

Tyngsborough Open Space and Recreation Plan

2009 Update



Prepared for:
Tyngsborough Open Space Committee

Prepared by:
Northern Middlesex Council of Governments

TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN

2009 UPDATE

**Town of Tyngsborough, Massachusetts
Open Space Committee**

Prepared with the assistance of the
Northern Middlesex Council of Governments
Lowell, MA

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SECTION 1: PLAN SUMMARY

Strategically located on Route 3 north of I-495, the Town of Tyngsborough is one of the fastest-growing communities in the Northern Middlesex region. The town's population growth rate was 235.6 % from 1960 to 2000, compared to the 66% growth rate experienced by the overall Greater Lowell region during the same time period. Most of the population growth has occurred since 1980, transforming the community from a rural agrarian town to a growing suburb. This influx of development has resulted in proportionately reducing the amount of agricultural land and available open space, creating strong advocacy for open space protection and preservation among town residents.

The 2009 Open Space and Recreation Plan builds upon the Town's 2002 Plan, as well as on the accomplishments of the past five years. The document inventories open space and recreation resources, assesses community needs, establishes goals and objectives, and outlines a seven-year action plan. The plan update has been prepared by the Open Space and Recreation Plan Committee, which consists of representatives of town boards and committees, and interested citizens. Resident preferences were solicited through a survey, an interactive public visioning session, open meetings of the Committee and a presentation of the draft plan at a public hearing.

The Plan follows the Massachusetts Division of Conservation Services (DCS) guidelines and format, and focuses upon the following goals:

- Increase the quantity and quality of recreation space and facilities;
- Develop maintenance and management plans for existing recreation and conservation areas;
- Revitalize the Town Center;
- Educate the residents on the value of open space in the Town and region;
- Increase accessibility of all recreational resources, facilities and programs;
- Promote land use and permitting practices that foster Smart Growth and protect historic assets, open space, cultural assets and resource areas;
- Improve the overall water quality of the Town's surface water bodies and wetland resources; and
- Establish greenways for recreation and habitat networks, with a focus on creating local and regional links.

The first five sections of the Plan Update provide an overview of Tyngsborough's natural and cultural environment, detail the town's development history and demographic trends; and present an inventory protected and unprotected lands of recreational or conservation interest. Based on this information, and on community opinion solicited through the survey and public meetings, the Committee developed the

community needs analysis, outlined the plan's goals and objectives, and delineated a seven-year action plan aimed at achieving these goals and objectives.

The Tyngsborough Open Space and Recreation Plan Update is consistent with the goals in the Commonwealth's previously issued *Massachusetts Outdoors 2006: Statewide Comprehensive Recreation Plan*, (SCORP) particularly in its emphasis on greenways and trails, improved public awareness and stewardship of open space resources, and public access to water resources. The Plan is also consistent the *Greater Lowell Open Space and Recreation Plan*.

SECTION 2: INTRODUCTION

A. Statement of Purpose

Tyngsborough's first open space and recreation plan was written in 1990. A new, comprehensive plan based on state open space planning principles was prepared in 1996 by the Open Space and Recreation Plan Committee, with assistance from NMCOG. The 1996 plan was updated in 2002.

This 2009 update of the 2002 Open Space and Recreation Plan is designed to serve as a source of information on the town's environmental, open space, and recreation resources, to review progress since the 2002 plan update, confirm and revise the goals and objectives of that plan, and articulate a policy agenda and action plan for the next seven years.

The completed plan is intended to serve as a guide for Tyngsborough's citizens and local officials as they work together over the next seven years to protect the town's resources for future generations, and to provide recreational opportunities for residents. The plan attempts to be specific enough to guide future decision-making, while providing the flexibility needed to respond to changing opportunities, programs and constraints. Through adoption of the Plan, the town recognizes that protection and stewardship of its natural, cultural and historic resources is essential to the overall quality of life, health, economic vitality and sustainability of the community.

B. Planning Process and Public Participation

This 2009 Tyngsborough Open Space and Recreation Plan Update was developed by the Tyngsborough Open Space and Recreation Plan Committee, with technical assistance from the Northern Middlesex Council of Governments (NMCOG), Tyngsborough's regional planning agency. The Committee included representation from the Planning Board, the Conservation Commission, the Recreation Department and interested residents. The Town's Conservation Director, Recreation Director, and the Town Administrator participated fully throughout the development of the Plan.

Public participation efforts included a visioning session, public meetings on proposed projects, and other public outreach actions, including a survey distributed through the Tyngsborough Tax Collector's Office. A copy of the survey and the tabulation of the results can be found in Appendix B. Approximately 4,100 surveys were distributed and 315 respondents returned the survey.

An interactive public visioning session was held on September 25, 2008, to solicit input and assistance in developing the Plan's goals and objectives. The visioning session

emphasized brainstorming and open discussion in the areas of open space, recreation, nature, and wildlife. Participants were asked to address the following questions:

- What are the Town's strengths and assets in terms of its open space and recreation facilities and programs?
- What are the community's weaknesses and liabilities in this regard?
- What opportunities does the Town have to improve upon or expand its existing open space and recreation facilities and programs?
- What challenges lie ahead? What concerns need to be addressed in order to move forward to meet the Town's open space and recreation needs?

Participants also discussed past actions and future goals and priorities, and made suggestions about specific action items that the town could focus on in the coming years.

A public meeting on the draft Plan was held on 07/27/2009 to present an overview of the Plan and to receive comments. A copy of the agenda and meeting notice for the Public Meeting can be found in Appendix A. In addition, the Open Space and Recreation Plan was presented to the Board of Selectmen, Planning Board, Conservation Commission and Recreation Commission.

C. Accomplishments Since 2002

Accomplishments since 2002, organized by 2002 plan goals, include the following:

Goal I: Environmental healthy water and resources.

- Completion of a Storm Water Management Plan under the NPDES Program. The Plan included the GPS locating of all stormwater structures and the stenciling of all public catch basins in the Town with "Dump no Waste".
- A Stormwater Management By-law was developed and adopted by the Town Meeting in 2007.
- A Wellhead Protection By-law has been drafted and is under review.
- A part time Conservation Director provides services to the Town.
- A systematic annual inspection of all stormwater structures is undertaken by the town to insure that the structures are functioning as designed.
- A public service announcement on stormwater management and healthy water resources has been developed by the Conservation Director and this PSA is periodically aired over the local cable outlet.

Goal II: Preservation of key open space parcels.

- Three key parcels have been purchased by the Town; two for open space and one, the former Campground on Frost Road, for recreation and public access to the Merrimack River.
- The land immediately east of the former Campground on Frost Road has been purchased by the Town and will help preserve the fragile wetlands in the area.

Goal III: Improved public awareness and access.

- The Sherburne House and Nature Center has been renovated for public access, and printed materials on activities that are held there are available at the House and at the Town Hall.
- The Sherburne Property is inspected annually by the Trustees of Reservations to insure compliance with the existing conservation restrictions. A detailed written report is generated and submitted to the town.
- The Conservation Commission has published brochures on Conservation Lands in the Town, with maps and guides for those that are open to the public.
- The renovation of the former Campground will provide public access to the Merrimack River.
- Public events targeting teens, such as the Open Air Movie Night, are run annually and are very well attended.

Goal IV: Efficient management and maintenance of recreational and open space resources.

- A Field Use Committee, that includes representatives of the Recreation Department and the Public Schools, has been formed, and is working with the Youth Council to develop a comprehensive plan for the maintenance of all fields and public recreation facilities.
- A Youth Council has been formed to raise funds for the maintenance of the new recreation facilities at the Tyngsborough Elementary School.
- The Town works very closely with youth organizations, e.g. youth soccer, to run athletic programs.
- The Conservation Commission is undertaking an in-depth review of its policies and is developing a single, comprehensive policy for use of all Conservation Commission managed areas.
- The Tyngsboro Trails Sub-Committee, and other volunteers, annually "clean up" town conservation properties (Sherburne, Shady Glade, Hunter, and Bell) by removing litter and storm debris, repairing trails and footbridges, and replacing trail markers.

Goal V: An improved Town Center with open space elements.

- A *Town Center Master Plan* has been developed incorporating open space and recreation elements into the overall redevelopment of the Town Center.

As can be seen from the information provided above, the Town has a strong record of accomplishment evident in the implementation of many of the items from the 2002 Action Plan. Furthermore, many of the remaining action items contained in the 2002 Plan will continue to be implemented over the next seven years as long-term projects.

SECTION 3: COMMUNITY SETTING

A. Regional Context

Location

The Town of Tyngsborough is a suburban community located 30 miles northwest of Boston, and is bisected by the Merrimack River and Route 3. The town contains 18 square miles of land and surface water, and as shown on Map 1, borders the towns of Dunstable, Groton, Westford, Chelmsford, and Dracut, the City of Lowell, and the State of New Hampshire. Tyngsborough's idyllic location on the Merrimack River (which is between 300 and 500 feet wide in its course through town), convenient access to Route 3, and the bridge crossing the river, have given it an important role in serving as a regional connection between Lowell and New Hampshire. The Tyngsborough Bridge, which carries Route 113 across the Merrimack River, is the best-known symbol of the town.

Regional Open Space Resources

There are several open space resource areas in Tyngsborough that have potential for regional importance, although they have limited or unpublicized access. The most obvious is the Lowell-Tyngsborough-Dracut State Forest. Approximately 223 acres of the 1,140-acre state forest are located at the southeastern corner of Tyngsborough. The state forest receives minimal management and programming from the Massachusetts Department of Conservation and Recreation. At the other end of Tyngsborough, near Massapoag Pond, the Massachusetts Division of Fisheries, Wildlife, and Environmental Law Enforcement (DFWELE) owns and manages Elbow Meadow (120 acres).

Large institutional holdings include significant natural areas at the MIT Haystack Observatory property (265 acres), Notre Dame Academy land (120 acres), and the Innovation Academy Charter School (178 acres). In addition, the Tyngsborough Country Club (93.45 acres), which is open to the public, offers golf, hiking, hunting, nature observing, and picnicking. The Greater Lowell Regional Technical High School grounds (79 acres) accommodate baseball/softball, basketball, football/soccer, general play, organized events, and other team activities. A private country club, the Vesper Country Club, has 178 acres of land, partly on an island in the Merrimack River.

State Forest

The 1,140-acre State Forest, owned and managed by the State Department of Conservation and Recreation, includes approximately 223 acres within Tyngsborough in the southeast corner of the town bordering the City of Lowell and the Town of Dracut.

