the town for conservation purposes has also been a policy and will continue to be appropriate. Making conservation land available to citizens is an important goal of this Open Space Plan.

Goal # 6: Provide active recreation opportunities to Bolton citizens

Active recreation is important to for all ages, and especially for the development of good life-style habits in children. Due to explosive population growth, there is a

continued need for space in Bolton on which active recreational activities can take place. The current popularity of field sports such as soccer and baseball create an expanding need for fields for practice and games, along with allowing certain fields to be rotated or rested through specific seasons. This goal relates to identifying recreation areas, facilities, and programs which should be developed by the town to serve the future needs of townspeople.

Section 7. ANALYSIS OF NEEDS

In Sections 1 through 5, the Town of Bolton has endeavored to compile all of the relevant data available about the Town as it relates to Open Space and Recreation Planning. Section 6 has simply stated the Town's goals in Open Space and Recreation Planning. Through the process of gathering information and discussing the information among the Open Space Committee, with Town Boards, reviewing the Massachusetts Outdoor 2000! (SCORP) on-line at

http://www.mass.gov/envir/dcs/global/publications.htm and at public meetings, the Town is forwarding the following sections that will identify the needs of the town and the specific actions for addressing those needs. Section 7 herein outlines the identified needs under three categories: (1) natural resource protection needs; (2) community needs; and (3) management needs.

7.A Summary of Natural Resource Protection Needs

Natural resource protection needs are borne out of the Section 4 and 5, and supported by responses to the 2002 Long Range Planning Survey. Overwhelmingly, respondents to the survey indicated that protecting the rural character of Bolton continues to be a high priority. Rural character is supported by a relatively low development density (when compared to surrounding towns), and a mix of fields and forests that have characterized Bolton for several hundred years. Residents and individual board members are also unanimous in declaring that protection of Bolton's orchards, farms, and key aquifers as top priority. Other important natural resources identified for protection include forestlands, wetlands/wildlife, and scenic views.

7.B Summary of Community Needs

Community needs have been identified by the Open Space and Recreation Planning Committee primarily through public meetings and discussion with Town Boards and supported by dialogue in the community newspaper. Preserving the historical and agricultural character of Bolton was a significant topic at several public meetings. Another topic that was discussed at length was the lack of a Master Plan, and aligning Open Space and conservation goals with other town priorities. Additional comments related to the need for better land management practices, including organized trail and recreational facilities maintenance, and the need to focus outreach work on working with surrounding towns and profiling the unique natural resources in Town.

7.C Summary of Management Needs

Management needs also arose out of Committee discussions, public meetings, and meeting with other boards. For the most part, management, particularly staff (or more likely volunteer) time and organization, along with financial resources, is behind many of the previously cited needs.

The recent hiring of both a full-time Town Administrator and Town Planner will go a long way in helping the town boards coordinate priorities and communicate between

themselves. The Town Planner is overseeing the development of Bolton's Master Plan, which Bolton is seriously lacking. The definition and fulfillment of these positions is consistent with the goals of this and previous Open Space and Recreation Plans.

Management and maintenance of existing conservation and recreation lands is a huge need. Although paid staff would be helpful for these endeavors, they will likely be accomplished by volunteers. The Parks and Recreation Committee has been more involved over the last five years, overseeing the Town Beach, creating an ice skate park in front of Emerson School, creating new soccer fields at Forbush Mill Road, and working on a new skateboard park. Trail building and maintenance on conservation lands has increased with the assistance of the Bolton Trails Committee, though their focus is on completing the Bolton Loop Trail. The next need is to organize neighborhood trail committees or trail stewards to clear local conservation trails on a regular basis.

The following is a list of needs for all categories:

- 1. Find innovative ways to help farmers protect their farms and orchards
- 2. Plan for future public water supplies
- 3. Focus on building core areas
- 4. Protect lands that link existing conservation lands to develop "green" corridors
- 5. Focus landscape preservation in historic villages in town such as East End and the Quaker Village
- 6. Improve Bolton's current recreational facilities including playing fields and the Town Beach
- 7. Improve access to particular conservation areas for the disabled and elderly
- 8. Protect unique and endangered natural resources
- 9. Increase staffing needs that will help town planning and priority setting
- 10. Engage more new residents in town volunteership
- 11. Organize neighborhood trail committees & stewards

Section 8. GOALS AND OBJECTIVES

This section describes the more specific objectives related to each of the six goals included in Section 6 and the needs outlined in Section 7.

1. Preserve the rural and historical character of Bolton

- Develop a focused and integrated land prospecting team
- Permanently preserve farms, key aquifers, and add to core areas
- Review, develop, and improve strategies to protect open space
- Establish greenways and wildlife corridors
- Identify and preserve historical sites in Bolton
- Protect scenic roads

2. Protect the water resources of Bolton

- Protect groundwater resources
- Preserve major wetland areas
- Identify and reduce impacts of road salt and storm water
- Protect wetlands from filling and other damage

3. Preserve and encourage agriculture

- Increase participation in the State's Agriculture Preservation Restriction (APR) Program
- Support the preservation and maintenance of open fields
- Encourage and support agriculture

4. Protect natural resources and wildlife habitats

- Preserve natural resources and wildlife habitat through land acquisition and/or protection
- Preserve natural resources and wildlife habitat on lands already under protection
- Protect Endangered Species
- Publicize information about Bolton's unique natural resources and wildlife habitat

5. Conserve open space areas for public use

- Develop an integrated land management strategy
- Create a trail system for 4-season passive recreation use
- Publicize conservation lands for public use
- Work with surrounding towns on linking trails for a regional trail system
- Identify and initiate revenue opportunities to help land acquisition and maintenance funding

6. Provide active recreation opportunities to Bolton citizens

- Identify and procure parcels for active recreation
- Continue to provide recreation programs
- Upgrade fields on town land to meet future needs
- Upgrade picnicking and other facilities at town parks
- Upgrade skating ponds on town-owned land
- Identify locations and provide neighborhood parks and recreation activities
- Identify revenue opportunities to help fund on-going maintenance efforts

Section 9. ACTION PLAN

In the following section, the Town presents its specific action items required to meet the goals and objectives for the 2004 Open Space Plan. It should be noted these actions are based on four principles without which they will not be achieved. The four principles are:

- 1. efficient and inclusive town government,
- 2. integrated land planning,
- 3. coordination with local, regional, and state efforts, and
- 4. excellent and open communication at all levels.

