

Boylston Open Space & Recreation Plan 2005-2010



*Farm on Cross Street – Town of Boylston
Photo by Sue Moore*

Prepared By:

**McGregor & Associates, P.C. and the Town of Boylston Open Space &
Recreation Plan Committee**

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Committee

The Boylston Open Space Committee includes the following people:

- Gigi Desautels
- Gerry Donnolly
- Dennis Goguen
- Susan Moore
- Teresa Prunier
- Gary Tuthill

The Town Administrator is Suzanne Olsen who was also involved. The Committee also acknowledges the valuable assistance of Brandon Kibbe of the Sudbury Valley Trustees and the 2004 Tahanto Envirothon Team (coached by Susan Moore) which made models, posters and a video on Boylston Open Space and the OSRD for the 2004 Boylston Town Meeting and the local access channel for Boylston.

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SECTION 1: PLAN SUMMARY

This Open Space Plan reflects Boylston's desire to protect, maintain, and diversify the open space available to its citizenry. Boylston acknowledges the value of existing open spaces—in terms of aesthetics, water supply, health, welfare, the economy, and recreation—and the benefits it provides for the Town. At the same time, Boylston recognizes the need to maintain lands in active use, and to balance local fiscal needs and tax-base concerns with conservation efforts.

Ultimately, the quality of life for all of Boylston's residents is enriched by the quality of the open space in the Town and region, whether the space is enjoyed for recreational activity or green tranquility. Boylston already enjoys a vast array of open space resources, in part a result of large state watershed protection holdings around Wachusett Reservoir. Interestingly, the Town lies within three watersheds, as discussed in more detail in Section 4.

Boylston will face some major decisions during the implementation of this plan such as determining what land parcels are important to acquire, addressing unmet open space and recreation needs, and also how to put the preservation of agricultural and natural resources, particularly for water supply, at the forefront of any growth discussions. Having a solid inventory of open space and recreational facilities and a plan as to how they will be taken care of will be a critical stepping-stone as the Town moves towards achieving its goals.

This plan also offers an overview of Boylston's history, physical development, demographic profile and environmental characteristics. Each component was critical in the identification of how to best serve the changing needs of Boylston residents as they pertain to open space and recreation.

The key components of the Plan include recommendations for a non-zoning wetlands bylaw, some zoning bylaw changes, developing criteria for future open space acquisition opportunities, outreach and education on open space and natural resource protection, creating regional networks for trails and other open space assets, and watershed protection. These issues are discussed in the Goals and Objectives (Section 8), as well as the Five-Year Action Plan (Section 9).

SECTION 2: INTRODUCTION

Statement of Purpose

Open space provides many kinds of recreation opportunities for residents, valued habitat for flora and fauna, watershed protection, public health and aesthetic benefits and a healthy dose of beauty in Boylston's unique setting. The purpose of this plan is threefold:

- to increase awareness concerning the open space and recreation needs and opportunities in Boylston;
- to encourage thoughtful planning and a sustained commitment to open space protection, care taking, and enhancement; and
- to outline a five-year plan of action with the Town agencies and Boylston's community organizations for the protection, care taking, and enhancement of land in the Town.

Importantly, this document includes elements of a *physical* plan - concerned with existing and proposed properties, facilities, and infrastructure, an *organizational* plan - concerned with the formal and informal organizational structures the Town has for maintenance, management, and overall decision-making related to open space and recreation, and also an *informational* resource - inventorying and describing resources, discussing past successes and present challenges, and in general "telling the Boylston open space story."

It is hoped and expected that this Plan will be a "living document" to guide the Town of Boylston, that will be consulted on a daily basis by citizens and decision-makers and evaluated and updated periodically. A number of the action items in Section IX speak directly to ways to accomplish this goal.

Planning Process and Public Participation

This Plan represents the first effort at local open space planning in Boylston. McGregor & Associates, P.C., was selected to complete the project. The contract was finalized and work on the plan began in 2003.

The public participation component of the process involved a number of simultaneous and mutually reinforcing tracks, as follows:

- 1) Open Space Planning Committee:** The Town Administrator appointed an Open Space Planning Committee for the purpose of

coordinating consultant work, encouraging public input, and developing this plan. The first meeting of this joint group was advertised and held in February 2004, and the group met regularly after that. A number of citizen volunteers attended meetings as well and provided the Committee with their input.

- 2) Community Forum:** On June 16, 2004, the Committee hosted an Open Space and Recreation Forum in Town Hall, attended by approximately twelve residents. Issues discussed and input received at this forum helped to form the plan's goals and objectives. The final draft of the plan was presented to the community in 2004.

SECTION 3: COMMUNITY SETTING

3.1 REGIONAL CONTEXT

The Town of Boylston is located in Central Massachusetts and is a part of Worcester County. Bordered by Sterling and Clinton in the north, Berlin and Northborough in the east, Shrewsbury in the south and West Boylston in the west, Boylston is 38 miles west of Boston and 7 miles north of the City of Worcester. As of the most recent Census – Census 2000, Boylston has a population of 4,008 people, a 14% increase from 1990. Compared to other nearby towns, only Shrewsbury (31%) and Northborough (17.5%) saw higher increases in population during the same timeframe.

Boylston is in the southern edge of the Nashua River Watershed. The Nashua River Watershed has unusual characteristics. The river was once a glacial lake that flowed southward through the Worcester area, but as a result of the Pleistocene glaciation, its direction reversed and the Nashua River Valley was created. From its impoundment at the Wachusett Reservoir, the mainstem of the river flows northward, meandering its way through north-central Massachusetts before eventually emptying into the Merrimack River in southern New Hampshire. The Nashua River Watershed has a total drainage area of approximately 538 square miles, with 454 square miles of the watershed occurring in Massachusetts and 74 square miles in New Hampshire. The Nashua River flows for approximately 56 miles, with approximately 46 of those miles flowing through Massachusetts, and is fed by the Squannacook, Nissitissit, Stillwater, Quinapoxet, North Nashua, and South Nashua Rivers.

The watershed encompasses all or part of 31 diverse communities, 7 in southern New Hampshire and 24 in central Massachusetts. Residents value the beauty of their local area and the conservation of open space, which protects water quality, wildlife habitats, farms, and forests and provides increased recreational opportunities. The watershed is also home to the Wachusett Reservoir, which provides drinking water to two-thirds of the Commonwealth's population.¹

Additionally, as described in Section 4.3.5, the Town is also located within portions of the Blackstone and SuAsCo watersheds. This unique characteristic drives a number of the goals and objectives, as well as the priority action items in this Open Space and Recreation Plan.

¹ Executive Office of Environmental Affairs website,
<http://www.state.ma.us/envir/water/nashua/nashua.htm>

Boylston was first settled in the 1720's in what was then part of Lancaster and Shrewsbury and by 1842 had become the North Precinct of Shrewsbury with its own Meetinghouse. In 1786 the Town of Boylston was incorporated. About ¼ of the land in the north of town was formerly Lancaster and the remainder formerly Shrewsbury. The Town took the name of Ward Nicholas Boylston, a wealthy benefactor and the donor of the funds that constructed the 1830 Stone Town Hall.

The Town was mostly a farming community for the first 150 years of settlement. By the beginning of the industrial revolution the section of town known as Sawyers Mills located on the Nashua River began to develop from a few small saw and grist mills to a thriving industrial complex with brick mills, row houses, stores and became a busy mill village engaged in cotton manufacturing. The railroad came through the village in the 1870's further enhancing the growth.

By 1890 this thriving village had black clouds on its horizon in that the State Board of Health had identified the Nashua River Valley as the prime location for a reservoir to supply water for the metropolitan Boston area. Fifteen years later the Wachusett Reservoir was completed and Sawyers Mills no longer existed. Half of Boylston's tax base was gone and the population declined by a third.

By the early 1900's there were no manufacturing jobs in Boylston, farming was declining and a third of most productive land was owned by the State. A new role for Boylston was created when the Electric Street Railway (Trolley) came to Town. It was no longer necessary to live within walking distance of your work place. The City of Worcester had much thriving industry and available jobs, while Boylston had available and affordable land. Land developers promoted the benefits of living in the country and laid out hundreds of lots in subdivisions with names like "City Gardens" and "Morningdale Manor". Many of the lots were 25 feet by 100 feet and there were all sorts of promotions that encouraged people to buy even more land. Many paper streets were laid out and never built.

The Village of Morningdale was named for one of the land promotions and to this day remains the most densely populated area of Boylston. The Wachusett Reservoir is one of the most important components of the Massachusetts Water Resources Authority water supply, which has in recent years expanded the amount of publicly held land in the watershed.

Boylston continued to grow slowly through the first half of the 20th century with a spurt of growth occurring after WWII and through the 60's. Farming continued to decline in the second half of the century to the point where in

2004, few if any people derive their primary income from farming in Boylston.

3.2 HISTORY OF THE COMMUNITY²

In 1717, a group of prospective settlers received a grant of land that comprised the present town of Shrewsbury plus the lower 2/3 of present-day Boylston and all of West Boylston. The first settlement in Boylston occurred in the early 1720's when several Lancaster families moved into the area.

By 1742, the number of people in Boylston had grown to warrant the creation of a separate town. The Colonial Governor turned down the request but did agree to create a quasi-independent area that was called the Second or North Parish of Shrewsbury. The citizens immediately began to organize their new precinct. Officials were chosen and plans were made to build a meetinghouse and seek a minister to fill the pulpit. The choice of minister fell on 25-year old Ebenezer Morse. A native of Medfield, he was a graduate of Harvard where he exhibited a superior intellectual ability. He studied some medicine but decided to pursue the profession of lawyer. He studied law in Worcester and found it not to his liking, so he returned to Harvard where he was awarded a master's degree of Divinity. Boylston was his first and only congregation.

By 1774, the population of the North Parish had grown to 500. The residents were split between those who supported the revolutionary movement and those who remained loyal to the Crown. Rev. Ebenezer Morse, who was later removed from his church, led the Tories. In April 1775, a company of minutemen marched to Boston to assist in the initial battles of the War of Independence. Over 100 men would serve in the army.

In 1786, the Second Parish was finally granted the status of a separate town, which was called Boylston in honor of the prominent Boston family of the same name. Boylston was primarily an agricultural community with its share of tradesmen. It had a school, a Meeting House, a general store run by Aaron White, several taverns, and in 1792, a Social Library that was housed in the home of the town minister.

The growth of the town was slow but steady. In 1793, the citizens who lived in the western part of the town built a second meetinghouse, not without some heated opposition. That group, led by Revolutionary War hero, Major Ezra Beaman, petitioned to be set apart from Boylston. The petition was granted in 1808, the new community taking the name West Boylston.

² Kenneth Kreutziger, 2000 Boylston Comprehensive Plan, March 2000

When Fort Sumter was attacked and President Lincoln called for volunteers, 80 Boylston men enlisted in the Union Army. The first man to enlist was John Roberts, a French Canadian immigrant. He was also the first Boylston man killed in action. In all, Boylston lost nine men.

During the nineteenth century, Boylston was home to several noteworthy people. Mary Avery White, wife of Squire Aaron White, was a prolific letter writer. These were not ordinary letters, but missives filled with insightful thoughts on the changing social scene and its impact on small town America. She was also one of the founders of an Abolitionist Society, and an advocate for Women's Rights. From 1848 until 1886, Boylston was home to the internationally famous temperance orator, John B. Gough. In 1848, he built a beautiful home in Boylston that he called "Hillside" because it reminded him of his home in Kent, England. He welcomed Temperance leaders, clergymen, politicians, artists and writers to his home. The Hillside Restoration Project is restoring his home, a National Historic Landmark.

Boylston experienced a flood of immigrants during this era. As early as 1840, Irish men and women came to Boylston to secure employment in the textile mill at Sawyers Mills. Soon after came the French Canadian, the Germans, and the Italians, adding to the community's "melting pot". In 1895, the Commonwealth began the construction of the Wachusett Reservoir, which would furnish water to metropolitan Boston. Over 200 acres of Boylston land was taken for the project. The beautiful Pleasant Valley was stripped and the lush farmland was destroyed. Boylston also lost three schools, a general store, a post office, a Catholic Chapel, and 39% of its population was displaced. Despite this blow, the town survived!

Boylston men were again called to defend the nation in 1917. Many of them were sent overseas and participated in some of the famous battles of World War I. Although some were wounded and some gassed, all 41 of the men came home to their families.

The twentieth century brought changes to Boylston as it did to the entire nation. Trolley cars, electricity, telephones, and automobiles were a few of the technological advances that transformed the life of this agricultural community. During the period of Prohibition, some Boylston residents engaged in the illegal production of liquor and many were apprehended.

When Pearl Harbor was attacked on December 7, 1941, the men of Boylston once again answered the call to duty. Some 156 men and women donned the uniform and many fought in far-flung theaters of operation. Three Boylston men made the ultimate sacrifice: Pvt. John Barton, Pvt. William Brown, and

Pvt. Burton. The Boylston Historical Society in the Town Hall houses uniforms and letters from World War II Boylston soldiers.

Boylston is now a suburban community that retains much of its rural, colonial charm. It has almost 100 small businesses and professional offices, but the majority of the adult workers have their place of employment outside the town. The early 'Anglo settlers have been replaced by a multiethnic population which has a variety of faiths and political persuasions. Boylston can boast of fine schools, a growing library, the Tower Hill Botanical Gardens, a vibrant Historical Society, Calliope - a live theater group, two golf courses, and is the home of a National Historic Landmark - the John B. Gough House at Hillside. The future holds only more growth and success.

3.3 POPULATION CHARACTERISTICS

Population, growth, density and development patterns can give a community a wealth of information on what its current and future open space and recreation needs might be. Recent trends throughout Massachusetts illustrate the difficulties of addressing the needs created by increased populations and development. Along with these population increases comes a greater need for housing, jobs and open space and recreational opportunities. The level of this need will vary from town to town. While some towns might need more playgrounds for a larger youth population, another town may need to increase organized activities such as a softball league. Analyzing population, employment and growth data is one factor that will help the Town of Boylston identify its open space and recreation needs and how it can best plan to meet them.

Between 1990 and 2000, the Town of Boylston saw an approximate 14% increase in population which is significant considering that between 1980-1990, the population only grew 1%. Thus the rate of growth is now occurring at a much slower pace than it did historically because up until recently, at every decennial census, the population growth had been between 17%-40%. Compared to other nearby towns, Boylston, with a population density of 253 people per square mile, experienced an early population influx instead of in the past ten years. (See Table 1)

Table 1: Comparison Population History

	1930	1940	1950	1960	1970	1980	1990	2000	% Change 1990-2000
Massachusetts	4,248,326	4,316,721	4,690,514	5,148,578	5,689,377	5,737,037	6,016,425	6,349,097	5.5%
Worcester County	490,737	504,470	546,401	583,228	638,114	646,352	709,705	750,963	5.8%
Boylston	1,097	1,388	1,700	2,367	2,774	3,470	3,517	4,008	14.0%
Berlin	1,075	1,057	1,349	1,742	2,099	2,215	2,293	2,380	3.8%
Clinton	12,817	12,440	12,287	12,848	13,383	12,771	13,222	13,435	1.6%
Northborough	3,013	2,382	3,122	6,687	9,218	10,568	11,929	14,013	17.5%
Shrewsbury	6,910	7,586	10,594	16,622	19,196	22,674	24,146	31,640	31.0%
Sterling	1,502	1,713	2,166	3,193	4,247	5,440	6,481	7,257	12.0%
West Boylston	1,255	1,822	2,570	5,526	6,369	6,204	6,611	7,481	13.2%
Worcester	195,311	193,694	203,486	186,587	176,572	161,799	169,759	172,648	1.7%

Sources: US Census Bureau, MISER

The neighboring town of Sterling saw the largest amount of population growth at a staggering 31%. Compared to the state and county, Boylston and most of its nearby communities all had significant increases in population.

Taking a closer look at Boylston's population by age group provides additional information about what direction the town should head in regarding open space and recreation. (See Table 2) Different age groups have different needs for services and amenities. In 2000, populations in the 5-9 age range, 45-54 age range and over 75-age range all saw the most dramatic percentage increases at 46%, 54% and 41% respectively. Although the school age children population experienced a large increase, it actually only makes up just over 7% of the population, as does the 10-14 age group. The under five category actually decreased in the past ten years. While Boylston may have an immediate need to ensure that these children are being offered appropriate recreation opportunities, it remains imperative that the Town plans accordingly for future populations as well. Some amenities that might be needed are additional playing fields, playgrounds, skate parks, organized youth activities like Little League, summer camps, swimming facilities and tennis and basketball courts.

Almost 50% of Boylston's population is between the ages of 25 and 54. This group is of particular importance because it includes the parents of school age children. They have different open space and recreation needs than the youth population. Walking and jogging trails, a swimming facility, public

Table 2: Comparison Population by Age

Age Group	1990	2000	Boylston % Change	MA State % Change	United States % Change
Under 5	240	238	-0.83%	-3.69%	4.47%
Age 5-9	204	299	46.57%	13.97%	13.54%
Age 10-14	209	282	34.93%	23.89%	19.95%
Age 15-19	236	206	-12.71%	1.42%	13.89%
Age 20-24	202	124	-38.61%	-21.29%	-0.30%
Age 25-34	568	476	-16.20%	-15.85%	-7.61%
Age 35-44	684	779	13.89%	15.74%	20.14%
Age 45-54	448	693	54.69%	45.54%	49.38%
Age 55-59	195	245	25.64%	22.31%	27.89%
Age 60-64	161	175	8.70%	-9.63%	1.78%
Age 65-74	227	288	26.87%	-6.97%	1.57%
Age 75-84	116	164	41.38%	18.13%	34.34%
Age 85+	27	39	44.44%	26.55%	37.64%

Source: Census 2000 and 1990, Summary File 1

gardens, scenic view corridors, adult organized activities such as slow pitch softball and tennis leagues, golf courses and more passive recreation opportunities are often of more interest to residents in this age group.

Residents that are age 60 and over represent approximately 17% of Boylston's population. Their open space and recreation needs are also unique. While they would also enjoy recreation and open space opportunities similar to those in the 25-54 age range, they have additional needs. A local Senior Center, a Meals on Wheels type program and handicapped accessible amenities are all potential amenities that Boylston might want to consider providing. Seniors also may be able to volunteer their time towards improving open space and recreation activities and amenities.

There are many characteristics that make Boylston an attractive place to live including its accessibility to several major cities (Boston, Providence and Worcester) and multiple recreational opportunities. Because of Boylston's proximity to major employment centers, a variety of jobs are available to residents. According to the most recent Census, 2,086 residents over age 16 were employed in the following occupations:

Table 3: Boylston Resident Occupations 2000

Occupation	Employed	% of Total
Management, Professional & Related	1,076	51.6%
Service	208	10.0%
Sales & Office	459	22.0%
Farming, Fishing & Forestry	6	0.3%
Construction, Extraction & Maintenance	174	8.3%
Production, Transportation & Material Moving	163	7.8%
Total	2,086	100.0%

Source: US Census 2000, Table DP3

Nearly 40% of employed workers are commuting between 15 –24 minutes to get to their jobs and almost 15% are commuting more than 45 minutes. Nearly 88% of this travel is by residents who drive alone to work while only 7% are carpooling. The remaining 5% either work at home or use some form of public transportation.

Although in 2000 unemployment in Boylston was below the statewide rate at 2%, times have changed and the rate climbed in 2003 to 5.5%. In uncertain economic times, it is natural for people to become more concerned about where and how they spend their personal money. Even if the unemployment should decrease, the Town of Boylston needs to keep this number in mind as it considers what recreation amenities should be provided to residents. If

this trend continues, people might be more likely to use a nice walking or jogging path than pay money for some other type of open space use.

Boylston has a higher median household income than both Massachusetts (\$50,502) and Worcester County (\$47,874) and it is comparable to other surrounding towns at \$67,703. This is a large increase from 1990 when the median household income was only \$52,424, an increase of almost 30% in ten years. Compared to more immediate Boston suburbs, Boylston especially in the 1990s had much more attractive single-family home prices. Attributing to this income increase could be the fact that people in better paying jobs were looking for a more affordable home to buy. Even as recently as 2003, single-family home prices in Boylston were lower than city suburbs and many surrounding towns. That being said, Boylston also has experienced significant increases in median home prices and has demonstrated the need for additional affordable housing for its residents³. Boylston should maintain awareness of the income levels of its local residents as it moves forward with open space and recreation planning.

3.4 GROWTH AND DEVELOPMENT PATTERNS

The Southwest part of Boylston around the village of Morningdale is mostly at build out with very little vacant buildable land. Future growth in this section will be limited. The Southeast portion of Boylston along Sewall Street and bordering Shrewsbury has vacant land that is well drained and has suitable topography for building, however it lies within the Zone II and Zone III for both Boylston and Shrewsbury public water supply wells. This may pose constraints on density. Priority should be given to protecting the watershed for the Boylston wells, because other than the Zone 1 required protected space around the wells, there is no publicly owned land protecting the recharge areas for these wells.

The Route 140 corridor is zoned for both commercial and industrial development and although the zoning has been in place for over 25 years, there are large tracts of vacant land. The lack of public sewers along with poorly drained soils remains a major constraint. The proximity to I-290 and an available interchange continues to make this area potentially attractive for development.

Boylston Center has had most of the frontage lots built upon, and most of the open space consists of wetlands and other land with building restraints. This part of the Town drains directly to the Wachusett Reservoir and has been designated as part of an Area of Critical Environmental Concern.

³ See the housing element of the Executive Order 418 Community Development Plan, June 2004.

Land along Route 70 North and part of the “East Woods” lie in the watershed for the Wachusett Reservoir where much of the land is owned by the Department of Conservation and Recreation (DCR – formerly the Metropolitan District Commission – MDC). In the past few years there has been a program resulting in the purchase of additional watershed land that contains wetlands.

Until recently there had not been any large scale development in the northeast section of Boylston due mainly to the physical restraints of the land such as rock outcroppings, high water tables, slopes and poor soils, coupled with the lack of municipal water or sewers. Changes in Title 5 allowing mounded septic systems and increased percolation rates, along with increased demand for land raising raw lot prices to over \$200,000, made it economically feasible to develop land that only five years ago would not have been considered for development. This trend will likely continue since Boylston is a very desirable place to live and people are willing to commute longer distances in order to live in a place like Boylston. The close proximity to I-290 makes it easy to access the interstate highway system. Many Boylston residents work in the Boston area – something that was rare 20 years ago – which may also be due to housing that is relatively more affordable.

Boylston’s change in land use offers some insight into what potential housing needs might exist. Since 1971, the Town has significantly increased the amount of land used for low-density residential housing, industrial uses and recreation and urban open spaces. Low-density residential housing usually means one house, typically a single-family home, on a one or two acre site. The major decreases in land acreage occurred in the amount of agricultural, forest, wetlands and open land available throughout town. (See Table 4) Reviewing historical land use patterns is important so that we can

Table 4: Land Use Change in Acres, Boylston 1971-1999

Land Use	1971	1985	1999	% Change 1971-1999
Agriculture	294.53	292.07	224.61	-23.7%
Forest	8,433.88	8,113.38	7,673.50	-9.0%
Recreation & Urban Open Space	159.90	162.16	375.91	135.1%
Multifamily Residential	0.00	44.06	46.40	5.3%
Moderate-Density Residential	253.64	294.37	300.46	18.5%
Low-Density Residential	582.72	792.11	1,214.19	108.4%
Commercial	39.09	42.06	48.17	23.2%
Industrial	7.23	19.12	22.65	213.1%
Transportation	28.17	28.17	28.17	0.0%
Open Land, Mining & Other Uses	385.05	406.09	261.76	-32.0%
Wetlands	101.67	92.31	92.76	-8.8%
Water	2,359.67	2,359.67	2,356.99	-0.1%
Total	12,645.56	12,645.55	12,645.56	0.0%
Source: MassGIS, Land Use 1971, 1985, 1999				

understand clearly the former land uses, and over time how the uses change with varying need. For example, the increase in recreation and urban open space lands (135%) is quite remarkable. Although much of this increase is attributable to the watershed protection land purchases of the Metropolitan

District Commission, now the Department of Conservation and Recreation Division of Water Supply Protection, Boylston clearly took a stance at some point in the past thirty years to be sure that this type of land was preserved and saved for purposes like soccer and baseball games, hiking, walking, jogging, playgrounds and other recreational opportunities. This land use type is obviously of great importance to the Town.