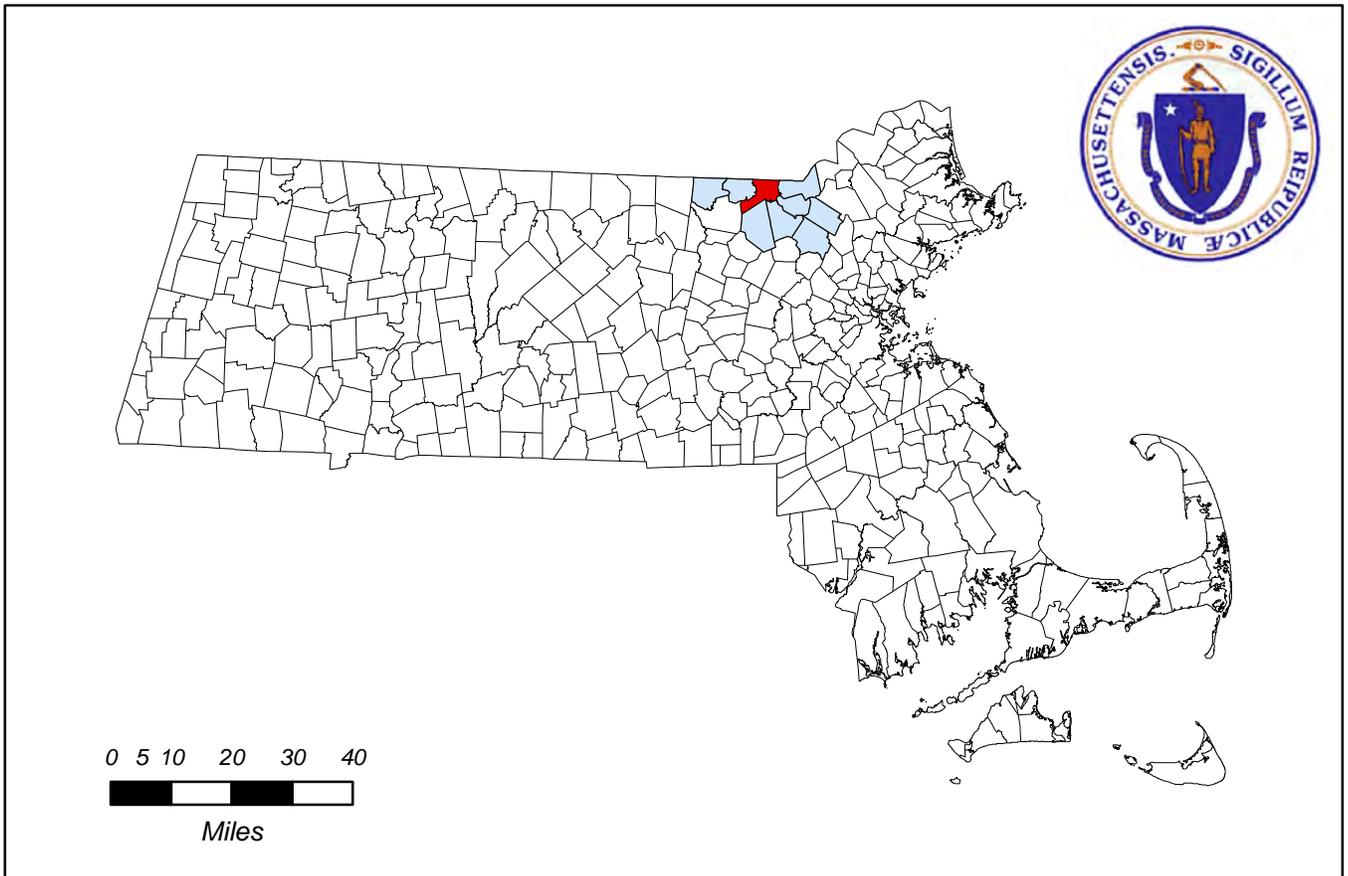
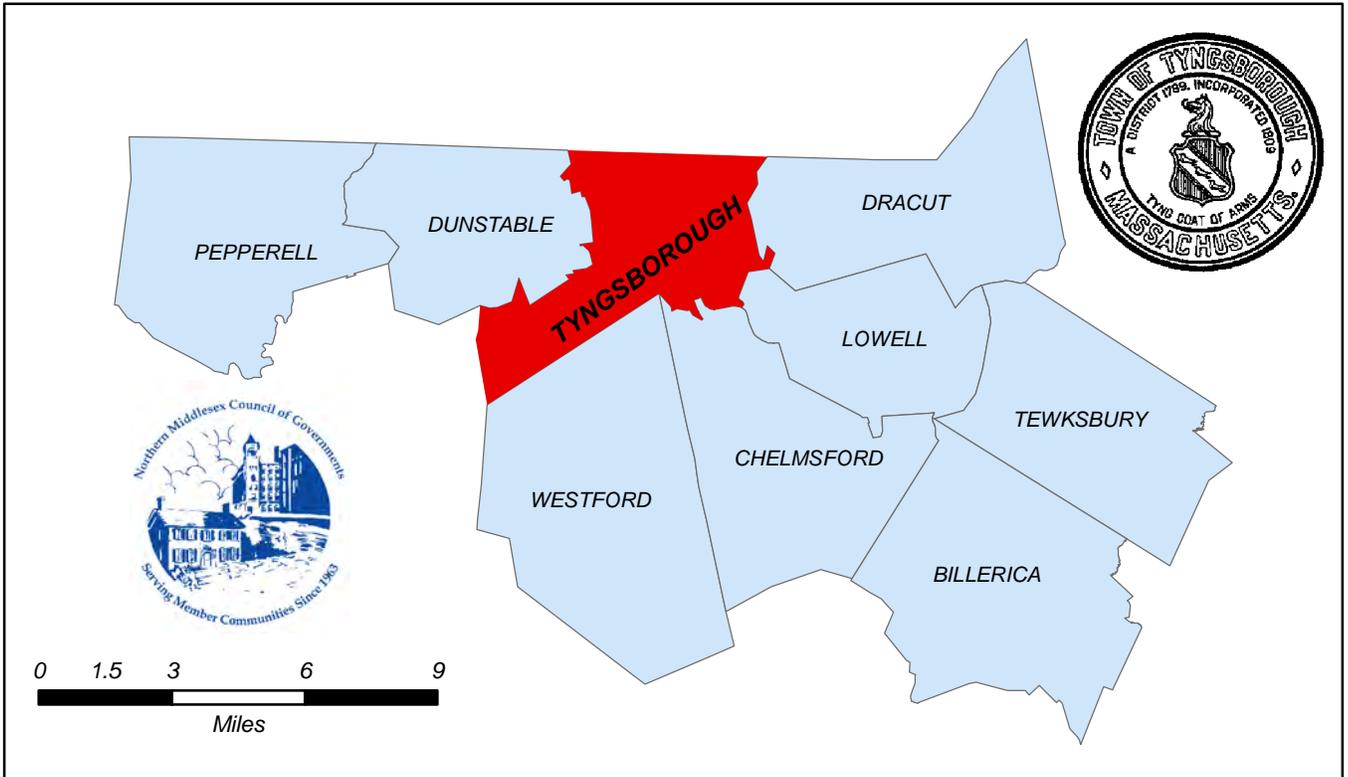
This forested area provides a wide variety of recreational opportunities including walking, hiking, jogging, nature observation, picnicking, horseback riding, bicycling, cross country skiing, snowmobiling, and hunting. The Dracut-Lowell-Tyngsborough State Forest provides an important ecosystem for the community, and adds to the quality of life for area residents by: helping clean air pollution and removing carbon dioxide from the atmosphere; supporting a wide range of recreation activities, from hiking and cross-country skiing to hunting and fishing; and providing much-needed habitat for wildlife that are dependent on the forest for at least part of their lifecycle. The forest has become increasingly more important as development has led to fragmentation of forested areas throughout the region. Additional information on the State forest can be found at www.mass.gov/dcr/parks/northeast/ldtf.htm.

A Friends of the Forest group with membership from the towns and the city has been formed. Please see information on this organization in Appendix D which highlights what natural and cultural features are found in the Forest.

Route 3 Widening Project

Work to widen Route 3 began in 2001, and was substantially complete by 2004. The project involved the addition of a third travel lane in each direction for the entire length of the 21-mile corridor, extending from Route 128/I-95 to the New Hampshire state line. As part of the environmental mitigation for the project, \$4 million was designated for acquisition of open space in the affected Route 3 communities. These funds were awarded through a competitive grant application process managed by the Massachusetts Executive Office of Environmental Affairs (EOEA).

Tyngsborough, Massachusetts:
Location within the Northern Middlesex Region
and the Commonwealth.



B. History of the Community

First settled by Europeans in the 1660s, Tyngsborough was part of the Town of Dunstable until its separate incorporation in 1809. Land grants originally acquired by the Tyng family were settled after the 1660s and the Pawtucket and Pennacook Indians, who lived and fished along the Merrimack River, were eventually driven out of the area as the pioneers staked their claim to land. The area subsequently grew into a community of scattered farmsteads as more settlers were attracted to the area.

During the period from the mid-1600s to the late 1700s, fur trading, land clearing, mill construction, and occasional hostilities from the Native Americans occupied the community. In 1760, the county ordered two new roads, one on each side of the river, to be constructed and connected by a ferry. Many of Tyngsborough's men participated in the Revolutionary War. By 1790, the town had 382 inhabitants.

Sarah Winslow, a daughter of Eleazer Tyng, set up a trust with Harvard College in 1789 to benefit the Town. The trust helped fund the Winslow School and still provides annual income to the Town. A condition of her bequest was that the district, a part of Dunstable, be known as Tyngsborough to honor her father and his family.

By 1800, Tyngsborough was a flourishing farm town with a few stores, craftsmen, and small mills to serve the local community's needs. The opening of the Middlesex Canal in 1809 and the Middlesex Turnpike (Middlesex Road) in 1811 connected the town to Lowell and Boston markets. Starting in 1819, steamboats on the Merrimack gave Tyngsborough a direct river connection to Lowell and Concord, NH. As Tyngsborough grew slowly during the early nineteenth century, it became known for its ferries, quarries, and box companies. During this period, another transportation improvement was a major catalyst in maintaining the vitality of the region; by 1835, the Boston and Lowell Railroad had begun operations, which brought the economies of the Boston and Lowell area even closer together, effectively making the Middlesex Canal obsolete and ultimately forcing its closing.

The proximity of the industrial centers of Lowell and Nashua, made even more accessible through transportation improvements, provided jobs to Tyngsborough throughout the late nineteenth century. By 1849, Tyngsborough took advantage of its proximity to Lowell and Nashua, and began providing boxes and barrels for shipping the finished products produced at these industrial centers. The completion of the Iron Bridge across the Merrimack River in 1871, and the installment of an electric railway system between Tyngsborough and Lowell in the 1890's, drew Tyngsborough even closer to Lowell, as Tyngsborough residents increasingly worked in the city.

Before the turn of the next century, Tyngsborough became a popular recreation area. River steamers, trains, trolleys, and autos brought visitors to Harmony Grove on the river, Willowdale on Lake Mascuppic, Mount Rock, on the western shore of Lake Mascuppic, and a variety of other resorts. Many of these resorts catered to vacationers from Boston and New York. Until the late 1960's, the town continued to be a vacation community with a large seasonal population.

After the automobile became the preferred mode of transportation in the early twentieth century, roadway improvements dispersed Tyngsborough's working population. By the late 1960's, Route 3 had been constructed, connecting Tyngsborough and southern New Hampshire with Route 128 and later Route 495. This catalyzed the development of Tyngsborough as a bedroom community to employment centers such as Nashua (NH), Lowell, the Route 128 technology belt, and Boston.

C. Population Characteristics

General Population Growth Trends

According to the 2000 Census, Tyngsborough has a population of 11,081 persons in 3,731 households and a population density of almost 616 persons per mi². The town's population grew by over 28 percent between 1990 and 2000, much more than the regional growth rate of 6.7 percent. Tyngsborough's growth rate since 1980, and projected through 2030, is shown in Table 1 below.

Based upon projections developed by MassHighway, the population in Tyngsborough is expected to grow to 17,400, or by 39%, by the year 2030. According to other build out estimates, such as those prepared by NMCOG in 2001 under contract to EOEA, the estimated maximum build-out of Tyngsborough, under current zoning, would produce a population of over 16,000 and a population density of 997 persons/mi². It is important to recognize that these two population projections were calculated using very different methodologies, and that the EOEA/NMCOG estimate does not assign a timeframe as to when full build out is likely to be realized. These population projections indicate that there is likely to be less land available in the future, and that there will be competing demands for this land. The policy choices made by local officials will likely have a significant impact on the future preservation of open space in the community.

Table 1: Population Growth and Projections

	1980	1990	2000	2010	2015	2020	2025	2030
Tyngsborough	5,683	8,642	11,081	13,430	14,610	15,400	16,200	17,400
% growth	NA	52.1	28.2	21.2	8.8	5.4	5.2	7.4
Density/mi ²	315.8	480.1	615.6	746.1	811.6	855.6	900	966.7
NMCOG region	235,052	263,656	281,225	304,000	314,500	325,000	332,500	343,800
% growth	6.8	12.2	6.7	8.0	3.5	3.3	2.3	3.4

Sources: 1980, 1990, 2000 U.S. Census
2010, 2015, 2020, 2025, 2030 MassHighway in consultation with NMCOG
NA-Not Available

Special Needs Population

According to the 2000 U.S. Census, the special needs population of the Town of Tyngsborough was estimated to be approximately 14% of the total population, or 1,521 residents. In comparison, the special needs population in the Greater Lowell region was 17.8% of the total population of 45,721 disabled residents. Based upon age breakdown, the special needs population in Tyngsborough comprised 88% of the 65 years and older group, 11.6% of the population between 21 and 64 years of age, and 6.8% of the population aged 5 through 20 years. Table 2 compares the special needs population in Tyngsborough and the Northern Middlesex region, by sex and age.

Socio-economic context

Based on the information above on population, income and employment it can be seen that the Town is well above the household regional median income for 2000 (\$69,818 to \$59,472), and above the state median of \$50,502. In a comparison of some of the indicators of the socio-economic condition of a community, Tyngsborough has higher homeownership rates than the state as a whole (84.3% to 61.7%), a lower percentage of the population living in poverty (4.7% to 33.2%), and higher median home value (\$210,400 to \$185,700). The major population cohort is the 25-44 age category, which is the most significant in terms of employment and home buying. It can be deduced that Tyngsborough is a typical, suburban, middle class, residential community which functions as a bedroom community to the City of Lowell and exurban technology and employment centers of the region.

Table 2: Special Needs Population by Age and Sex

		5-15 YEARS	16-20 YEARS	21-64 YEARS	65-74 YEARS	75+ YEARS	TOTAL
Tyngsborough	Male	73	7	336	271	59	746
	Female	54	44	450	122	105	775
	Total	127	51	786	393	164	1,521
<hr/>							
Region	Male	1,856	1,254	14,942	2,448	2,042	22,542
	Female	1,023	1,273	14,229	2,650	4,004	23,179
	Total	2,879	2,527	29,171	5,098	6,046	45,721

Source: U.S. Census for 2000

The U.S. Census categorizes disabilities as follows: sensory, physical, mental, self-care, go-outside-home and employment. According to the 2000 U.S. Census, 1,521 persons with disabilities were tallied in Tyngsborough, compared to 80,928 in the region as a whole. It should be noted that disabled residents might experience more than one form of disability so there is multiple counting within these estimates. Table 3 below breaks out these estimates by age group and type of disability.

Table 3: Special Needs Population by Disability

AGE GROUP AND DISABILITY TYPE	TYNGSBOROUGH	REGION
Total disability	1,521	80,298
5-15 years old:	127	3,662
Sensory disability	24	489
Physical disability	10	412
Mental disability	93	2,320
Self-care disability	0	441
16-64 years old:	837	55,114
Sensory disability	79	3,660
Physical disability	171	9,460
Mental disability	24	7,271
Self-care disability	0	2,760
Go-outside-home disability	32	11,272
Employment disability	287	20,691
65 years +:	557	22,152
Sensory disability	70	3,938
Physical disability	80	7,195
Mental disability	0	2,776
Self-care disability	65	2,472
Go-outside-home disability	88	5,771

Source: 2000 U.S. Census

The Special Needs population represents a significant portion of the community. The recreation needs of this population will be given special consideration throughout the open space and recreation planning process.

Age Composition

The current age breakdown of Tyngsborough's population remains typical of an established, family-oriented, and growing suburban community. The Town has one of the youngest populations in the region. In 2000, the median age for the Northern region was 34.8 years, while Tyngsborough had the second lowest median age among the nine community region at 35 years. The percentages of the population under 5 years and 5-14 years, as outlined in Table 4 below, are significantly above the regional average and reflect the number of young families that have moved into the community since 1990. In 2000, persons 65 and over made up almost 7 percent of Tyngsborough's population, less than the 13.5 percent average seen in the state overall.