Although these principles seem basic and easily understood, the Open Space Committee felt that it was important to present them up-front to emphasize their importance. The town boards and citizens must regularly engage in these four activities if the town is to achieve the goals and implement the actions set forth in Bolton's Open Space and Recreation Plan. Section 9 uses the following abbreviations for town boards and local groups who are responsible for implementing the applicable action items:

TA - Town Administrator

PLAN - Town Planner

BOS - Board of Selectmen

AC - Advisory Committee

CC - Conservation Commission

BCT - Bolton Conservation Trust

PB - Planning Board

BOH - Board of Health

HC - Historical Commission

HS - Historical Society

TC – Bolton Trail Committee

FRM- Local Farm Groups

PR - Parks and Recreation Committee

AH – Affordable Housing

ZBA – Zoning Board of Appeals

DPW – Department of Public Works

The Action Plan Map highlighting desired results of key action items is demonstrated in Figure 9.1.

GOAL #1: PRESERVE RURAL AND HISTORICAL CHARACTER OF BOLTON

Objective - Develop a focused and integrated land prospecting team

Action	Who	Due
Establish members, chairperson, goals & objectives, and regular meeting time.	CC, BCT, TC, PR, HC (Land Group)	Year 1
Develop and agree on conservation and recreation land priorities.	Land Group	Year 1
Coordinate with Master Planning Committee, Town Planner, and other municipal land groups. Priorities should feed into town's Master Plan.	Land Group	Year 1
Develop strategy to talk with landowners of key parcels.	Land Group	Year 1- Year 2

Objective - Permanently preserve farms, key aquifers, and add to core areas

Action	Who	Due
Execute strategy defined in previous objective.	Land Group	Year 1- Year 5
Acquire and protect prioritized parcels as opportunities arise.	Land Group	Year 1- Year 5

Objective - Review, develop, and improve strategies to protect open space

Action	Who	Due
Identify competitive grant programs for open space acquisition and apply for funding.	Land Group	Year 1- Year 5
Investigate Community Preservation Act and present an article for approval at Annual Town Meeting.	Land Group	Year 1- Year 2
Contact governmental agencies that purchase lands for specific purposes, such as endangered species protection or greenway development, regarding potential projects in Bolton.	CC & BCT	Year 1- Year 5
Review tax delinquent properties on a regular basis for potential open space and acquisition/protection.	Land Group	Year 1- Year 5
Identify parcels that can solve multiple municipal interests or where house lots can be created and sold to help fund land set aside for conservation/recreation.	Land Group	Year 1- Year 5
Actively pursue opportunities to establish conservation restrictions and trail easements with private landowners in core areas.	Land Group	Year 1- Year 5
Identify conservation parcels where house lots can be created and sold off to fund conservation purchase.	Land Group	Year 1- Year 5
Encourage lobbying activity to enhance APR funding.	Land Group	Year 1- Year 5
Add requirement for grantor to place identifying marks or permanent bounds on Open Space being deeded to the town to FOSPRD bylaw.	PB, CC, TA	Year 1
Develop a process for having open space and recreation land being deeded to the town through Comprehensive Permits, Affordable Housing, or other initiatives be identified by marks or permanent bounds.	PB, CC, AC	Year 2

Develop a process and a centralized	CC, BCT, PLAN,	Year 2
GIS repository for land updates. This	Assessor	
includes new gifts, acquisitions,		
CR/APR or Chapter 61 protection		
measures, easements, and changes to		
existing Assessor's GIS Files.		

Objective - Establish greenways and wildlife corridors

Action	Who	Due
Actively pursue opportunities to establish conservation restrictions and trail easements with private landowners where trails currently exist in non-core conservation areas.	Land Group	Year 1- Year 5
Following outlined priority scheme, develop and execute a strategy to protect sections of lower priority parcels that connect to other parcels, creating a greenway or corridor.	Land Group	Year 2
Work with developers in subdivisions, FOSPRD plans, and comprehensive permits to provide connections to other protected space.	PB, CC, ZBA, TC	Year 1-5
Encourage natural buffers and landscaping to provide corridors and greenways.	PB, CC	Year 1-5

Objective - Identify and preserve historical sites in Bolton

Action	Who	Due
Establish Historic Districts identified in Survey of Historic Properties from 1998 that have not been already established	НС	Year 2- Year 5
Continue to mark historical and archaeological sites in town identified in either Survey of Historic Properties or Archaeological Reconnaissance Survey from 2001.	HC & HS	Year 2- Year 5
Continue to incorporate historical sites into the town's trail system.	HC, HS, TC	Year 1- Year 5

Develop a GIS layer comprised of sites with Historical interest	HC, HS	Year 3
Develop a process to communicate with Historical Commission on large projects coming before the Conservation Commission.	СС, НС	Year 2
Develop a process where the Bolton Conservation Trust and the Historical Commission work together to preserve Bolton's older homes and surrounding land with restrictions.	HC & BCT	Year 2

Objective - Protect scenic roads, views, and the rural and historical character

Action	Who	Due
Strengthen and apply the town's scenic Road Bylaw by identifying the appropriate group to oversee and regulate all work done on Scenic Roads, including paving, construction, maintenance, cleaning, tree pruning and removal, snow removal, stonewall and historic marker maintenance, etc.	TA, BOS, CC, PB, HC	Year 2
Develop and implement a process to regulate this work.	TA	Year 2
Using the one developed by the Town of Weston as an example, develop a pictorial essay that demonstrates how homeowners, developers, builders, and landscape architects can maintain the rural and historic character of Bolton. The book should be placed in Town Hall, and placed on the town web site.	HC, HS, BCT	Year 3
Encourage regulations that preserve and support the agenda for this objective.	CC, PLAN	Year 1- Year 5
Establish a dead tree removal process.	DPW	Year 3

GOAL #2: PROTECT THE WATER RESOURCES OF BOLTON

Objective – Protect groundwater resources

Action	Who	Due
Identify site for downtown water and sewer project.	Land Group, PLAN, Master Planning Committee	Year 2
Continue to monitor plume of MBTE near town barn off of 117/Forbush Mill Road that is leaching towards town's largest potential aquifer.	ВОН	Year 1- Year 5
Steer development away from wetlands, with the goal of no net loss of Wetlands or BVW.	CC, ZBA, PB, AH	Year 1- Year 5
Review Groundwater Protection Bylaw and propose changes to improve and strengthen to make it more effective.	ВоН	Year 5
Develop and manage a set of Manure Regulations.	ВоН	Year 3
Continue the volunteer program coordinated by NRW Stream Teams to test water quality on Still and Nashua Rivers at least three times per year.	Friends of Oxbow, BCT	Year 1- Year 5
Implement water quality testing on other major brooks and bodies of water in town, including Danforth, Great Brook, Forbush Mill, and West Pond (Town Beach).	BCT	Year 1- Year 5