Over the last ten years, Boylston has issued, on average, approximately 25-30 building permits per year. This varies due to the phasing of permitted residential subdivisions.

Infrastructure

Two major state routes run through the Town of Boylston, Route 140 and Route 70. These roadways intersect in the southwest corner of Boylston and Route 140, which is targeted for future economic development sites, also provides drivers with direct access to interstate highway 290. I-290 makes the commute to both Boston (38 miles to the east) and Worcester (7 miles to the south) convenient for residents. The Town of Boylston is a member of the Worcester Regional Transit Authority and up until last year, it was served directly with bus service. The closest bus service now is along the Clinton route that serves West Boylston. The MBTA does not serve Boylston directly either, but people wishing to use the commuter rail can travel to Worcester or Westborough.

Boylston has no public sewer and no plans to provide sewer in the future. Thus, the entire Town is served by private septic systems, many of which are in failing condition. The Town recently established a water department that combines two small water districts (Morningdale and Boylston). The Town is served by five public drinking water wells. The Morningdale area, the Town Center, and several streets north of Route 140 are served by public water. The remainder of the Town, particularly the area north of the Town Center, is served by private wells. Some individual housing projects are hooked up to the public water supply and/or common septic systems.

Build-Out Analysis

In 1999, the Massachusetts Executive Office of Environmental Affairs began an effort to research and create a build-out analysis for every community in

the Commonwealth. Build-out analyses try to determine what the maximum population would be for a town or city and how many developable lots might exist if it was completely “built-out” under existing standards of zoning. Land that is already developed, land with environmental constraints and land that is protected are not included in the calculations.

In 2001, the Central Massachusetts Regional Planning Commission completed a build-out analysis for the town of Boylston. Currently in Boylston and the surrounding communities, there are a lot of variables that exist which foster new development like good highway access and a large amount of open land suitable for development. The entire region is being burdened by sprawl characteristics like congested roadways, loss of open land to development and an increasing number of school age children.

Boylston’s build-out analysis showed that the community has the potential for an increase of over 5,700 new residents, which would be a 30% percent increase in the current population. In addition, the analysis notes that there are approximately 3,950 acres of additional developable land. It was estimated that Boylston could have over 2,300 new residential lots and over 1.4 million square feet available for commercial and industrial buildable floor area as well. These statistics are based on the build-out analysis formula and do not take into consideration every single variable that exists in a community, they are simply a way of defining what would happen in Boylston under current conditions if a maximum build-out were to happen now.

Boylston does have a large amount of open land and will continue to face increased pressure to develop it for residential purposes. The community should continue to focus on protecting the open land that it can while planning for future growth in a way that Boylston can retain its character.

SECTION 4: ENVIRONMENTAL INVENTORY & ANALYSIS

4.1 GEOLOGY, SOILS AND TOPOGRAPHY

The Town of Boylston is approximately 19.75 square miles or 12,640 acres. Within its land area, there are many sand and gravel deposits, areas of fine grain deposits and flood plains. Fewer parts of town consist of till or bedrock. Between Main Street and Sewall Street is where the largest area of sand and gravel deposits is located. It extends east of Sewall Street south to the town line, except for the areas around Sewall Brook, Sewall Pond and Spruce Pond, which is a flood plain alluvium area. Other sand and gravel locations are located near Tahanto Regional High School and running north towards the Town of Clinton, including Sawyers Bluff and the area around Pine Grove Cemetery and Tahanto Point, just west of the Wachusett Reservoir.

The majority of the land in Boylston is till, bedrock, or some combination of both. The areas north of Central Street beyond the Mount Pleasant Country Club have the tendency to be more rough and stony terrain with rock outcrops. Three main soil types exist in Boylston with several variations of each present and major ones include:

Hinckley-Merrimac-Windsor – Very deep, nearly level to steep soils that are excessively drained and somewhat excessively drained; on outwash plains

Paxton-Woodbridge-Canton – Very deep, nearly level to steep soils that are well drained and moderately well drained; on uplands

Chatfield-Hollis – Moderately deep and shallow, gently sloping to moderately steep soils that are well drained or somewhat excessively drained; on uplands

Different soils are better for different purposes whether it be residential construction, farmland, apple orchards, left in their natural state or for a variety of other situations.

Boylston has a mix of forest communities that includes a white pine/oak forest and mixed oak forests. The white pine forest is dominated by white pines, red and white oaks, with red maple, black birch and black cherry as well. Shrubs include lowbush and highbush blueberries, black huckleberry, witch-hazel and American chestnut sprouts. These forests are frequently located on glacial till soils of drumlins and moraines. The mixed oak forest is dominated by red, white and black oaks and pitch pine and white oak are occasional as well. Both lowbush and highbush blueberries and black huckleberry are common and soils are often shallow.

4.2 LANDSCAPE CHARACTER

The Boylston landscape is characterized by mostly rolling hills with many scenic views from several locations within the Town. The view from Hillside, the site of the Town office complex, looks east towards Shrewsbury with church steeples visible in the distance. Mount Wachusett can be seen from the Route 140 area and off Linden Street. Mount Monadnock and the New Hampshire hills can be seen from Linden Street and parts of the East Woods. Mount Wachusett and the Reservoir and the western towns can be seen from Tower Hill. The center of Boylston is a typical picturesque New England small town with a center Common, old Burying Ground, white church and stone public buildings surrounded by 18th century homes.

The land north of Route 140 is about 80% covered with second growth mixed pine and hardwood forest. Most of this land was farmed in the past and the once open fields have returned to woods. This land, as in most other Worcester County towns, is crisscrossed with miles of beautiful stone walls. This is an aesthetic as well as wildlife habitat asset. The existing farmlands lend a rural character to the Town. Boylston's history as an agricultural community today makes the preservation and protection of this remaining land at the forefront of this Open Space and Recreation Plan.

The Town of Boylston has large undisturbed tracts of forestland throughout the community; it makes up almost 60% of the remaining undeveloped land and several areas of significant environmental interest. The primary type of forest habitat that exists is known as the transition hardwoods or a white pine/hemlock forest. White pine is commonly used for lumber and hemlock is commonly used in construction. The many ponds provide for recreational opportunities such as swimming, fishing and canoeing. The Wachusett Reservoir, in addition to being a major water source, provides an excellent fishing spot as well.

Although it does retain its agricultural, rural and colonial history to a certain extent, Boylston is very much a suburban community of Boston and Worcester. The Town has little in the way of commercial businesses and service providers, but has an excellent school system and other unique features like the Tower Hill Botanical Garden and a very active historical society. Living in Boylston offers both the opportunity to enjoy the charm of a smaller community as well as the benefits of living near denser population areas.

4.3 WATER RESOURCES

The water resources in town provide not only a private and public water supply for thousands of people, but they also function as flood control, recreational opportunities (such as swimming, boating and fishing), wildlife habitat areas, ground water supply, pollution prevention and storm damage control sources.

4.3.1 RIVERS, STREAMS, PONDS

Almost 19% of Boylston's coverage is surface water (2,356 acres) and 0.7% (93 acres) is wetlands. The Town has a mix of ponds, streams, wetlands and aquifers while the community's dominant feature is the Wachusett Reservoir.

Ponds

Some smaller ponds in Boylston include Rocky Pond, which received its name from the many boulders that surround it, Pout Pond, Halls Pond, Flagg Pond, Sewall Pond, Spruce Pond and Newton Pond/Mud Pond, which is partially located in Shrewsbury as well.

Located fully in Boylston, Rocky Pond offers water for an abundance of wildlife. Many cottages dot its shoreline and it is adjacent to agricultural land. It is glacial in origin and is used for swimming, boating, and fishing. It contains peat bog with pitcher plants and the pond contains only native species.

Sewall Pond consists of eleven spring fed acres. Camp Harrington (YMCA) and Gothing Beach have provided recreation and beach facilities available to both Boylston and Shrewsbury residents for at least 50 years. Sewall Pond is part of the Blackstone River Watershed and feeds into Mud Pond (Newton Pond), which feeds into Lake Quinsigamond. Sewall Pond is home to much wildlife such as deer, great blue heron, beaver and rare species such as the wood turtle. However, its water quality is threatened by contamination from stormwater runoff.

Spruce Pond has high scenic value, contains peat bog mats, black spruce trees, and a wide variety of wildlife.

Brooks

French Brook⁴, sometimes called Mill Brook, flows through the easterly and north central parts of the town into the Wachusett Reservoir. It is called French Brook because it flowed before the Reservoir was constructed for a long distance through land that was once owned by one of the settlers named Jonathan French: it took the other name of Mill Brook from the fact that there were several saw mills upon the stream. There are two small brooks in the northeasterly part of the town one of which is known as Hastings Brook, which flows into the Wachusett Reservoir. The other brook is called Wrack Meadow Brook and flows into North Brook in Berlin, which is a tributary of the Assabet River. Malagasco or Muddy Brook as it is more generally called, rises easterly of the village of Boylston Center and flows into the Wachusett Reservoir. It has been designated an Outstanding Water Resource. Sewall Brook flows east of Cross Street, crosses Route 140 and south to Sewall Pond (Blackstone Watershed). Cold Harbor Brook starts at Rocky Pond and flows southeasterly into Northborough and is in the SuAsCo Watershed.

Reservoirs

In 1908, the Metropolitan District Commission (MDC) dammed the south branch of the Nashua River to create the 4,135-acre Wachusett Reservoir as a clean, safe, drinking water supply for the Boston Metro area. Slowly, during the past 30 years, almost 80% of the shoreline has been open for fishing. The Wachusett Reservoir is located in Boylston, West Boylston, Clinton and Sterling and it covers 6.5 square miles (4,135 acres). Thirty-seven (37) miles of shoreline border the reservoir and it has an average depth of 48 feet. Although fishing is allowed, there is no boating or ice fishing allowed in the winter. Other recreational activities are limited or prohibited on publicly-owned watershed lands surrounding the reservoir. There are three main tributaries that feed the reservoir, the Quinapoxet and Stillwater Rivers and the Quabbin Reservoir. The Quinapoxet and Stillwater empty into Thomas Basin and the Quabbin Reservoir is connected to the Wachusett through an underground aqueduct.

The Reservoir and its watershed is the location of the former Sawyers Mills, breathtaking scenery, hiking and cross-country skiing trails, and fishing and boating activities.

⁴ George Wright, "History of Boylston,:" [INTERNET] www.boylstonhistory.org, May 2004

4.3.2 WETLANDS & FLOODPLAINS

According to the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife⁵ and the Boylston Conservation Commission, Boylston has at least six Certified Vernal Pools and many Potential Vernal Pools that were identified through aerial photographs. Vernal pools are small, shallow ponds characterized by lack of fish, periods of dryness, a variety of wildlife species such as amphibians and other organisms that spend their lives in vernal pools. Clusters of potential vernal pools indicate particularly good habitat for species that depend on vernal pools such as water scorpions, spotted turtles, wood ducks, water bugs, ribbon snakes, salamanders (several species), fairy shrimp, isopods, wood frogs, spadefoot toads and fingernail clams.

4.3.3 AQUIFERS

Aquifers are glacial formations that are capable of storing and yielding significant quantities of water to serve as a private or public water supply. Water saturates the soil during periods of precipitation that in turn migrates downward to the saturated zone. The water table is the area between the saturated zone and unsaturated zone and when more precipitation enters the aquifer than is taken out, the water table rises. Boylston has made several efforts to protect areas around private and public wells from contamination and a new Wellhead Protection District was adopted at the 1999 Town Meeting. It includes the Zone II areas, which are areas of an aquifer that contribute water to a well under pumping and recharge conditions.

Boylston has some very productive aquifers located near or along the Wachusett Reservoir and in the southwest corner of Town near Spruce, Sewall, Hall and Newton Ponds. Morningdale Water District Wells 1 and 2 and Boylston Water District Wells 1 and 2 are located in this area. The two water districts recently combined to form the Boylston Water District. Boylston Water District Well No.3 is located at the intersection of Rts. 70 and 140 and off Scar Hill Road near the shore of the Wachusett Reservoir within DCR land near the Pine Grove Cemetery.⁶ The Boylston Water District wells have a combined safe yield of 6.7 millions gallons per day, and the quality of the water derived from these wells is excellent. The only water treatment required is to maintain pH and alkalinity to adjust for corrosion control.

Aquifer recharge areas consist of the Quinsigamond valley extending from Route 140 south to Lake Quinsigamond in Worcester and beyond, with

⁵ Information for this and the following two sections is drawn primarily from a May 6, 2003 letter from Patricia Swain, Ph.D., an ecologist with the Natural Heritage and Endangered Species Program.

⁶ Kenneth Kreutziger, "Boylston Comprehensive Plan," March 2000.

municipal wells in Boylston, Shrewsbury and Worcester. The Nashua River valley, including the Wachusett Reservoir, consists of extensive deposits of water bearing gravel.

4.3.4 WATERSHEDS

One unique characteristic of Boylston is that three different watersheds divide it. The largest is the Nashua River Watershed, which drains into the Wachusett Reservoir. In the eastern portion of town is the Concord Watershed (also known as the Sudbury-Assabet-Concord, or SuAsCo, Watershed) that drains east, and in the southwest corner is the Blackstone River watershed, which drains to the south.

Nashua River Watershed⁷

The Nashua River Watershed is unusual in several of its characteristics. The watershed is located in both Massachusetts and New Hampshire, with 454 square miles and 74 square miles being located in each state respectively. The Nashua River itself flows for almost 56 miles with 46 of those miles flowing through the state of Massachusetts. Twenty-four Massachusetts and seven New Hampshire communities encompass this major watershed. The Nashua River was previously a glacial lake that flowed to the south through Worcester and its surrounding area. Its name derives from the Native American word Nash-a-way which means “river with the pebbled bottom.” As a result of the Pleistocene glaciation, the direction of the river actually reversed thereby creating the Nashua River Valley. The mainstream of the river flows northward from its impoundment at the Wachusett Reservoir (a large portion of which is in Boylston), and it travels through north-central Massachusetts before emptying into the Merrimack River in southern New Hampshire. The Wachusett Reservoir provides drinking water to two thirds of Massachusetts’ population.

Although not actually in or near the Town of Boylston, the Squannassit and Petapawag (“swampy place/land”) are Areas of Critical Environmental Concern (ACECs) that have local and regional significance. These were designated in 2002 and are located in the Nashua River Watershed. Because Boylston is also in this watershed, it is important to note their designation in this plan, from a regional perspective. These two ACECs have an amazingly diverse concentration of very significant environmental resources, and as a part of their designation, providing long-term stewardship of these environmental resources is important. The Squannassit and Petapawag ACECs are rich in hydrological, geological, ecological and cultural resources such as variable soils, diverse habitat types, rich biodiversity, rare,

⁷ EOEa, “Nashua River Watershed,” [INTERNET] www.mass.gov/envir/water/nashua.htm, May, 2004

threatened and endangered plants and wildlife, natural communities and even ancient archaeological sites as well.⁸

Several major priorities exist for the continued protection, conservation and enhancement of the natural beauty, wildlife population and recreational opportunities provided by the diverse natural populations and open space areas in the Nashua River Watershed. They include:

- addressing the existing long-term water quality issues
- evaluating point and non-point source pollutants
- completing hydrologic assessments and implementing recommendations from that
- restoring and protecting water quality from non-point source pollution; and
- managing growth and encouraging careful land use with well planned development to minimize the further loss of open space. To help address some of these priorities, a five year action plan has been completed and its success will depend largely on stakeholder participation and community involvement. The Nashua River Watershed Association, which was founded in 1969, has made it its mission to “work for a healthy ecosystem with clean water and open space for human and wildlife communities where people work to sustain mutual economic and environmental well-being in the Nashua River watershed.”⁹

Recently, a Five-Year Action Plan was completed for the watershed, as well as a sophisticated water model that, among other things, tracks water flow in and out of the watershed.

Tahanto High School, East Woods, the Town Center, Tower Hill Botanical Garden, and the Pleasant Country Club are located in this watershed (north of Rt. 140).

Concord River Watershed¹⁰

The Concord River Watershed flows into the Merrimack River and is located in the metro-west area of Massachusetts. This watershed is located in all or part of 36 communities in Massachusetts and it has a total drainage area of 377 square miles. The Sudbury, Concord and Assabet Rivers are the three major rivers that run through the watershed and in 1999, they were all

⁸ The Squanassit & Petapawag Areas of Critical Environmental Concern [INTERNET] www.squanassit.org, May, 2004.

⁹ Nashua River Watershed Association, “Welcome to the NRWA,” [INTERNET], www.nashuariverwatershed.org, May, 2004.

¹⁰ EOEa, “SuAsCo Watershed,” [INTERNET] www.mass.gov/envir/water/suasco/suasco.htm, May, 2004.

recognized for their ecological, historical, scenic and recreational values. Also within this watershed are two national wildlife refuges (NWR), the Great Meadows NWR and the Assabet NWR. The very first designation of an ACEC, the Great Cedar Swamp in Westborough, which is one of the largest wetlands in Central Massachusetts, is within this watershed.

Some of the more significant priorities for this watershed include:

- gathering sufficient water quality data to identify areas affected by point and non-point source pollution
- understanding watershed hydrology to assist in decisions about the Inter-Basin Transfer Act and Water Management Act permit requests
- maintaining a healthy variability of streamflow to sustain aquatic and terrestrial biodiversity; and
- decreasing impervious surface area and water consumption.

Rocky Pond, Wrack Meadow and Straw Hollow are in the watershed.

Blackstone River Watershed¹¹

The Blackstone River originated in the Worcester area (as a series of streams) and flows to the south into Rhode Island for 48 miles where it empties into Narragansett Bay. This watershed encompasses all or part of 29 communities in Massachusetts and Rhode Island and over 1300 acres of lakes, ponds and reservoirs. Major tributaries to the Blackstone River are the Quinsigamond, West, Mumford, Mill and Peters Rivers.

The Blackstone River Valley has a great deal of historical significance to Massachusetts and Rhode Island and is known as a major player in the industrial revolution. Due to the power of the river, settlers took advantage of the benefits that it had in their livelihoods. All of this activity left the Blackstone River severely polluted with untreated sewage, detergents, solvents, heavy metals and other industrial wastes.¹²

Priorities for this watershed include:

- finalizing the Bi-State Blackstone Watershed Five-Year Action Plan
- completing the Army Corps of Engineers Feasibility Study, building a constructed wetland
- removing the Mass Electric Dam in Millbury

¹¹ EOEa, "Blackstone River Watershed," [INTERNET] www.mass.gov/envir/water/blackstone/blackstone.htm, May 2004.

¹²NPS, "The Blackstone River Coalition," [INTERNET] www.nps.gov/black, May, 2004

- restoring Leesville Pond, Dorothy Pond, Indian Lake and Lake Manchaug; and
- ensuring brownfields impacts to the Blackstone are consistent with the future use of the river.

The Blackstone River Watershed Association was founded in 1976 as an organization dedicated to restoring, enhancing and preserving the river and its watershed. A major goal of the association is to make the Blackstone River and its tributaries swimmable and fishable by 2015. One key to implementation is the upgrading of every sewage treatment plant on the river, which has been required by state and federal regulations. Additionally, it is important to engage, educate and work with the public about river cleanup, how to do it and why it is important.

A Five-Year Action Plan is being prepared for this watershed.

Hillside, Spruce Pond, Boylston Elementary School, Sewall Pond, Newton Pond and Morningdale are in this watershed.

4.4 VEGETATION

In addition to many varieties of common vegetation mentioned above, the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife identifies a number of rare plant species in Boylston:

- **New England Blazing Star** – a perennial plant with tall purple spikes of flower heads in late summer. It blooms from late August through October. They like open areas with dry, sandy, low nutrient soils, usually sandplain grasslands or coastal heathlands. This is a plant variety of special concern in Boylston, and it was most recently identified in 2000.
- **Broad Waterleaf** – a perennial waterleaf that grows to be slightly over a foot tall. It has light green marking on the leaves that resemble a water stain on a piece of paper. Its leaves resemble maple leaves and it has pinkish-purple flowers. The Broad Waterleaf likes rich, moist, limy woods and it is considered an endangered species, last seen in Boylston in 1943.
- **Dwarf Mistletoe** – a member of the mistletoe family, this is a small shrub that has parasitic habits. It has greenish/purplish stems circular in shape. It has sticky reproductive seeds. Generally the Dwarf Mistletoe is found in peatlands, generally on the branches of

black spruce tree and sometimes on red spruce or white spruce. It is listed as a species of special concern and was last noted in Boylston sometime in 1898.

- **Large Whorled Pogonia** – a small orchid that has a brown stem and appears most of the season with five or six leaves. It reproduces through underground stems and has yellowish green flowers with purple sepals in May and June. The Whorled Pogonia likes moist edges of red maple swamps and also in dry oak forests. It is on an unofficial watch list for its species status, and was last noted in 1968.
- **Adder's Tongue Fern** – a small terrestrial fern with a green stalk with one leaf and a fertile spike. There is a large variation in size, shape and position of the blade and it appears anytime after June. This fern likes boggy meadows, acidic fens, borders of marshes, wet fields and moist woodland clearings. It was last seen in Boylston in 2000 and is considered to be a threatened species.

The NHESP updated the state's "Estimated Habitat" and "Priority Habitat" maps in July 2005, which forms the basis for much of this information. This program also identifies the importance of management and monitoring of conservation lands as important priorities. For example, wetland health depends on ensuring water quantity and quality. Similarly, the control of invasive non-native species is crucial if native habitats and species are to be preserved.

Non-Native Exotic (Invasive) Species

Invasive plant species are abundant in the natural environment in Boylston and throughout Massachusetts. Non-native species were introduced intentionally in some areas of the state for erosion control and food supply for wildlife. However, fruits and seeds were spread unintentionally by wildlife and human nature and slowly, natural habitats across the state are being degraded. Identifying an invasive species can be done by looking for the following characteristics: it grows and matures quickly; it spreads quickly; it can flower or set seed all season; it has no known diseases or pests to control it; it thrives in many habitats and it is difficult to remove or control.¹³

Some invasive species that have been found in Massachusetts throughout the entire state include but are not limited to¹⁴:

¹³ Greater Worcester Land Trust, "Invasive Plant Species of Massachusetts," [INTERNET] www.cyberonic.com/~gwlt/invasive.html, 8 December 2004.

¹⁴ The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts, Horticultural Research Institute, Massachusetts EOE, Massachusetts Nursery & Landscape Association

Common Name**Scientific Name**

Bishop's Goutweed	Aegopodium Podagraria
Tree of Heaven	Ailanthus Altissima
Garlic Mustard	Alliaria Petiolata
Japanese Barberry	Berberis Thunbergii
Carolina Fanwort	Cabomba Caroliniana
Asiatic Bittersweet	Celastrus Orbiculatus
Black Swallow-Wort	Cynanchum Louiseae
Autumn Olive	Elaeagnus Umbellata
European Buckthorn	Frangula Alnus
Dame's Rocket	Hesperis Matronalis
Yellow Iris	Iris Pseudacorus
Bell's Honeysuckle	Lonicera X-Bella
Japanese Honeysuckle	Lonicera Japonica
Morrow's Honeysuckle	Lonicera Morrowii
Creeping Jenny	Lysimachia Nummularia
Purple Loosestrife	Lythrum Salicaria
Twoleaved Water Milfoil	Myriophyllum Heterophyllum
European Water Milfoil	Myriophyllum Spicatum
Common Reed	Phragmites Australis
Japanese Knotweed	Polygonum Cuspidatum
Crisped Pondweed	Potamogeton Crispus
Common Buckthorn	Rhamnus Cathartica
Black Locust	Robinia Pseudoacacia
Multiflora Rose	Rosa Multiflora

In order to better protect existing native plant species, towns and individuals should take the initiative to educate themselves and others about the adverse impacts of non-native species. Awareness of what invasive species look like and how to deal with them is important to natural habitat restoration. Also, planting native species wherever possible is another way to discourage the growth of invasives. For more information, contact the Division of Fisheries and Wildlife in Massachusetts.¹⁵

4.5 FISHERIES AND WILDLIFE

In Boylston, there are four areas of estimated habitat for rare wildlife, according to the Natural Heritage and Endangered Species Program (NHESP). These areas are designated as such so as to educate the public about their importance to rare, threatened or endangered species that need the environment for breeding habitat dwelling. The first area is around

¹⁵ Division of Fisheries and Wildlife, http://www.mass.gov/dfwele/dfw/dfw_toc.htm

Sewall Pond and it includes a portion of the Sewall Brook area and the second area is just south of Route 140, which includes Spruce Pond, Flagg Pond and the pond and wetland area south of Elmwood Place. Another area is at Stiles Hill extending down to Barnard Hill and the fourth area includes Rocky Pond and the wetlands nearby and it also includes portions of East Woods. NHESP also identifies “priority” sites for rare species and natural communities. Priority sites are the most important (estimated) natural habitats in Massachusetts for rare, threatened or endangered wildlife or plant species.

The Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife identifies a number of rare animal species in Boylston:

- **Blue Spotted Salamander** – these animals have a long, slender body, short limbs with long digits and a narrow, rounded snout. Their defining characteristic is by their brilliant sky-blue spots on the lower sides of the body. They require moist, moderately shaded environments and they favor northern hardwood/hemlock forests that have depressions for seasonal flooding (usually vernal pools). These salamanders are a species of special concern and they were last seen in Boylston in 2000.
- **Marbled Salamander** – these salamanders are similar to the Blue Spotted Salamander as young adults. They are short and stout with a stocky body, short limbs and a broad, rounded snout. The front limbs have four digits and the back, five. They have a dark brown/black background splashed with bold silver-white or grey band like markings that converge to create black “spots.” They like deciduous to mixed southern hardwood woods dominated by oak and hickory species with White Pine. Wooded vernal pools or the like are required for breeding. They are a threatened species, last seen in 1999 in Boylston.
- **Four-Toed Salamander** – this is the smallest salamander in Massachusetts and is easily identified by having only four toes on the hind feet, a distinct constriction at the base of the tail and its belly is bright white speckled with black. They like bogs, swamps dominated by red maple and white cedar, vernal pools and other perennial wetlands with sphagnum moss. They are a species of special concern and were last noted in Boylston in 2003.
- **Common Loon** – this is a heavy goose sized water bird with a thick black, pointed bill. Its head and neck are black glossed with green and it has a broad color of white and black lines. Its back is cross-banded

black with white spots. The loon looks slightly different in the winter. Loons are a water dependent inland bird that nest during breeding times at shorelines, wintering in oceans and bays. It is a species of special concern and was last seen in Boylston in 2000.

- **Pied-Billed Grebe** – a stocky waterbird with short wings, tail and a stout thick bill. The bird is uniformly brown in the summer with a black band on its bill. Its appearance changes slightly in the winter. This bird prefers to nest in marshes, lakes, large ponds and other wetlands and they winter in lakes, rivers and estuaries. They are an endangered species and were last noted in Boylston in 1978.
- **Bald Eagle** – adult Bald Eagles have a white head and tail, brown body, pale yellow eyes and a bright yellow beak and feet. Their body can be up to three feet with a wingspan between 6-7 feet. They usually inhabit coastal areas, estuaries and larger inland waters as they require a high amount of water to land edge with stands of forest. Bald Eagles are endangered and they were last noted in 1999 in Boylston.
- **Bridle Shiner** – a small, straw colored minnow with a distinct dark lateral band that goes from snout to the base of the caudal fin. It has a large eye and a pointed mouth. They are found in clear water in streams, rivers, lakes and ponds and they prefer sites with a high coverage of submerged aquatic vegetation. They are a species of special concern and were last noted in Boylston in 1951.
- **Spotted Turtle** – a relatively small turtle with bright yellow circular spots that dot its smooth black upper shell. They like to live in or near forested wetlands and vernal pools. A species of special concern, they were last noted in Boylston in 1990.
- **Wood Turtle** – a medium sized turtle with roundish segments on its upper shell that resemble a wood-grained cross-section of a branch with growth rings. They like to live in riparian areas near slower moving streams, with sandy bottoms and heavily vegetated stream banks. They are species of special concern, last seen in Boylston in 1983.

In addition to rare, threatened and endangered species, the Town of Boylston also has some common wildlife animals that also need food, shelter, and corridors to pass through safely. Some of the animals include: the Fisher, Gray Fox, Bobcat, Porcupine, River Otter, Mink, Southern Bog Lemming, Water Shrew, Beaver, Opossums, Shrews, Moles, Bats, the Eastern

Cottontail, Deer, Chipmunks, Woodchucks, Squirrels, Skunks, Weasels, Coyote, Fox, Bobcat, Bear and Moose (although there are less frequent sightings) different varieties of marshland and grassland birds, a variety of other amphibians and fish as well.

The Massachusetts Division of Fisheries and Wildlife¹⁶ updates and maintains the State's Reptile and Amphibian List, which includes both threatened, endangered and common species. The third edition of this list was created in 2000 and it was updated as recently as 2002 according to the Division of Fisheries and Wildlife website. Reptiles and amphibians that exist or have been known to exist in Massachusetts are on this list. The positive benefit is that the list is comprehensive, however, it does not break down habitat of the animals by town. Specific counties are mentioned in some cases, and in others the location stated is "statewide." Left open to interpretation, that means that the reptiles and amphibians listed below technically may or may not be found in Boylston, however, because many of them are common species, the likelihood is good, granting their inclusion in this plan. Reptiles and amphibians not already listed in this report that may be located in Boylston include¹⁷:

- **Eastern Newt**¹⁸ – yellowish/brown in or olive in color on top with a yellowish belly and black and red spots, this creature grows to approximately five inches. This animal has four toes on the front feet and five toes on the back feet and their habitat is primarily ponds, lakes, streams and marshes.
- **Northern Dusky Salamander**¹⁹ – gray, tan or brown in color, this salamander is small in size ranging from 2.5-4.5 inches in length. With a keeled tail, they are found in forest brooks, seepage areas and near springs.
- **Spring Salamander**– dark reddish in color and also has aquatic gills near the head area. This is another animal commonly found near brooks and streams.



¹⁶ <http://www.mass.gov/dfwele/dfw>

¹⁷ <http://www.npwrc.usgs.gov/narcam/idguide>

¹⁸ http://www.fcps.k12.va.us/StratfordLandingES/Ecology/mpages/eastern_newt.htm

¹⁹ <http://www.npwrc.usgs.gov/narcam/idguide/dfuscus.htm>

- **Northern Two-lined Salamander** - a small salamander that almost never reaches more than 3.5 inches in length. Two dark lines run from the back of the eyes to the tip of the tail on this salamander. Streams, rocky bottoms, and springs near streams are where you will find this creature.
- **American Toad**– this toad is medium in size, between two and three inches and it has spots that only contain one to two warts. The belly is usually spotted, particularly in the front chest area.
- **Fowler’s Toad** – this toad is similar to the American Toad only it has three or more warts in the largest dark spots. It is gray to reddish in color and has almost no spots along its belly (photo to the right).
- **Spring Peeper** – considered to be a Chorus Frog that is tiny in size, usually no more than one inch long. Marks on the back of this frog usually form what looks to be an “X.” The call of this frog gives it its distinction and it is usually brown, gray or green in color.
- **Gray Treefrog** – a small to medium sized frog, gray, green or brown in color with large disks on the end of their finger like appendages. This frog is typically found in trees.
- **American Bullfrog** – this is a large frog that can grow up to six inches in length. They are usually a dull green or brown in color and can be found near ponds and streams.
- **Green Frog**²⁰ – this is a medium sized frog that has a very distinctive coloration behind the eye. Typically they like warm water and a variety of plants for their habitat, sometimes a damp woodland area near decaying vegetation.
- **Pickerel Frog**²¹ – has a distinctive square leopard pattern on its back with orange or yellow coloring within its hind legs.



²⁰ <http://allaboutfrogs.org/info/species/green.html>

²¹ <http://www.npwrc.usgs.gov/narcam/idguide/rpalust.htm>

- **Wood Frog** – a medium sized frog reaching up to 2.75 inches in length. This frog has a black mask near its eyes and it varies in color from brown to black to olive. Interestingly, this frog has the ability to lower the glucose in its cell fluids in order to survive extreme low temperatures.
- **Snapping Turtle** – one of the largest most common turtles in Massachusetts, they can weigh up to twenty pounds. This turtle can be aggressive, is greenish brown in color and it has a long tail.
- **Eastern Musk Turtle** – a small, dull colored turtle with the ability to secrete a smelly musk scent from its glands. This turtle prefers lakes, ditches and quiet ponds.
- **Painted Turtle** – a very shy animal with a colorful shell, this turtle lives on both land and water. The shell is typically green with yellow markings on the back and sides and the edges marked in red. The head has yellow markings and the neck and legs, red.
- **Blanding's Turtle** – a bright yellow throat and chin, this is a somewhat large yet shy turtle. They are primarily an aquatic turtle but can be found wandering on land, never far from a pond or stream.
- **Eastern Box Turtle** – a well-known turtle, this type can be found in a variety of environments, fields or forests and they prefer moist areas. They have a high domed shell with orange and yellow markings. The adult box turtle grows to be five to six inches in size.
- **Eastern Racer**²² – a quick-moving, nervous snake that prefers bushy or light-wooded areas. This snake can grow to be four to six feet in length and its color is an olive to grayish color and its belly is a yellowish white color.
- **Ringnecked Snake** – this snake has a yellow/orange ring around its neck and it spends the day hidden beneath objects like logs and rocks because it is nocturnal. They feed on salamanders and can grow between 10-15 inches in length.
- **Eastern Ratsnake** – this snake is a constrictor with three different color patterns, plain, striped and blotched. They live in hardwood forests, wooded canyons, swamps, farmlands, fields and barnyards. This snake is a climber and is only nocturnal in the summer months.

²² <http://sandgatevermont.com/snakes/racer.html>

- **Eastern Hognosed Snake** – this species is 24-26 inches long usually and it varies in color and pattern between brown and yellow and spotted and solid. They prefer heavily wooded areas for their habitat.
- **Milksnake** – this snake is marked in broad bands of yellow and red with black striping in between. This is a constrictor snake that prefers woodland areas.
- **Northern Watersnake**²³ – mostly found in aquatic areas, this snake can grow to be two to three feet long. The color ranges from a reddish brown to gray to dark brown with dark crossbands. They like to eat small fish, salamanders and juvenile turtles.
- **Smooth Greensnake**²⁴ – a bright green snake with an off-white or yellow colored belly. They are typically found in marshes, fields or wet meadows.



Other species that are commonly found in Massachusetts perhaps Boylston include DeKay's Brownsnake, Red-bellied Snake, Eastern Ribbonsnake and the Common Gartersnake.

4.6 SCENIC RESOURCES AND UNIQUE ENVIRONMENTS

The Town Center in Boylston is considered a scenic resource because of its beautiful New England village characteristics. Its pristine churches, pedestrian friendly streets and historical charm are important to the residents of the community to preserve and protect as the town continues to struggle with development pressures.

Along with historic Boylston Town Center is the John Gough Estate at Hillside, a national historic landmark since 1975. This is in the Blackstone River Watershed and has the potential to be included in the Blackstone River Valley National Heritage Corridor. This estate is a unique example of the connection made in the mid 1800s between structure and landscape. The house on the property is architecturally connected to its time (early Italianate architecture), and the landscape features on the 12-acre estate are equally charming. The views of and from the estate are important to local residents. The land has been protected by a preservation agreement between the

²³ <http://www.uga.edu/srelherp/snakes/nersip.htm>

²⁴ <http://sandgatevermont.com/snakes/green.html>

residents of Boylston and the Massachusetts Historical Commission. The preservation area includes the house, the land, the tree-lined drive, stonewalls, unique plantings and views of Boylston, a carriage house, horse barn and the remains of an apple orchard.²⁵ There is also a demonstration forest and a signed nature trail, as well as an American Chestnut nursery. Flagg Pond is a good fishing resource and an example of pond succession.

Covering roughly 70 acres, Rocky Pond is the largest natural pond in Boylston, and its water is especially clean, being primarily spring-fed. There are only a few minor streams, which flow into the pond, and a majority of its shoreline is protected from

*Rocky Pond – Town of Boylston
Photo by Sue Moore*



development because the New England Forestry Foundation owns portions of it. There are suggestions of an Indian settlement having been on the northern shore of Rocky Pond. In 1677, 200 acres north of the pond (the "Rocky Pond Grant") were given to Thomas Eames of Framingham as compensation for his family's suffering during the Indian wars. Potential threats to this resource include development and water quality concerns due to stormwater management issues.

A unique feature of Rocky Pond is the "floating island", which most recently was blown across the pond to the western shore during the 1938 hurricane. Among other wildlife, the pond is home to turtles, and a variety of fish and birds, all native species. No exotic species exist in Rocky Pond.

Just northwest of Boylston in West Boylston and Sterling, is the Mass Central Rail Trail (MCRT) that has been cleaned up and modified for use by bikers, joggers, walkers and cross country skiers. Volunteers and property owners worked extremely hard to turn this former railroad line (ruined by a hurricane in 1938) into a recreational gem. Although not located in Boylston, the MCRT provides a valuable regional resource to those in the community seeking such a recreational opportunity. Approximately 15 miles are open for use at this time. There is still much work to do with property owners and

²⁵ Nel Lazour, Hillside Restoration Project, April 2004

cleanup of this trail, but it has great potential to offer a much needed trail in central Massachusetts. Reconstruction and maintenance is organized by Wachusett Greenways, a regional nonprofit, volunteer organization. This rail trail is regarded as an important regional recreational facility.²⁶

The Worcester County Horticultural Society operates Tower Hill Botanical Garden²⁷ as its headquarters on a 132-acre site in Boylston, Massachusetts. Tower Hill has been in operation since 1986. There are numerous opportunities to stroll along the grounds and view the gardens or hike the woodland trails. The botanic garden has different varieties of plants and shrubbery on display. It is broken down into sections that are outlined in the Tower Hill master plan. An entry court displays a mix of unusual annuals, shrubs and trees and there is an orchard with a variety of antique apple varieties. The Lawn Garden is bordered by 350 species and varieties of trees and shrubs and the Secret Garden features fragrant plants, a fountain with garden pool, statuary, and a wide variety of grasses, perennials and annuals. The Cottage Garden has annuals, perennials and woody plants and the Vegetable Garden a collection of unusual vegetables. The Wildlife Garden has a potential vernal pool, bird viewing station and native flora and fauna and the Wildlife Refuge Pond is man-made open-water habitat. The Systematic Garden has plants arranged according to their evolutionary sequence, from ancient to modern. There is also an American Chestnut nursery.

The Wachusett Reservoir and the surrounding watershed are managed by the Department of Conservation and Recreation (DCR) and its Division of Water Supply Protection, and it is considered a scenic/unique resource for both its water value and its recreational value. Walking, cross-country skiing, snowshoeing and shore fishing are allowed at some points along the reservoir shoreline. There are miles of forested fire roads south of Route 110 in West Boylston and Boylston. The reservoir was created by the construction of Clinton Dam, completed in 1908 on the South Branch of the Nashua River.

NHESP's Living Waters data layer is based on the Living Waters Project whose goal is to promote the strategic protection of freshwater biodiversity in Massachusetts. Since changes in water flow and degradation in water quality threaten these and other freshwater species, Natural Heritage developed the Living Waters conservation plan to identify our most critical sites for freshwater biodiversity in the Commonwealth. These sites, referred to as Core Habitats, represent the rivers, streams, lakes, and ponds where we should focus proactive conservation activities in order to protect freshwater

²⁶ <http://www.masscentralrailtrail.org/>

²⁷ Tower Hill Botanic Garden, "Distinctive Gardens," [INTERNET] May 2004

habitats.²⁸ Wrack Meadow is a scenic area with numerous wetland resources. It is a NHESP Core Habitat and contains a number of endangered species.

4.7 ENVIRONMENTAL CHALLENGES

The Town of Boylston, because of its large amount of wildlife habitat (almost 60% of the community is forested) and its important major water resource, the Wachusett Reservoir, faces several major environmental challenges to ensure the further protection of these, and other, natural resources such as Rocky Pond, Sewall Pond and Spruce Pond.

4.7.1 HAZARDOUS WASTE

The Massachusetts Department of Environmental Protection (DEP) is responsible for keeping a database and enforcing the cleanup of sites that are contaminated with toxic or hazardous waste. DEP indicates that 18 sites in Boylston have reported releases of hazardous waste that are in various stages of remediation, the most recent report of which was reported on March 30, 2004.²⁹ Many of them took place at gas and service stations have been cleaned up and no longer pose a threat to the surrounding area. None of the active sites seem to pose an imminent threat to the environment as they are contained and there are plans to clean and monitor them.

4.7.2 NON-POINT POLLUTION SOURCES

The pollution of Boylston's water and ground water resources is important to identify and manage for residents and wildlife that reside there. Non-point source (NPS) pollution is runoff that has been altered and contaminated by outside sources such as salt and sand from roadways, failing septic systems, underground storage tanks, landfills, gas stations, agricultural runoff, fertilizer from lawns and erosion. These pollutants may enter into water bodies from runoff caused by snowfall and rainfall thereby harming water quality. Additionally, Route 12 bisects the Wachusett Reservoir, creating a vulnerability due to the potential fuel spill in the event of an accident. The challenge is to find a balance for these pollutants and nature and to reduce the negative impact to a minimum or eliminate it completely. Part of that process is to have an appropriate monitoring and management in place to identify when levels are of concern and identify what measures should be taken to remediate the problem.

²⁸ NHESP, "Living Waters," [INTERNET] June, 2004

²⁹ <http://www.mass.gov/cgi-bin/dep/wscreport.cgi>

The Tahanto Envirothon Team in 2001 found stormwater runoff from the Route 70/140 intersection into Spruce Pond that included zinc and cadmium. They are working with the Massachusetts Highway Department to rectify this situation.

NPS is a contributor to the water quality degradation within the three watersheds, for example. Fortunately, there are ways to reduce the impacts of NPS. These include:

- keep storm drains that connect to our lakes, streams and rivers clear of debris;
- apply any lawn chemicals sparingly if at all;
- control soil erosion;
- minimize the amount of salt and sand added to roadways in winter months;
- encourage the adoption of construction/sediment control bylaws in town;
- have septic systems pumped and inspected every 3-5 years;
- conduct further outreach and education to local residents about NPS; and
- purchase environmentally friendly household cleaners.³⁰

The Town of Boylston has an opportunity to identify how much NPS is harming its natural resources and formulate a plan for what they intend to implement as a protection measure.

4.7.3 SOLID WASTE FACILITIES

According to information from the DEP, as of 2000, there are thirteen specific types of solid waste facilities in Massachusetts. The majority of these sites are landfills and only a few of them are actually active. One solid waste facility exists in Boylston on Mile Hill Road, just north of its intersection with Green Street.³¹ The landfill was closed and capped several years ago. At this time, there are no known environmental problems with this solid waste facility, but, it should continue to be monitored and managed.

4.7.4 FLOODING

There are several areas throughout Boylston that are prone to 100 year and 500 year flooding, according to the FEMA maps. For the most part, they can be found along the shore of the Wachusett Reservoir and the major ponds.

³⁰ US Environmental Protection Agency, "What You Can do to Prevent NPS Pollution," [INTERNET] www.epa.gov/owow/nps, 8 December 2003.

³¹ Kenneth Kreutziger, Boylston Comprehensive Plan, March 2000

4.7.5 UNDERGROUND STORAGE TANKS

Boylston has twelve (12) underground storage tanks located within town boundaries. Underground storage tanks are important to inventory and monitor due to their potential adverse environmental effects should there be a leak, spill or some other type of problem. Due to the sensitive nature of much of Boylston's environment, this list should continue to be updated and the sites monitored by the Town and DEP. Underground storage tanks are located at:

- 170 Shrewsbury Street – New England Telephone
- 328 Shrewsbury Street – Mobile Oil O6ELN
- 50 Shrewsbury Street – Atlas News
- 240 Shrewsbury Street – Caprera Construction Company
- 2 Green Street – Mt. Pleasant Country Club
- 200 Shrewsbury Street – New Boylston Trust
- 270 Shrewsbury Street – Dipilato's Service
- 74 Main Street – Wagner Brothers, Inc.
- Route 140 – Robert F. Desmarais Construction
- Sewall Street – Town of Boylston
- 67 Main Street – Wagner Motor Sales
- Main Street – New England Telephone

4.7.6 STORMWATER MANAGEMENT

The Town is in compliance with the federal and state stormwater requirements. The Town filed its stormwater management plan and submitted its first annual report before the May 1, 2004 deadline.



*Hall Pond – Town of Boylston
Photo by Sue Moore*

SECTION 5: INVENTORY OF LANDS OF CONSERVATION AND RECREATIONAL INTEREST

This section provides information about Boylston's current open space. The inventory matrix and maps include parks, forests, wildlife management areas, conservation lands, and significant other open space parcels drawn from data provided by the Town, MassGIS, CMRPC, and the Sudbury Valley Trustees.

Determinations of each site's condition, recreational potential, and public access were made based on observation by the Town's consultant.

The Open Space Matrix column headings are defined below.

- **Site Name:** Names the open space site.
- **Acres:** Gives the site's acreage or an approximation in cases of the non-park and playground parcels. One acre is 43,560 square feet or 1/640 of a square mile.
- **Owner:** Indicates the owner of the property and the agency or department responsible for managing and maintaining the parcel.
- **Level of Protection:** Indicates if the site, either by virtue of its zoning or by the fact that it has received state or federal funding, is protected from sale and building development (see below)
- **Public Access:** Indicates if the public can access the site.

Definition of Open Space

In this Plan, the term "open space" was defined as "all parks, forests, trails, playgrounds, and fields of significant size owned and managed for recreation, agriculture, or conservation uses."

Different Types of Protection

Open space within a Town, whether publicly or privately owned, can be protected against development in a number of different ways. The following are all forms of open space protection employed (or potentially employed) in Boylston. Of these types of protection, only protection through deed restrictions or funding through the Land and Water Conservation Fund or Self-Help programs (often requiring the placement of a deed restriction) are considered by the Division of Conservation Services to be "in perpetuity."

- **Land & Water Conservation Fund Protection/Self-Help Funding Protection:** In the case of many Boylston playgrounds, the receipt of grant funding affords these parcels protection as parklands, essentially in perpetuity. Note that for these properties the protection of Article 97 (below) would apply as well.
- **Article 97 Protection:** A codification of the “Public Trust Doctrine,” Article 97 of the Massachusetts Constitution protects all publicly owned lands used for conservation or recreation purposes. Before these properties can be sold, transferred, or even converted to a different use, this amendment requires a vote of the Town as well as a roll-call vote of the State House of Representatives and Senate.
- **Protection through Ownership (“Fee”):** In most cases in Boylston, the open space in question has been acquired in its entirety (“in fee”) by a public or private conservation interest—a State or Federal agency, or nonprofit organization such as the Trustees of Reservations or the New England Forestry Foundation. In many cases, such ownership will trigger other forms of protection, such as Article 97. If the owner is a nonprofit organization, the land could in theory be sold and/or developed, but doing so could contradict the group’s conservation purpose.
- **Protection through Conservation Restrictions, Easements, or other Deed Instruments:** Due to the high costs of acquiring land, it has become increasingly popular to acquire conservation restrictions limiting future development. Similarly, access easements can provide permanent public access to a property. In certain situations, deed restrictions or easements may be granted by a private party as part of a development approval process. As with any matters involving real property, care must be taken in the drafting of the restrictions to ensure the rights and interests of all parties are represented and clearly documented. Conservation Restrictions must be approved by the Board of Selectmen and the Massachusetts Division of Conservation Services. Chapter 61, for example, is a way to help protect forestland in Massachusetts through encouraged preservation. Landowners who wish to ensure the long-term, but not permanent protection of forests may be offered helpful tax benefits. Should the owner wish to end the agreement, the town has the authority to recover tax benefits given and they have first right of refusal on the purchase of the land if it is to be sold for non-forestry purposes.