Table 4: Population Change by Age Group

Age	TYNGSBOROUGH			NMCOG REGION		
	1990 # (%)	2000 # (%)	Change # (%)	1990 # (%)	2000 # (%)	Change # (%)
Under 5	842 (9.7)	987 (8.9)	145(17.2)	21,214(8.0)	20,536(7.3)	-678(-3.2)
5 - 17	1,629 (18.9)	2,229(20.1)	600(36.8)	47,902(17.9)	55,054(19.6)	7,845(16.6)
18 - 24	817 (9.5)	778(7.0)	-39(4.8)	30,779(1.7)	-23,360(8.3)	-7,419(24.1)
25 - 44	3,400 (39.4)	3,958(35.7)	558(16.4)	91,159(34.6)	92,446(32.9)	1,287(1.4)
45 - 64	1,348 (15.6)	2,397(21.6)	1,049(78.0)	47,277(17.9)	60,964(21.7)	13,687(29.0)
65+	604 (7.0)	732(6.6)	128(21.2)	26,018(9.9)	28,865(10.3)	2,847(10.9)
Total	8,640	11,081	2441(28.3)	263,656	281,225	17,569(6.7)
Median	32.0	35	3 (9.4)	31.3	34.8	3.5 (11.2)

Source: U.S. Census data, 1990 and 2000

Household Data

The number of households in Tyngsborough increased three times as much as the region between 1990 and 2000, and this change in the number of households is projected to increase by 2.4% per year until 2030, according to the MassHighway projections shown in Table 5 on the following page. The number of households created through the construction of Chapter 40B housing units will be reflected in the upcoming 2010 Census.

According to the 2000 U.S. Census, the average household size in Tyngsborough was 2.97 persons and the average family size was 3.37, in both cases more than the state averages of 2.51 and 3.11 respectively. Over three-quarters (79 percent) of Tyngsborough households are family households (that is, married couples with or without children and single householders with children), which is much more than the 65 percent in the state overall. People living alone made up 16.1 percent of all households, less than the state's 28 percent. However, 15.1 percent of all Tyngsborough households include persons 65 years and older, much less than the 25 percent of the state's households with elderly persons.

Table 5: Occupied Households (1980, 1990, 2000, Projections)

	1990	2000	2010	2015	2020	2025	2030
Tyngsborough	2,844	3,731	4,680	5,152	5,572	5,967	6,440
% growth	NA	31.2	25.4	10.1	8.2	7.1	8.0
NMCOG region	90,191	99,342	110,300	115,300	120,300	124,200	128,400
% growth	20.4	10.1	4.5	4.5	4.3	3.2	3.4

Sources: 1990, 2000 U.S. Census
2010, 2015, 2020, 2025, 2030 MassHighway in consultation with NMCOG

Income and Employment

The latest available income data from the 2000 U.S. Census shows that the 1999 median household income in Tyngsborough was \$69,818, up almost 43 percent from 1989. As shown in Table 6, the majority of households in Tyngsborough have an income of almost \$70,000, well above the regional average of \$59,472. The mode is in the \$75,000 – \$99,999 range, which is a noticeable increase from the 1990 census, where the mode was in the \$50,000 - \$74,999 range. The greatest percentage increase was in the \$75,000 - \$99,999 range which is not reflective of the changes in the region as a whole, but in fact, is above the regional average.

Table 6: Median Income Distribution-1990 and 2000

MEDIAN INCOME	TYNGSBOROUGH		NMCOG REGION	
	1990 #Households (%)	2000 #Households (%)	1990 #Households (%)	2000 #Households (%)
< \$10,000	258 (9.1)	120 (3.2)	10,570 (11.7)	6,844 (6.9)
\$10,000-14,999	34 (1.2)	187 (5.0)	4,709 (5.2)	4,756 (4.8)
\$15,000-24,999	231 (8.1)	189 (5.0)	9,780 (10.9)	8,441 (4.8)
\$25,000-34,999	306 (10.8)	194 (5.2)	11,323 (12.6)	9,052 (9.1)
\$35,000-49,999	569 (20.0)	589 (15.7)	17,794 (19.7)	14,660 (14.7)
\$50,000-74,999	961 (34.0)	724 (19.4)	21,526 (23.9)	21,472 (21.6)
\$75,000-99,999	301 (10.6)	859 (23.0)	9,150 (10.2)	15,100 (15.2)
\$100,000-149,000	80 (2.8)	580 (15.5)	4,199 (4.7)	13,342 (13.4)
>\$150,000	36 (1.3)	299 (8.0)	1,067 (1.2)	5,875 (5.9)
TOTAL HOUSEHOLDS	2,844	3,741	90,118	99,542
Median Income	\$48,842	\$69,818	\$43,008	\$59,472

Source: 1990 and 2000 U.S. Census, Table DP-3

In further analyzing the income distribution figures for Tyngsborough and the NMCOG Region, it is useful to determine the percentage of extremely low-income (30% of median income), low-income (50% of median income), moderate income (80% of median income) and middle-income (95% of median income) populations. Based upon the median income figure (\$67,841) for the Lowell MA-NH PMSA for 2000, approximately 11% of households (397 out of 3,731) in Tyngsborough made less than 30% (\$ 20,352.30) of the area’s median income. An additional 7.6% of Tyngsborough

households (284 out of 3,731) earned 30% or more, but less than 50%, of the area's median income (\$33,920.50) and would qualify as low-income households. Those households qualifying as moderate income represented an additional 20% of Tyngsborough households (734 out of 3,731) and earned more than 50%, but less than 80%, of the area's median income (\$54,272.80). Finally, households (1,429 out of 3,731) that earned more than 80% of the area's median income, but less than 95% (\$ 64,448.95), or 38.3% of Tyngsborough households, would qualify as middle-income populations. (It should be noted that given that the percentage median income brackets do not exactly match the census income brackets, there is some extrapolation of household numbers within some of the income levels.)

Most Tyngsborough residents work outside of town. According to the Massachusetts Department of Workforce Development, the 2008 labor force in Tyngsborough was 6,463, and 6,168 of these people were employed, yielding an unemployment rate of 4.5%, which was lower than the overall unemployment rate for the state, as shown in Table 7 below. In 2000, there were 4,476 jobs in the community and MassHighway projects that in 2010 there will be approximately 5,203 jobs in Tyngsborough.

Table 7: Labor Force and Employment Trends

YEAR	LABOR FORCE	EMPLOYED	UNEMPLOYED	TYNGSBOROUGH UNEMPLOYMENT RATE	STATE UNEMPLOYMENT RATE
1990	5,137	4,810	343	6.7	6.3
2000	6,328	6,176	152	2.4	2.7
2005	6,347	6,065	282	4.4	4.8
2006	6,381	6,098	283	4.4	3.7
2007	6,467	6,195	272	4.2	4.5
2008	6,463	6,168	295	4.5	5.1

Source: Commonwealth of Mass. Workforce Development (not seasonally adjusted)

Industry Composition

There were a total of 366 business establishments located within the Town of Tyngsborough during the second quarter of 2008, and of those 118 were in the goods-producing domain and 248 in the service-producing domain. The average weekly wage in the former was \$815, while in the latter it was \$792. A more detailed breakdown of the industries, using the North American Industry Classification System (NAICS), by type, number and total number of employees can be found in Table 8 on the following page.

**Table 8: Industry Composition for the Town of Tyngsborough
(Second Quarter, 2008)**

DESCRIPTION	NUMBER OF ESTABLISHMENTS	NUMBER OF EMPLOYEES			TOTAL WAGES	AVERAGE MONTHLY EMPLOYMENT	AVERAGE WEEKLY WAGE
		April	May	June			
Total all industries	366	4,450	4,678	4,828	\$49,290,038	4,652	\$815
Goods Producing Domain	118	661	737	751	\$8,752,085	716	\$940
23/Construction	102	454	526	546	\$6,399,723	509	\$967
31-33 Manufacturing	16	207	211	205	\$2,352,362	208	\$870
DUR-durable goods	14	192	196	189	\$2,135,609	192	\$856
Service Producing Domain	248	3,789	3,941	4,077	\$40,537,953	3,936	\$792
Trade, transportation, utilities	63	605	618	642	\$10,666,629	622	\$1,319
42/Wholesale trade	27	279	264	283	\$8,207,993	275	\$2,296
44-45/Retail trade	32	279	305	305	\$1,982,495	296	\$515
48-49/Transportation & Warehousing	4	47	49	54	\$476,141	50	\$733
Information	4	44	42	43	\$196,723	43	\$352
Financial Activities	4	44	42	43	\$196,723	43	\$352
52/Finance & Insurance	14	58	61	59	\$435,400	59	\$568
53/Real estate & rental & leasing	9	49	49	48	\$343,573	49	\$539
Professional & Business Services	59	941	1,022	1,100	\$7,925,055	1,021	\$597
54/Professional & business services	36	135	145	137	\$2,151,777	139	\$1,191
56/Administrative and waste services	22	806	877	963	\$5,773,278	882	\$504
Education Health Services	22	1,024	1,026	1,039	\$15,545,041	1,030	\$1,161
61/Educational services	9	935	935	952	\$14,776,656	941	\$1,208
62/Health care & social assistance	13	89	91	87	\$768,385	89	\$664
Leisure and Hospitality	40	821	873	896	\$3,842,797	863	\$343
71/Arts, entertainment & recreation	8	155	189	202	\$958,935	182	\$405

72/Accommodation & food service	32	666	684	694	\$2,883,862	681	\$326
Other services	41	144	147	146	\$830,597	146	\$438
81/Other services, ex. Public administration	41	144	147	146	\$830,597	146	\$438

Source: Commonwealth of Mass. Workforce Development, ES 202 Reports

D. Growth and Development Patterns

Patterns and Trends

Tyngsborough has undergone many changes since its early farm and homestead beginnings. The town has had many identities -- a small agricultural community, a summer resort town, and today, a suburban bedroom community. Tyngsborough's population more than doubled between 1980 and 2000, with the greatest population increases occurring during the 1980s, when the population grew 52.1 percent, and again in the 1990s, when it grew 28.2 percent.

Although Tyngsborough lost over half of its agricultural acreage in the forty years between 1950 and 1991, 14 percent of Tyngsborough's land remained in agricultural use in 1999. Table 9 shows the number of residential building permits for new construction issued in Tyngsborough from 2002 to 2008. The declining number of permits in 2007 and 2008 is likely a reflection of the current downturn in the economy.

**Table 9: Tyngsborough Residential Building Permits 2002 – 2007
New Construction**

YEAR	TOTAL
2002	20
2003	49
2004	22
2005	63
2006	78
2007	33
2008	16

Source: Tyngsborough Building Department

Table 10 provides a summary of Tyngsborough's 2008 land use by land use category and calculates the changes in land uses from 1999 to 2008. The categories of land use are based on data compiled by MassGIS and are based on statewide, standardized land use classifications interpreted from 1:25,000 aerial photography. Map 2 shows Land Use for Tyngsborough in 2005 and Map 3 depicts the current zoning classifications throughout the Town.

Table 10: Tyngsborough Land Use Change 1999 -2008

LAND USE CATEGORY	1999 (ACRES)	2008 (ACRES)	2008 % OF TOTAL	ACREAGE CHANGE - 1999 TO 2008	% CHANGE - 1999 TO 2008
Cropland	353	337	2.91	(15)	(4)
Pasture	77	69	0.60	(8)	(10)
Forest	5590	5120	44.22	(470)	(8)
Wetland	348	344	2.97	(4)	(1)
Mining	46	35	0.30	(11)	(24)
Open Land	332	297	2.57	(35)	(10)
Participatory Recreation	275	272	2.35	(3)	(1)
Water Based Recreation	1	1	0.01	0	0
Residential (Multi-family)	74	106	0.92	33	44
Residential ($\leq 1/4$ acre.)	34	29	0.25	(5)	(15)
Residential ($1/4 - 1/2$ acre)	416	335	2.90	(80)	(19)
Residential ($\geq 1/2$ acre)	2574	3095	26.73	521	20
Commercial	224	225	1.95	1	1
Industrial	59	132	1.14	73	122
Urban Open Land	145	158	1.37	13	9
Transportation	225	243	2.10	18	8

Source: MassGIS, 2008 MacConnell Land Use data

Recent Planning Efforts

In 2004, the Town completed a Master Plan that outlined the overall vision for the community and enumerated numerous goals and objectives which will help guide the Town's future growth and development. Among the Plan's recommendations are the following:

- Create an expanded Town Center with three development nodes;
- Develop mixed use commercial, residential, cultural village nodes;
- Extend sewer service along Middlesex Road;
- Preserve the golf courses and institutional lands;
- Provide incentives for open space residential developments; and
- Develop an open space corridor/trail system.

This sampling of the recommendations in the Plan shows that the Town is committed to actively pursuing an open space/recreational component as part of its overall development. The Open Space Recreation Plan Survey reflected desire on the part of the Town's residents to develop recreational activities emphasizing pedestrian facilities and hiking trails (See Section 7.)

In 2006, NMCOG assisted the Town in preparing the *Tyngsborough Economic Development Plan*, as a means of encouraging economic growth, while maintaining the quality of life for the town's residents. The Economic Development Plan encouraged the creation of a National Register Historic District within the Town Center, and recommended a series of pedestrian improvements, expanding the green space located along Winslow Road, and establishing design guidelines that promote smart growth principles and protect the character of the community.

In 2007, the Town completed its Storm Water Management Plan under the National Pollution Discharge Elimination System (NPDES) Program and adopted a local Storm Water Management By-law. In addition, the town is currently reviewing a draft ground water protection by-law that was developed as part of the Storm Water Management Plan.

The Town completed the *Town Center Master Plan* in September 2008, which builds upon several prior planning efforts, and focuses on creating a vibrant and dynamic town center. The plan examines the re-use of town-owned properties within the center, explores open space and pedestrian improvements, and assesses opportunities for new development and infrastructure improvements. The master plan recommends that town greens be established at two locations along Middlesex Road: just south of the Korean Church and at the site of the former Flint Box Factory. The land that lies between the church and the property of the Tyngsborough Housing Authority was formerly used as a town common. Improvements to the existing open space along Winslow Drive are also detailed within the document. These improvements include extending the green space onto portions of Winslow Drive, streetscape improvements and providing additional pedestrian amenities.

The Town Center Plan also advocates creating a park on land between Flint Pond and the Old Town Hall, with improved pedestrian connections to Kendall Road, and identifies a second location for a potential park behind the Winslow School. It may be possible to connect the new park behind the Winslow School with the New Town Hall by constructing a walking path through the woods.