Objective - Preserve major wetland areas

Action	Who	Due
Target open space protection toward	CC &	Land
the following natural systems: Great Brook, Danforth Brook, Forbush Mill, Sunk Meadow, Hog Swamp, Still River, Little Pond, West Pond.	ВСТ	Group
Continue to identify and certify Vernal Pools throughout the town.	BCT, CC	

Objective - Identify and reduce impacts of road salt and storm water

Action	Who	Due
Review effectiveness of storm water control mechanisms utilized in subdivisions and new house lots in existence since 1998 and implement changes where necessary.	PB, DPW, CC, TA	Year 2
Consult with the Town Highway Director and Town Boards on reducing salt and sand use where appropriate.	DPW,TA	Year 2
Eliminate direct discharges by improving drainage or improving storm water management when roads are resurfaced, repaired, or culverts are repaired or replaced.	DPW, AC, TA	Year 1- Year 5

Objective - Protect wetlands from filling and other damage

Action	Who	Due
Administer Wetlands Protection Act, Wetlands Bylaw and WRPD.	CC	Year 1- Year 5
Develop standard escrow procedure between ConCom and Planning Board on projects impacting a resource area. This will include a defined amount that will be held in escrow, and how and when those funds are released back to the applicant.	TA, PB, CC	Year 2
Revise WRPD to eliminate redundancy and confusion with Wetland Bylaw and prepare appropriate guidance document.	CC	Year 2
Develop standard enforcement procedure when violations to WPA, Bylaw and WRPD occur.	CC, TA	Year 2
Encourage integrated pest management to limit impact to resource areas.	CC, BCT, PB, BoH	Year 1- Year 5

GOAL #3: PRESERVE AND ENCOURAGE AGRICULTURE

Objective - Increase participation in the State's Agriculture Preservation Restriction (APR) Program

Action	Who	Due
Continue to work closely with state representatives who could assist with grant applications on additional APRs.	BCT	Year 1- Year 5
Develop a plan to migrate remaining farms from Chapter 61 status to either APR or CR.	BCT, CC, Assessor	Year 1- Year 2

Objective - Support the preservation and maintenance of open fields

Action	Who	Due
Develop annual or bi-annually mowing	CC, BCT	Year 2
or haying schedule for publicly owned		
fields held for conservation.		
Identify town lands for a town	FRM,BCT	Year 2-
operated agricultural project (like a		Year 3
community garden) and develop such		
a program, which could include		
leasing fields for private haying.		
Encourage preservation of existing	PB, CC, BCT	Year 1-
fields during FOSPRD process (not		Year 5
just woodlands).		

Objective - Encourage and support agriculture

Action	Who	Due
Investigate the establishment of an agricultural commission or Farm Board per the Commonwealth's Smart Growth initiative.	TA, BoS, BCT	Year 3
Organize a public event to promote Bolton's orchards emphasizing the importance of apple farming in this region.	Land Group, FRM	Year 2
Encourage agriculture during review process of FOSPRD for potential setaside.	CC, PB, BCT	Year 1- Year 5

Establish annual field trips between local schools and day care centers and Bolton orchards that talks about the importance of farming and protecting land.	Land Group, BCT, FRM	Year 2
Investigate and execute strategy around creating a farmer's market, consisting of produce and agricultural products from local farms.	BCT, FRM	Year 2- Year 3
Work with receptive teachers to develop a curriculum around present and long range land use, the role of farmland in the community and methods of preserving open space.	ВСТ, НС	Year 2- Year 3

GOAL #4: PROTECT NATURAL RESOURCES AND WILDLIFE HABITAT

Objective - Preserve natural resources and wildlife habitat through land acquisition and/or protection

Action	Who	Due
Develop a group to identify and catalog wildlife species occurring in Bolton.	CC, BCT	Year 1
Assess natural resources and wildlife habitat value for potential acquisition and or protection; wildlife habitats include woods, fields, wetlands, floodplains, vernal pools, orchards, and scenic viewsheds.	CC, BCT	Year 1 - Year 2
Acquire lands with high natural resource and/or wildlife habitat value.	Land Group	Year 2 - Year 5

Objective - Preserve natural resources and wildlife habitat on lands already under protection

Action	Who	Due
Work with Massachusetts Division of Fisheries and Wildlife on management activities at Bolton Flats and Delaney Wildlife Management Areas.	CC, BCT, TC	Year 2 - Year 5

Develop and execute a program to inventory wildlife, including unique mammals, birds, fishes, and plants on town conservation lands. This could be a scouting program.	CC, BCT	Year 3
Develop and publicize procedure to follow to solve issues created by beaver and/or muskrat on both private and public parcels.	СС, ВОН, ТА	Year 1
Minimize Fragmentation of habitat with proper placement of trails.	TC, CC, BCT	Year 1- Year 5
Develop and publicize a policy on dogs on conservation land.	CC, BCT	Year 4

Objective - Protect Endangered Species

Action	Who	Due
Identify additional habitats that may contain endangered species known to live in Bolton.	BCT, CC	Year 2
Continue to apply all available state laws and bylaws to ensure protection of areas of "estimated habitat for endangered species" as identified by the Massachusetts Natural Heritage Program and based on the inventory described in the previous objective.	CC	Year 1- Year 5

Objective - Publicize information about Bolton's unique natural resources and wildlife habitat

Action	Who	Due
Continue to work with schools and school children on environmental education projects including the ELF (Environmental Learning for the Future) Program and the Tom Denney Nature Camp.	BCT	Year 1- Year 5
Write regular articles for the Bolton Common which highlights important natural areas in town.	BCT, HC, CC	Year 1- Year 5
Develop, implement, and publicize Web content for the BCT and Town Web Sites that identifies Bolton's resources.	BCT, CC	Year 2
Support the use of public lands for class projects and the Tom Denney nature camp which encourages awareness of the natural world in Bolton's youth.	CC, BCT	Year 1- Year 5
Consider developing additional stream teams in coordination with Riverways Program.	BCT	Year 3

GOAL #5: CONSERVE OPEN SPACE AREAS FOR PUBLIC USE

Objective - Develop an integrated land management strategy

Action	Who	Due
Develop and implement a land stewardship program for all publicly held conservation and municipal parcels.	CC, BCT, TC, AC, PR, TA	Year 1
Develop, implement, and publicize a process for maintaining public conservation lands, including new projects, annual maintenance schedule, and all work done in resource areas.	CC, BCT, TC, AC, PR, TA	Year 2

Year 1-
Year 5
CT, CC, PB Year 1 -
Year 5

Objective - Create a trail system for 4-season passive recreation use

Action	Who	Due
Continue progress towards completing the Bolton Loop Trail.	TC	Year 1- Year 5
Investigate the potential for using old railroad beds for trails in town; apply to grant programs for project funding.	TC, CC, BCT, PR, HC	Year 2
Research ownership of private existing trails; locate new trail connections.	BCT, CC TC	Year 1
Design permanent and temporary trail easement agreements.	BCT, CC	Year 2
Approach individual owners about easements.	TC, BCT, CC	Year 2
Hold and publicize land owner suppers to thank private land owners for granting easements and/or restrictions.	BCT	Year 1- Year 5
Clearly mark new easements prior to any development to reduce any future confusion.	TC	Year 1- Year 5