Inventory of Parcels of Conservation and Recreation Interest				
Site Name	Acres	Owner	Level of Protection	Public Access
Commonwealth of Massachusetts				
Wachusett Reservoir	2,346.38	State (DCR)	Permanent	Limited
Wachusett Reservoir Watershed	168.38	State (DCR)	Permanent	Limited
Subtotal:	2,514.76			
Town of Boylston				
Town Tennis Courts	1.99	Town	Permanent	Residents Only
Tahanto Regional High School	23.01	Town	Permanent	Public
Pine Grove Cemetery	19.42	Town	Permanent	Public
Old Boylston Cemetery	.38	Town	Permanent	Public
Manor Playground	10.68	Town	Permanent	Residents Only
East Woods	209.78	Town	Permanent	Public
Boylston Elementary School	23.09	Town	Permanent	Public
Miscellaneous	16.66	Town	Permanent	None
Boylston Water District	12.71	Town	Limited	Unknown
Northborough Reservoir	3.25	Town	Limited	Unknown
Subtotal:	320.97			
Private Ownership				
Wachusett Reservoir Watershed	4.04	Private	Permanent	Unknown
Wachusett Reservoir Watershed	57.32	Private	Permanent	Limited
Tower Hill	149.36	Worcester Horticultural Society	Permanent	Private – Public Welcome
Fawcett Memorial Forest	5.79	NEFF	Permanent	Public
Falby Memorial Forest	156.80	NEFF	Permanent	Public
Davidian Brothers Farm	9.02	Davidian Brothers	Permanent	Unknown
Wrack Meadow	69.65	SVT	Permanent	Private
Miscellaneous	134.78	DCR	Permanent	Unknown
Worcester Pistol	24.36	Worcester Pistol	Unprotected	Private –

Inventory of Parcels of Conservation and Recreation Interest				
Site Name	Acres	Owner	Level of Protection	Public Access
& Rifle Club		& Rifle Club		Members Only
YMCA Camp	27.49	YMCA of Worcester	Unprotected	Private – Public Welcome
APR	2.46	Unknown	Limited	Unknown
Mt. Pleasant Country Club	212.98	Mt. Pleasant Country Club	Temporary	Private – Members Only
Cyprian Keyes Golf Club	230	Cyprian Keyes Golf Club	Temporary	Private – Public Welcome
Boylston Sportsman Club	7.35	Boylston Sportsman Club	Temporary	Private – Members Only
Subtotal	1,091.4			
Total Open Space	3,927.13			

Legend:

DCR – Department of Conservation and Recreation

SVT – Sudbury Valley Trustees

NEFF – New England Forestry Foundation

SECTION 6: COMMUNITY VISION

6.1 DESCRIPTION OF THE PROCESS

The Open Space Planning Committee was appointed by the Board of Selectmen in early 2004 to oversee the production of this Plan. The committee met on a regular basis to discuss key issues and review drafts of the Plan.

On June 16, 2004, a public forum was held at Town Hall. A number of local residents and Town officials attended the meeting. The focus of the forum was to obtain consensus on the goals of the Plan and to generally discuss potential implementation items. The goals listed in Section 8 were all agreed upon by the participants in the forum, although the priority assigned to them changed somewhat.

Protection of water and agricultural resources were deemed to be the highest priorities for this Plan. Educating Boylston residents about natural resource protection also ranked high. In the middle tier were the goals regarding the inventory of parcels and establishment of criteria for future open space purposes (see more detailed discussion in Section 7.2), exploring regional efforts to connect trails and resources, and efforts to direct growth to those areas most appropriate. There was also a consensus to make the Open Space Planning Committee a permanent standing committee of the Town.

6.2 STATEMENT OF OPEN SPACE AND RECREATION GOALS

During the creation of the 2000 Boylston Comprehensive Plan, the following goals were identified for open space and recreation at the visioning workshops and public meetings. Residents feel that it is important for Boylston to:

- Protect ecologically sensitive areas as the town develops and allow for connective wildlife corridors between areas preserved as open space;
- Protect and improve conditions surrounding the municipal wells in order to safeguard the town water supply;
- Protect groundwater to ensure the quality of private water supply;
- Plan now and purchase lands for public open space and facilities such as school sites, playgrounds, and recreation facilities for residents of all ages;

- Connect existing open spaces with continuous walkways and bikepaths;
- Plan for both passive and active open space recreational opportunities; and
- Negotiate recreational use of MDC (now DCR) property.

Since the setting of these goals, a wellhead protection bylaw was passed in 1999 to protect conditions surrounding the municipal wells in order to safeguard the Town water supply.



*Spruce Pond – Town of Boylston
Photo by Sue Moore*

SECTION 7: ANALYSIS OF NEEDS

7.1 RESOURCE PROTECTION NEEDS

There are two prominent resource protection needs in Boylston. One crucial need is the continued evaluation and certification of vernal pools in the community so that they may be further protected. As mentioned earlier, there are three Certified Vernal Pools and countless Potential Vernal Pools. The plant and animal species that depend on these resources are large in number. Vernal pools also provide a critical breeding habitat for many of them.

The second need is that mounded septic systems must be better controlled in Boylston. They often look “mounded” or built up and it is out of character with the community’s natural/country feel. In order to better control septic systems and to ensure that they do not fail, better monitoring and enforcement must be required. Failed systems are a major source of non-point source pollution in Boylston and its watersheds.

Some of the area around Rocky Pond, including some of the East Woods and Wrack Meadow are considered Concord River Watershed biodiversity sites. Streams associated with this area are Cold Harbor Brook, French Brook and North Brook. These sites consist of mixed oak forest on glacial till, some vernal pools (either potential or certified), pond and peatlands in Rocky Pond, a young successional red maple swamp, and peatlands in Wrack Meadow. These natural communities are valuable because they are on the watershed divide and they connect to Mount Pisgah. They offer large unfragmented tracts of forestland, which is a precious resource for wildlife, and the headwaters of three streams along with vernal pool clusters. The Concord River Watershed Association has expressed concern about these areas because they are divided by roadways, they are becoming increasingly fragmented by development, there is the existence of a golf course in the area, there is increased development on Rocky Pond, and the imminent threat of development in Wrack Meadow.

7.2 LAND ACQUISITION

There are opportunities for the Town of Boylston to connect additional open space parcels with DCR owned land around the Wachusett Reservoir. Even if acquiring an entire parcel is not possible, creating a connected trail network would at least give residents some access to additional open space. The first step for Boylston to take would be to identify specific parcels of land they are interested in protecting and conserving. Having a “wish list” will be helpful in guiding any acquisition processes. Any open space acquisition scheme—

whether to preserve one acre or 10,000 acres —needs to prioritize parcels. Before any parcel is to be purchased, and before any money is sought for preservation, the community must assess the natural values of the land (both objective and subjective measurements) and determine in advance which lands are the highest priorities to preserve. Rather than waiting passively for opportunities to arise, Boylston (or private land trust or other entity) must proactively seek preservation opportunities for the most valued parcels. Priorities stated clearly in advance can lead to such opportunities, whether as a result of grant funding, private donation, or contributions as a result of a land use approval process. Such an approach contrasts sharply with the piecemeal, ad hoc decision-making processes that so often determine open space acquisitions.

Although there is local interest in protecting open space and acquiring additional parcels, there is no internal mechanism in place to guide the decision-making process. Regardless of the reason for which a parcel may be desired by the Town, there are no criteria defined to assist the Town in determining whether a parcel should be purchased. If additional land is to be procured, it is important to know what criteria should be applied because it will be impossible for the Town to purchase every parcel brought before them. This is particularly critical for land in the Chapter 61 program since the Town has a very limited window of opportunity in which to exercise its right of first refusal and offer to buy the land.

While the Town may have “unofficially” adopted several criteria for open space purchases (mostly based on natural and water resource protection, waterfront location, and open space and habitat), it is recommended that more specific criteria be applied in future decision-making.

There are a number of temporarily protected land parcels in Boylston that are in either the Chapter 61, 61A or 61B preservation programs. When land is removed from these programs, the Town has only 120 days to exercise its right of first refusal to purchase the property. With the numerous legal complications that can arise, as well as the procedural requirements that must be met for a municipal purchase of land, 120 days does not provide much leeway for the Town to exercise this right.

The OSRP and the Assessor’s records provide an inventory of all parcels that are currently in one of these programs. A more detailed field survey of each parcel will yield additional information regarding how the land compares with the criteria listed below. The goal of this assessment is to provide the Town with the decision-making tools to ascertain how the parcels should be prioritized and whether a particular parcel should be purchased when such an opportunity arises.

The most significant factors to consider include protection of regional or local drinking water sources, natural resources and scenic views, creation of regional and local networks or corridors of open spaces and trails (and identifying the barriers to do so), and maintaining the rural character of the Town. These factors have been repeatedly stressed in the goals and objectives and during the course of public participation forums held as part of the OSRP processes. Given the nature of the three watersheds and potential non-point pollution sources as described in Section 4, open space acquisitions affecting water quality and within local watersheds should be considered for a high level of priority. An additional high priority should be the creation or extension of regional open space and trail networks that connect with those in other watershed towns. In no particular order, the specific criteria used to evaluate sites for purchase should include the following:

- Agricultural features such as open fields, the existence of prime agricultural soils, scenic views from and into agricultural land, visible stone walls, whether some portion of the land is currently in active agricultural use, and the presence of structures used in the agricultural setting (such as barns, silos, etc.) and its proximity to land with an existing Agricultural Preservation Restriction.
- Location of the parcel in relationship to other protected land including other land owned by the Town, the Commonwealth of Massachusetts, or other not-for-profit organizations such as conservation organizations or land trusts. Is the land adjacent to land set aside as a result of cluster or open space preservation development? Will it contribute to needed civic space near village centers or adjacent recreational areas? Is it located in a neighborhood currently underserved with respect to open space area?
- Does the land create new or expanded connections to an existing regional or local trail network for walking, hiking, biking, cross-country skiing, or other recreational opportunities? Can the land provide public access to water?
- Proximity to valuable regional or local environmental resources including existing and potential drinking water sources, wetlands, waterfront, ponds, lakes, streams, and significant unfragmented vegetative and wildlife habitat

or wildlife corridors including habitat for rare or endangered species.

- Presence of scenic resources such as special landscape characteristics such as steep slopes and unique geological features, a view into the parcel or a view from the inside of the parcel to adjacent properties or scenic waterfront resources.
- Proximity to historic and cultural resources.
- Potential environmental problems with the site must be identified, particularly if there is a likelihood of a hazardous waste liability problem arising from previous uses at the site. Although this has not been a significant problem in Boylston, some lands such as agricultural land, could present some problems from pesticide or herbicide residue, for example. Significant long-term legal and cost issues may place such a parcel in a lower priority classification. However, these problems are not insurmountable and if the costs for remediation are known, they can be managed and factored into the purchase price.
- Finally, the cost of the parcel needs to be considered, especially when compared with others. If the land has a high potential for development with few environmental constraints, it may cost more than an equivalently sized parcel with severe limitations on future development.

Theoretically, points can be assigned to these factors to assist in the decision-making process. Based upon the input received during the master planning process, priority can be given (or points assigned) to parcels that may exhibit characteristics from more than one category. For example, a piece of land that has agricultural features, contributes to a water supply area, and provides a connection with an existing trail network may receive more points and be given a higher place on the priority list than a parcel that only can demonstrate two of these factors. Conversely, points can be subtracted from any parcel that may raise hazardous waste liability or high cost factors.

Working with developers and landowners to gather land gifts, easements or restrictions for conservation purposes are all important as well. The Board of Selectmen and Finance Committee should all work together to develop town support for the funding of any land acquisition when it becomes available. This open space and recreation plan once approved will help the town access

Self-Help and Urban Self-Help monies (granted through an application and review process) from the state. Maintaining the Open Space Planning Committee to think about land that Boylston should be acquiring and working to implement that goal would be an excellent way to allow this vision to come to fruition.

Along these lines, the Town of Boylston should educate the public about the Chapter 61 program because currently, only two exist in the whole community, the Mt. Pleasant Country Club and the Boylston Sportsman Club. Encouraging landowners to participate in this program will at least temporarily protect the parcels.

7.3 RECREATION AND COMMUNITY NEEDS

In the 2000 Boylston Comprehensive Plan, residents identified that there was a need for additional soccer, street hockey and other playing fields in the community. Of the recreational facilities that currently exist, several of them need to address some Americans with Disabilities Act (ADA) issues. Boylston should wherever possible extend its accommodations for handicapped citizens and visitors particularly when it pertains to outdoor recreational facilities. See Appendix B for the complete ADA study.

Field and Court Sports

Listed below is an up to date inventory of all the courts and fields Boylston has available for recreational activities.

RECREATIONAL FACILITIES	
Baseball & Softball Fields	Morningdale Manor Park, Tahanto Regional High School, Boylston Elementary School
Soccer & Football Fields	Hillside; Scarhill Road
Basketball Courts	John Fellows Memorial Park; Morningdale Manor Park; Town Hall Gymnasium
Tennis Courts	John Fellows Memorial Park; Morningdale Manor Park;
Other Fields/Open Space	Town Common; Hillside; Tahanto Regional High School; Boylston Elementary; Tower Hill Botanical Garden

Golf Courses

The Town of Boylston has one 18-hole private golf course at Mt. Pleasant Country Club that is only available for members. Another golf course, Cyprian Keyes, also 18 holes that is open to the public. Cyprian Keys also has a 9-hole par three course.

Playgrounds

One tot lot exists at Morningdale Manor Park. Playgrounds are also located at Boylston Elementary School and Hillside.

Swimming

Boylston residents are fortunate to have two places where that they are allowed to use for swimming purposes during the spring/summer/fall season. Camp Harrington (the YMCA) is open for pond swimming. The M. Gothing Property is also open for swimming, and it has a bathhouse and convenient parking. There is a fee to local residents for the use of this facility.

Passive Recreation Areas

Some of the above mentioned properties are also used for passive and active recreation purposes. Much of the open space in Boylston is available for passive recreation such as hiking, walking, wildlife observation, and similar activities. Additional areas for passive recreation include: Fawcett Memorial Forest, Falby Memorial Forest, Town Common, Hillside, the Wachusett Reservoir, Wrack Meadow, Old Boylston Cemetery, Pine Grove Cemetery, Tougas Farm, East Woods, Tower Hill, the Davidian Brothers Farm as well as various other public ways.

Future Recreation Needs

As identified in the 2000 Comprehensive Plan, the Parks and Recreation Commission indicated that Boylston needs to:

- Construct two more soccer fields at Hillside;
- Reconfigure Morningdale sports fields to include three baseball diamonds. (Note that one was recently added at the Boylston Elementary School.) Eliminate the use of the area for soccer/football;
- Establish a paved area at Hillside for street hockey;
- Add soccer fields under high-tension wires at Hillside;

- Establish a playground at Hillside (Note that this was recently completed); and
- Build a stand for snacks at Hillside (Note that this was recently completed).

7.4 MANAGEMENT NEEDS

Ensuring that this Open Space and Recreation Plan will not sit on a shelf will be key to achieving some of the goals and objectives that residents and local officials highlighted. Thus, it is imperative that Boylston specifically designate an entity or board to be in charge of implementing the recommendations found in the Action Plan. Ideally, such an entity should be the continued work of the Open Space Planning Committee as a standing committee of the Town, appointed by the Board of Selectmen. The Town already has a Parks and Recreation Commission, which is an elected board.

Given the small staff at Town Hall (no planner, Conservation Commission agent, or recreation staff), it is important that these committees and commissions continue to function, recognizing the volunteer nature of their memberships. The Open Space Planning Committee can play an important role in overseeing implementation of the Plan.

Recognizing the regional significance of the local open space resources, a member of the West Boylston Open Space Committee has formed a regional open space group representing the Towns of Boylston, West Boylston, and Sterling at this time. Others may be recruited in the future as this effort expands and there is greater recognition of the need and benefit to conduct open space planning on a regional basis.

7.5 SCORP

The assessment of recreational needs for Boylston detailed in this Open Space and Recreation Plan are not just local in nature. In 2000, the Commonwealth of Massachusetts produced a document called *Massachusetts Outdoors 2000!, the Statewide Comprehensive Outdoor Recreation Plan* (SCORP). The SCORP is a planning tool that also looks at open space and recreation, but from a regional perspective. The purpose of the plan is to help direct the best investment of funds and effort towards protecting and enhancing recreation resources.

The Town of Boylston is in the Central Region, which is characterized by population growth driven by residential, commercial/office and light industrial development. The result of this growth has been that greater demand has been placed on existing recreational facility capacity that has not

expanded in response to this increased level of demand. This region has further significance due to the concentration of regional water supplies, including the Wachusett Reservoir, part of which is located in Boylston.

Demand for recreational activities within the region are the highest for swimming, walking, sightseeing, and boating, some of which are among the the highest rates in the state. Thus, it is not surprising that the region's lakes and ponds have the strongest attraction for visitors and residents. Additionally, strong preferences were expressed for golf courses, parks, playgrounds, and tot lots. Boylston has addressed some of these needs with existing facilities and ones recently completed as recommended in the Town's Comprehensive Plan, which was completed the same year as the SCORP.

SECTION 8: GOALS AND OBJECTIVES

In addition to the broad and overarching vision presented in Section 6, the Open Space Committee and other residents also suggested a number of more specific goals for open space and recreation, they include:

Overall Goals

- Be proactive about continuing to enhance and preserve Boylston's town character and small New England town feel and formulate/implement additional goals and objectives that are consistent with this goal.
- Preserve and protect Boylston's remaining agricultural lands.
- Educate residents about the importance of natural resources and habitat protection areas and encourage their participation in such initiatives.
- Maintain, add and enhance recreational facilities and programs as needed.
- Manage and protect water resources to ensure good water quality for ordinary water, recreation, and wildlife habitat.
- Direct development to specific areas of Boylston that have been previously identified so as to maximize the protection of the Town's natural resources.
- Start implementing the five-year action strategy as soon as possible.

Organizational Goals

- Make the Open Space and Recreation Committee a permanent standing Committee.
- The Open Space and Recreation Committee in coordination with other town boards should inventory and rank parcels of land that are important to protect for their wildlife and habitat resources.
- Further educate Boylston residents about the Chapter 61 land protection program and encourage landowners to participate.

- Continue to work with other communities from a regional perspective on opportunities for increased open space connection, wildlife preservation and other recreational opportunities.

GOALS & OBJECTIVES

Goal: Be proactive about continuing to enhance and preserve Boylston's town character and small New England town feel and formulate/implement additional goals and objectives that are consistent with this goal.

Objectives:

1. Amend the Zoning Bylaw to include Open Space Residential Design.
2. Develop criteria for open space acquisition.
3. Consider bylaws to promote dark night skies and a healthy level of noise.
4. Acquire additional open space and enhance protection of existing open space parcels.
5. Market and promote Boylston's open spaces and small town charm as a way of inspiring community pride and interest in the continuing to plan for the town's future.
6. Actively involve local businesses, organizations and schools in beautifying Boylston through cleanup days and streetscape improvements.

Goal: Preserve and protect Boylston's remaining agricultural lands.

Objectives:

1. Develop criteria for open space acquisition.
2. Explore techniques that encourage property owners to continue farming.
3. Further educate property owners the Chapter 61 program to conserve agricultural (or other) lands and encourage them to participate.
4. Research and apply for grants specifically for agricultural land preservation.

Goal: The Open Space and Recreation Committee in coordination with other town boards should inventory and rank parcels of land that are important to protect for their wildlife and habitat resources.

Objectives:

1. Town Boards and Commissions should meet on a regular basis to discuss preservation activities and development proposals.

Goal: Continue to work with other communities from a regional perspective on opportunities for increased open space connection, wildlife preservation and other recreational opportunities.

Objectives:

1. Town Boards and Commissions should meet regularly with their counterparts in neighboring communities to discuss regional goals and resource protection.

Goal: Educate residents about the importance of natural resources and habitat protection areas and encourage their participation in such initiatives.

Objectives:

1. Develop education and public relations materials on Boylston's open spaces to broaden local interest and awareness about the value of these natural resources.
2. Create K-12 curriculum that educates students about Boylston and its open space and natural resources. Encourage use by teachers of Nature Trail and programs at each school, for example – Boylston Elementary School Nature Trail Network and "Nature Day" and Tahanto Nature Trail and "Wachusett Watershed Awareness Day."
3. Protect and provide access to priority parcels through the purchase of land or conservation restrictions.

Goal: Maintain, add and enhance recreational facilities and programs as needed.

Objectives:

1. Determine needs for additional recreational facilities.
2. Develop a maintenance schedule and program for existing facilities.
3. Enhance access to existing facilities and promote such areas in specific neighborhoods.
4. Evaluate the need for additional recreational programming for year-round activities for adults and children.

5. Construct and provide additional picnic tables in appropriate areas for large and small gatherings.
6. Continue to respond to the needs and ideas of residents for further recreational opportunities and programs in Boylston.
7. Recruit volunteer groups to help with the maintenance, upgrading and clean-up of facilities (such as the Boy Scouts etc.).
8. Continue to work towards linking existing natural resources and open spaces with a contiguous greenways network.

Goal: Direct development to specific areas of Boylston that have been previously identified so as to maximize the protection of the Town's natural resources

Objectives:

1. Adopt Sustainable Development Principles established by the Massachusetts Office of Commonwealth Development (see Appendix D).
2. Adopt open space residential zoning that would require developers to create greater density with housing units while leaving large open tracts of open space intact.
3. Promote both redevelopment and reuse of existing properties that are being underutilized to help minimize the amount of new construction.

Goal: Implement the five-year action strategy as soon as possible

Objectives:

1. Make the Open Space and Recreation Committee a permanent standing Committee.
2. Hold meetings at least twice a year with all parties listed in the Action Plan to review their progress and reevaluate the tasks at hand.
3. Revise and update Boylston's action plan to reflect the town's changing needs.

SECTION 9: FIVE-YEAR ACTION PLAN

The five-year action plan is based on the goals and objectives of the previous section. To ensure the implementation on a year-to-year basis of these actions, the Town of Boylston should clearly identify a committee or board that will be in charge of ensuring this plan is used and followed. The committee will be responsible not only for overall implementation of the Plan, but also for public outreach and education regarding actions being taken and to help make this effort successful. Moreover, Boylston should participate in the regional open space committee efforts with its neighboring communities.

The Five Year Action Plan is often the most difficult component of an Open Space and Recreation Plan. Unlike the lofty goals and objectives of the previous sections, here is where the rubber meets the road, where the planning ideals are translated into concrete actions. An Action Plan can be difficult to commit to and be problematic to review over time. Items that have been accomplished fade from view, while the more intractable problems continue to haunt the town. Financial and political trends may change, advancing some items while leaving others untouched. For these reasons alone, many communities are hesitant to put in writing the full scope of their intentions.

The following action plan intends to deliver on the promise of the goals and objectives expressed throughout this process, with a program of tangible steps for the Town to take over the next five years. There is a high level of activity on these issues, based upon the input received during the planning process.

These actions are targeted to address the physical as well as the organizational issues confronting the Town, as described and analyzed in Section 7. The five-year action plan described below works to correct these “process “ problems, while still maintaining a focus on the substantive issues of open space and recreation preservation, acquisition, enhancement, management, and maintenance.

Some of these actions may already be well underway; others are ongoing but need additional support. And while all actions listed are recognized as important, three areas in particular rise to the top as being absolutely essential for any future progress towards meeting the goals of this Plan:

- Obtaining “buy-in” from Town staff, commissions, and boards that open space is a central and lasting priority for the Town. While it is to be understood that there may be competing needs in the Town, all groups must abide by the central tenet that

open space issues are extremely important to the residents of Boylston. Where open space and recreational resources are concerned, the goals and policies of this Plan and the Committee members and staff of the Town must be consulted. Furthermore, groups must agree in advance on the proper decision making procedures to be followed in such matters.

- The creation of an Open Space Advisory Committee. Open space and recreation activities are not always coordinated or focused; there is no single consistent voice for open space needs in the Town. If the ambitious goals and objectives of this Plan are to be achieved, there needs to be a single committee charged with overseeing this progress and coordinating the actions and priorities of the various groups. This Committee should also coordinate with committees of neighboring towns.
- Securing additional sources of funding, staffing, and other support for open space and recreation activities and programs. The Town of Boylston is a small rural community with few municipal resources to achieve the goals of this Plan. Support for the goals and objectives may be found in the form of donated community labor or park “adoption” by residents, or from federal, state, and private grants.