E. Infrastructure

Transportation

Tyngsborough is bisected by Route 3, which runs north-south, and is approximately 5 miles north of Interstate Route 495. Tyngsborough's three interchanges on Route 3: Westford Road, Exit 34; Kendall Road, Exit 35; and Middlesex Road, Exit 36, provide the community with outstanding highway access. In addition, Route 3A parallels the Merrimack River and connects Tyngsborough with Lowell to the south and Hudson, NH to the north. Route 113 also parallels the Merrimack River from Lowell to the intersection with Route 3A, where it crosses the River and continues west into Dunstable. There is a regional park and ride lot located on Route 113 near Exit 35 on Route 3.

All roadways are classified by State and Federal transportation agencies according to the road's function. Principal Arterials carry high volumes of traffic and provide connections to other major roadways and adjoining communities. Route 3 is classified as Urban Principal Arterial, while Routes 113 and 3A are classified as Urban Minor Arterials meaning that their function is secondary to the Principal Arterials and serve primarily as links between distinct urban geographic and/or economic regions or as links between two Principal Arterials.

The Tyngsborough Bridge, constructed in 1932, provides an important crossing of the Merrimack River for residents of Tyngsborough and neighboring communities. The bridge provides the only river crossing for approximately five miles to the north and six miles to the south, and carries nearly 25,000 vehicles per day. In recent years, traffic congestion in the bridge has increased due to population growth and increased retail development in South Nashua. In 2002, the *New Tyngsborough Bridge Transportation Study* was completed by MassHighway to assess the need for a second river crossing. The study identified two possible locations for a new crossing: Alternative 5/6, which would align with Westford Road, and Alternative 14 which would cross the river further north at the Pheasant Lane Mall.

The Lowell Regional Transit Authority provides fixed route bus service and paratransit for the elderly and disabled. The Dracut-Tyngsborough route runs along Lakeview Avenue up to Frost Road and Madeline Terrace, and up to Ayotte's Market near the New Hampshire state line. Tyngsborough residents can access commuter rail service to Boston at the Gallagher Intermodal Center in Lowell. The Nashua Regional Planning Commission is studying the feasibility of extending commuter rail service beyond Lowell, through Chelmsford and Tyngsborough, to Nashua and Manchester, New Hampshire.

The lack of bicycle and hiking paths and trails, along with the lack of sidewalks, have been identified as issues of concern in the survey results gathered as part of the public input process for the Open Space and Recreational Plan update.

Water Supply

Approximately thirty percent of the town is served by public water. The remaining seventy percent (70%) is served by on-site private wells. Within the Town of Tyngsborough, three water districts operate a total of five water distribution systems that access various supply sources in neighboring communities, including Dracut, Chelmsford, Lowell and Nashua. Management of the water supply infrastructure and the related contractual agreements is relative complex.

The largest water distribution network is comprised of three separate water systems and operated by the Tyngsborough Water District (TWD). The TWD is the only Town-based provider of public water, which is supplied through the communities of Dracut and Lowell, and through the Pennichuck Water Works Corporation of Nashua. The water demand for the TWD is estimated at 200,000 gpd, according to the 2003 Comprehensive Water Resources Management Plan prepared for the Town by SEA Consultants.

The Dracut Water Supply District (DWSD) has one water system serving the area north of Masscuppic Lake. A smaller distribution system operated and maintained by the Tyngsborough Water District is located within this same area and is connected to the larger DWSD System. The water supplies for these two systems have been via a connection in Dracut to a distribution line in Lowell, a wellfield site in Dracut, and during peak demands, a wellfield operated by the DWSD that is located off Larsen Avenue on the northwest bank of the Merrimack River in Tyngsborough. The current intermunicipal agreement between the TWD and DWSD, for water furnished to the TWD-operated system, provides an initial maximum allowance of 100,000 gpd, with increases for each new unit of residential housing and commercial service.

The North Chelmsford Water Supply District (NCWSD) services a small area along the western bank of the Merrimack River near Tyng's Island. The water supply is just capable of meeting current demands, although additional water supplies are potentially available through neighboring districts in Chelmsford.

The 2003 Comprehensive Water Resources Management Plan (CWRMP) analyzed future demand for the Town based upon past water use and anticipated future development. The report concluded that the TWD's intermunicipal agreements with Dracut and Lowell, and the agreement with the Pennichuck Water Works Corporation, appear to contain sufficient capacity for future growth in the water system through 2020.

Sewer System

Tyngsborough's wastewater management system was first developed in the 1970s and has continued to expand through subsequent decades. Public sewer currently services 25% of the town. Currently, the most extensive sewage collection area in the town surrounds Mascuppic Lake. Sewers were originally constructed in this area in the late 1970s, in response to failing septic systems that were found to be degrading water quality. In 1999 and 2000, a major addition was constructed to provide sewers to the Norris Road School complex.

A second sewage collection area is situated along the eastern shore of the Merrimack River adjacent to Tyng's Island. This sewered area is relatively small, accounting for only about twenty connections. West of the Merrimack River, the primary basis for the construction of sewers was to give the EPA Superfund site at the Charles George Landfill a means for discharge of industrial wastewater generated onsite. The majority of sewers in this area lie on Dunstable Road. In December 2004, two developers, Maple Ridge Estates Development and Merrimack Landing Trust extended sewer to their planned affordable housing developments located on Middlesex Road and Old Tyng Road.

The *2006 Tyngsborough Economic Development Plan* found that lack of sewer and water infrastructure represents the greatest challenge to economic development for the community. Wastewater treatment is provided at the Greater Lowell Wastewater Utility via connections with Chelmsford, Dracut and Lowell. The Town's inter-municipal agreements (IMAs) with the Towns of Chelmsford, Dracut and Lowell establish a capacity of 1.6 million gallons per day (mgd) .35 mgd, and .085 mgd, respectively which meets the current needs of the community and provides room for expansion.

The Town received EEA approval of its Comprehensive Wastewater Management Plan (CWMP) in January of 2009. The CWMP is a 20-year plan that identifies environmentally sustainable treatment and disposal alternatives that respond to the community's needs while meeting water quality and public health standards. The first two phases of the plan to be designed and constructed include the Town Center to the Chelmsford line and the Town Center to the Nashua, NH border, along with the Sunset Park area located off Lakeview Avenue.

Current initiatives include an Inflow and Infiltration Study, which focuses on the integrity of the infrastructure and identifies sources of infiltration in an effort to improve efficiencies and reduce operating costs and replacement of the Willowdale Pump Station.

Long-Term Development Patterns

Tyngsborough is a town in transition. Since 1980, the Town has lost much of its rural landscape and character. As land and housing became increasingly costly throughout eastern Massachusetts, Tyngsborough's location along Route 3 and the availability of land made it ripe for residential development. With a current population over 11,000, the Town continues to face the challenges of absorbing growth, providing and upgrading services and infrastructure, retaining open space, and preserving the community character that attracted many residents to the Town in the first place.

In 2000, NMCOG prepared a build-out analysis for Tyngsborough, using a methodology developed for a statewide initiative by the Executive Office of Environmental Affairs. (It should be noted that this methodology differs from the methodology used by MassHighway, and thus produces different projection numbers from those shown in Table 1.) The build-out analysis, as shown on Table 11, provides order-of-magnitude numbers for the amount of development capacity remaining in Tyngsborough under current zoning, based on assumptions about household size and other matters. In fact, communities rarely reach 100 percent buildout; zoning regulations can change, and the timeframe in which total build-out might occur depends on economic conditions and other factors. Taking into account these caveats, the build-out information provides a useful estimate of remaining development capacity, that is, the *additional* homes and nonresidential development that could potentially be built. The analysis also estimates the water, wastewater, school and other impacts associated with this additional development. According to this analysis, Tyngsborough has room for approximately 3,600 new housing units and 17 million square feet of nonresidential development.

Table 11: Summary Build-out Statistics - Additional Development and Impacts

MEASURE	POTENTIAL IMPACT
Total Developable Land Area (sf)	
<ul style="list-style-type: none"> • Residential • Commercial • Industrial 	192,336,537 5,165,538 <u>19,721,680</u> 217,223,680
Total Residential Lots/Dwelling	3,134/3,686
Total Commercial/Industrial Buildable Floor Area	
<ul style="list-style-type: none"> • Commercial • Industrial 	1,659,603 <u>15,692,918</u> 17,353,521
Total Water Use (gallons/day)	
<ul style="list-style-type: none"> • Residential • Commercial/Industrial 	718,729 <u>1,301,439</u> 2,020,168

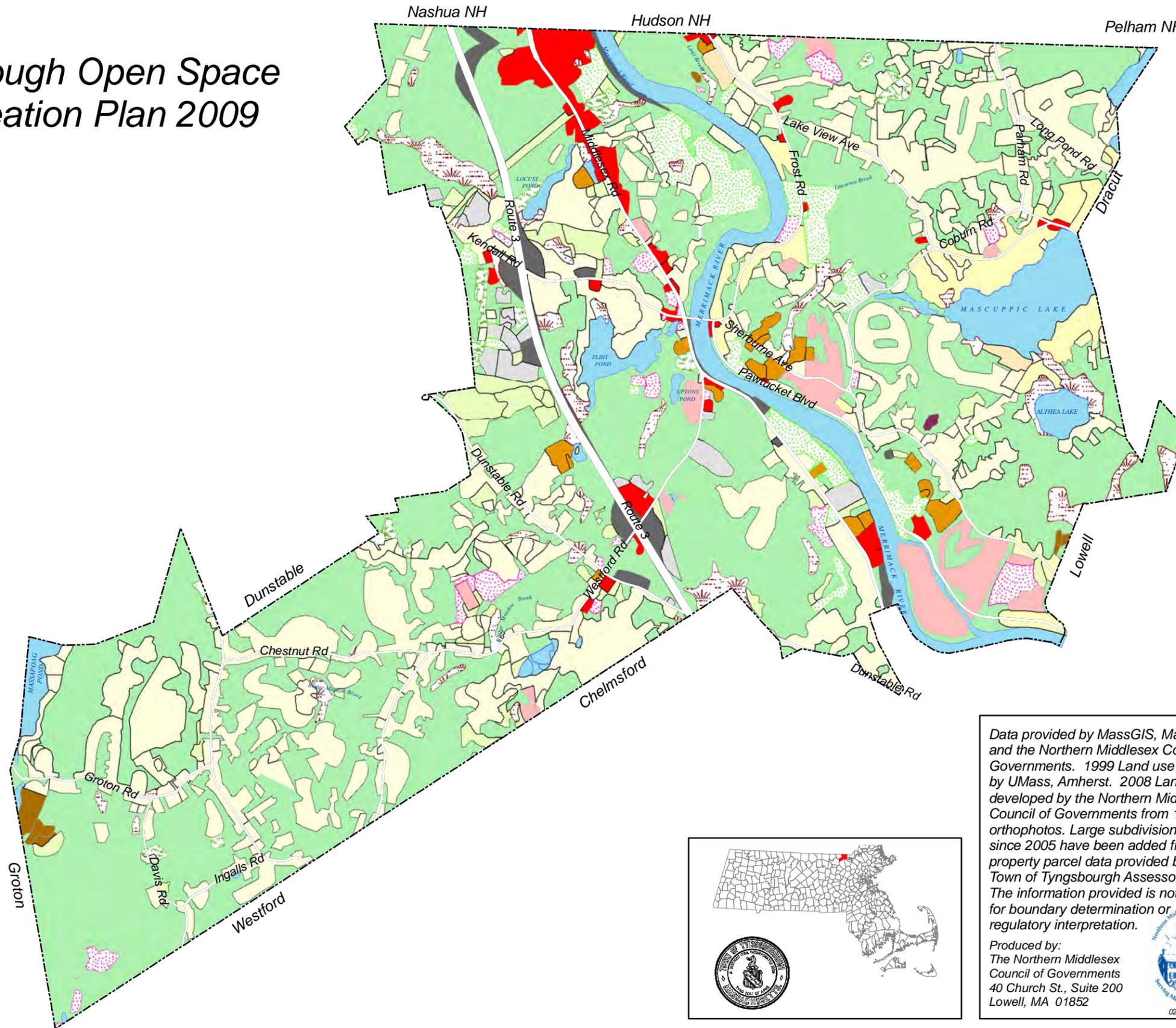
Total Municipal Solid Waste (MSW) in tons/year	
• Recycled or composted MSW	1,420
• Non-recycled/non composted MSW	<u>3,496</u>
	4,916
Students (Grades K-12)	1,437
New Roadways (linear miles)	61.8
Vehicle Trips per day	
• Residential	34,123
• Commercial	7,017
• Industrial	<u>113,401</u>
	154,541

Notes on Table 11:

1. Residential water use is based on 75 gallons per person per day.
2. Commercial/Industrial water use is based on 75 gallons per 1,000 square feet of floor space.
3. Municipal solid waste is based on 1,206 pounds per person per year. All waste estimates are for residential uses only and assume that 730 pounds of waste per person are disposed of in a landfill or incinerator.
4. The number of students at buildout is based on a student to household ratio of 0.3 as ascertained through the 2000 U.S. Census.