Objective - Publicize conservation lands for public use

Action	Who	Due
Contact with special interest recreation groups in town (e.g., ski, horse) about trail activities.	TC, BCT, CC	Year 2 - Year 3
Complete printed publication of a new trail guide to town conservation lands, update GIS information, and post on town and trust Web sites.	BCT, TC, CC	Year 2

Hold special interest walks (bird-watching, geology, wildflower, tracking, orienteering, etc.) on conservation lands, and post them in local newspapers.	BCT, CC	Year 1 - Year 5
Recruit trail groups from neighborhoods for public trail projects.	TC	Year 1 - Year 5
Encourage the formation of additional trail groups by publicizing trail walks in neighborhoods.	TC	Year 1 – Year 5
Collaborate with Eagle Scouts and other groups on trail projects.	TC, BCT, CC	Year 1 – Year 5
Develop and implement a signage strategy for all public lands.	TC, BCT, CC	Year 1 - Year 4

Objective - Work with surrounding towns on linking trails for a regional trail system

Action	Who	Due
Make contact with trail groups in neighboring towns.	TC, CC, BCT	Year 1- Year 5
Coordinate trail efforts with regional groups (e.g., Nashua River Watershed Association, Sudbury Valley of Trustees, etc.).	TC, BCT, CC	Year 1 - Year 5
Organize inter-town walks with Harvard, Hudson, Lancaster, and Stow.	TC, BCT, CC	Year 1 - Year 5
Create links with trails from other neighboring towns.	TC, BCT, CC	Year 1- Year 5

$\label{lem:continuous} Objective-Identify\ and\ initiate\ revenue\ opportunities\ to\ help\ land\ acquisition\ and\ maintenance\ funding$

Action	Who	Due
Identify and initiate fundraising opportunities, including auctions, multi-sport races held on public land, competitions, annual drives, corporation matching programs, etc.	TC, CC, BCT	Year 1 & 2

GOAL #6 PROVIDE ACTIVE RECREATION OPPORTUNITIES TO BOLTON CITIZENS

Objective - Identify and procure parcels for active recreation

Action	Who	Due
Identify future needs based on population growth studies.	PR, TA	Year 1 - Year 2
Define requirements for specific field- use types, including soccer, baseball, skate board parks, and other activities.	PR	Year 1 – Year 2
Based on needs, work with land group to identify parcels suitable for active recreation.	PR, Land Group	Year 1 – Year 5

Objective - Continue to provide recreation programs

Action	Who	Due
Expand the programs of the Tom Denney Nature Camp.	BCT	Year 1- Year 5
Develop swimming programs at the Town Beach.	PR	Year 2
Identify new active recreation programs like additional summer camps, tennis programs, soccer programs, agricultural programs, ski and skating programs, etc.	PR, BCT	Year 1 - Year 5

Objective - Upgrade fields on town land to meet future needs

Action	Who	Due
Develop a schedule and budget to seed and loam fields on a rotating basis.	PR, DPW	Year 2

Objective - Upgrade picnicking and other facilities at town parks

Action	Who	Due
Review all publicly-owned property, define needs, and develop a plan and priority schedule for upgrading	PR	Year 2

Define budget for above and request funds from the Town for upgrades.	PR	Year 2 - Year 3
Identify facilities appropriate for access and use by the disabled and elderly, and initiate projects that allow that access.	PR	Year 1 - Year 5

Objective - Upgrade skating ponds on town-owned land

Action	Who	Due
Discuss with other boards a	PR	Year 1 -
maintenance strategy for appropriate		Year 2
skating locations like Bowers Springs,		
town beach, or Parson's Park.		

Objective – Identify locations and provide neighborhood parks and recreation activities

Action	Who	Due
Review FOSPRD, Affordable Housing Plans, and Comprehensive Permits to ensure active recreation parcels are included in set aside requirements as appropriate for new developments.	PR, PB, TA, CC, AH, ZBA	Year 1- Year 5
Review tax delinquent list on annual basis against needs and parcel identification.	PR, Land Group, TA	Year 1 - Year 5
Work with private land owners on easements and restrictions as appropriate.	PR, Land Group	Year 1 - Year 5

Objective – Identify revenue opportunities to help fund on-going maintenance efforts

Action	Who	Due
Identify revenue opportunities like refreshment stands at Forbush Mill Field, fund raising activities, auctions, corporate sponsorships, competitions, user fees, etc.	PR	Year 1
Implement appropriate strategy.	PR	Year 2

APPENDIX A

SUPPORT LETTERS FROM TOWN BOARDS AND LOCAL GROUPS

Board of Selectmen
Conservation Commission
Planning Board
Board of Health
Historical Commission
Bolton Conservation Trust
Trail Committee

APPENDIX B

MEMBERS OF THE OPEN SPACE COMMITTEE

Bob Johnson Long Range Planning/Land Use Committee

Bonnie Potter Bolton Conservation Trust & Trail Committee

Marty Fitzgerald Parks & Recreation

Ed Sterling Parks & Recreation

Scott Duhaime Conservation Commission

Bill Fateiger Conservation Commission

Joe Myerson Conservation Commission

Karen Groginksy Conservation Commission

Rose Stanley Conservation Commission

Carol Gumbart Conservation Administrator

Jane Moosebrucker Citizen

Panny Gerkin Long Range Planning Committee

Suzy Becker Historical Society

APPENDIX C LIST OF OFFICIAL MEETING DATES

<u>Initial Public Meetings – Publicized in Bolton Common Newspaper and held at Town Hall</u>

2/10/03

4/8/03

<u>Town Boards – Published in Individual Meeting Agendas, held in Open Public Meeting</u> Format

Long Range Planning Committee, Emerson School - 5/12/03

Bolton Conservation Trust, Emerson School – 2/10/04

Department of Public Health, Town Hall – 3/9/04

Planning Board, Town Hall – 3/24/04

Board of Selectmen, Town Hall – 4/15/04

Bolton Conservation Trust, Emerson School – 5/25/04

Parks & Recreation, Parson's Park – 6/7/04

<u>Public Meetings to Define Goals, Objectives, and Action Plan – Publicized in Bolton Common Newspaper and Held at Town Hall</u>

4/1/04

4/5/04

4/13/04

APPENDIX J

TOWN OF BOLTON PERSONNEL BYLAW

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1.14.1 Scope of the Bylaw

This Bylaw has been adopted pursuant to the provisions of M.G.L. Chapter 41, sections 108A and 108C, and other enabling acts. This bylaw does not supercede Federal or State Laws and Regulations.