[Note: The column marked “Priority” gives an indication of the weight given to this item in obtaining the overall goals and objectives of this plan. Priority can be understood to relate to both the “level of importance” of items and the necessary sequencing of them (i.e., without completing the first priority items, it may be difficult to proceed to the latter ones). In the tables, 1=highest/first priority, 4 = lowest/last priority.]

Specific Strategies

Adopt OCD Sustainable Development Principles

The Massachusetts Office for Commonwealth Development adopted Sustainable Development Principles designed to protect the built and natural environment through the integration of energy, environmental, housing, and transportation policies. See Appendix D for more details on these principles.

OSRD Bylaw

Open Space Residential Design (OSRD) is a development technique that creates neighborhoods by building on land suitable for development while maximizing land that is set aside as permanently protected open space

without reducing the number of homes built. This is in contrast to typical “cookie cutter” subdivisions that merely create buildable lots without any provision for open space. The same number of homes as would be permissible in a conventionally-zoned subdivision are allowed using OSRD. The difference is that the units would be sited in a manner that respects overall site characteristics and natural features.

The challenge for Boylston would be to address wastewater issues in such developments. However, there are new technologies available and the possibility of using shared systems may overcome that barrier. If the Town adopts OSRD, it should only be applied where the soils are capable of handling the expected wastewater stream. Thus, Board of Health involvement is essential in making this option viable.

Specific design standards apply to ensure that valued natural resources are protected and that the buildings are properly located on the project site. A model version of such a bylaw can be found in Appendix C.

Wetlands Bylaw

Many communities have local wetlands bylaws that go beyond the regulations promulgated by the state (310 CMR 10.000 et seq.). A local bylaw will allow the Town to protect resources not necessarily covered under state law (M. G. L. c. 131 §40). The Massachusetts Association of Conservation Commission model bylaw is attached in Appendix C.

Noise and Light Bylaw

A number of communities regulate noise and light pollution in their zoning bylaw. An example can be found in Appendix C.

FIVE-YEAR ACTION PLAN SUMMARY

YEAR 1

Action	Priority	Completion Deadline	Lead Agency	Comments
Create permanent standing Open Space Advisory Committee ³²	1	2005	Board of Selectmen	A top priority for this Action Plan
Establish criteria for future open space acquisitions	1	2006	OSRP Committee	Preservation of water resources and agricultural lands deemed most important
Conduct a public outreach and education program informing residents of the Town's desire to acquire and protect specific open space parcels and start a dialogue with land owners, particularly agricultural lands	1	2005-2010	OSRP Committee	This may involve newspaper articles, mailings, meetings etc.
Ensure that all commissions, committees and boards mentioned in this plan receive a copy of it and understand their role in its implementation	1	2005	OSRP Committee	Will need to have a lead contact should people have comments
Review zoning bylaw for ways in which open space preservation can be enhanced consistent with town character and preservation goals and objectives	1	2006 and ongoing	Planning Board and OSRP Committee	Consider zoning changes: cluster/open space residential design
Work with regional land trusts and other agencies to prioritize remaining desirable properties for watershed protection, habitat and trail networks, and other uses as appropriate	2	2006	OSRP Committee	
Continue to maintain and manage existing facilities	3	2005--2010	Parks & Recreation	

³² Existing Committee can fill this role. If this Committee disbands and no replacement is established, the Conservation Commission will typically become the steward of open space resources. For the purposes of this action plan, it will be assumed that a Committee will be established. If not, the Conservation Commission will oversee open space issues and the Parks and Recreation Commission will be charged with recreational facilities.

YEAR 2

Action	Priority	Completion Deadline	Lead Agency	Comments
Inventory and assess properties of interest and document their unique features and natural significance to the town	1	2007	OSRP Committee and Parks and Recreation	Requires cooperation of private and public entities
Set up a database of desired land parcels and who owns them, consider targeting the owners and educating them about land preservation	1	2007	OSRP Committee	
Draft wetlands bylaw for consideration by Town Meeting	1	2006	Conservation Commission	
Pursue grant funding as a way to acquire identified land parcels of interest	2	2006-2010	OSRP Committee	May need help from Town officials
Prepare educational materials to assist in outreach regarding open space and natural resources in Town	2	2006-2010	OSRP Committee	Work with neighboring communities for regional perspective
Develop and maintain a website to include information about all trails and outdoor opportunities that would provide all necessary information for residents and visitors	3	2007	OSRP Committee (Or other designated party by the Committee)	
Continue to maintain and manage existing facilities	3	ongoing	Parks and Recreation	
Prepare and distribute information in a variety of media and venues to build as wide a recreational constituency as possible	4	2006 and ongoing	OSRP Committee	

YEAR 3

Action	Priority	Completion Deadline	Lead Agency	Comments
In accordance with the 2004 ADA study, make recreation areas, facilities and programs more accessible to the public	1	2009	ADA Coordinator Board of Selectmen and OSRP Committee	This will take some time due to the capital cost involved
Designate regional recreation liaison to coordinate information	2	2007	Board of Selectmen or OSRP Committee	Contact other towns and regional land trusts
Continue to maintain and manage existing facilities	3	ongoing	Board of Selectmen or OSRP Committee	
Monitor and safeguard water quality in the Wachusett Reservoir and tributaries	3	ongoing	OSRP Committee and Conservation Commission	
Periodically assess and evaluate recreational needs and resources	3	ongoing	OSRP Committee	

YEAR 4

Action	Priority	Completion Deadline	Lead Agency	Comments
Continue to maintain and manage existing facilities	1	ongoing	Parks and Recreation	
Periodically assess and evaluate recreational needs and resources	1	ongoing	OSRP Committee	
Consider creating additional historic districts in Boylston	2	2009	Historic Commission	

YEAR 5 AND ONGOING

Action	Priority	Completion Deadline	Lead Agency	Comments
Continue to maintain and manage existing facilities	1	ongoing	Parks and Recreation	
Periodically assess and evaluate recreational needs and resources	1	ongoing	OSRP Committee	
Acquire additional land parcels through the use of grants and other funding sources as often as possible	1	2005-2010	OSRP Committee	
Apply conservation restrictions for significant town-owned parcels that have been determined to stay as open space	1	2005-2010	OSRP Committee and Conservation Commission	
Start the process for reviewing and updating the Open Space and Recreation Plan for when it expires	1	2010	OSRP Committee	Could be another appointed committee as well

SECTION 10: PUBLIC COMMENTS

Boylston's Open Space and Recreation Plan included input from many local residents and town staff. Upon completion of the final draft of this plan, copies were circulated for review to the Board of Selectmen, Planning Board, Open Space and Recreation Committee, and Conservation Commission, as well as the Central Massachusetts Regional Planning Commission. Based on their suggestions, minor changes were made to the plan. Letters of their review and support are included in this section.

SECTION 11: REFERENCES

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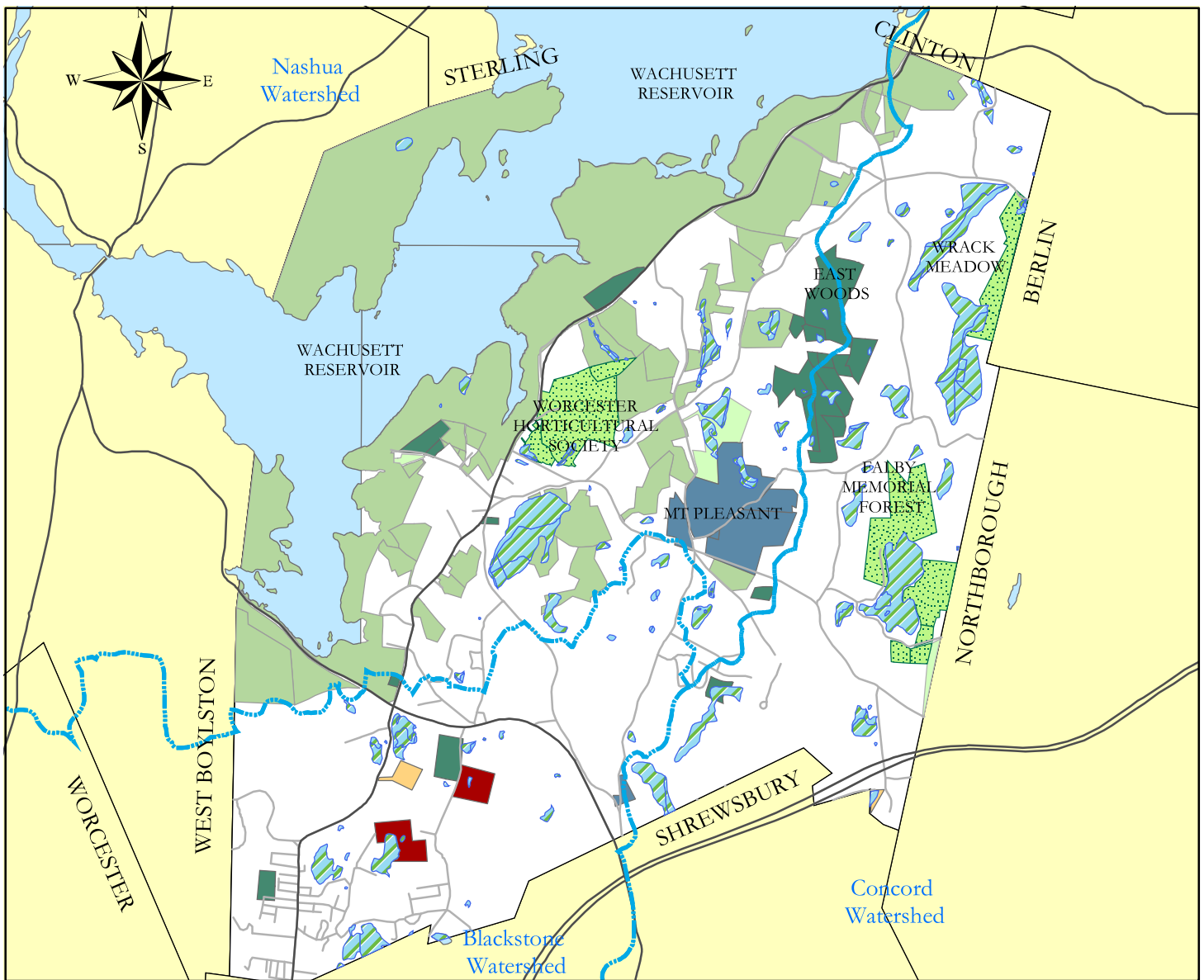
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APPENDIX A: MAPS



Town of Boylston Existing Open Space

Map #1



McGregor & Associate, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Legend

- Wachusett Reservoir
- Watershed Boundaries
- Major Routes
- Local Roads
- Town of Boylston
- Surrounding Towns
- Hydrography

Temporary Protection

- Chapter 61

Permanently Protected Open Space

- Municipal
- Private NonProfit
- Private for Profit
- State

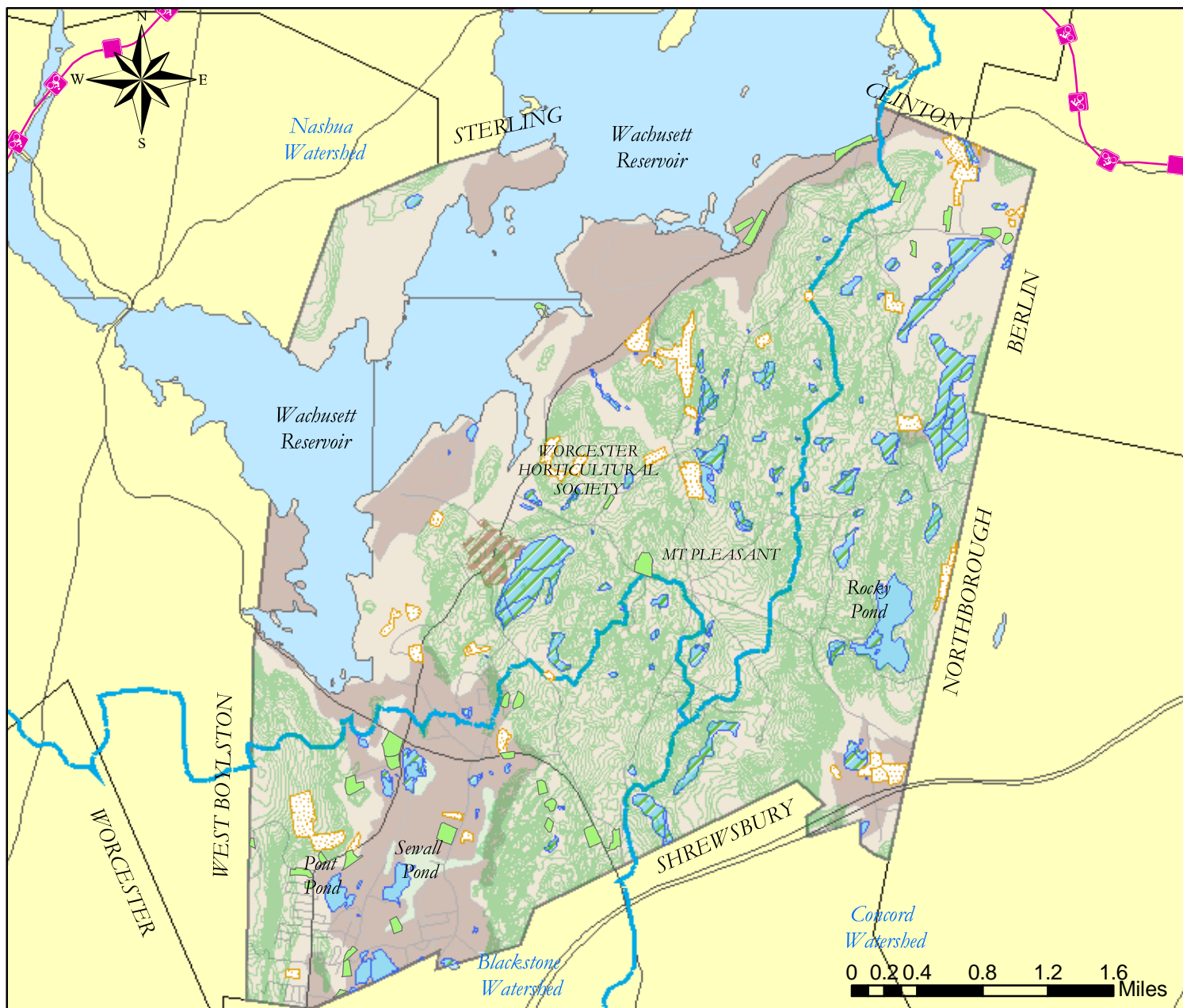
Other Open Space

- Limited Protection
- No Protection

0 0.2 0.4 0.8 1.2 1.6 Miles

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.



Town of Boylston Landscape Features

Map #2



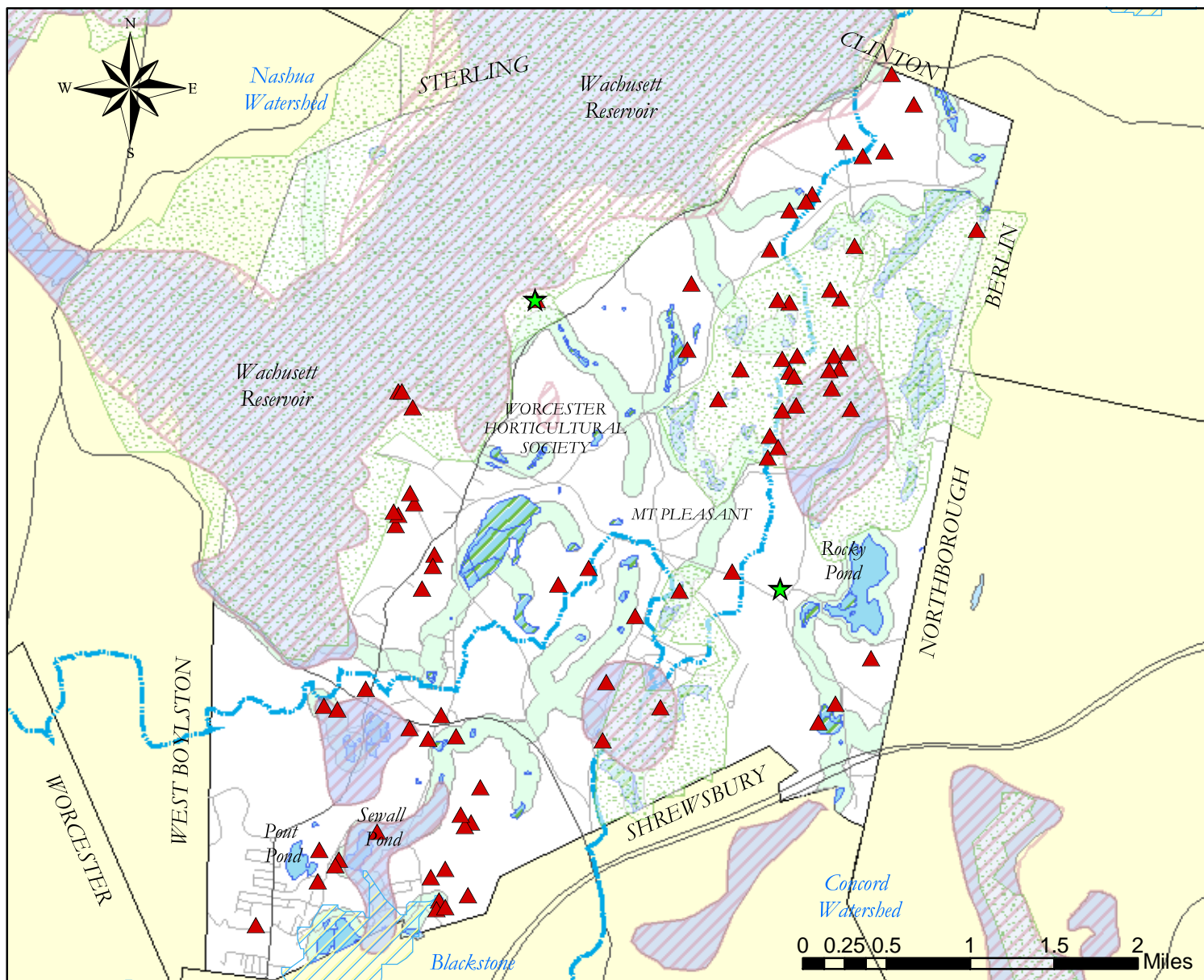
McGregor & Associate, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.

Legend

— Major Routes	Surficial Geology
— Local Roads	Sand & Gravel
Open Land	Till or Bedrock
Pastures and Cropland	Floodplain Alluvium
Mass Central Rail Trail	Hydrography
Boylston Historic District	Wetland, Marsh, Swamp
Contour Lines > 150 Meters	Lake, Pond, River
Wachusett Reservoir	
Watershed Boundaries	
Town of Boylston	
Surrounding Towns	

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.



Town of Boylston Habitat and Ecosystems

Map #3



McGregor & Associate, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Legend

- ★ NHESP Certified Vernal Pools
- ▲ NHESP Potential Vernal Pools
- ▨ NHESP Critical Supporting Watershed
- ▨ NHESP Priority Habitat Rare Species
- ▨ NHESP BioMap Core Habitat
- ▨ NHESP Estimated Habitat Wildlife
- ▨ Wachusett Reservoir
- ▨ Watershed Boundaries
- Major Routes
- Local Roads
- ▨ Riparian Corridors
- ▨ Town of Boylston
- ▨ Surrounding Towns

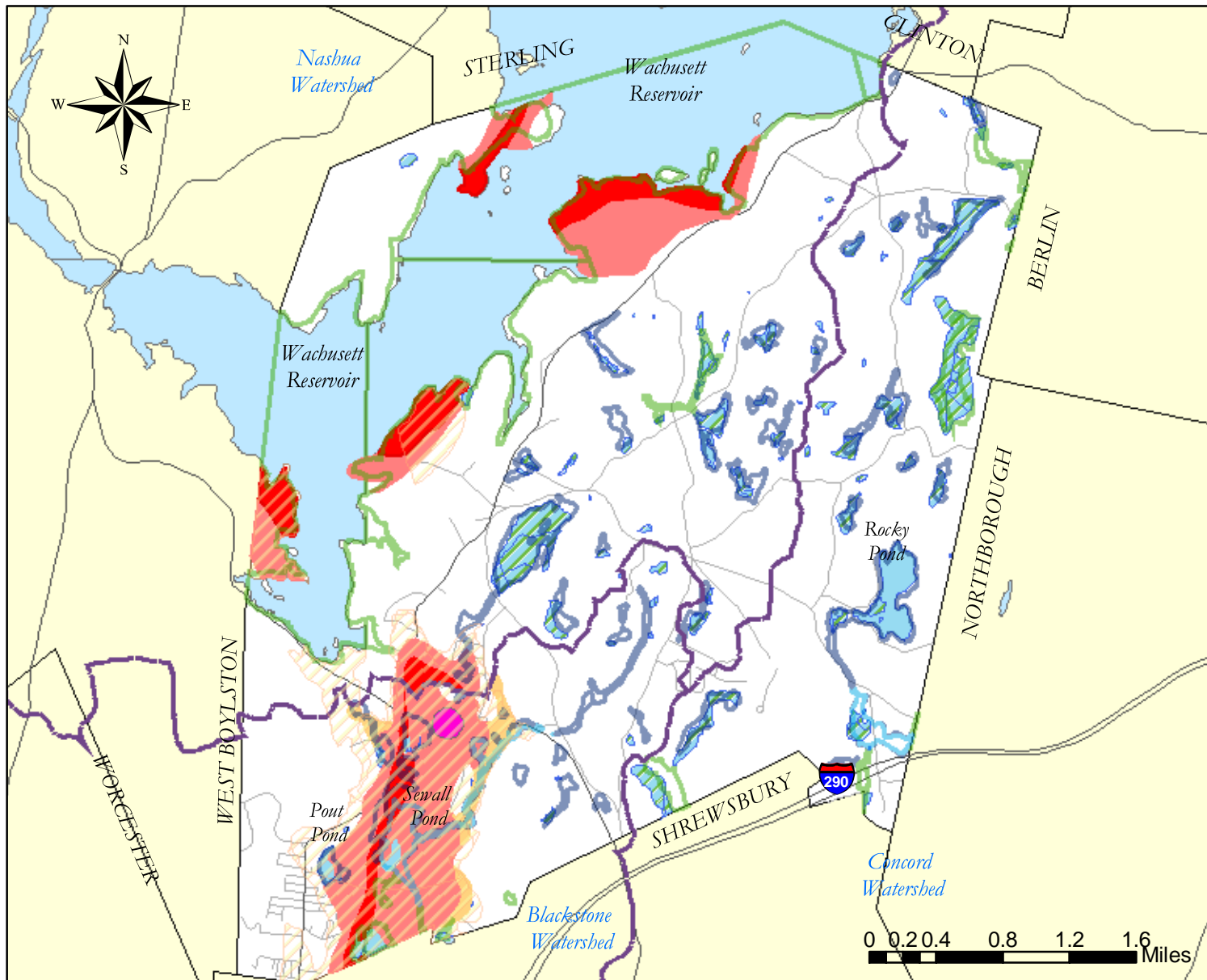
Hydrography

- ▨ Wetland, Marsh, Swamp
- ▨ Lake, Pond, River

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.

Additional Data References:
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 * NHESP BioMap Core Habitat
 * NHESP Potential Vernal Pools: NOT Equivalent to Certified Vernal Pools
 * NHESP 2003 MA Certified Vernal Pools

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.



Town of Boylston Water Resources

Map #4



McGregor & Associate, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.