Tyngsborough Open Space and Recreation Plan 2009

Map 2: 2005 Land Use



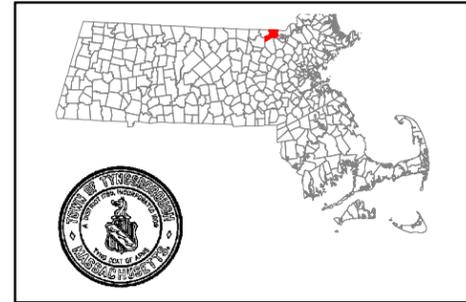
Legend

- Town Boundary
- Major Roads
- 2005 Land Use**
- ▨ Cropland
- ▨ Pasture
- ▨ Forest
- ▨ Wetland
- ▨ Mining
- ▨ Open Land
- ▨ Participatory Recreation
- ▨ Residential-Multi-family
- ▨ Residential - Less than .25 acre
- ▨ Residential - .25 acre to .5 acre
- ▨ Residential greater than .5 acre
- ▨ Commercial
- ▨ Industrial
- ▨ Urban Open
- ▨ Transportation
- ▨ Waste Disposal
- ▨ Water
- ▨ Woody Perennial

Data provided by MassGIS, MassHighway and the Northern Middlesex Council of Governments. 1999 Land use developed by UMass, Amherst. 2008 Land use developed by the Northern Middlesex Council of Governments from 1:5000 orthophotos. Large subdivisions added since 2005 have been added from property parcel data provided by the Town of Tyngsborough Assessor's office. The information provided is not adequate for boundary determination or regulatory interpretation.

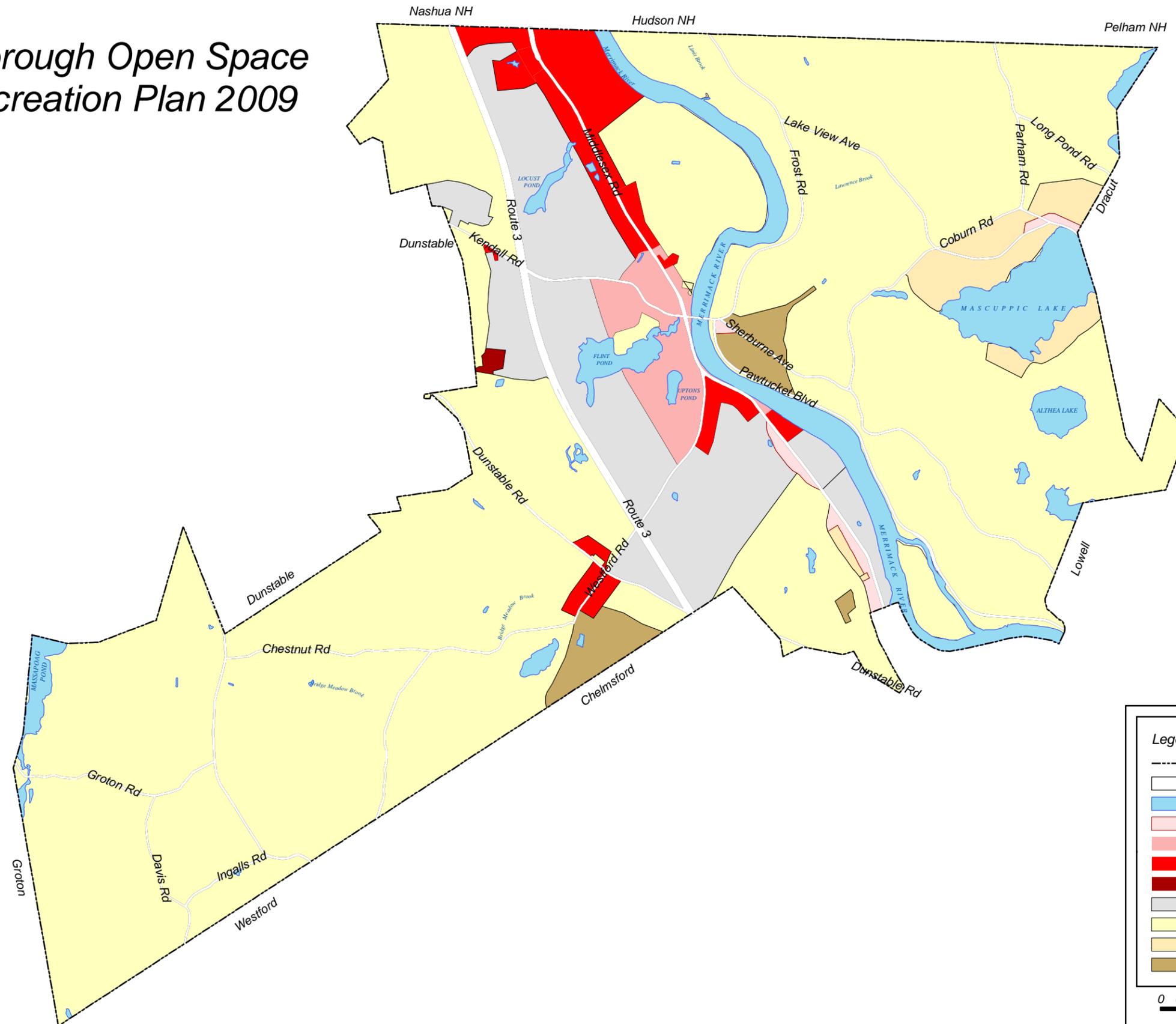
Produced by:
The Northern Middlesex Council of Governments
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Lowell, MA 01852

02/15/2009 JCM



Tyngsborough Open Space and Recreation Plan 2009

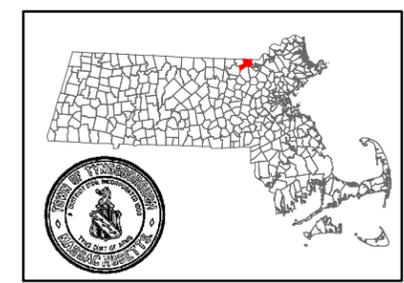
Map 3: Zoning Districts



Legend

- Town Boundary
- Major Roadways
- Open Water
- Business/Commercial 1
- Business/Commercial 2
- Business/Commercial 3
- Business/Commercial 4
- Industrial
- Residential 1
- Residential 2
- Residential 3

0 0.15 0.3 0.6 0.9
Miles



Data provided by MassGIS, MassHighway, The Northern Middlesex Council of Governments and the Town of Tyngsborough. The data represented on this map is not adequate for regulatory interpretation or boundary determination.

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JCM 03/04/2009

SECTION 4: ENVIRONMENT INVENTORY AND ANALYSIS

A. Geology, Soils and Topography

The Merrimack River divides Tyngsborough into two topographic regions. The eastern part of Town is characterized by gently rolling hills, while the western part of Town has higher elevations and steeper slopes. The highest elevations in Tyngsborough are found west of the river atop Scribner Hill (400 feet), at the MIT observatory (400 feet), and atop Bear Hill (373 feet). The lowest point in town is at about 98 feet in elevation, where the Merrimack River flows across the town line into Lowell.

The topography of Tyngsborough was formed by glaciation during the Cenozoic era (beginning 65 million years ago and including the present) in the Pleistocene age - the most recent dramatic geological event. The sharply accented hills and valleys of the pre-glacial landscape were modified by glacial abrasion and outwash deposits (alluvium) caused by the huge ice formations. Glacial till, alluvium made up of clay, sand, silt, and gravel deposited by glaciation, covers the bedrock formations of the Paleozoic era (beginning 600 million years ago and ending 230 million years ago) in the pre-Cambrian age.

Surface bedrock, or "ledge", is very evident in the western hills of Tyngsborough. Drumloid hills, a rounded yet asymmetrical landform relic of the glaciers composed of highly compressed clay and till, are obvious near Flint Pond. The western edge of Flint Pond shows evidence of eskers, caused by the buildup of sand and gravel left by the streams that flowed under glaciers. Flint Pond and other water bodies in Tyngsborough are the legacy of glaciers that carved out huge depressions in the ground as they came to rest, slowly melting over a period of years and leaving their melt water in the remaining cavities. Alluvial sand and gravel deposits left by running water are found along the shores of the Merrimack River.

As shown on Map 4, two main soil associations are found in Tyngsborough. The dominant soil association is the Hollis-Canton-Scituate which accounts for 51% of all soils in Tyngsborough and is most prevalent in the hilly western and northeastern sections of Town. Stony and sandy, these soils have slight or moderate limitations for wildlife and recreation uses, moderate to severe limitations for woodlands, and severe constraints for construction and agricultural activity. The Hinckley-Windsor-Deerfield soil association accounts for 24% of all soils and is found near the Merrimack River and other waterways. These sandy and gravelly soils have slight limitations for construction, as sources of sand and gravel, and for sanitary landfill areas and moderate limitations for agricultural uses. The remaining 18% of all soil deposits (7% of the Town is water) are comprised of the Muck-Scarboro-Whitman (9%), Hadley-Suncook-Winooski (6%),

and Millis-Paxton-Hollis (3%) associations, which generally have slight limitations for wildlife and recreational uses, slight to moderate limitations for agricultural uses, and severe limitations for construction.

The composition and landscape of Tyngsborough's geology and soils have played an important part in development and land use in the Town. Hollis-Canton-Scituate soils in the western and northeastern part of Town, difficult for housing construction because of their poor drainage characteristics and shallow depth to bedrock (ledge outcroppings), delayed residential development in these areas. Hinkley-Windsor-Deerfield soils, generally located near waterways, are poorly drained soils with high water tables and have tended to restrict land development along rivers, streams, and low areas of Town. The excavation of these same sandy and gravelly soils in central Tyngsborough created the mines and quarries present in that area of Town.

B. Landscape Character

Tyngsborough's landscape provides a diversity of terrain and scenery. The gently rolling topography east of the river contrasts with the complex of prominent drumloid hills in the west. The town is bisected by the Merrimack River, dotted with lakes and ponds, and overlaid with a network of meandering streams, brooks, and wetlands.

Tyngsborough's identity is closely linked to the Merrimack River, which cuts a wide swath through the heart of the Town. The Tyngsborough Bridge, high above the river, is the most well-known symbol of the town, and roads along the river shore in several locations provide long river views. Mascuppic Lake, Althea Lake, Long Pond, Massapoag Pond, as well as smaller ponds throughout the town, provide scenic recreational areas.

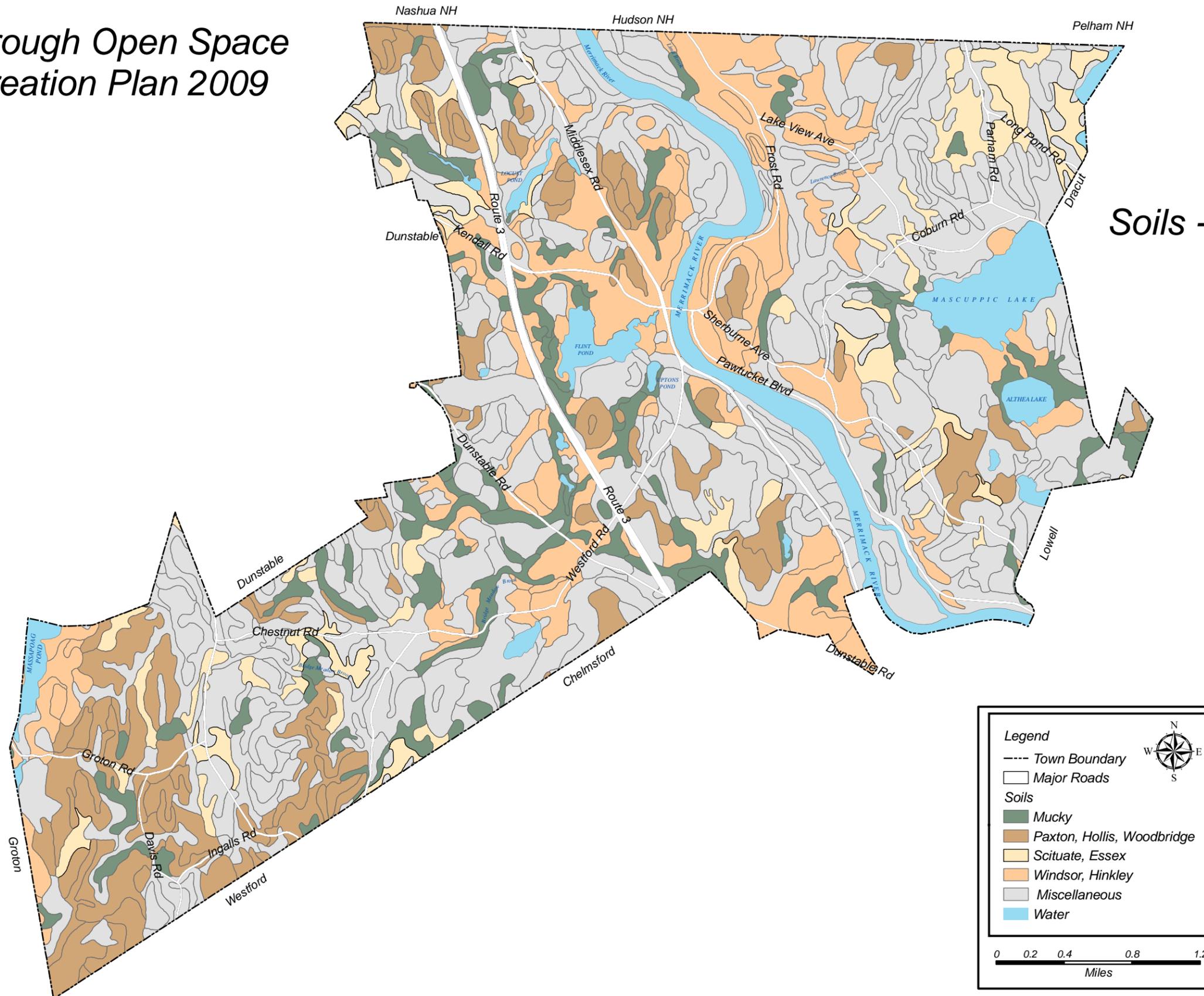
Several large patches of natural habitat help preserve Tyngsborough's remaining semi-rural landscape character: the MIT Observatory land (400 feet), which continues into Westford and Groton; Bear Hill (373 feet); Notre Dame Academy; Innovation Academy Charter School; the Greater Lowell Regional Vocational Technical High School; and the Lowell / Tyngsborough / Tyngsborough State Forest. In addition, Tyngsborough still has a number of private parcels in forest and agriculture.