The bylaw applies to all employees of the Town except:

- a) those filled by popular election
- b) those under the control of the School Committee; and
- c) those covered by collective bargaining agreement.

1.14.2 Equal Employment Opportunity, At Will Employment

The provisions of this bylaw shall be applied equally to all employees without discrimination as to age, sex, marital status, race, color, creed, national origin, handicap, veteran status, or political affiliation.

The Town of Bolton subscribes to the Commonwealth of Massachusetts prevailing employment-at-will relationship between employer and employee, which states that either party may terminate the employment relationship at any time, with or without cause or notice, absent a limiting statute or contractual agreement between the employer and employee.

1.14.2.1 Harassment

Harassment is conduct that has the purpose or effect of creating an intimidating, hostile or offensive working environment, interfering with an individual's work performance, or otherwise adversely affecting an individual's employment opportunities.

Derogatory comments and objectionable conduct of a racist, ethnic, or sexist nature or those aimed at a person's handicap are not only abusive and offensive, but are also violations of the laws, policies, and guidelines of equal opportunity. No employee either male or female is to be subjected to unsolicited and unwelcome conduct of a sexual nature, nor is any employee to be subjected to comments which are disparaging to his/her handicap, sex, or racial or ethnic background.

1.14.2.2 Sexual Harassment

Introduction

It is the goal of the Town of Bolton to promote a workplace that is free of sexual harassment. Sexual harassment of employees occurring in the workplace, or in

other settings in which employees may find themselves in connection with their employment, is unlawful and will not be tolerated by this town. Further, any retaliation against an individual who has complained about sexual harassment or retaliation against individuals for cooperating with an investigation of sexual harassment complaint is similarly unlawful and will not be tolerated. To achieve our goal of providing a workplace free from sexual harassment, the conduct that is described in this policy will not be tolerated and we have provided a procedure by which inappropriate conduct will be dealt with, if encountered by employees.

Because the Town of Bolton takes allegations of sexual harassment seriously, we will respond promptly to complaints of sexual harassment and where it is determined that such inappropriate conduct has occurred, we will act promptly to eliminate the conduct and impose such corrective action as is necessary, including disciplinary action where appropriate

Please note that while this policy sets forth our goals of promoting a workplace that is free of sexual harassment, the policy is not designed or intended to limit our authority to discipline or take remedial action for workplace conduct which we deem unacceptable, regardless of whether that conduct satisfies the definition of sexual harassment.

Definition of Sexual Harassment

In Massachusetts, the legal definition of sexual harassment is this:

"sexual harassment" means sexual advances, requests for sexual favors, and verbal or physical conduct of a sexual nature when:

submission to or rejection of such advances, requests or conduct is made either explicitly or implicitly a term or condition of employment or as a basis for employment decisions; or,

such advances, requests or conduct have the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, humiliating or sexually offensive work environment.

Under these definitions, direct or implied requests by a supervisor for sexual favors in exchange for actual or promised job benefits such as favorable reviews, salary increases, promotions, increased benefits, or continued employment constitutes sexual harassment.

The legal definition of sexual harassment is broad and in addition to the above examples, other sexually oriented conduct, whether it is intended or not, that is unwelcome and has the effect of creating a work place environment that is hostile,

offensive, intimidating, or humiliating to male or female workers may also constitute sexual harassment.

While it is not possible to list all those additional circumstances that may constitute sexual harassment, the following are some examples of conduct which if unwelcome, may constitute sexual harassment depending upon the totality of the circumstances including the severity of the conduct and its pervasiveness:

Unwelcome sexual advances - whether they involve physical touching or not, including repeated, offensive sexual flirtations, advances or propositions;

Sexual epithets, jokes, written or oral references to sexual conduct, gossip regarding one's sex life; comment on an individual's body, comment about an individual's sexual activity, deficiencies, or prowess;

Displaying sexually suggestive objects, pictures, cartoons;

Unwelcome leering, whistling, brushing against the body, sexual gestures, suggestive or insulting comments; and

Discussions of one's sexual activities.

Incidents of sexual harassment may result from the conduct of managers, supervisors, or other employees, and may also result from the conduct of the Town's vendors, clients or suppliers or other parties with whom the Town deals with on a regular basis. All incidents of harassment, whether occurring internally within the Town's offices, or externally when an employee of the Town is performing services at any other location, should be reported promptly to the contact persons identified in the complaint procedure outlined below.

Complaint Procedure

In compliance with Massachusetts General Laws Chapter 151B, Section 3A, the following sexual harassment complaint procedure has been developed by the Personnel Committee specifically to ensure that complaints are investigated quickly and in a manner that is fair to all:

- 1. Any employee having a complaint of harassment should immediately notify his/her immediate supervisor. If this complaint is against the immediate supervisor or if the employee does not feel comfortable in approaching his/her immediate supervisor relative to the compliant, the employee should immediately notify the Personnel Committee, or a member thereof. To obtain the work addresses and telephone numbers of The Personnel Committee, contact the Town Secretary at 779-2297.
- 2. If a supervisor receives a complaint of harassment, the supervisor is required to immediately notify the Personnel Committee. When the Personnel Committee receives the complaint we will promptly investigate the allegation

in a fair and expeditious manner. The investigation will be conducted in such a way as to maintain confidentiality to the extent practicable under the circumstances. Our investigation will include a private interview with the person filing the complaint and with witnesses. We will also interview the person alleged to have committed sexual harassment. In the event of such an investigation, each employee, supervisor and manager is responsible for cooperating fully with the Personnel Committee.

3. When we have completed our investigation, we will, to the extent appropriate, inform the person filing the complaint and the person alleged to have committed the conduct of the results of that investigation.

If it is determined that inappropriate conduct has occurred, we will act promptly to eliminate the offending conduct, and where it is appropriate we will also impose disciplinary action.

Disciplinary Action

If it is determined that inappropriate conduct has been committed by one of our employees, we will take such action as is appropriate under the circumstances. Such action may range from counseling to termination from employment, and may include such other forms of disciplinary action as we deem appropriate under the circumstances

No Retaliation for Filing Complaint or for Cooperating in an Investigation

No employee, supervisor or manager shall be retaliated or discriminated against in any way for making a complaint of sexual harassment in good faith or for assisting or cooperating in the investigation of such a complaint. Such retaliation or discrimination is unlawful, and shall not be tolerated by the Town.

State and Federal Remedies

In addition to the above, if an employee believes he/she has been subjected to sexual harassment, they may file a formal complaint with either or both of the government agencies set forth below. Using the Personnel Committee complaint process does not prohibit an employee from also filing a complaint with these agencies.