Legend

— Major Routes

— Local Roads

Interim Wellhead Protection Area

Wellhead Protection Area - Zone II

Wachusett Reservoir

Riparian Corridors

Watershed Boundaries

Town of Boylston

Surrounding Towns

Aquifers

HIGH

LOW

MED

Flood Zones

100 Year Flood, No BFEs

100 Year Flood, BFEs

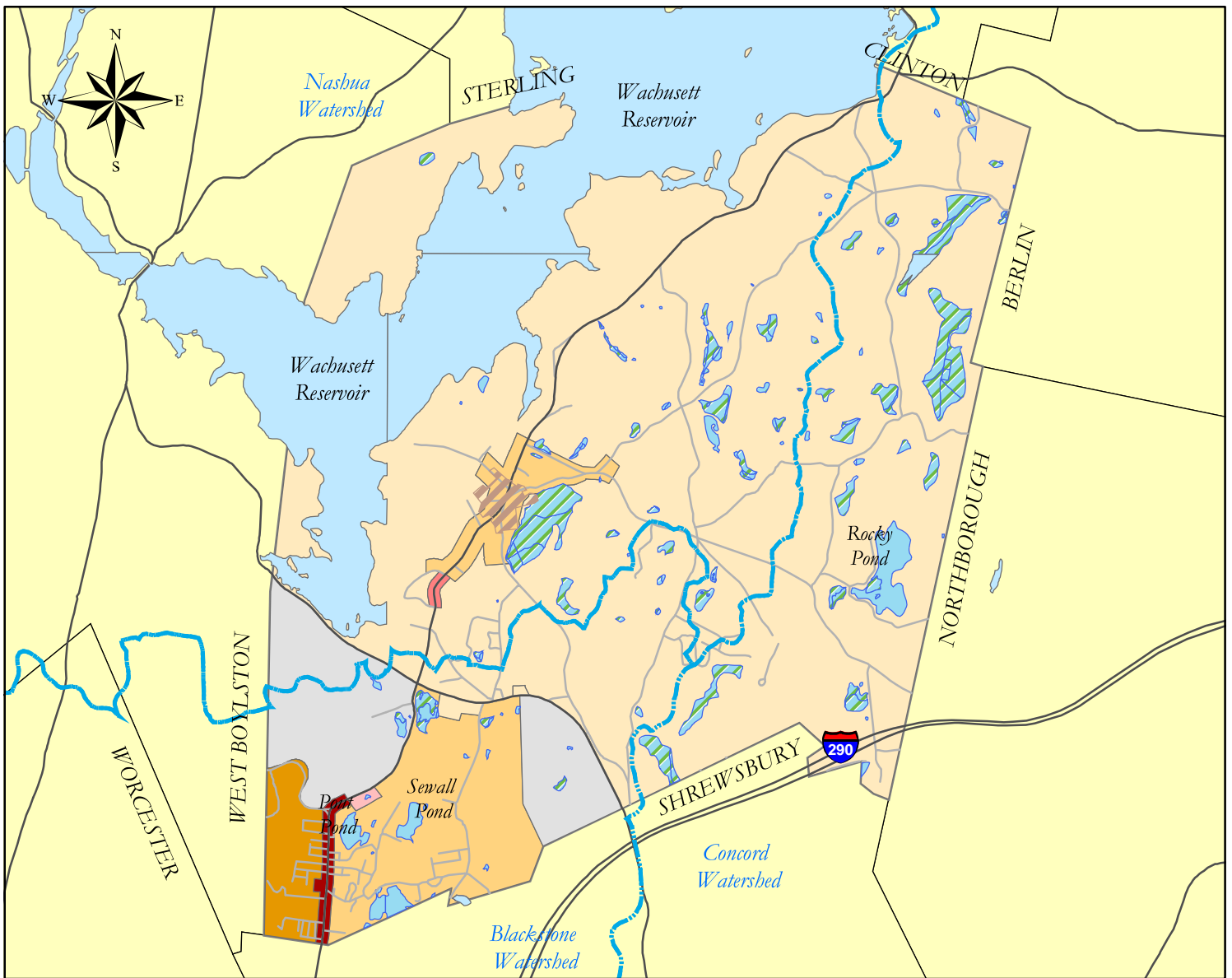
500 Year Flood

Hydrography

Wetland, Marsh, Swamp

Lake, Pond, River

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.



Town of Boylston

Zoning

Map #5



McGregor & Associate, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Legend

- Boylston Historic District
- Major Routes
- Local Roads
- Wachusett Reservoir
- Watershed Boundaries
- Town of Boylston
- Surrounding Towns
- Commercial
- Highway Business
- Village Business
- Industrial
- Rural Residential
- Residential
- General Residential

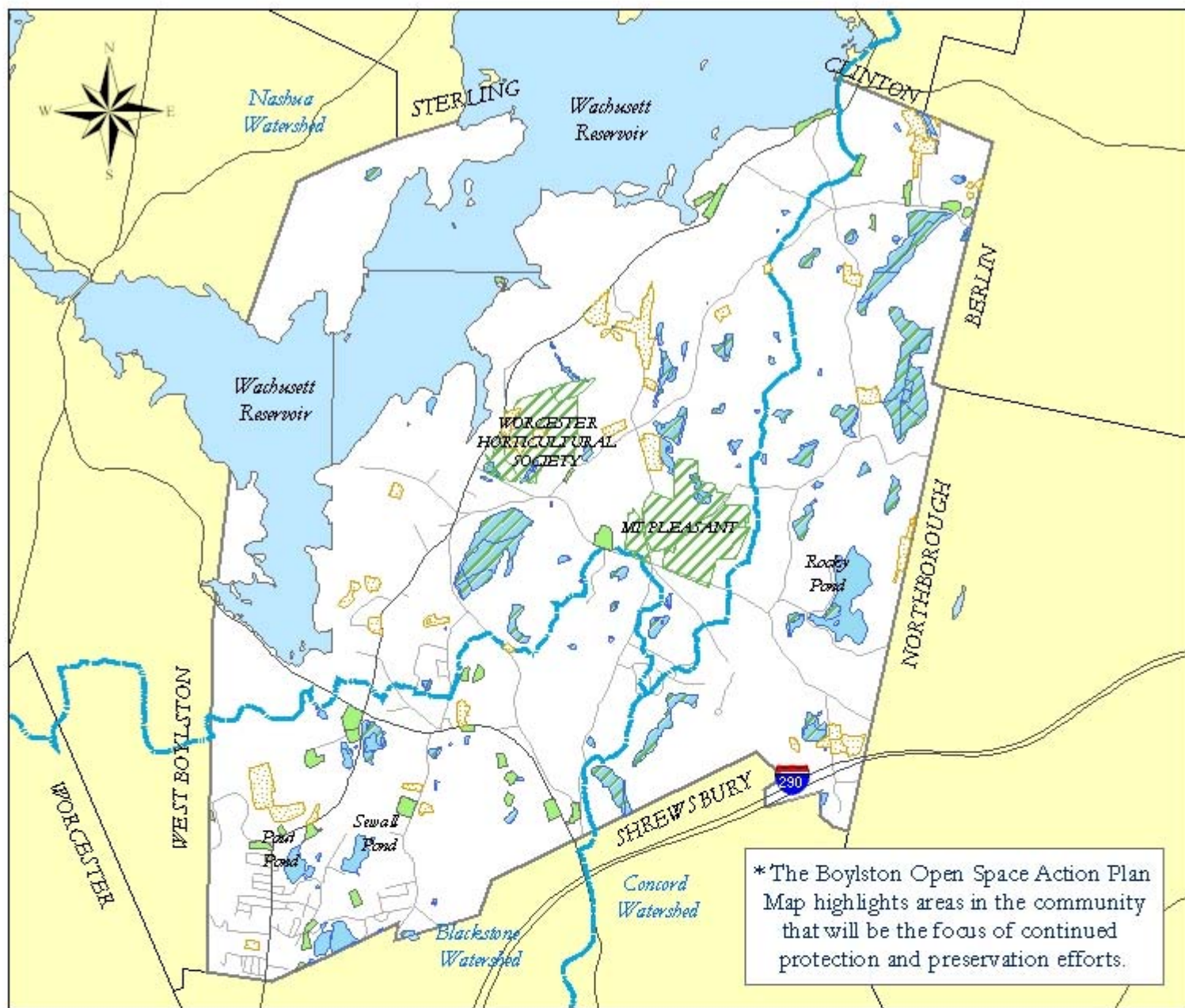
Hydrography

- Wetland, Marsh, Swamp
- Lake, Pond, River

0 0.2 0.4 0.8 1.2 1.6 Miles

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.



Town of Boylston

Open Space Action Plan Map

Map #6



McGregor & Associates, P.C.
Boston, Massachusetts
Data Source: Mass GIS
Date: June, 2004

Legend

- Local Roads
- Major Routes
- Pastures and Cropland
- Open Land
- Other Open Space
- Wachusett Reservoir
- Watershed Boundaries
- Town of Boylston
- Surrounding Towns

Hydrography

- Wetland, Marsh, Swamp
- Lake, Pond, River

0 0.2 0.4 0.8 1.2 1.6
Miles

Information shown on this map is for planning purposes only and is not adequate for legal boundary interpretation. The end user is responsible for verifying accuracy and appropriateness of data.

Funded under Executive Order 418 by the Massachusetts Department of Housing and Community Development, Massachusetts Department of Economic Development, Executive Office of Transportation and Construction and Executive Office of Environmental Affairs.

APPENDIX B: ADA STUDY/SELF EVALUATION

Location	Parking Spaces	Ramps	Public Phones	Water Fountains	Toilet Facility	Picnic Area	Trails	Play Area
Open Space Playground Areas								
Boylston Center Common	Y/N	N	N	Y/N	N	N	N	N
Boylston Center Courts	Y/N	N	N	Y/N	N	N	N	N
Morningdale Manor Courts	Y/N	N	N	N	Y/N	Y/Y	N	Y/N
Morningdale Manor Playground	Y/N	N	N	N	Y/N	Y/Y	N	Y/N
Hillside Playground	Y/N	N	N	N	Y/Y	Y/Y	N	Y/N
Scar Hill Ball Field	N	N	N	N	N	N	N	N
Schools								
Boylston Elementary School	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	N/N	Y/N	Y/Y
Tahanto Regional High School	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	N/N	Y/N	Y/Y
Cemeteries								
Pine Grove Cemetery	N	N	N	N	N	N	Y	N
Old Boylston Cemetery	N	N	N	N	N	N	Y	N
Miscellaneous								
East Woods*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boylston Water District**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northborough Reservoir	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

- Pine Grove Cemetery has paved paths throughout and is barrier free.
- Old Cemetery is gated and sloped which makes access difficult – no longer used for burials – maintained as an Historic site only.

* While the area nicknamed East Woods represents a large area of open space and what appears to be town owned land, they are primarily privately owned and not accessible to the general public because the town does not, as yet, have clear title, thus no ownership to most parcels.

** The Water District covers the entire Town of Boylston and serves as the provider for public drinking water. The property owned by the District consists of underground pipes and well houses, none of which are available to the general public.

*** Northborough Reservoir is an old and abandoned reservoir that provides no service to Boylston and is primarily located in Northborough.

Town Buildings

Municipal Office Building: The Town of Boylston's Municipal Office Building has three handicapped parking spaces. Both the basement and the main floor are fully handicapped accessible while the third floor is partially accessible and the fourth floor is not accessible at all. There are handicapped accessible bathrooms on both the main floor and the third floor, and the ground access outside is a tarred non-slip surface in good shape.

School Administration Building: This building has three handicapped parking spaces and ground level access to the building as well as handicapped accessible bathrooms.

Police Department: The Police Department has one handicapped parking space and an access ramp for disabled visitors.

Boylston Elementary School: The elementary school in the Town of Boylston is fully handicapped accessible.

Old Town Hall/Historical Society: This building is not handicapped accessible at all.

Municipal Light Department: Handicapped parking is available here and there is an asphalt walk and wide doorway for easier access. The restrooms are not handicapped accessible.

Town House: This building is handicapped accessible and it has handicapped parking spaces and bathrooms.

Library: The Town library is handicapped accessible via ramp and there are handicapped parking spaces. Unfortunately the bathrooms at the library are not handicapped accessible.

Grievance Procedures – Town of Boylston

The following grievance procedure is established to meet the requirements of the Americans with Disabilities Act. It may be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability in employment practices and policies or the provision of services, activities, programs and benefits by the Town of Boylston.

The complaint should be in writing and contain information about the alleged discrimination such as name, address, telephone number of complainant and location, date and description of the problem. Reasonable accommodations, such as personal interviews or a tape recording of the complainant, will be made available for persons with disabilities who are unable to submit a written complaint.

The complaint should be submitted by the grievant and/or his/her designee as soon as possible but no later than 60 calendar days after the alleged violation to the Boylston ADA Coordinator, Town Hall – 221 Main Street, Boylston, MA 01505. Sue Olsen, Town Administrator serves as the ADA Coordinator until the Board of Selectmen appoints a permanent Coordinator.

Within fifteen calendar days after receipt of the complaint, the ADA Coordinator will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the ADA Coordinator will respond in writing, and where appropriate in a format accessible to the complainant such as audiotape. The response will explain the position of the Town of Boylston and offer options for substantive resolution of the complaint.

If the response by the ADA Coordinator does not satisfactorily resolve the issue, the complainant and/or/his/her designee may appeal the decision of the ADA Coordinator within 15 days after receipt of the response to the Board of Selectmen or their designee.

Within 15 calendar days after receipt of the appeal, the Boylston Board of Selectmen or their designee will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting the Board of Selectmen or their designee will respond in writing, and where appropriate in a format accessible to the complainant such as audiotape, with a final resolution of the complaint.

All complaints received by the ADA Coordinator, appeals to the Boylston Board of Selectmen or their designee and responses from the ADA

Coordinator and the Boylston Board of selectmen or their designee will be kept by the Town of Boylston for at least three years.

EQUAL OPPORTUNITY POLICY

General Policy Statement

It is the policy of the Town of Boylston to ensure that persons with disabilities are provided maximum opportunity to participate in and benefit from programs, services, and activities offered by the town. It is the town's goal that such participation as equal as possible to that of able-bodied persons. Therefore, the town's primary focus will be architectural modifications, assistive listening devices and equipment, and sign language interpreters upon request and availability. This approach may not always be feasible or sufficient to ensure equal access and benefit.

In providing its services, programs and activities the Town of Boylston shall not:

- 1) Deny a qualified individual with a disability the opportunity to participate in or benefit from a benefit, service or activity.
- 2) Afford a qualified individual with a disability the opportunity to participate in or benefit from any aid, benefit or service that is not equal to that offered to others.
- 3) Deny a qualified individual with a disability the opportunity to participate as a member of planning or advisory boards, commissions, or any other entity of the Town of Boylston.
- 4) Limit a qualified individual with a disability the enjoyment of any right, privilege, advantage or opportunity received by other individuals receiving the aid, benefit or service.

It is the policy of the Town of Boylston to ensure that persons with disabilities are provided maximum opportunity to participate in and benefit from programs, services and activities. It is the goal that such participation is in the same manner as that of non-disabled persons. Toward achieving this, the Town has a primary focus to identify barriers to access and remove or modify them to use assistive devices or procedures when necessary.

Reasonable Modifications Policy

The Town of Boylston shall make a reasonable program or service modification whenever a person requests such an accommodation, unless it can be demonstrated by the town that such an accommodation would impose an undue burden or fundamental alteration to the program or service. Final

decisions regarding requests for reasonable modifications will be made by the ADA Coordinator in a timely manner. These modifications shall be made within thirty (30) working days of the request or as soon as is reasonably possible. Individuals seeking to contest a denial of a request for reasonable modifications will be given a copy of the grievance procedure in the format appropriate for their needs.

The town will comply with all applicable Federal and State laws and regulations relative to the use of assistive equipment, including trained assistance animals. In addition, no arbitrary restrictions or limitations will be placed on the type or number of assistive equipment items, including assistive animals, that people with disabilities may bring with them to town facilities.

Eligibility Requirements

Any prohibitions or limits upon the eligibility of qualified individuals with disabilities to receive services or practice any occupation or profession are not allowed under this policy.

Assurance Regarding Surcharges

It is the policy of the Town of Boylston that surcharges are never charged to participants (nor any other interested party or person) for reasonable accommodations under any circumstances. Such accommodations include, but are not limited to: American Sign Language (ASL) interpreters, Computer Aided Real Time (CART) translators, architectural accessibility, computer accessibility hardware or software, Braille material, listening devices, closed captioning etc.

Integrated Services Assurance

The Town of Boylston strives to ensure that all of its services, programs, and activities are provided in the most integrated setting possible. People with disabilities will not be required to participate in separate programs even if separate programs that are specifically designed to meet the needs of persons with disabilities are offered.

Services will not be provided to any person with a disability in a manner or at a location different from that available to other service recipients unless the potential for removal of architectural barriers or the use of assistive devices and equipment have been found to be inadequate or inappropriate to the needs of the individual. In all cases, the affected individual will be fully involved in the consideration and decision-making process.

Significant Assistance Assurance

It is the policy of the Town of Boylston that programs to whom the town provides significant support or who the town sponsors may not discriminate against people with disabilities.

Accessible Transportation Policy

It is the policy of the town that whenever transportation services are provided they will be accessible to participants in town programs regardless of disability. When transportation services are provided and an individual is in need of accessible transportation they should make their request in writing to the ADA Coordinator. Requests must be made at least five days in advance of the need. As with all of the town's transportation services, all requests are subject to the availability of space. When a request can not be met, notice will be given as soon as possible and at least one day before the requested date of service.

If a person needs a wheelchair van every effort will be made to accommodate this need. If the town is providing transportation for anyone to or from a particular event or service and someone requests wheelchair accessible transportation, then the town will be responsible for the arrangement and the cost of that transportation.

Community Referral Assurance

Whenever the Town of Boylston participates in or funds programs or makes references to other programs or services, it is the policy that such programs and services must be accessible or usable by a person with a disability. The town will gather information regarding which of the programs and services that it refers people to are accessible, and those that are not. The town will make efforts to gather at least one accessible provider in each of the categories of service in which the town makes referrals.

APPENDIX C: BYLAW EXAMPLES

1. MACC Model Wetlands Bylaw¹

I. Purpose

The purpose of this bylaw [ordinance] is to protect the wetlands, water resources, and adjoining land areas in the Town [City] of _____ by controlling activities deemed by the Conservation Commission likely to have a significant or cumulative effect upon resource area values, including but not limited to the following: public or private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention including coastal storm flowage, water quality, water pollution control, fisheries, shellfisheries, wildlife habitat, rare species habitat including rare plant species, agriculture, aquaculture, and recreation values, deemed important to the community (collectively, the "resource area values protected by this bylaw"). This bylaw is intended to utilize the Home Rule authority of this municipality to protect additional resource areas, for additional values, with additional standards and procedures stricter than those of the Wetlands Protection Act (G.L. Ch. 131 §40) and Regulations thereunder (310 CMR 10.00), subject, however, to the rights and benefits accorded to agricultural uses and structures of all kinds under the laws of the Commonwealth.

II. Jurisdiction

Except as permitted by the Conservation Commission or as provided in this bylaw, no person shall commence to remove, fill, dredge, build upon, degrade, discharge into, or otherwise alter the following resource areas: any freshwater or coastal wetlands; marshes; wet meadows; bogs; swamps; vernal pools; banks; reservoirs; lakes; ponds of any size; rivers; streams; creeks; beaches; dunes; estuaries; the ocean; lands under water bodies; lands subject to flooding or inundation by groundwater or surface water; lands subject to tidal action, coastal storm flowage, or flooding; and lands abutting any of the aforesaid resource areas as set out in §VII (collectively the "resource areas protected by this bylaw"). Said resource areas shall be protected whether or not they border surface waters.

¹ http://maccweb.org/wetlands_bylaw.html
Town of Boylston

III. Exemptions and Exceptions

The application and permit required by this bylaw shall not be required for work performed for normal maintenance or improvement of land in agricultural use as defined by the Wetlands Protection Act Regulations at 310 CMR 10.04.

(Optional) The application and permit required by this bylaw shall not be required for maintaining, repairing, or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public to provide electric, gas, water, telephone, telegraph, or other telecommunication services, provided that written notice has been given to the Conservation Commission prior to commencement of work, and provided that the work conforms to any performance standards and design specifications in regulations adopted by the Commission.

The application and permit required by this bylaw shall not be required for emergency projects necessary for the protection of the health and safety of the public, provided that the work is to be performed by or has been ordered to be performed by an agency of the Commonwealth or a political subdivision thereof; provided that advance notice, oral or written, has been given to the Commission prior to commencement of work or within 24 hours after commencement; provided that the Commission or its agent certifies the work as an emergency project; provided that the work is performed only for the time and place certified by the Commission for the limited purposes necessary to abate the emergency; and provided that within 21 days of commencement of an emergency project a permit application shall be filed with the Commission for review as provided by this bylaw. Upon failure to meet these and other requirements of the Commission, the Commission may, after notice and a public hearing, revoke or modify an emergency project approval and order restoration and mitigation measures. Other than stated in this section, the exceptions provided in the Wetlands Protection Act (G.L. Ch. 131 §40) and Regulations (310 CMR 10.00) shall not apply under this bylaw.

IV. Applications and Fees

Written application shall be filed with the Conservation Commission to perform activities affecting resource areas protected by this bylaw. The permit application shall include such information and plans as are deemed necessary by the Commission to describe proposed activities and their effects on the resource areas protected by this bylaw. No activities shall

commence without receiving and complying with a permit issued pursuant to this bylaw.

The Commission in an appropriate case may accept as the application and plans under this bylaw any application and plans filed under the Wetlands Protection Act (G.L. Ch. 131 §40) and Regulations (310 CMR 10.00). Any person desiring to know whether or not a proposed activity or an area is subject to this bylaw may in writing request a determination from the Commission. Such a Request for Determination (RFD) shall include information and plans as are deemed necessary by the Commission. At the time of an application, the applicant shall pay a filing fee specified in Regulations of the Commission. The fee is in addition to that required by the Wetlands Protection Act and Regulations.

Upon receipt of an application, or at any point during the hearing process, the Commission is authorized to require an applicant to pay a fee for the reasonable costs and expenses borne by the Commission for specific expert engineering and other consultant services deemed necessary by the Commission to come to a final decision on the application. This fee is called the "consultant fee." The specific consultant services may include, but are not limited to, performing or verifying the accuracy of resource area survey and delineation; analyzing resource area functions and values, including wildlife habitat evaluations, hydrogeologic and drainage analysis; and researching environmental or land use law.

If a municipal revolving fund has been established, pursuant to G.L. Ch. 44 §53E_ or a special act, for deposit and Commission use of filing and/or consultant fees described above, then such filing and/or consultant fees shall be deposited therein, for uses set out in the vote establishing the fund. This account shall be kept separate from the account established for filing fees paid under the state Wetlands Protection Act. (see note 1).

The exercise of discretion by the Commission in making its determination to require the payment of a consultant fee shall be based upon its reasonable finding that additional information available only through outside consultants is necessary for the making of an objective decision. Any applicant aggrieved by the imposition of, or size of, the consultant fee, or any act related thereto, may appeal according to the provisions of the

Massachusetts General Laws. The Commission may waive the filing fee, consultant fee, and costs and expenses for a permit or other application or RFD filed by a government agency.

The maximum consultant fee charged to reimburse the Commission for reasonable costs and expenses shall be according to the following schedule:

Project Cost (\$) - Maximum Fee (\$)

Up to 100,000	-- 500
100,001 - 500,000	-- 2,500
500,001 - 1,000,000	-- 5,000
1,000,001 - 1,500,000	-- 7,500
1,500,001 - 2,000,000	-- 10,000

Each additional \$500,000 project cost increment (over \$2,000,000) may be charged not more than an additional \$2,500 maximum fee per increment. The project cost means the estimated, entire cost of the project, including but not limited to, resource area delineation, building design and construction, site preparation, landscaping, and all site improvements. The consultant fee shall be paid pro rata for that portion of the project cost applicable to those activities within resource areas protected by this bylaw. The project shall not be segmented to avoid the consultant fee. The applicant shall submit estimated project costs at the Commission's request, but the lack of such estimated project costs shall not impact payment of the consultant fee.

V. Notice and Hearings

Any person filing a permit or other application or RFD with the Conservation Commission at the same time shall give written notice thereof, by certified mail (return receipt requested) or hand delivered, to all abutters at their mailing addresses shown on the most recent applicable tax list of the assessors, including owners of land directly opposite on any public or private street or way, and abutters to the abutters within 300 feet of the property line of the applicant, including any in another municipality or across a body of water. The notice to abutters shall have enclosed a copy of the application or request, with plans, or shall state where copies may be examined and obtained by abutters. An affidavit of the person providing such notice, with a copy of the notice mailed or delivered, shall be filed with the Commission. When a person requesting a determination is

other than the owner, the request, the notice of the hearing, and the determination itself shall be sent by the Commission to the owner as well as to the person making the request.