C. Water Resources

All of Tyngsborough is within the watershed of the Merrimack River and its tributaries, Beaver Brook and Salmon Brook. A small part of the northeast section of Town drains into the Beaver Brook subwatershed, while small areas in the western part of Town drain into Salmon Brook. Much of Tyngsborough drains directly to the Merrimack River. See Map 6 – Water Resources.

Tyngsborough Open Space and Recreation Plan 2009

Map 4: Soils - Basic Associations



Legend

- Town Boundary
- Major Roads

Soils

- Mucky
- Paxton, Hollis, Woodbridge
- Scituate, Essex
- Windsor, Hinkley
- Miscellaneous
- Water

0 0.2 0.4 0.8 1.2
Miles



Data provided by the Natural Resources Conservation Service (NRCS), a division of the United States Department of Agriculture and the Massachusetts Highway Department. Please refer to NRCS metadata regarding the accuracy and detail of soils data. No usage of the data provided should be made for regulatory interpretation or boundary determination.

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Surface Water

Rivers and Streams. The Merrimack River, second largest river in the state after the Connecticut River, winds southerly through the Town and divides it nearly in half. The River runs through town for over five miles and serves as the water supply for much of town. Although there are no formal boat launches or fishing piers along the Merrimack in Town, public access could be provided through Town-owned land off Pawtucket Boulevard and Farwell Road on the east and west sides of the river, respectively. (Such public access was often mentioned by those responding to the Open Space Recreation Plan Survey.) The section of the Merrimack River that cuts through Tyngsborough is designated as a Class B stream to be used for propagation of fish, other aquatic life and wildlife, and for primary (swimming) and secondary (boating) contact recreation. The river has no trouble meeting the Class B requirements under low flow conditions, but sometimes does not meet them under wet weather and storm conditions due to nonpoint source (NPS) pollution.

The Scarlet, Lawrence, Limit, Locust and Bridge Meadow Brooks support fishing and other light uses. Bridge Meadow Brook originates on Scribner Hill and flows into Flint Pond. Lawrence Brook flows from Norris Corner along Lawndale Road and into the Merrimack River just upstream from the Tyngsborough Country Club. Limit Brook flows out of Hudson, New Hampshire and into the Merrimack River near Frost Road. Scarlet Brook flows out of wetlands, between Althea Lake and the State Forest, into the Merrimack River. Locust Brook flows from Locust Pond, along Locust Avenue, into the Merrimack River near Farwell Road.

Ponds and Lakes. There are seven large lakes or ponds located within the Town of Tyngsborough. Lake Mascuppic is 215 acres in total area, of which approximately 209 acres are located in Tyngsborough. This is the largest lake in town and is surrounded by former summer cottages that have been converted to year-round residences. Impacts from stormwater runoff, yard fertilizers, fecal matter from non-migratory water fowl, and motor boats and jet skis, have taken their toll on the lake's water quality. Lake Mascuppic is bordered by Town-owned and privately-owned conservation land off Sequoia Drive and a Town Beach off Mascuppic Trail.

Long Pond has a total area of 163 acres, of which approximately 40 acres are located in Tyngsborough. The pond has a developed shoreline that is used extensively for recreation - particularly swimming, fishing, and boating. Massapoag Pond (153 acres total, approximately 64 acres in Tyngsborough), Flint Pond (74 acres managed by the state Department of Fish, Wildlife and Environmental Law Enforcement - DFWELE), and Althea Lake (38 acres) are primarily passive recreation areas that support fishing and canoeing, and also serve as wildlife habitat. Lake Althea is accessible from the State Forest off Althea Avenue. Locust Pond (13 acres) and Upton Pond (5 acres) have limited public access and serve mainly as wildlife habitat and conservation areas. (See Map 4 – Water Resources.)

Flood Hazard Areas

Areas subject to 100-year floods include the banks of the Merrimack River; the shorelines of Lake Mascuppic and Althea Lake, including connecting wetlands and out flowing tributaries; the shorelines of Long Pond; the shorelines of Flint Pond and Massapoag Pond, including tributaries and associated wetlands; Lawrence Brook; and Bridge Meadow Brook and its many tributaries. Most of these shorelines are already developed, except for portions of Lake Mascuppic, Althea Lake, and Flint Pond.

There are two repetitive flood loss structures within the Town, according to the *Pre-Disaster Mitigation Plan for the Northern Middlesex Region* prepared by NMCOG. The Plan also indicates that when the Merrimack River is at flood stage it overflows its bank and floods a section of Route 113 near the Vesper Country Club. The document's action plan recommends mitigating this flooding issue.

Wetlands

The 634 acres of mapped wetlands in Tyngsborough represents approximately 5.7% of the Town's total land area. As is typical of the region, more than half of all wetlands (361 acres) appear to be non-forested. The remaining 273 acres are forested wetlands. Tyngsborough's wetlands vary in size, from less than one acre to approximately 36 acres, and are generally associated with major waterways and water bodies including the Bridge Meadow Brook, Lawrence Brook, Scarlet Brook, Lake Mascuppic, Althea Lake, and Flint Pond.

Wetlands are characterized by a year-round high water table, sections of open marsh, and seasonal flooding. They are generally continuous with the streams traveling through them. Tyngsborough also has some perched wetlands, which are maintained by water trapped above impermeable soils or bedrock. These wetlands are small discontinuous, and wooded.

Wetlands provide many essential ecological functions:

- They serve as natural drainage ways and minimize flood damage.
- They recharge groundwater.
- They serve as siltation basins and purify the air and water of pollutants.
- They provide essential wildlife habitat and function as a natural open space network.

Wetlands themselves are protected by the Wetlands Protection Act and Tyngsborough's local Wetlands Protection Bylaw, but the appropriate management of the upland areas adjacent to wetlands is essential in order to conserve the integrity and

function of wetlands. The Tyngsborough Conservation Commission has established several policies to protect wetland buffer zones:

- Fifty-foot no-build zone: No new structures or impervious surfaces may be constructed within 50 feet of a resource area.
- Thirty-foot no-touch zone: No disturbance of any kind is allowed within 30 feet of a resource area.

Where there has already been disturbance of the buffer zone, it is important to make property owners aware of practices that will protect wetlands and water resources. For example, rather than mowing up to the edge of water or wetlands, buffers of native vegetation should be conserved.

In 2007, the Town completed its Stormwater Management Plan under the NPDES Program, and adopted a local Stormwater Management By-law. In addition, the town is currently reviewing a draft ground water protection by-law that was developed as part of the Storm Water Management Plan.

Aquifer Recharge Areas

Aquifers are primary sources of groundwater, and are found in stratified sand and gravel deposits laid down by glacial melt water, or in the post-glacial alluvium deposited as river terraces and floodplains by waterways. The recharge areas for aquifers are the wetlands and surface water bodies that form the surface of the underground aquifer, as well as the glacial deposits nearby. The pervious soils found in these places are also suitable for leaching fields and construction, so these recharge areas are often attractive to development.

Groundwater from local aquifers are a major source of domestic water for Tyngsborough residents, whether they depend on public water supplies or private wells. Some important aquifers or groundwater recharge areas are found within the town boundaries. A high yield aquifer (more than 300 gallons per minute) lies under the Dracut well fields, and downstream between the river and Middlesex Road. Lower yield aquifers (100 to 300 gallons per minute) are located along Bridge Meadow Brook, near the intersection of Westford Road and Dunstable Road, near Flint Pond, along the Merrimack River and at Tyng Island. The TWSD wells are located near these lower yield aquifers or along Lawrence Brook.

Tyngsborough Open Space and Recreation Plan 2009

Map 5: Special Landscapes



Agricultural Lands



Massapoag's Verdant Shores



River view at campground



Lowell, Dracut, Tyngsborough State Park

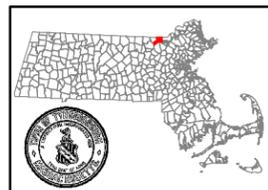


Historic Town Center and Tyngsborough Bridge

Legend

- Town Boundary
- Major Roads
- Open Water

0 0.1 0.2 0.4 0.6
Miles



Data provided by MassGIS, MassHighway, The Northern Middlesex Council of Governments and the Town of Tyngsborough. The data represented on this map is not adequate for regulatory interpretation or boundary determination.

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D. Vegetation

Since 1980, significant development has reduced the size of large areas of contiguous woodland in Tyngsborough. This is particularly the case in the western “panhandle,” where the construction of new subdivisions, as well as development along historic roads, has fragmented the woodlands in this area of hills and ledge. In addition to the state forest and institutional lands noted earlier, substantial forest cover remains in the industrially-zoned area between Route 3 and the Merrimack River.

The white pine and hemlock forest association is dominant in the region, and several stands of white pine can be found in Town. Hardwood species that are present in the region, and also found in Tyngsborough, include red and sugar maple; several species of oak; white, black, and grey birch; white ash; and beech and American elm. Wetlands in Tyngsborough support a variety of typical plant life including ferns, dogwoods, viburnums, cattails, and many types of coniferous and deciduous trees.

Invasive exotic species such as multiflora rose, European buckthorn, Oriental bittersweet and purple loosestrife are common in the hedgerows, roadsides, overgrown pastures and orchards, and, in the case of loosestrife, the wetlands of the Town. These invasives crowd out native species. No efforts are yet underway to control these invasive plants that threaten native plant communities.

The diversity of plant communities within the town provides food and habitat for wildlife. The following is a partial list of plants believed to be present within the Town:

- Black Oak (*Quercus veluntina*)
- Scarlet Oak (*Quercus coccinea*)
- Red Oak (*Quercus rubrum*)
- Chestnut Oak (*Quercus prinus*)
- White Oak (*Quercus alba*)
- Pin Oak (*Quercus palustris*)
- Swamp white oak (*Quercus bicolor*)
- Red Maple (*Acer rubrum*)
- Sugar Maple (*Acer saccharum*)
- Silver maple (*Acer saccharinum*)
- Grey Birch (*Betula populifolia*)
- White Birch (*Betula papyrifera*)
- Black Birch (*Betula lenta*)
- River Birch (*Betula nigra*)
- Black Cherry (*Prunus serotina*)
- Black gum (*Nyssa sylvatica*)
- White Pine (*Pinus strobus*)
- Sassafras (*Sassafras albidum*)

-
- Flowering Dogwood (*Cornus florida*)
 - Silky dogwood (*Cornus amomum*)
 - European buckthorn (*Rhamnus frangula*)
 - Shadbush (*Amelanchier arborea*)
 - White Ash (*Fraxinus Americana*)
 - Green Ash (*Fraxinus pennsylvanica*)
 - Aspen (*Populus tremuloides*)
 - Big-toothed Aspen (*Populus grandidentata*)
 - Chestnut (*Castanea dentate*)
 - Hemlock (*Tsuga canadensis*)
 - Beech (*Fagus grandifolia*)
 - Hickory (*Carya ovata*, *C. tomentosa*, *C. glabra*, and *C. ovalis*)
 - Mountain laurel (*Kalmia latifolia*)
 - Buttonbush (*Cephalanthus occidentalis*)
 - Sweet pepper bush (*Clethra alnifolia*)
 - Spicebush (*Lindera benzoin*)
 - Swamp azalea (*Rhododendron viscosum*)
 - Swamp candles (*Lysimachia terrestris*)
 - Arrow wood (*Viburnum dentatum* var. *lucidum*)
 - Black willow (*Salix nigra*)
 - Cottonwood (*Populus deltoids*)
 - Witch hazel (*Hamamelis virginiana*)
 - Shagbark and other hickories (*Carya ovata*, *C. labra* and *C. ovalis*)
 - Lowbush blueberries (*Vaccinium angustifolium* and *V. pallidum*)
 - Highbush blueberries (*Vaccinium corymbosum*)
 - Speckled alder (*Alnus incana* spp. *rugosa*)
 - Smooth alder (*Alnus serrulata*)
 - Winterberry (*Ilex verticillata*)
 - Nannyberry (*Viburnum lentago*)
 - Huckleberry (*Gaylussacia baccata*)
 - Elderberry (*Sambucus Canadensis*)
 - Partridgeberry (*Mitchella repens*)
 - Scrub Oak (*Quercus ilicifolia*)
 - Maple-leaved Viburnum (*Viburnum acerifolium*)
 - American Hazlenut (*Corylus Americana*)
 - Bracken fern (*Pteridium aquilinum*)
 - Cinnamon fern (*Osmunda cinnamomea*)
 - Ostrich fern (*Matteuccia struthiopteris*)
 - Christmas fern (*Polystichum acrostichoides*)
 - Sensitive fern (*Onoclea sensibilis*)
 - Royal fern (*Osmunda regalis*)
 - Pink lady slipper (*Cypripedium acaule*)
 - Club mosses (*Lycopodium* spp)
 - False nettle (*Boehmeria cylindrical*)

-
- Canada mayflower (*Maianthemum canadense*)
 - White wood aster (*Aster divaricatus*)
 - Indian cucumber (*Medeola virginiana*)
 - Water parsnip (*Sium suave*)
 - Wintergreen (*Gaultheria procumbens*)
 - Wild sarsaparilla (*Aralia nudicaulis*)
 - Poison Ivy (*Toxicodendron radicans*)
 - Poison sumac (*Toxicodendron vernix*)
 - Skunk cabbage (*Symplocarpus foetidus*)
 - Marsh marigold (*Caltha palustris*)
 - Meadowsweet (*Spiraea alba* var. *latifolia*)
 - Maleberry (*Lyonia ligustrina*)
 - Star flower (*Trientalis borealis*)
 - Perfoliate bellwort (*Uvularia perfoliata*)
 - False Solomon's Seal (*Maianthemum racemosum*)
 - Early meadow rue (*Thalictrum dioicum*)
 - False foxgloves (*Aureolaria flava*, *A. pedicularia*, and *A. virginica*)
 - Little blue stem grass (*Schizachyrium scoparium*)
 - Pennsylvania sedge (*Carex pensylvanica*)
 - Awned sedge (*Carex crinita*)
 - Bugleweeds (*Lycopus* spp.)
 - Poverty grass (*Danthonia spicata*)
 - Goldenrods (*Solidago* and *Euthamia* spp.)
 - Milk weeds (*Asclepias* spp. and *A. tuberosa*)

Shade Trees

Tyngsborough does not have a shade tree by-law. The Highway Department inspects the Town's street trees and park trees for decay, damage, disease or death. Healthy trees are not removed unless they are a hindrance to public safety. The Highway Department works with all tree trimming companies hired by utilities for line trimming of any trees in the public right of way. In addition, the Planning Board rules and regulations addresses tree planting in new subdivisions.