Please note, each of the agencies has a short time period for filing a claim (EEOC - 180 days; MCAD - 6 months).

The United States Equal Employment Opportunity Commission ("EEOC")

One Congress Street, 10th Floor Boston, MA 02114 Telephone: (617) 565-3200 FAX: (617) 565-3196

The Massachusetts Commission Against Discrimination ("MCAD")

One Ashburton Place, 6th Floor, Room 601

Boston, MA 02108

Telephone: (617) 727-3990 FAX: (617) 720-6053

1.14.2.3 Notification of Employment Opportunities

Notice of all vacancies shall be posted on each department's bulletin board and at the Town Hall prior to public advertising. Advertising is to be done in area newspapers for a maximum of two weeks. All positions must be classified and all interviews must be held after the advertisement period has ended.

1.14.3 Personnel Committee

This Personnel Bylaw shall be administered by a Personnel Committee, consisting of five voting members appointed by the Board of Selectmen, said Board shall have the power to fill all vacancies. Members are appointed for three-year, staggered terms. The Committee shall select a chairman from its membership who shall preside over meetings. The Committee shall select a clerk from its membership who shall be responsible for recording minutes of all committee meetings, in accordance with the Open Meeting Law.

Like all Town employees and board/committee members, the Personnel Committee is subject to and shall abide by the provisions of the Conflict of Interest Law. M.G.L. Chapter 268A.

No members of the Personnel Committee may be an employee of the Town nor hold Town office, whether appointed or elected. Members of the Personnel Committee shall serve without compensation.

At any meeting of the Personnel Committee action by a majority of the Committee members present shall be binding. At least three members of the Committee shall be present in order to constitute a quorum.

The Personnel Committee is responsible for administering this Personnel Bylaw and may establish procedures as necessary to fulfill this charge. The Personnel Committee may, from time to time, make and issue interpretations and regulations consistent with the provisions of the Personnel Bylaw and necessary for its administration. Similarly, the Personnel Committee shall periodically review the Bylaw

and make recommendations for changes, as appropriate, and in accordance with the provisions governing amendments as set forth in Section 1.14.11.

It shall be the responsibility of the Personnel Committee to develop a classification and compensation plan, and to review position classifications and rates of pay at reasonable intervals, as set forth in Section 1.14.10(a). The Personnel Committee shall conduct an open meeting once annually with town employees to discuss employee concerns about salary, fringe benefits, and the administration of the Bylaw. The Personnel Committee shall fulfill its role in the Grievance Procedure, as outlined in Section 1.14.8.

1.14.4 Definition of Employee Categories

- a) FULL TIME EMPLOYEE is a regular employee who works at least 40 hours per week throughout the year.
- b) PART TIME EMPLOYEE is a regular employee who works less than 40 hours per week throughout the year.
- c) TEMPORARY EMPLOYEE is an employee in a full or part time position which is not likely to require the services of an incumbent on a year-round basis. Seasonal employees and employees hired for a specific project on a short-term basis are considered temporary employees.
- d) REGULAR EMPLOYEE is an employee who has completed his/her 90-Day Assessment Period.
- e) EXEMPT EMPLOYEE is a salaried employee who is employed in an executive, administrative, or professional capacity, and is not generally entitled to overtime pay if she/he meets the following criteria:
 - 1) Executive--primary duty is to manage a department;
 - 2) Administrative--primary duty is office or non-manual work directly related to management policies, or directly assisting an executive; and
 - 3) Professional--primary duty requires advanced knowledge acquired by specialized study, work is intellectual and the result is not standardized.
- f) NON-EXEMPT EMPLOYEE is an employee, whether paid a salary or hourly wage, whose primary duty is not executive, administrative, or professional in nature. A non-exempt employee is entitled to overtime pay under certain conditions.

1.14.5 90-Day Assessment Period

The first ninety (90) days of employment between the Town and new employees is considered an assessment period wherein both parties assess overall match of skills, abilities, and job needs to determine if the correct employment decision has been made. Prior to the conclusion of this period either party may dissolve the employment relationship consistent with the prevailing practices of the employment-at-will relationship.

During the 90-Day Assessment Period applicable employee benefits are made available to eligible employees. However, if the employment relationship is dissolved at any time during the 90-Day Assessment Period, exiting employees will not be entitled to any accrued vacation time. An employee is entitled to pay for holidays during the 90-Day Assessment Period, and may use sick leave as earned.

1.14.6 Work Week

The normal work week for employees shall be as follows:

Managerial Employees As required
Police Employees 40 hours per week
Highway Employees 40 hours per week

Communication Employees 40 hours per week

1.14.7 Interruption of Service

Any regular employee who leaves Town service while in good standing may be rehired by the appointing authority and, upon successful completion of one year's service, will be given credit for time actually employed by the Town.

1.14.8 Grievance Procedure

A grievance is a dispute between an employee and the appointing or supervisory authority arising out of an exercise of management rights or administrative discretion, or interpretation of this Bylaw.

STEP I. An employee who has a grievance must discuss the grievance with the department head and/or supervisory authority in a mutual effort to resolve the grievance.

STEP 2. If, one week after such conference, a satisfactory understanding and solution of the grievance has not been reached, then either the department head or the employee may refer the grievance to the Personnel Committee. The Committee shall

hold a hearing thereon and render a written decision within ten working days of such hearing.

STEP 3. If any party is aggrieved by the decision of the Personnel Committee, such decision may be appealed in writing to the Board of Selectmen, who shall conduct a hearing with respect hereto and render a written decision within ten days of such hearing. A decision of the Board of Selectmen with respect to the grievance shall be binding on both parties.

1.14.9 Fringe Benefits

a) Vacation Time

Full time employees shall be entitled to paid vacation in accordance with the following schedule:

Less than five (5) years of service two (2) weeks/year

From five (5) years to

less than eleven (11) years of service three (3) weeks/year

Upon completion of eleven (11) years of service four

(4) weeks/year

Upon completion of twenty (20) years of service five (5)

weeks/year

An employee shall request vacation leave from his/her supervisor, giving as much notice as possible. An employee is eligible for vacation leave after completing one year of service and may begin taking leave as accrued after that time. If a holiday falls during a vacation period, an additional day off will be scheduled, by agreement with the department head.

Vacation leave is credited monthly, beginning in the first month of employment, at the rate of 1/12 of the employee's annual entitlement. Vacation leave may not be taken until it is earned. Vacation entitlement for the first and last months of an individual's employment shall be pro-rated on a calendar day basis to the date of hire or termination, as appropriate. For vacation increment purposes, the anniversary date shall be considered the first day of the month of date of hire, for those employees hired between the first and the fifteenth day of the month. Those employees hired after the fifteenth day of the month shall have an anniversary date of the first day of the following month, for vacation increment purposes.