The Commission shall conduct a public hearing on any permit application, Abbreviated Notice of Resource Area Delineation (ANORAD) or RFD, with written notice given at the expense of the applicant, at least five business days prior to the hearing, in a newspaper of general circulation in the municipality.

The Commission shall commence the public hearing within 21 days from receipt of a completed permit application, ANORAD or RFD unless an extension is authorized in writing by the applicant. The Commission shall have authority to continue the hearing to a specific date announced at the hearing, for reasons stated at the hearing, which may include the need for additional information from the applicant or others deemed necessary by the Commission in its discretion, based on comments and recommendations of the boards and officials listed in §VI.

The Commission shall issue its permit, other order or determination in writing within 21 days of the close of the public hearing thereon unless an extension is authorized in writing by the applicant. The Commission in an appropriate case may combine its hearing under this bylaw with the hearing conducted under the Wetlands Protection Act (G.L. Ch.131 §40) and Regulations (310 CMR 10.00).

VI. Coordination with Other Boards

Any person filing a permit application or RFD with the Conservation Commission shall provide a copy thereof at the same time, by certified mail (return receipt requested) or hand delivery, to the selectboard [or mayor], planning board, board of appeals, board of health, town [or city] engineer, and building inspector. A copy shall be provided in the same manner to the Conservation Commission of the adjoining municipality, if the application or RFD pertains to property within 300 feet of that municipality. An affidavit of the person providing notice, with a copy of the notice mailed or delivered, shall be filed with the Commission. The Commission shall not take final action until the boards and officials have had 14 days from receipt of notice to file written comments and recommendations with the Commission, which the Commission shall take into account but which shall not be binding on the Commission. The applicant shall have the right to receive any comments and

recommendations, and to respond to them at a hearing of the Commission, prior to final action.

VII. Permits and Conditions

If the Conservation Commission, after a public hearing, determines that the activities which are subject to the permit application or the land and water uses which will result therefrom, are likely to have a significant individual or cumulative effect upon the resource area values protected by this bylaw, the Commission, within 21 days of the close of the hearing, shall issue or deny a permit for the activities requested. If it issues a permit, the Commission shall impose conditions which the Commission deems necessary or desirable to protect those values, and all activities shall be done in accordance with those conditions. The Commission shall take into account the cumulative adverse effects of loss, degradation, isolation, and replication of protected resource areas throughout the community and the watershed, resulting from past activities, permitted and exempt, and foreseeable future activities. Where no conditions are adequate to protect those resource values, the Commission is empowered to deny a permit for failure to meet the requirements of this bylaw. It may also deny a permit: for failure to submit necessary information and plans requested by the Commission; for failure to meet the design specifications, performance standards, and other requirements in regulations of the Commission; or for failure to avoid or prevent unacceptable significant or cumulative effects upon the resource area values protected by this bylaw. Due consideration shall be given to any demonstrated hardship on the applicant by reason of denial, as presented at the public hearing.

Lands within 200 feet of rivers, ponds and lakes, and lands within 100 feet of other resource areas, are presumed important to the protection of these resources because activities undertaken in close proximity to resource areas have a high likelihood of adverse impact upon the wetland or other resource, either immediately, as a consequence of construction, or over time, as a consequence of daily operation or existence of the activities. These adverse impacts from construction and use can include, without limitation, erosion, siltation, loss of groundwater recharge, poor water quality, and loss of wildlife habitat. The Commission may therefore establish performance standards for protection of such lands including without limitation strips of continuous, undisturbed vegetative cover

within the 200-foot or 100-foot area, or other form of work limit or setback to buildings, roads, landscaping and other features, unless the applicant convinces the Commission that the area or part of it may be disturbed without harm to the values protected by the bylaw. The specific size and type of protected area may be established by regulations of the Commission (see note 2).

(Optional) In the review of areas within 200 feet of rivers, ponds and lakes, no permit issued hereunder shall permit any activities unless the applicant, in addition to meeting the otherwise applicable requirements of this bylaw, has proved by a preponderance of the evidence that (1) there is no practicable alternative to the proposed project with less adverse effects, and that (2) such activities, including proposed mitigation measures, will have no significant adverse impact on the areas or values protected by this bylaw. The Commission shall regard as practicable an alternative which is reasonably available and capable of being done after taking into consideration the proposed property use, overall project purpose (e.g., residential, institutional, commercial, or industrial purpose), logistics, existing technology, costs of the alternatives, and overall project costs.

To prevent wetlands loss, the Commission shall require applicants to avoid wetlands alteration wherever feasible; shall minimize wetlands alteration; and, where alteration is unavoidable, shall require full mitigation. The Commission may authorize or require replication of wetlands as a form of mitigation, but only with adequate security, professional design, and monitoring to assure success, because of the high likelihood of failure of replication. The Commission may require a wildlife habitat study of the project area, to be paid for by the applicant, whenever it deems appropriate, regardless of the type of resource area or the amount or type of alteration proposed. The decision shall be based upon the Commission's estimation of the importance of the habitat area considering (but not limited to) such factors as proximity to other areas suitable for wildlife, importance of wildlife "corridors" in the area, or possible presence of rare species in the area. The work shall be performed by an individual who at least meets the qualifications set out in the wildlife habitat section of the Wetlands Protection Act Regulations (310 CMR 10.60).

The Commission shall presume that all areas meeting the definition of "vernal pools" under §IX of this bylaw, including the adjacent area, perform essential habitat functions. This presumption may be overcome only by the presentation of credible evidence which, in the judgment of the Commission, demonstrates that the basin or depression does not provide essential habitat functions. Any formal evaluation should be performed by an individual meeting the qualifications under the wildlife habitat section of the Wetlands Protection Act Regulations.

A permit shall expire three years from the date of issuance. Notwithstanding the above, the Commission in its discretion may issue a permit expiring five years from the date of issuance for recurring or continuous maintenance work, provided that annual notification of time and location of work is given to the Commission. Any permit may be renewed once for an additional one year period, provided that a request for a renewal is received in writing by the Commission prior to expiration. Notwithstanding the above, a permit may identify requirements which shall be enforceable for a stated number of years, indefinitely, or until permanent protection is in place, and shall apply to all owners of the land.

For good cause the Commission may revoke any permit, other order, determination or other decision issued under this bylaw after notice to the holder of the permit, the public, abutters, and town boards, pursuant to §V and §VI, and a public hearing. Amendments to permits or determinations shall be handled in the manner set out in the Wetlands Protection Act Regulations and policies thereunder.

The Commission in an appropriate case may combine the decision issued under this bylaw with the Order of Conditions, Order of Resource Area Delineation (ORAD), Determination of Applicability or Certificate of Compliance issued under the Wetlands Protection Act and Regulations.

No work proposed in any application shall be undertaken until the permit, ORAD or determination issued by the Commission with respect to such work has been recorded in the registry of deeds or, if the land affected is registered land, in the registry section of the land court for the district wherein the land lies, and until the holder of the permit certifies in writing to the Commission that the document has been recorded. If the

applicant fails to perform, the Commission may record the documents itself.

VIII. Regulations

After public notice and public hearing, the Conservation Commission shall promulgate rules and regulations to effectuate the purposes of this bylaw, effective when voted and filed with the town or city clerk. Failure by the Commission to promulgate such rules and regulations or a legal declaration of their invalidity by a court of law shall not act to suspend or invalidate the effect of this bylaw. At a minimum these regulations shall define key terms in this bylaw not inconsistent with the bylaw, and procedures governing the amount and filing of fees.

IX. Definitions

The following definitions shall apply in the interpretation and implementation of this bylaw.

The term "alter" shall include, without limitation, the following activities when undertaken to, upon, within or affecting resource areas protected by this bylaw:

- A. Removal, excavation, or dredging of soil, sand, gravel, or aggregate materials of any kind
- B. Changing of preexisting drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns, or flood retention characteristics
- C. Drainage, or other disturbance of water level or water table
- D. Dumping, discharging, or filling with any material which may degrade water quality
- E. Placing of fill, or removal of material, which would alter elevation
- F. Driving of piles, erection, expansion or repair of buildings, or structures of any kind
- G. Placing of obstructions or objects in water
- H. Destruction of plant life including cutting or trimming of trees and shrubs
- I. Changing temperature, biochemical oxygen demand, or other physical, biological, or chemical characteristics of any waters
- J. Any activities, changes, or work which may cause or tend to contribute to pollution of any body of water or groundwater

K. Incremental activities which have, or may have, a cumulative adverse impact on the resource areas protected by this bylaw.

The term "bank" shall include the land area which normally abuts and confines a water body; the lower boundary being the mean annual low flow level, and the upper boundary being the first observable break in the slope or the mean annual flood level, whichever is higher.

The term "person" shall include any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to town bylaws, administrative agency, public or quasi-public corporation or body, this municipality, and any other legal entity, its legal representatives, agents, or assigns.

The term "pond" shall follow the definition of 310 CMR 10.04 except that the size threshold of 10,000 square feet shall not apply.

The term "rare species" shall include, without limitation, all vertebrate and invertebrate animal and all plant species listed as endangered, threatened, or of special concern by the Massachusetts Division of Fisheries and Wildlife, regardless of whether the site in which they occur has been previously identified by the Division.

The term "vernal pool" shall include, in addition to scientific definitions found in the regulations under the Wetlands Protection Act, any confined basin or depression not occurring in existing lawns, gardens, landscaped areas or driveways which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, contains at least 200 cubic feet of water at some time during most years, is free of adult predatory fish populations, and provides essential breeding and rearing habitat functions for amphibian, reptile or other vernal pool community species, regardless of whether the site has been certified by the Massachusetts Division of Fisheries and Wildlife. The boundary of the resource area for vernal pools shall be 100 feet outward from the mean annual high-water line defining the depression, but shall not include existing lawns, gardens, landscaped or developed areas.

Except as otherwise provided in this bylaw or in regulations of the Conservation Commission, the definitions of terms and procedures in this bylaw shall be as set forth in the Wetlands Protection Act (G.L. Ch. 131 §40) and Regulations (310 CMR 10.00).

X. Security

As part of a permit issued under this bylaw, in addition to any security required by any other municipal or state board, agency, or official, the Conservation Commission may require that the performance and observance of the conditions imposed thereunder (including conditions requiring mitigation work) be secured wholly or in part by one or more of the methods described below:

- A. By a proper bond or deposit of money or negotiable securities or other undertaking of financial responsibility sufficient in the opinion of the Commission, to be released in whole or in part upon issuance of a Certificate of Compliance for work performed pursuant to the permit
- B. By accepting a conservation restriction, easement, or other covenant enforceable in a court of law, executed and duly recorded by the owner of record, running with the land to the benefit of this municipality whereby the permit conditions shall be performed and observed before any lot may be conveyed other than by mortgage deed. This method shall be used only with the consent of the applicant.

XI. Enforcement

No person shall remove, fill, dredge, build upon, degrade, or otherwise alter resource areas protected by this bylaw, or cause, suffer, or allow such activity, or leave in place unauthorized fill, or otherwise fail to restore illegally altered land to its original condition, or fail to comply with a permit or an enforcement order issued pursuant to this bylaw.

The Conservation Commission, its agents, officers, and employees shall have authority to enter upon privately owned land for the purpose of performing their duties under this bylaw and may make or cause to be made such examinations, surveys, or sampling as the Commission deems necessary, subject to the

constitutions and laws of the United States and the Commonwealth (see note 3).

The Commission shall have authority to enforce this bylaw, its regulations, and permits issued thereunder by violation notices, non-criminal citations under G.L. Ch. 40 §21D, and civil and criminal court actions. Any person who violates provisions of this bylaw may be ordered to restore the property to its original condition and take other action deemed necessary to remedy such violations, or may be fined, or both.

Upon request of the Commission, the selectboard and town counsel [or mayor and city solicitor] shall take legal action for enforcement under civil law. Upon request of the Commission, the chief of police shall take legal action for enforcement under criminal law.

Municipal boards and officers, including any police officer or other officer having police powers, shall have authority to assist the Commission in enforcement.

Any person who violates any provision of this bylaw, or regulations, permits, or administrative orders issued thereunder, shall be punished by a fine of not more than \$300. Each day or portion thereof during which a violation continues, or unauthorized fill or other alteration remains in place, shall constitute a separate offense, and each provision of the bylaw, regulations, permits, or administrative orders violated shall constitute a separate offense. As an alternative to criminal prosecution in a specific case, the Commission may issue citations under the non-criminal disposition procedure set forth in G.L. Ch. 40 §21D, which has been adopted by the Town in section __ of the general bylaws (see note 4).

XII. Burden of Proof

The applicant for a permit shall have the burden of proving by a preponderance of the credible evidence that the work proposed in the permit application will not have unacceptable significant or cumulative effect upon the resource area values protected by this bylaw. Failure to provide adequate evidence to the Conservation Commission supporting this burden shall be sufficient cause for the Commission to deny a permit or grant a permit with conditions.

XIII. Appeals

A decision of the Conservation Commission shall be reviewable in the superior court in accordance with G.L. Ch. 249 §4.

XIV. Relation to the Wetlands Protection Act

This bylaw is adopted under the Home Rule Amendment of the Massachusetts Constitution and the Home Rule statutes, independent of the Wetlands Protection Act (G.L. Ch. 131 §40) and Regulations (310 CMR 10.00) thereunder.

XV. Severability

The invalidity of any section or provision of this bylaw shall not invalidate any other section or provision thereof, nor shall it invalidate any permit, approval or determination which previously has been issued.

Notes

1. Regarding filing and consultant fee revolving fund: This must be authorized by separate vote of annual (spring) town meeting to establish a revolving fund under G.L. Ch. 44 §53E_. Revolving funds have been established in a few communities by special act. The town cannot establish such a fund merely by creating a bylaw. Furthermore, the revolving fund must be re-established by such a vote each year at annual town meeting, on recommendation of the selectboard. The text below is recommended for the initial town meeting vote.

"Voted: That the town hereby establishes a revolving fund under G.L. Ch. 44 §53E_ for the purposes of administering the filing and consultant fee provisions of the Wetlands Protection Bylaw, and further that the Conservation Commission may expend same without appropriation for expenses reasonably related to its duties and responsibilities as provided therein; that expenditures from same shall not exceed [\$25,000] in the fiscal year; that the Conservation Commission will report to the next annual town meeting on the receipts and expenditures of the revolving fund; and that the fund, in order to continue in existence, must be re-authorized by each subsequent town meeting."

2. Regarding setbacks: To protect resource areas many communities impose minimum "setbacks" in bylaws or in Commission regulations. A "no-build" setback should be clearly distinguished from a "no-work" area where no disturbance at all is allowed during or after the work, and landscaping limits must be clearly identified. A community may wish to establish a setback of 200 feet for work abutting rivers in parallel with the Wetlands Protection Act as amended by the Rivers Protection Act, or extend this 200-foot requirement to other resource areas such as lakes, vernal pools, etc.
3. Constitutional limits on entry into private property may supersede Wetlands Protection Act right-of-entry. Express permission should be sought. An administrative search warrant may be required for entry and inspection. These difficulties are unlikely to arise once an application has been filed, or if a violation is in plain view from a road, the air, or land of a friendly abutter.
4. Regarding Ch. 40 §21D: This is best adopted as a separate general bylaw or ordinance. Some towns may fold it into their wetlands bylaw. In that case, a section should be added repeating important language from §21D. The town should designate the Commission and its agents as an agent to issue non-criminal citations among others, often including the board of health, building inspector, zoning enforcement officer, and police officers.

2. Open Space Residential Development Bylaw

This Open Space Residential Design Site Plan Bylaw encourages land-sensitive construction, siting and design of significant new residential projects through a cooperative exploration of alternatives which allows relaxation of current zoning and subdivision dimensional standards and which permits increased density in return for achievement of open space preservation targets.

I. PURPOSE AND INTENT

1. The Primary Purposes for this OSRD bylaw are the following:
 - (a) To allow for greater flexibility and creativity in the design of residential developments;

- (b) To encourage the permanent preservation of open space, forestry land, wildlife habitat, other natural resources including aquifers, water bodies and wetlands, and historical resources in a manner that is consistent with _____Master Plan and Open Space and Recreation Plan;
- (c) To encourage a less sprawling and more efficient form of development that consumes less open land and conforms to existing topography and natural features better than a conventional or grid subdivision;
- (d) To minimize the total amount of disturbance on the site;
- (e) To further the goals and policies of _____Master Plan and Open Space and Recreation Plan;
- (f) To facilitate the construction and maintenance of housing, streets, utilities, and public service in a more economical and efficient manner.

2. The Secondary Purposes for the OSRD bylaw are the following:

- (a) To protect the value of real property;
- (b) To protect community water supplies;
- (c) To provide for a diversified housing stock;
- (d) To provide affordable housing to persons of low and moderate income.

II. APPLICABILITY

1. Number of Lots; Area. Any development or construction of new housing (including a condominium) on a tract of land that (i) will create either four (4) or more buildable lots by reason of a subdivision or four (4) or more new dwelling units (excluding new units in an existing building), or (ii) has an area of 2 acres or more, shall be subject to this OSRD bylaw (in either case, a “Covered Project”). Any other residential project may elect to be subject to this OSRD bylaw.
2. Zoning Classification. This OSRD bylaw shall apply only to those tracts (or to the portions thereof) located in one or more residential zoning districts.

3. Tract. A “tract” for the purposes of this OSRD bylaw shall consist of one or more contiguous lots under single legal or beneficial ownership or proposed to be developed as a single project, including in phases. Lots separated only by a private or public way shall be considered contiguous for the purposes of this OSRD bylaw.

This bylaw shall not prevent endorsement of any qualified ANR plan but shall apply to all Covered Projects after ANR endorsement has been received or obtained.

4. OSRD Site Plan Approval. No building permit shall be issued for, nor any construction or foundation work be commenced, on any portion of a Covered Project without first obtaining OSRD Site Plan Approval pursuant to this OSRD Bylaw for the entire project.

III. GENERAL DESIGN PROCESS.

During the OSRD site plan pre-application and approval process, and beginning as early as economically feasible, but no later than the time of submittal of the Sketch Plan described below, applicants shall demonstrate to the Planning Board that the following steps, in the order indicated, were (i) performed by a certified Landscape Architect or by a multidisciplinary team one member of which must be a certified Landscape Architect (or in either case, a professional approved in advance by the Planning Board as having similar skills and qualifications) and (ii) followed in determining the layout of proposed streets, buildings, house lots, and open space as shown on the required plans.

1. **Step One: Identifying Conservation Areas.** Identify preservation land by two steps. First, Primary Conservation Areas (such as wetlands, riverfront areas, and floodplains regulated by state or federal law) and Secondary Conservation Areas (including elements of the natural landscape such as steep slopes, mature woodlands, prime farmland, meadows, wildlife habitats and cultural features such as historic sites and scenic views) shall be identified and delineated. Second, the Potentially Developable Area will be identified and delineated. To the maximum extent feasible, the “Potentially Developable Area” shall consist of land outside identified Primary and Secondary Conservation Areas.
2. **Step Two: Locating Housing Sites.** Locate the approximate sites of all residential buildings within the Potentially Developable Area and include the delineation of private yards, exclusive easement areas, and shared amenities, with a design that seeks to encourage an integrated community within the proposed development and further the goals of the Master Plan

and the Open Space and Recreation Plan. The number of dwelling units (both inside and outside the development) entitled to enjoy the amenities of the development should be maximized.

3. **Step Three: Aligning Streets and Access Ways.** Align streets in order to access the house lots and residential buildings. Additionally, new access ways should be laid out to create internal and external connections to existing and/or potential future streets, sidewalks, trails and bicycle paths.
4. **Step Four: Lot Lines.** Draw in new lot lines (as applicable).

IV. PRE-APPLICATION PROCESS

1. Pre-Application Review. Prior to submitting its application for an OSRD site plan approval, and in advance of filing any preliminary or definitive subdivision plan for the proposed development or any portion thereof, the applicant shall participate in pre-application review at one or more regular business meetings of the Planning Board. The Planning Board shall send notice to other appropriate municipal committees and Boards, who may attend or send representatives to attend and speak in an unofficial capacity. The purpose of pre-application review is to minimize the applicant's costs of engineering and other technical experts, and to commence discussions with the Planning Board at the earliest possible stage in the development. At or during the pre-application review, the applicant shall submit at least one "Sketch Plan" (as defined in IV.2 below), shall describe the development and how it furthers the goals of this bylaw, seek feedback from the Planning Board and/or its technical experts, and indicate a possible timetable for submittal of a formal application. At the request and at the expense of the applicant, the Planning Board may engage technical experts to review the plans submitted by the applicant and to facilitate submittal of a formal application for OSRD site plan approval. The pre-application review may extend over more than one meeting or session and shall not constitute or require a public hearing; however, the Planning Board may elect to receive limited public input at this stage to assist in the design process.
2. Sketch Plan. At least one plan submitted during the pre-application process shall constitute a "Sketch Plan" as described below. Submission during the pre-application stage of two or more conceptual plans showing alternative development configurations is strongly encouraged. The applicant is also encouraged not to submit a Sketch Plan until the Planning Board and the applicant have discussed alternative development and conservation configurations so that the input of the Planning Board

can be taken into account in the creation of a Sketch Plan depicting the preferred configuration.

The Sketch Plan shall address the general features and topography of the land, identify major types and approximate size of vegetation, give approximate configurations of the lots, open space, and roadways, and include other information as appropriate as listed in OSRD Site Plan Rules and Regulations. The Sketch Plan shall incorporate the four-step General Design Process, noted above, and the Design Standards according to Section V.3 below, when determining a proposed design for the development.

3. Yield Plan. Before approval of the Sketch Plan by the Planning Board in the pre-application phase, the applicant shall submit a Yield Plan (as defined in Section VI below).
4. Rules and Regulations. The Planning Board shall adopt rules and regulations relative to the size, form, number and contents of the Sketch plan and Yield plan.
5. Approval of Sketch Plan. A Sketch Plan shall be approved by the Planning Board subject to such conditions as it deems appropriate to achieve the goals of this OSRD bylaw. When the Planning Board approves the Sketch Plan, the applicant may then file an application for OSRD Site Plan Approval.

V. SITE PLAN APPROVAL PROCESS

1. OSRD Site Plan. A proposed OSRD Site Plan shall be a fully engineered plan, conforming to the provisions of this OSRD bylaw, all the provisions of the OSRD Site Plan Rules and Regulations, and the Town of _____ Site Plan Zoning Bylaw. The Site Plan shall incorporate the features and comply with the conditions of the approved Sketch Plan but shall also include storm-water management, wastewater management, utilities, and all other information as required by applicable bylaws, rules and regulations.

2. General Procedures.

(a) When an application for approval of an OSRD Site Plan is filed with the Planning Board, the applicant shall also file, within five (5) working days of the filing of the completed application, a copy of the full application, including development plan and other documentation, with each of the Board of Health, Conservation Commission, Building Inspector, Department of Public Works, Police Chief, Fire Chief, and

Engineer for their consideration, review, and report. The applicant shall furnish the copies necessary to fulfill this requirement. Reports from other boards and officials shall be submitted to the Planning Board within forty-five (45) days of receipt by the reviewing party of all of the required materials; failure of these reviewing parties to make recommendations after having received copies of all such required materials shall be deemed a lack of opposition thereto. In the event that the public hearing by the Planning Board is commenced prior to the expiration of the 45 day period, the Planning Board shall continue the public hearing to permit the formal submission of reports and recommendations within that forty-five (45) day period.

(b) The Planning Board shall hold a public hearing within sixty (60) days of receipt of a complete application. The decision of the Planning Board shall be upon a majority of its members present at the public hearing. The Planning Board shall make and file its decision with the Town Clerk within sixty (60) days from the close of the public hearing, and shall notify the applicant of its decision. The decision shall contain, in writing, an explanation for any departures from the recommendations of any reviewing party. A copy of the decision, certified by the Town Clerk as free of appeal, shall be recorded by the applicant prior to the commencement of work. The decision shall be binding on the land depicted on the approved Site Plan.

(c) OSRD Site Plan approval shall lapse after one year from the grant thereof if a substantial use thereof has not sooner commenced except for good cause. Such approval may, for good cause, be extended from time to time in writing by the Planning Board, without public hearing, upon the written request of the applicant.