Deforestation

Based on MassGIS information, Tyngsborough has lost an average of 34 acres of forest per year between 1971 and 2005. This is a significant reduction reflective of the rapid population growth evidenced in the region as a whole and the town in particular. (See table 1 on page 3.) It is estimated that forests still cover approximately fifty percent of the land area, containing a mix of hardwoods and softwoods, with understory species including cherry, honey locust, and sumac, among others. Forest areas are important in that they protect large tracts of second growth vegetation. In addition, in those areas of the town that have been more densely developed, an "urban

forest” setting has begun to emerge. The “urban forest” in Tyngsborough is composed of the small forest patches and individual trees in back yards, behind and between subdivision developments, along roads, in parking lots and in town parks. As larger woodland patches of forest become less common, management of the urban forest will become more important.

E. Rare, Threatened, and Endangered Species

As of November 2008, the Massachusetts Natural Heritage and Endangered Species Program (NHESP) listed eleven species under the threatened, special concern or endangered categories within Tyngsborough. Other rare or endangered plant species may exist in Tyngsborough, but have not been documented. Because the NHESP office depends to a significant degree on volunteer documentation of sightings of rare and endangered species, local efforts to survey plants and wildlife in Tyngsborough could result in additional listings. Information and forms to submit on sightings of rare species are available at the State Division of Fisheries and Wildlife website www.state.ma.us/dfw/nhesp/nhdat.htm.

The Massachusetts Natural Heritage and Endangered Species Program (NHESP), currently lists the following for Tyngsborough:

Threatened

- Blanding’s Turtle (*Emydoidea blandingii*), last documented in 2006
- Clubtail dragonfly (*Stylurus spiniceps*), last documented in 2004

Special Concern

- Blue-Spotted Salamander (*Ambystoma laterale*), last documented in 1995
- Wood Turtle (*Clemmys insculpta*), last documented in 1999
- Cobra Clubtail Dragonfly (*Gomphus vastus*), last documented in 1917
- Twelve-Spotted Tiger Beetle (*Cicindela duodecimguttata*), last documented date unknown
- Purple Tiger Beetle (*Cicindela purpurea*), last documented in 2004.
- New England Blazing Star (*Liatris scariosa*), last documented in 1915
- Umber Shadowdragon (*Neurocordulia obsoleta*), last documented in 2004

Endangered

- New Jersey Tea Inchworm (*Apodrepanulatrix liberaria*), last documented in 1918
- Riverine Clubtail (*Stylurus amnicola*), last documented in 2004

It should be noted that the bald eagle is listed as a state endangered species and nesting sites are believed to be present along the Merrimack River in Tyngsborough. However, the eagle is not listed as an endangered species in the town listing for Tyngsborough. Additional information is provided in Appendix F.

F. Fisheries and Wildlife

Numerous species of small fresh water fish, vertebrates, and invertebrates are present in Town waters. In particular, salmon and shad are returning to the Merrimack River because of a restoration program conducted by the Massachusetts Division of Fisheries and Wildlife and the New Hampshire Fish and Game Department. The *Merrimack River Comprehensive Watershed Assessment Report*, prepared by EOEA in 2001, identified the following fish species as being present within the Merrimack Watershed:

- 3-spine stickleback
- 4-spine stickleback
- 9-spine stickleback
- Alewife
- American shad
- American smelt
- Atlantic salmon
- Atlantic silverside
- Atlantic sturgeon
- Banded killfish
- Banded sunfish
- Black crappie
- Blacknose dace
- Blueback herring
- Bluegill
- Bowfin
- Bridle shiner
- Brown bullhead
- Carp
- Chain pickerel
- Channel catfish
- Common shiner
- Eel
- Falifish
- Gizzard shad
- Golden shiner
- Goldfish
- Largemouth bass
- Longnose dace
- Margined madtom
- Mummichog
- Northern pike

-
- Northern pipefish
 - Pumpkinseed
 - Red breast sunfish
 - Sand lance
 - Sea lamprey
 - Shortnose sturgeon
 - Smallmouth bass
 - Spottail shiner
 - Striped bass
 - Swamp Darter
 - Tessellated Darter
 - White catfish
 - White perch
 - White sucker
 - Yellow bullhead
 - Yellow perch.

Wildlife typical of suburban and semi-rural areas can be found in Tyngsborough including deer as well as small rodents and mammals such as foxes, rabbits, opossums, raccoons, squirrels, and mice. Many kinds of birds also inhabit the forested areas of Tyngsborough. The Massachusetts Audubon Society has recorded sightings of many species, from the Tree Swallow to the Rufus-Sided Towhee. Reptiles and amphibians, such as frogs, salamanders, snakes, and turtles, as well as water-dependent mammals including beavers, and muskrats are common in wet areas. Because access to clean water is a critical survival need for all animal species, streams, ponds, and wetlands are important wildlife habitat. Committee members and participants in the public meetings also reported seeing mink, pileated woodpeckers, bluebirds, owls, orioles, wild turkey, bald eagles (listed as an "endangered species"), and Blandings Turtles (listed as a "threatened" species). The western "panhandle" of Tyngsborough is shown on the state's new BioMap as "supporting natural landscape" – essential buffers for core habitat for the state's biodiversity. In recent acquisitions of open space, Tyngsborough has made an effort to create large areas of contiguous open space that provide the interior forest environments needed by some species that cannot survive in fragmented open space common in suburban environments.

There are four certified vernal pools in Tyngsborough, and most likely there are others that are undocumented. By definition, flooded during only part of the year, vernal pools lack fish populations and common wetlands vegetation. They support unique wildlife communities that have adapted to wet and dry cycles. Biologists working on state natural heritage surveys have realized that many rare and valuable species depend on vernal pools. Vernal pools must be certified by Massachusetts's Natural Heritage and Endangered Species Program in order to receive protection under the state wetlands act. However, the Tyngsborough Conservation Commission has established a policy to consider vernal pools a resource area, whether or not they are

certified by the state. Because vernal pools are intermittent phenomena, unless they are identified during the spring, they could be disturbed inadvertently. In a number of communities, identification and certification of vernal pools has become part of the school curriculum. Vernal pool information and certification forms are available at the State Division of Fisheries and Wildlife website.

G. Corridors

Although large patches of undeveloped woodlands remain in Tyngsborough, arterial roads in many cases function as barriers to wildlife movement. Even in these cases, waterways and wetland networks play a crucial role in permitting animal movement between the remaining areas of undeveloped land. The primary migratory corridors in Tyngsborough are along waterways. Water courses and their shores provide corridors for wildlife to move among different habitat areas. The Merrimack River, Bridge Meadow Brook and Lawrence Brook provide the framework for habitat networks in Tyngsborough, particularly because they allow wildlife to navigate through increasingly developed areas to reach wetland and forested areas. Power line corridors and unused open land, such as agricultural fields that are no longer being cultivated, are also areas used by many species of wildlife.

H. Scenic Resources and Unique Environments

Scenic Landscapes

The river, lakes and ponds, and the hills in western Tyngsborough are the most compelling scenic areas in town. The Tyngsborough Bridge, high above the river, affords magnificent views upstream and downstream. Roads parallel the river along much of its course, providing valued vistas. Scribner Hill, Bear Hill, and the MIT Haystack Observatory, in the western part of Town, provide vistas of the region from their summits.

Agricultural Lands

As shown in Table 10 on page 20, the Town of Tyngsborough had 406 acres of agricultural land remaining in 2008, of which 337 acres was identified as cropland and 72 acres was identified as pasture. Most of the remaining agricultural land is located along the Merrimack River. There are also small farm parcels scattered in other areas of town.

Forest Land

The Land Use Map shown on page 27, identifies 5,120 acres of forest land, which represents 44% of the town's land area. These forests are primarily Central Hardwoods-Hemlock-White Pine association and relatively small areas of the Swamp Hardwood association. The remaining uninterrupted forests in Tyngsborough are particularly valuable for a broad diversity of wildlife.

Four large forest areas remain. One is on Bear Hill and includes the site of the MIT Observatory. Another area is located between Middlesex Road, Westford Road, and Dunstable Road to the south of Potash Hill. This area also extends to the west of Westford Road to Flint Pond and includes the slopes of Abrams Hill. The third major area is located to the south of Althea Lake and joins with the Lowell-Dracut-Tyngsborough State Forest. The fourth area is on both sides of Route 3, including the area north of Locust Hill.

Major Characteristic or Unusual Geologic Features

Central Tyngsborough is a basin through which the Merrimack flows. Drumloid hills rise in the northeast and the southwest parts of town. In the southwest panhandle, complex hill formations provide a characteristic landscape of steep hills, ledge outcroppings, and small depressions, often filled with wetlands. The impacts of glaciation are evident in the landforms seen throughout Town.

Unique Environments

Nickel Mine Hill (elevation 180 feet) was one of the earliest mining ventures in the United States, possibly worked as early as the mid-1600s for iron. Nickel was first mined in 1876 in what is now the State Forest. The deposit consists primarily of amphibolite containing nickel in disseminated copper and iron sulfides.

Cultural and Historic Areas

In 2002, the town hired an historic consultant to inventory its historic resources, funded in part through a grant from the Massachusetts Historical Commission. The Tyngsborough Center area was identified as being eligible for the creation of an historic district. The resources identified as part of the possible district include the following:

- Old Town Hall building (also known as the 1834 Baptist Church);
- Littlefield Library, built in 1904;
- Winslow School, built in 1890;
- First Parish Church, built in 1836;
- Evangelical Congregational Church, built in 1836;
- Fifield Box Shop, 77 Kendall Road, c. 1880;
- 1727 Farwell House, 9 Kendall Road, the former residence of ferry operators and mill owner, and the site of town meetings in the 18th century;

-
- Tyngsborough Bridge, built in 1930;
 - Parsonage, 12 Kendall Road, c. 1832;
 - Rev. Lawrence House, 16 Kendall Road, c. 1800;
 - Gordon-Barry House, 20 Kendall Road, c. 1800;
 - C. Worcester House, 27 Kendall Road, c. 1860;
 - J. Kendall House, 45 Kendall Road, built 1814;
 - Kendall House, 51 Kendall Road, built 1808;
 - Swallow Farm, 54 Kendall Road, c. 1890;
 - 62 Kendall Road residence, c. 1900;
 - J. Farwell House, 63 Kendall Road, c. 1797;
 - 64 Kendall Road residence, c. 1855;
 - M. Kendall House, 69 Kendall Road, c. 1818;
 - 70 Kendall Road residence, c. 1875;
 - 75 Kendall Road residence, c. 1850;
 - 76 Kendall Road residence, c. 1900;
 - War Memorial, Middlesex Road, 1955;
 - Captain J. Farwell House, 201 Middlesex Road, built 1803;
 - Farwell-Richardson House, 208 Middlesex Road, built 1824;
 - 259 Middlesex Road residence, c. 1895;
 - Bennett and Perham Duplex, 260 Middlesex Road, c. 1870;
 - Bither Insurance, 261 Middlesex Road, c. 1890;
 - 266 Middlesex Road residence, c. 1888; and
 - 269 Middlesex Road residence, c. 1889.

The Tyngsborough Historical Commission is the official town body charged with the identification of historic properties and sites in town, and is the principal advisor on matters related to historic preservation. Such issues include zoning changes, the re-use of municipally-owned historic buildings, and the planning and preservation of historic areas and landscapes. The six-member board is appointed by the Board of Selectmen.

The Town's Master Plan recommends establishing a National Register Historic District in the Town Center. Kendall Road forms the principal axis of this grouping of 32 structures located near the Tyngsborough Bridge. Although residences predominate, two churches, the old Town Hall, the Littlefield Museum (formerly the library), and the old Winslow School remain as examples of 18th century Federal and Greek Revival period architecture. Resident interest to revitalize the town center is growing, and includes preserving and renovating historic structures, as evidenced in the survey results.

The Tyngsborough Bridge itself is nearly 80 years old, and is the second oldest of five identified steel rib through arch bridges in the state. The Tyngsborough Bridge's 547-foot main span is the longest simple steel arch span in the Commonwealth. The Old Town Hall is the only structure in the community to be included the National Historic Register. Unfortunately, two of Tyngsborough's more famous historic buildings

were lost in the 1980s, when the Brinley Mansion was demolished by Notre Dame Academy and the Tyng Mansion (the only historic building on the National and State Register of Historic Places in Tyngsborough) was destroyed by fire.

Areas of Critical Environmental Concern (ACEC)

There is currently one ACEC in Tyngsborough. A small area in the western part of Tyngsborough, which is in the Salmon Brook watershed, is included in the Petapawag Area of Critical Environmental Concern, designated by the Massachusetts Executive Office of Energy and Environmental Affairs in 2002. The Tyngsborough portion of this ACEC includes a 100-foot border of Massapoag Pond. (See Map 5 – Special Landscape Features.)

I. Environmental Problems

Hazardous Waste Sites

Superfund Site. There is one Superfund site located in Tyngsborough, the Charles-George Reclamation Trust Landfill. Situated on the Tyngsborough-Dunstable border, the landfill started as a small municipal dump in the late 1950s. New owners expanded the dump to 55 acres in the late 1960s, and accepted hazardous waste from 1973 to 1976, including toxic metal sludge and chemicals, such as volatile organic compounds (VOCs). Over 1,000 pounds of mercury and 2,500 cubic yards of chemical wastes were disposed of at the site. The water supply of the Cannongate condominium complex, 800 feet southwest of the site, was found to be contaminated, and in 1983, the state ordered the landfill closed. It was listed as a Superfund site in 1984. Groundwater was found to be contaminated by benzene, arsenic and other toxics. Flint Pond marsh, Flint Pond, Dunstable Brook, and nearby wetlands were threatened by migration of the contaminants. The nearest residents lived 100 feet from the site.