Part time employees working an average of at least 20 hours per week are entitled to vacation according to the above schedule, with their vacation pay pro-rated to their weekly schedule.

Temporary employees or employees working fewer than 20 hours per week are not entitled to vacation pay.

Employees are required to take vacation on a regular basis to allow for the proper rest from the rigors of work. In unusual circumstances and with prior approval of the department head and Personnel Committee, no more than (5) accrued vacation days may be carried into, and must be taken, during the next calendar year.

b) Sick Leave

Each full time employee shall accumulate sick leave at the rate of one and one quarter day for each month of employment (15 days / year). Unused sick leave may be accumulated up to a maximum of 120 working days. Sick leave is intended for use in times of illness only and as such carries no "buyback" or "cash in" valuation

New employees are entitled to sick leave after completing at least one month of service.

Part time employees who work a minimum of 20 hours per week are eligible to accumulate sick leave on a pro-rated basis.

Sick leave is generally for protection of employees against loss of pay due to personal illness. However, sick leave may be used by an employee for illness of a dependent child, spouse, or other immediate relative. Medical certification may be required for any illness after five (5) consecutive days.

c) Personal Leave

Each full time employee with at least one year of service is allowed two days each fiscal year for personal reasons. Personal leave is not to be used as vacation, and may not be combined with vacation leave. Except in an emergency, employees should obtain approval from their supervisors at least 48

hours in advance of taking the personal day. Personal leave may not be carried over from one fiscal year to the next.

Part time employees who work a minimum of 20 hours per week are eligible for personal leave pro-rated basis to their weekly schedule.

d) Bereavement Leave

An employee may be granted up to three days of bereavement leave for the purpose of arranging for and attending the funeral of a member of the employee's immediate family. "Immediate family" shall include spouse, child, parent, brother, sister, parent-in-law, children-in-law, or other relative residing in the employee's household. An employee may be granted up to one day of bereavement leave for the purpose of attending the funeral of a grandparent, aunt, uncle, or other close relative.

e) Holidays

Floating one-half day

New Year's Day January 1

Martin Luther King Day 3rd Monday in January

Washington's Birthday 3rd Monday in February

Patriots' Day 3rd Monday in April
Memorial Day Last Monday in May

Independence Day July 4

Labor Day 1st Monday in September
Columbus Day 2nd Monday in October

Veterans' Day November 11

Thanksgiving Day 4th Thursday in November

Day after Thanksgiving 4th Friday in November

Christmas December 25

Full time employees and part time employees who work at least 20 hours per week will receive compensation on a pro-rated basis for the above listed holidays. Employees working on a holiday will be paid double time, with the exception of the December 25th holiday when all working employees will be paid at a rate of double time plus one half time therefore equal to two and one half times their regular pay.

f) Jury Duty

Employees required to serve on a jury shall be paid the difference between the compensation received from jury duty (excluding travel allowance) and their regular compensation from the Town. In most cases, this will be full pay for the first three days of jury duty, and full pay less the daily jury compensation paid by the court system for the balance of the time served on the jury. Proper evidence of jury pay received must be submitted to the department head

g) Military Leave

Regular employees who are called for temporary military duty shall receive the difference between their military pay (excluding travel allowance) and their regular pay for up to two weeks of such duty annually. Their vacation allowance shall not be affected by such duty.

h) Deleted December 13, 1999, Article 3

i) Leaves of Absence

The Town of Bolton will abide by all federal and state laws regarding family and medical leave, to include FMLA (Family and Medical Leave Act) and SNLA (Small Necessities Leave Act), and other applicable federal or state laws regarding leaves of absence.

A detailed description of FMLA and SNLA can be found in the Town of Bolton Employee Handbook.

j) Insurance Benefits

The Town and employee shall share equally in the cost of health and life insurance benefits. The employee's share of the premium payment is deducted from his/her pay check. Employees working a minimum of 20 hours per week on a year-round basis are entitled to join the Town's group insurance program. The Town currently offers health insurance programs through a commercial carrier and Health Maintenance Organizations. The Town also offers a \$5,000 Savings Bank Life Insurance Policy.

Employees who are members of Bolton health insurance group and terminate employment (for reasons other than gross misconduct) may continue coverage in the group for up to 18 months, at their own expense. Such

continued coverage will be identical to the coverage provided under the plan for active employees and their covered families, but will cease if the premium is not paid on a timely basis or if they become covered under another group health plan.

Health insurance coverage may be continued, at their own expense, for up to 36 months for a spouse or dependent child of an employee who dies while employed by the Town. In the case of a divorce or legal separation, health insurance may be continued for dependents, at their own expense or at the expense of the employee, in accordance with the divorce/separation agreement. Continuation of this coverage also ceases if the premium is not paid on a timely basis or if coverage is obtained through another group. In addition, dependent children have the right to continue coverage with their own membership, at their own expense, if coverage through the Town's group is lost when they cease to have "dependent child" status under the terms of the health insurance policy.

k) Workers' Compensation/Injury Leave

Police and Fire uniformed employees are covered under the provisions of M.G.L. Chapter 4l Section 100 and 111F, and are entitled to the rights and benefits of these laws. All other employees are covered under the Massachusetts Worker's Compensation Law and are entitled to the benefits and provisions of this law.

1) Pension

Regular employees working a minimum of 20 hours per week (1000 hours per year) are required to join the Worcester County Retirement Association, with payroll deductions made in accordance with State Law and date of hire

m) Educational Assistance

Full time employees and part time employees working at least 20 hours per week, who have worked for the Town for at least one year are eligible for reimbursement for tuition, registration fees, and books for work-related courses which serve to improve their knowledge and skills and increase their performance with the Town.

Approval for the particular course must be requested prior to enrollment in order to be eligible for the reimbursement, and in order to qualify must have the recommendation of the department head and approval of the Personnel Committee. Approval is subject to sufficient municipal funds. Reimbursement shall be made upon successful completion of the course or program. The Town may require the employee to sign an agreement to remain

with the Town for a period of up to two years after completion of the course, or else be willing to reimburse the Town for the funds.

"Successful completion" of a course shall mean a minimum grade of B or equivalent.