(d) The appeal of any decision of the Planning Board granting or denying Site Plan Approval shall be made in accordance with the provisions of MGL Chapter 40A, Section 17. For this purpose, such action of the Planning Board shall be deemed that of a Special Permit Granting Authority.

3. Design Standards. In approving an OSRD Site Plan, the Planning Board may impose conditions to ensure that the site plan complies with the following design standards.

(a). Generic Design Standards

(i.) The site plan shall promote permanent preservation of open space, agricultural land, forestry land, natural resources and historical and

archeological resources better than a conventional subdivision (for purposes of this OSRD bylaw a “conventional subdivision” shall mean a subdivision designed in full accordance with applicable subdivision rules and regulations [other than pursuant to this OSRD bylaw] without waivers of any kind);

(ii.) The site plan shall consume less open land and shall conform to existing topography and natural features better than a conventional subdivision;

(iii.) The site plan shall have less total amount of disturbance on the site than a conventional subdivision;

(iv.) The site plan shall facilitate the construction and maintenance of streets, utilities, and public service in a more economical, safe and efficient manner than a conventional subdivision and all utilities shall be underground within the proposed development;

(v.) The landscape within the site plan shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal. The orientation of building sites shall be such as to maintain maximum natural topography and cover. Topography, tree cover, and natural drainage ways shall be treated as fixed determinants of road and lot configuration rather than as malleable elements that can be changed to follow a preferred development scheme.

(vi.) Streets and other ways within the site plan shall be designed and located in such a manner as to maintain and preserve natural topography, significant landmarks, and trees; to minimize cut and fill; and to preserve and enhance views and vistas on or off the subject parcel.

(vii.) All open space (landscaped and usable) shall be designed to add to the visual amenities of the area by maximizing its visibility for persons passing the site or overlooking it from nearby properties.

(viii.) The removal or disruption of historic, traditional or significant uses, structures, or architectural elements shall be minimized insofar as practicable, whether these exist on the site or on adjacent properties.

(ix.) Parking areas shall be screened by fencing or landscaping to the extent possible.

(b). Site Specific Design Standards

(i.) Parking. Each dwelling unit shall be served by two (2) off-street parking spaces. Parking spaces in front of garages may count in this computation.

(ii.) Buffer Areas. A buffer area of at least fifty (50) feet (one hundred [100] feet in the case of a tract exceeding two [2] acres) shall be provided at the following locations: (a) perimeter of the property; (b) certain resource areas on or adjacent to the tract like rock outcrops, ledge, agricultural or recreational fields, and land held for conservation purposes, (c) Primary and Secondary Conservation Areas (as defined in III.1 above); and (d) existing public ways. Such buffer areas shall be free of above-ground structures and improvements, except that driveways necessary for access and egress to and from the tract may cross such buffer areas. No vegetation in this buffer area will be disturbed, destroyed or removed, except for installation and normal maintenance of structures and landscapes approved as part of the project. The Planning Board may waive, reduce or increase the buffer requirement in those locations where it determines that a smaller or larger buffer (or no buffer) is necessary, or will suffice, to accomplish the objectives set forth herein; provided always that no buffer requirement herein shall be applied so as to render any tract unusable, and any variation from the required buffer area shall be rationally related to accomplishing the objectives of this OSRD bylaw.

(iii.) Drainage. The Planning Board shall encourage the use of “soft” (non-structural) storm water management techniques (such as swales) and other drainage techniques that reduce impervious surface and enable infiltration where appropriate.

(iv.) Common/Shared Driveways. A common or shared driveway may serve a maximum number of six (6) lots.

(v.) Stormwater Management Facilities. All structural surface storm water management facilities shall be accompanied by a conceptual landscape and screening plan.

(vi.) On-site Pedestrian and Bicycle Circulation. Walkways and bicycle paths shall be provided to link residences with parking areas, recreation facilities (including parkland and open space) and adjacent land uses where appropriate.

(vii) Undisturbed Areas. At least 50% of the total tract shall be undisturbed, whether by initial or subsequent construction or structures. An undisturbed area is any land left in its natural vegetated state.

(viii) Disturbed Areas. Within areas to be disturbed, the applicant shall show all trees of ten (10) inches caliper or greater and present justification for their disturbance or removal.

4. Site Visit. Whether or not conducted during the pre-application stage, the Planning Board may conduct a site visit during the public hearing. At the site visit, the Planning Board and/or its agents shall be accompanied by the applicant and/or its agents.

5. Relationship Between the OSRD Site Plan and Definitive Subdivision Plan
For developments subject to this OSRD bylaw, the issuance of an OSRD Site Plan Approval allows the applicant to submit a Definitive Subdivision Plan to the Planning Board for approval under the Subdivision Control Law. Any Site Plan Approval issued by the Planning Board shall specifically state that the Definitive Subdivision Plan shall substantially comply with the approved Site Plan.

Upon written request of the applicant, the Planning Board in its sole discretion, and to the extent permitted by law, may permit the applicant to apply for Definitive Subdivision Plan Approval at the same time as it files its application for OSRD Site Plan Approval, and may conduct the public hearings on the applications concurrently, provided

(i) by so requesting the applicant shall be irrevocably deemed to have requested extensions from the Planning Board of the timeframes for hearing and final action under the Subdivision Control Law in order to allow Site Plan Approval to proceed as stated in this OSRD bylaw, including the provisions of (iii) below,

(ii) that the Planning Board's decision on Site Plan Approval shall be rendered separately from and prior to taking final action on the Definitive Subdivision Plan, and

(iii) that the Planning Board shall take final action with respect to the Definitive Subdivision Plan not later than one hundred thirty-five (135) days after the close of the public hearing on the Site Plan Approval.

If such hearings are conducted concurrently, they may at any time be severed by the Planning Board and thereafter conducted separately, provided that in no event shall the public hearing on the Definitive Subdivision Plan be closed before the public hearing on the OSRD Site Plan. It is intended that the discretion afforded to the Planning Board in this paragraph shall be exercised primarily in those situations where, due to the thoroughness of the pre-application review, both the proposed OSRD Site Plan and proposed Definitive Subdivision Plan are likely to be straightforward and non-controversial, or the potential for alternative development options is virtually non-existent.

A Definitive Subdivision Plan will be considered not to substantially comply with the approved Site Plan if the Planning Board determines that the Definitive Subdivision Plan displays, in comparison to such approved Site Plan:

- a.) an increase in the number of building lots or dwelling units;
- b.) a significant decrease in the open space acreage;
- c.) a significant change in the lot layout;
- d.) a significant change in the general development pattern which adversely affects natural landscape features and open space preservation;
- e.) significant changes to the storm water management facilities; and/or,
- f.) significant changes in the wastewater management systems.

If the Planning Board determines that the Definitive Subdivision Plan does not substantially comply with the approved Site Plan, the Board may disapprove the definitive subdivision plan for failure to comply with the conditions of the Site Plan requiring that the Definitive Plan substantially comply with the Site Plan.

The Planning Board may conditionally approve a Definitive Subdivision Plan that does not substantially comply with the approved Site Plan. However, such conditional approval must identify where the plan does not substantially comply with the approved Site Plan and shall require that the approved Site Plan be amended to be in compliance with the significant changes identified by the Planning Board. The Planning Board shall also require that the applicant file an application to amend the Site Plan within a specified time period.

The public hearing on the application to amend the Site Plan shall be limited to the significant changes identified by the Planning Board in their conditional approval of the open space Definitive Subdivision Plan. These are

the only considerations that the Planning Board may take into account in deciding whether to amend the Site Plan.

6. Other Information The submittals and permits of this section shall be in addition to any other requirements of the Subdivision Control Law, the applicable Subdivision Rules and Regulations or any other provisions of this Zoning Bylaw.

VI. BASIC MAXIMUM NUMBER (OF LOTS/UNITS)

In order for an OSRD Site Plan to be approved, the number of lots or dwelling units on the tract shall not exceed the Basic Maximum Number, as defined below.

The Basic Maximum Number shall be the maximum number of lots (or, where no subdivision or lot division is involved, number of dwelling units) that could feasibly and reasonably economically be placed upon the site under a conventional subdivision or development plan pursuant to then applicable zoning (other than this OSRD bylaw), without variances or waivers of any kind, including from other bodies having regulatory authority over the development or any portion thereof (such as the Conservation Commission and Board of Health), and accurately depicted on the Yield Plan. The Yield Plan shall display the general features and topography of the land shown on the Sketch Plan, the dimensions, areas, and locations of the lots, open space, and roadways, and such other information as is required from time to time by the OSRD rules and regulations. The applicant shall have the burden of proof in establishing the Basic Maximum Number of lots (or dwelling units) resulting from the design and engineering specifications shown on the Yield Plan. The Planning Board shall consider at least the following factors in determining if such burden of proof has been met:

- (i) the applicant has demonstrated through title insurance or other acceptable evidence that it is the owner of, and in control of, the entire tract depicted within the OSRD Site Plan;
- (ii) the existence of wetlands and other environmental and regulatory constraints upon development has been adequately shown and dealt with; and
- (iii) the applicant demonstrates that under then current market conditions the number of dwelling units, and their related improvements and infrastructure, as shown on the Yield Plan could be reasonably and economically constructed.

VII. PERMITTED REDUCTION OF DIMENSIONAL REQUIREMENTS

The Planning Board encourages applicants to modify lot size, shape, and other dimensional requirements for lots within an OSRD Site Plan, in order to further the goals of this OSRD bylaw, subject to the following limitations:

1. Lots having reduced area or frontage shall not have frontage on a street other than a street created by the OSRD; and
2. Reduction of otherwise applicable setback requirements shall not be permitted with respect to those setbacks measured from any exterior boundary of the tract.
3. If the entire tract depicted in the OSRD Site Plan preserves seventy percent (70%) or more of its Potentially Developable Area (as defined in III.1 above), then the number of lots (or dwelling units in the case of a condominium development) that may be permitted above the Basic Maximum Number allowed under then existing zoning limitations, shall be as follows:

Basic Maximum

Number

Increase Allowed

4 to 10	1 unit/lot
11 to 30	2 units/lots
31 and above	10 percent (rounded down to nearest whole number)

4. Notwithstanding the foregoing, nothing in this section shall permit, or be deemed to permit, the construction or use of more dwelling units per lot than is otherwise permitted in the applicable zoning district.

VIII. OPEN SPACE REQUIREMENTS

1. Open Space. A minimum of fifty percent (50%) of the tract shown on the OSRD site plan shall be open space meeting the following criteria:
 - A. All proposed open space, unless conveyed to a Conservation Entity (as defined below), shall be subject to a recorded conservation restriction enforceable by a Conservation Entity, which restriction provides in accordance with MGL Chapter 184, Sections 31 and 33, that such land shall be perpetually kept in an open state, that it shall be preserved exclusively for the purposes set forth herein, and that it shall be

maintained in a manner which will ensure its suitability for its intended purposes.

- B. Not more than _____ (____%) of the area shown as proposed open space shall consist of either (i) wetland resource areas, as that term is defined in the City of _____ Wetlands Bylaw and Regulations, or (ii) areas having a slope of more than twenty percent (20%); however, the Planning Board may reduce such open space requirement in any instance where the strict application thereof would render a tract unusable.
- C. The open space sufficient to meet the minimum requirements shall be contiguous. Open space shall be considered contiguous if a roadway or an accessory amenity separates it.
- D. The open space shall be used for wildlife habitat and conservation and the following additional purposes: historic preservation, education, outdoor education, recreation, park purposes, agriculture, horticulture, forestry, a combination of these uses, and shall be served by suitable access for such purposes. The Planning Board may permit up to five percent (5 %) of the open space to be paved or built upon for structures accessory to the dedicated use or uses of such open space (e.g., pedestrian walks and bike paths).
- E. Wastewater and storm water management systems serving the OSRD may be located within the open space; however surface systems, such as retention and detention ponds, shall not qualify towards the minimum open space required.

2. Ownership of the Open Space. The open space shall, at the applicant's election, be conveyed to, and shall be held as Open Space, in perpetuity by one or more of the following (each a "Conservation Entity"):

- (a) the City, acting by and through its Conservation Commission;
- (b) a nonprofit organization, the principal purpose of which is the conservation of open space and any of the purposes for such open space set forth above;
- (c) a corporation or trust owned jointly or in common by the owners of lots within the OSRD Site Plan. If such corporation or trust is utilized, ownership thereof shall pass with conveyance of the lots in perpetuity. Maintenance of such open space and facilities shall be permanently guaranteed by such corporation or trust which shall provide for

mandatory assessments for maintenance expenses to each lot. Each such trust or corporation shall be deemed to have assented to allow the Town to perform maintenance of such open space and facilities, if the trust or corporation fails to provide adequate maintenance, and shall grant the Town an easement for this purpose. In such event, the Town shall first provide fourteen (14) days written notice to the trust or corporation as to the inadequate maintenance, and, if the trust or corporation fails to complete such maintenance, the Town may perform it. Each individual deed, and the deed or trust or articles of incorporation, shall include provisions designed to effect these provisions. Documents creating such trust or corporation shall be submitted to the Planning Board for approval, and shall thereafter be recorded.

3. Lighting Standards

- A. Applicability. Outdoor illumination rated at 1800 lumens or more (approximately equal to one 120-watt incandescent light bulb) shall be subject to the provisions of this Section. The following exceptions apply: emergency lighting; hazard warning; temporary decorative or holiday lighting; public roadway illumination or other lighting required by or installed by government agencies. It shall also not apply to any luminaire intended solely to illuminate any freestanding sign, flag or the walls of any building, but such luminaire shall be shielded so that its direct light is confined to the surface of such sign, flag or building.

The replacement of existing fixtures shall be subject to the provisions of this Section, but the replacement of existing non-conforming lamps or fixtures with the same or lower output non-conforming lamps is exempted.

- B. Exterior lighting shall be shielded or reflected so that the light source is not visible from any residential district. Exterior lighting, the source of which would be visible from any public street, shall have its source reflected or retracted so as to direct and distribute the light to minimize glare.
- C. No flickering or flashing lights shall be permitted.
- D. In non-residential districts, luminaries attached to a building for area lighting shall be shielded to eliminate glare.

- E. Outdoor Advertising Signs. Lighting fixtures used to illuminate an outdoor advertising sign shall be mounted on the top of the sign structure. Bottom mounted outdoor advertising-sign lighting shall not be used. Illumination of outdoor advertising signs shall be prohibited during the hours the business is closed. Existing outdoor advertising structures shall be brought into compliance with this Section within 10 years.

3. Lighting

6.4 EXTERIOR LIGHTING

6.4.1 Purpose. The purpose of this Section is to enhance public safety by providing for adequate and appropriate outdoor lighting, protect community character, promote energy conservation and protect against light trespass and glare.

6.4.2 Definitions. For the purposes of this Section, the following terms shall be defined as indicated below. Although set forth here for convenience, the terms shall have the same effect as if set forth in Section 2.0 of this Bylaw.

6.4.2.1 **COLOR RENDERING INDEX (CRI)** A measurement of the amount of color shift that objects undergo when lighted by a light source as compared with the color of those same objects when seen under a reference light source of comparable color temperature. CRI values generally range from 0 to 100, where 100 represents incandescent light.

6.4.2.2 **FIXTURE** The assembly that houses a lamp or lamps, and which may include a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor, lens or diffuser lens.

6.4.2.3 **GLARE** Light emitted from a luminaire with intensity great enough to produce annoyance, discomfort or a reduction in a viewer's ability to see.

6.4.2.4 **LAMP** The component of a luminaire that produces the actual light.

6.4.2.5 **LIGHT TRESPASS** The shining of direct light produced by a luminaire beyond the boundaries of the lot on which it is located.

6.4.2.6 **LUMEN** A measure of light energy generated by a light source. One foot candle is one lumen per square foot. For purposes of this Bylaw, the lumen output shall be the initial lumen output of a lamp, as rated by the manufacturer.

6.4.2.7 **LUMINAIRE** A complete lighting system, including a lamp or lamps and a fixture.

6.4.3 Applicability. Outdoor illumination by flood or spot luminaires rated at nine hundred (900) lumens or more (which is approximately equal to one 60-watt incandescent light bulb) or by any other luminaires rated at one thousand eight hundred (1800) lumens or more (which is approximately equal to one 120-watt incandescent light bulb) shall be subject to the provisions of this Section, with the following exceptions: emergency lighting; hazard warning; temporary decorative or holiday lighting; public roadway illumination or other lighting required by or installed by governmental agencies. It shall also not apply to any luminaire intended solely to illuminate any freestanding sign, flag or the walls of any building but such luminaire shall be shielded so that its direct light is confined to the surface of such sign, flag or building.

6.4.3.1 The replacement of existing fixtures shall be subject to the provisions of this Section, however, the replacement of existing nonconforming lamps or fixtures with the same or lower output nonconforming lamps or fixtures is exempted.

6.4.3.2 The Planning Board in performing review pursuant to Section 7.3, Environmental Impact and Design Review may determine that special circumstances of the site, context or design make an alternative lighting design at least equally effective in meeting the purposes of this Section and in such cases, may modify the requirements of this Section.

6.4.4 Exterior Lighting Plan. Applications subject to the provisions of Section 7.3, Environmental Impact and Design Review shall submit a lighting plan which shall include the following information, except to the extent waived by the Planning Board. All other lighting not subject to the provisions of said Section 7.3 does not require a lighting plan but shall meet the standards as set forth in this Section, unless as may otherwise be provided herein. The lighting plan shall include the following information:

6.4.4.1 location, orientation and type of outdoor luminaire, including the height of the luminaire;

6.4.4.2 luminaire manufacturer's specification data, including lumen output and photometric data showing cutoff angles;

6.4.4.3 type of lamp such as metal halide, compact fluorescent, high pressure sodium and its associated Color Rendering Index (CRI);

6.4.4.4 photometric plan showing the intensity of illumination expressed in foot candles at ground level within the interior of the property and at the property boundaries. The plan shall also include the following illumination information in a table format: Minimum; Maximum; Average; Average to Minimum and Maximum to Minimum; and

6.4.4.5 evidence that any light trespass does not exceed the limitations set forth

in Chart IV herein.

6.4.5 Flickering and Flashing Lights. No flickering or flashing lights shall be permitted. Processes, such as arc welding, which create light flashes shall be confined within buildings or shielded to prevent either direct glare or flashing.

6.4.6 Wall Mounted Fixtures. In Nonresidential Districts, a luminaire attached to the exterior of a building or structure for area lighting shall be mounted no higher than fifteen (15) feet above grade and shall be shielded to control glare.

6.4.7 Pole Mounted Fixtures. Pole mounted exterior lighting fixture types are defined and restricted as follows:

6.4.7.1 Type A. No light cutoff.

6.4.7.2 Type B. Luminaire shielded such that beam candlepower is at an angle of 75 degrees or less from straight down, and essentially no light is emitted above the horizontal.

6.4.7.3 Type C. Luminaire shielded such that total cutoff is at less than 90 degrees from straight down, and no light source is in direct view of an observer five (5) feet above the ground at any point off the premises.

6.4.8 Pole Mounted Fixtures Height Limitation. Illustrations of pole mounted exterior lighting fixture types are shown in Chart I herein. Pole mounted fixtures shall not exceed the applicable pole mounted height limitation set forth in Chart II in any district. The Type A pole mounted exterior lighting fixture is prohibited in all Nonresidential Districts.

4. Noise

Section 173-78. General.

A. No activity shall be permitted in any district unless it can be demonstrated that its operation will be so conducted that the following requirements will be met. Nothing in this Article shall be construed to

B. Exceptions. This regulation shall not apply to the following:

(1) Any activity, except construction, on premises used exclusively for residential and customary accessory purposes.

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(2) Any noise produced by equipment used exclusively in the maintenance or repair of buildings or grounds, provided that such equipment is rated at not more than fifteen (15) horsepower.

(3) Any noise produced by a registered motor vehicle, provided that

such vehicle is equipped with all noise-suppression devices required for legal operation under such registration by the laws of the commonwealth.

(4) Human or animal noises unless mechanically or electronically amplified.

(5) Farm equipment.

(6) Any fire or burglar alarm or other emergency signaling device, provided that such device is arranged to shut off automatically after not more than thirty (30) minutes of operation.

(7) Construction equipment between the hours of 7:00 am. and 7:00 p.m. only.

(8) Parades, fairs or outdoor entertainment between the hours of 7:00 am. and 11:00 p.m. only. provided that a permit for such activity has been granted by the Board of Selectmen and that said permit is for not more than ten (10) days.

(9) Religious services conducted by an organization which qualifies under the laws of the commonwealth as a tax-exempt religious group.

Section 173-79. Special conditions.

Exceptions to this Article may be made under the following conditions:

A. A permit to operate construction equipment outside the hours specified above and in excess of the noise levels specified may be issued upon determination of reasonable necessity by the senior police officer on duty in town at the time. Such permit shall be valid for not more than twenty-four (24) hours from the time of issue.

B. Emergency repair due to flood, fire or other catastrophe may be carried out prior to a permit being issued if such work is necessary for the general welfare or to avoid further catastrophe. Such work must cease, however, upon demand of the enforcing authority.

C. The enforcing authority may delay enforcement of any provisions of this Article for such reasonable time as may be required to modify any equipment so as to conform to these regulations.

D. A special permit may be granted for exceptions for the operation of equipment which is necessary to the conduct of a business if there is no technically feasible way to perform the operation with equipment which complies with the regulations.

Section 173-80. Criteria: decibel levels.

A. Noise levels specified herein shall be sound levels in decibels on the A-scale (dBa) referred to two ten-thousandths (0.0002) dynes per square

centimeter as measured by a sound-level meter manufactured in conformance with the American National Standards Institute Standard S 1.4-1971. Type 2.

B. Readings shall be taken using the fast-response setting of the meter, except that, when the fluctuations are so rapid as to make reading difficult, the slow-response setting may be used.

C. The measured sound level shall be the average readings for fluctuations less than six (6) decibels and three (3) decibels less than the maximum for fluctuations greater than six (6) decibels. In taking these readings, infrequent peaks shall be ignored, except in the case of impulsive or sporadic noise of which they are a significant component.

D. For the purposes of this section, "day" shall be defined as the hours between 7:00 am. and 9:00 p.m. on all days, except Sundays and legal holidays, and between 12:00 noon and 9:00 p.m. on Sundays and legal holiday& Night requirements shall apply at all other times.

E. The maximum allowable sound levels for continuous noise in each district shall be as follows:

Residential – 50 decibels (day)	40 decibels (night)
Business – 55 decibels (day)	45 decibels (night)
Industrial – 65 decibels (day)	50 decibels (night)

G. Notwithstanding any other provision of this Article, it shall be unlawful to produce any noise other than sporadic noise in excess of ninety (90) decibels at any property line or street line.

Section 173-81. Location of measurements.

Noise measurements shall be made at the property line or street line.

A. Noise requirements at any property or street line shall be those of the zoning district in which the property line lies, regardless of the location of the source of the noise.

B. When a property line is also a zoning district boundary, the requirements shall be those of the district on the opposite side of the line from the source of the noise. When a street line is the zoning district boundary and the noise source is in the less restrictive zone, the noise level shall be measured at the street line of the property in the more restrictive zone.

Section 173-82. Types of noise.

For the purposes of this Article, types of noise are defined as follows:

CONTINUOUS NOISE - Noise which has no noticeably dominant frequency and which does not vary in sound level enough to be defined as sporadic or impulsive noise.

DOMINANT TONE NOISE - Noise which has a single dominant frequency which, in the opinion of the enforcing authority, is more objectionable than a continuous noise of the same sound level.

IMPULSIVE NOISE - Noise of repetitive character which varies more than five (5) decibels more frequently than sporadic noise.

SPORADIC NOISE - Noise which persists one (1) minute or less and occurs less than five (5) times in any fifteen-minute period and less than ten (10) times in any one-hour period.

Section 173-83. Evidence of future compliance.

The Building Inspector may require that an applicant for a facility whose future compliance with performance standards in this chapter is questionable furnish evidence of probable compliance, whether by example of similar facilities or by engineering analysis. Issuance of a permit on the basis of that evidence shall certify the town's acceptance of the conformity of the basic structure and equipment, but future equipment changes and operating procedures must be such as to also comply with these standards.

APPENDIX D: MASSACHUSETTS OFFICE OF COMMONWEALTH DEVELOPMENT SUSTAINABLE DEVELOPMENT PRINCIPLES