1.14.10 Compensation

a) Compensation Review

Whenever the Personnel Committee reviews the wage and salary provisions of this Bylaw, it shall take into account and give such weight as it may deem desirable to the following:

- Rates of pay for like positions in other Massachusetts towns considered by the Personnel Committee to be comparable to Bolton;
- Rates of pay for like jobs (if any) in commercial and business establishments in the area of Bolton and vicinity;
- Other benefits received by Town employees;
- The current level of the Consumer Price Index for the Boston area; and
- The financial policy and economic considerations of the Town.

b) Overtime/Compensatory Time

Payment for overtime shall be in accordance with the terms of the Fair Labor Standards Act of 1938, as amended. If an assignment requires work in excess of 40 hours per week, such overtime work must be authorized in advance by the department head. Non-exempt employees shall be paid one and one-half times their regular hourly rate for hours worked beyond 40 in the work week. Compensatory time may be taken in lieu of overtime pay, at the rate of time and one-half, only by mutual agreement of both employee and supervisor prior to overtime hours being worked. If such agreement is made, then compensatory time should be taken within a reasonable time of being earned. An employee is eligible to be paid for any unused compensatory time upon termination or retirement. Supervisory, professional, and managerial employees are exempt employees and are not eligible for overtime pay.

c) Payroll Period

Employees are paid on a bi-weekly basis for a period beginning on a Sunday and ending on a Saturday. Payday is generally Wednesday for the two-week period ending the previous Saturday.

d) Call-Back Pay

If full time non-exempt employees are recalled to work from offduty hours, the Highway Department will receive a minimum of three hours pay, and the Police Department will receive a minimum of three hours pay.

e) Longevity Pay

All full time employees shall receive longevity payments according to the following schedule:

Length of Service	Annual
Amount	
10 years	\$200
15 years	\$300
20 years	\$400

On an annual basis the Selectmen should review any full-time employee who has accumulated over 20 years of service to the Town and may award a meritorious award up to \$100 for this service.

This amount shall be paid in one lump sum in the first pay period following the anniversary of the employee's date of hire. The date of hire shall be considered the date when the employee began working for the Town at least 20 hours per week on a continuous basis. The years of service shall be calculated from this date of hire.

All part time employees working at least 20 hours per week are entitled to longevity pay according to the above schedule, with the amount of payment pro-rated to their weekly schedule.

Temporary employees, or employees working fewer than 20 hours per week are not entitled to longevity pay.

1.14.11 Amendments to the Bylaw

This Bylaw may be amended by vote of the Town at a Town Meeting. How ever, no amendment shall be considered or voted on by Town Meeting unless the proposed amendment has first been considered by the Personnel Committee and Board of Selectmen.

1.14.12 Collective Bargaining Agreements

The provisions of any collective bargaining agreement negotiated, as provided by the Mass. General Laws, between the Town and an employee, group or union shall prevail over the provisions of this Bylaw.

1.14.13 Severability Clauses

Each provision of this Bylaw shall be construed as separate, to the end that if any part of it shall be held invalid for any reason, the remainder shall continue in full force and effect.

1.14.14 Implementation

Implementation date of Sections 1.14.9 and 1.14.10 of this bylaw and all their respective subsections shall be implemented and become effective commencing July 1, 1988.

1.14.15 Reimbursement for Town Business Expenses

(a) Mileage Reimbursement

When employees have prior approval from their supervisor to use their personal vehicle for Town business, they are reimbursed for business travel at the approved per mile rate, set by the Personnel Committee and the Town Treasurer concurrently. Local travel expenses between the employee's home and assigned work location are not reimbursable. However, if employees are required by business necessity to travel from home directly to a site other than their assigned work location, the Town will reimburse them for the difference between the mileage in their normal commute to their assigned work location and the total miles driven on business.

When using a private vehicle for Town business purposes, the employee assumes liability for the vehicle. All employees who use their personal vehicles for Town business must have a current driver's license and vehicle liability insurance in the minimum amounts required by state law. Otherwise, the vehicle is not authorized for Town business use.

APPENDIX I

BOLTON CONSERVATION COMMISSION BEAVER & MUSKRAT MANAGEMENT GUIDELINES

Bolton Conservation Commission
Beaver & Muskrat Management Guidelines
Dated April 16, 2004
Version 1.0

Overview

The Bolton Conservation Commission, ("the Commission"), recognizes that the beaver and muskrat population are part of the rural landscape of Bolton, and in general, should be left alone as part of the natural environment. As part of its charter, the Commission will continue to enforce the Wetlands Protection Act and the Bolton Wetlands Bylaw, as applicable, to protect the resource areas that provide their habitat.

Best intentions aside, the Commission recognizes that there are times when the activities of these animals may become a public health threat. For general guidance, the Commission subscribes to the regulations and procedures (together the "Regs") as set forth by the Commonwealth of Massachusetts ("the Commonwealth"), Massachusetts Department of Public Health ("DPH"), and the Division of Fisheries and Wildlife ("DF&W"). These Regs are documented at the following Web site: http://www.state.ma.us/dph/beha/beavers/beavh.htm.

Process

In general, the first step an individual must take if they believe there is a problem caused by beaver or muskrat activity in the town of Bolton is to determine if the problem is a threat to public health and safety. If the individual ("Applicant") believes the problem is a threat, they must contact the Bolton Board of Health ("BoH"), who will walk the applicant through a checklist that identifies the potential threat. If the BoH determines there is a threat, they will issue a 10-day emergency permit that allows the Applicant the following options:

- A) Trap with a box/cage or Conibear trap
- B) Breach the dam
- C) Install a water-flow device

If it is determined the problem is not a threat to public health and safety, the Applicant can contact the DF&W, Massachusetts Society for Prevention of Cruelty to Animals ("MSPCA"), or a private contractor who can advise of available solutions.

Activities Requiring Review by the Commission

In either an emergency or non-emergency/non-threatening situation, both B and C must be approved by the Commission, either of which can be expedited without a Public Hearing if the BoH issues the emergency permit. However, if the problem is not a threat to public safety or if the BoH denies the emergency permit and either option B or C are required to alleviate the problem, the Applicant must file an NOI and the Commission must hold a Public Hearing and issue a decision and a permit before any work can be done in the resource area.

Financial Considerations

The Applicant is financially responsible for any action taken on private land.

If any of the permitted activities are to occur on town-owned conservation land, the Commission may contact the DF&W, MSPCA, or a private contractor to discuss the best approach for a short and long term solution, and if budgeted, may take immediate steps to solve these issues. This may include hiring a contractor, or a trained individual, either employed by the town or independently. If funds are not immediately available to the Commission to solve the issue, the Commission will review with the Board of Selectmen and/or Advisory Committee if contingency funds are available. If contingency funds are also unavailable, the Conservation Commission will work with other

boards/commissions to locate suitable funds to address a more financial viable, short term solution.

On an annual basis, the Conservation Commission will provide a historical account of locations and funds used to control the above issues in the previous fiscal year, and will provide an estimate to Advisory Committee to control potential new issues on public conservation land through the upcoming fiscal year. Should contracting expenses become a financial burden, the town may consider training certain individuals in the community, either employed by the town or not, in beaver control.