The site was addressed in five stages: initial actions and four long-term remedial phases focusing on providing a permanent water supply to nearby residences; capping the site; controlling the migration of contaminants, including collection and treatment of landfill gas; and collection and off-site discharge of leachate and contaminated groundwater to a publicly-owned water treatment facility. The final step in this clean-up was completed in 1998 and the site is now in the operation and monitoring phase.

The Charles George Natural Resources Trustees Council was designated by the courts as the recipient of \$1,353,440 in natural resources damage claims in 1992. The damages to natural resources that are specified in the court decision are:

- Effects on migratory birds using Flint Pond and Flint Pond marsh;
- Potential contaminant migration to the Merrimack River and effects on fisheries habitat; and

-
- Damage to groundwater and wetlands.

The Trustees filed a Draft Restoration Plan/Environmental Assessment in 2001. According to this document, the goal is “to compensate for impacts to groundwater, wetlands, migratory birds that use wetland habitat, and migratory fish in the Merrimack River. The role of the Trustees is to ensure that restoration funds are used to provide the maximum benefit (maximum benefit is stipulated since the damage settlement was insufficient to provide complete restoration), and to ensure that the project provides benefits to Trust Resources in perpetuity.”¹ The alternatives considered include on-site wetland restoration, off-site wetland restoration, acquisition of equivalent resources, on-site migratory fish restoration, and off-site migratory fish restoration. These alternatives were evaluated based on a number of criteria. The acquisition alternatives include several parcels in Tyngsborough. Action has not yet been taken, although town residents would like to see more rapid implementation of the restoration program.

Other Hazardous Waste Sites. The state Department of Environmental Protection Bureau of Waste Site Cleanup currently lists no other hazardous waste sites in Tyngsborough of the same magnitude as the one above. However, there are a number of “reportable releases” of environmental contaminants reported to the DEP, which are listed in Appendix E.

Landfills

There are no operating landfills in Tyngsborough at present. As discussed above, the former Charles George Landfill has been capped as part of the Superfund site.

Erosion and Sedimentation

The banks of the Merrimack River are sometimes subject to erosion due to the operation of the Pawtucket Dam located approximately 6 miles to the south in the City of Lowell. Otherwise, there are no areas of special concern in terms of erosion and sedimentation. To help prevent future problems, this issue has been addressed in the Stormwater Management By-law referenced previously.

Chronic Flooding

There are two repetitive flood loss properties within the Town of Tyngsborough, according to the *Pre-Disaster Mitigation Plan for the Northern Middlesex Region* prepared by the Northern Middlesex Council of Governments. As of 2005, the National Flood Insurance Program had paid \$14,464 for four claims. When the Merrimack River

¹ Charles-George Natural Resources Trustee Council, Draft Restoration Plan and Environmental Assessment: Charles George Land Reclamation Trust Landfill Superfund Site, October 2001, sec. 2.1. Available in the Tyngsborough Library or at <http://greatmeadows.fws.gov/charlesgeorge.html>.

is at flood stage it overflows its banks and floods a section of Route 113 near the Vesper County Club. Other areas of chronic flooding include:

- Bridge Meadow Brook crossing on Westford Road near the new school;
- Red Gate Road near Emerald Street;
- Dunstable Road and Constantine Drive in the Bridge Meadow Brook area;
- Chestnut Road near Fire Station #3;
- Willowdale Road; and
- Massapoag Pond shores.

The prevalence of beaver dams has also created flooding problems in some locations.

Development Impact

As noted earlier, development pressures in Tyngsborough have been substantial during the last two decades. A significant proportion of the remaining forested land in Tyngsborough is located between Route 3 and the Route 3A corridor, and most of this land is in private hands. Some is owned by institutions, such as Notre Dame Academy or Innovation Academy Charter School, and most is zoned for industrial or commercial use. During the next economic expansion, the non-institutional lands may become very attractive for development.

Elsewhere in Tyngsborough, residential development has fragmented much of the remaining open space. In some cases, houses have been built on steep slopes with retaining walls. The increase in impervious surfaces in the hilly western part of town has undoubtedly increased stormwater runoff to nearby streams and wetlands, and may be increasing erosion. Future development may require more detailed and sophisticated regulatory tools to insure protection of natural resources and open space. Properties under the Chapter 61, 61A and 61B tax abatement programs have been evaluated and prioritized to help the town prepare for potential development of these properties.

Ground and Surface Water Pollution

Although water quality in the Merrimack River has improved significantly over the last generation, Tyngsborough's stretch of river is still threatened by point and nonpoint pollution impacts from upstream sources in New Hampshire and from the nonpoint sources in Tyngsborough itself. Lake Mascuppic and Long Pond, two of the largest water bodies in Tyngsborough (both shared with the Town of Dracut), support a variety of recreational pursuits, including fishing, swimming, and boating. When the seasonal vacation communities became permanent residential areas, owners winterized their cottages and failing septic systems became a significant source of pollution. With the provision of town sewer in the lake and pond areas in the late 1980s, the most severe pollution threats were averted, but the relatively intense use of these waters continues

to make them susceptible to pollution.

J. Environmental Equity

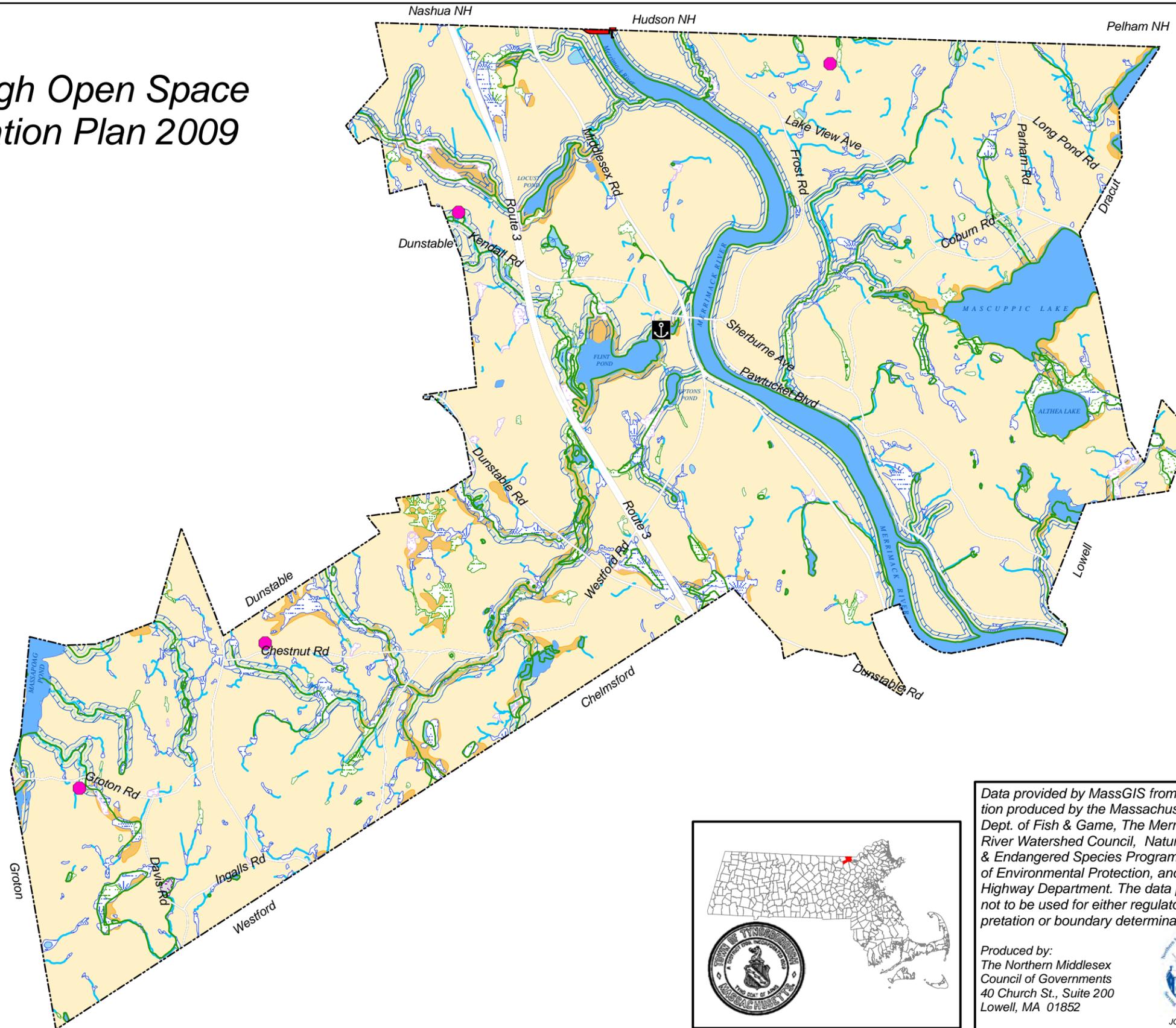
In terms of the needs of special groups such as persons with disabilities, the Town is actively working to bring all town facilities into compliance with the Americans with Disabilities Act. This is enumerated as a stated goal and objective of the Town in Sections 8 and 9 of the Plan. The Town is committed to making sure all of its citizens can fully partake of all of the community resources. It should be noted that no complaints were filed as of December 2008 concerning accessibility issues at Town.

One of the themes that did emerge during the public participation process, and in consultation with the Town staff, was the need for more neighborhood based playgrounds and parks. Expanding the neighborhood based park and playground opportunities is the first objective, under the first goal of the Town's seven year action plan.

While the needs of the elderly specifically did not come up during the public meetings, the visioning session, or in the town survey, the Tyngsborough Council on Aging, located at 180 Lakeview Avenue, was consulted during the preparation of this Update. The Council offers recreational programs designed for the elderly population in Town. Educational programs in art, knitting and drawing are offered along with activities that include quilting, bowling, art, card games, bingo and Tai Chi. The Council sponsors day trips and overnight bus trips as well as walking groups, and offers health services involving blood pressure screenings, fitness programs and podiatrist services. Fuel assistance, grocery shopping and transportation are also available. During the vision session, the need for a new, and larger senior center was discussed.

Tyngsborough Open Space and Recreation Plan 2009

Map 6: Water Resources



Legend

- Town Boundary
- ▭ Major Roads
- ⚓ Boating Access Points
- 🚣 Canoe Access Points
- NHESP Certified Vernal Pools

Water Resources

- Open water
- ▨ Shallow marsh, meadow
- ▨ Shrub swamp
- ▨ Wooded swamp (deciduous)
- ▨ Wood swamp (mixed trees)
- ▨ Bog

River Protection Act boundaries

- ▨ 100 foot protective zone
- ▨ 200 foot protective zone

Flood Plain Areas

- 100 Year Flood Plain

0 0.2 0.4 0.8 1.2
Miles

Data provided by MassGIS from information produced by the Massachusetts Dept. of Fish & Game, The Merrimack River Watershed Council, Natural Heritage & Endangered Species Program, the Dept. of Environmental Protection, and the Mass Highway Department. The data provided is not to be used for either regulatory interpretation or boundary determination.

Produced by:
The Northern Middlesex
Council of Governments
40 Church St., Suite 200
Lowell, MA 01852

JCM 03/04/2009



SECTION 5: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

Open space is defined as land that, for the most part, is free of structures or other impervious surfaces. Whether under public or private ownership, open spaces provide valuable habitat for wildlife; help protect water and air quality; provide flood storage, scenic vistas and recreational opportunities; preserve historic sites; and enhance the value of abutting properties.

Despite the strong pace of residential development in Tyngsborough over the last quarter century, and continuing developmental pressure, the town is fortunate to retain substantial open space. Approximately 31 percent of the Town's total land area of 10,816 acres is classified as open space. However, the semi-rural character of the town, valued by its residents, is by no means permanently protected. Approximately 1,242.72 acres of the 3,311.93 acres classified as open space are considered permanently protected. With town meeting approval of the Community Preservation Act, residents have shown their desire to continue to fund the preservation of open space.

The following provides additional information on the various categories of open space and recreation lands in Tyngsborough. The full inventory of lands of interest can be found in Table 17 following the narrative. (Also, see Map 7 – Open Space.)

A. Permanently Protected Lands

Tyngsborough has 1,242.78 acres of permanently protected open space owned by the State, the Town, and the Dracut Water Supply District. Permanent Protected is defined as state lands such as the State Forest, and permanently protected municipal properties subject to Article 97 or a Conservation Restriction, as well as privately-owned properties that are protected through a Conservation Restriction. The statistics regarding level of protection and ownership of the seventy-seven parcels that are permanently protected are provided Table 12. These protected properties include the following categories:

State Lands. The state owns a total of seventeen parcels comprising 480.43 permanently protected acres in Tyngsborough. The majority of this land, 223 acres, is located in the Lowell-Dracut-Tyngsborough State Forest. There are an additional 120 acres located on Groton Road under the jurisdiction of the Massachusetts Division of Fisheries and Wildlife, as well as another 81.97 acres at Flint Pond on Kendall Road.

Town Lands. The town owns 536.82 acres of permanently protected conservation and recreational land in 53 parcels. The largest protected areas in Tyngsborough include the Sherburne House and Nature Center and Property on Coburn Road, totaling 81.73 acres, and the Primrose Lane Conservation Area, totaling 63 acres.

Water Supply Lands: There are 71.70 acres of water supply lands, located on Frost Road, which are owned by the Dracut Water Supply District. (There are also 3.25 acres of land owned by the Tyngsborough Water District broken down into three parcels, one on Frost Road and two on Tower Road. These parcels have been included in the Town-owned Land section.)

Conservation Restrictions (CR). A Conservation Restriction is a voluntary and legally binding document, recorded in the land records, through which a land owner agrees to limit the use of his or her property for the purpose of protecting the conservation value of the land. The land owner receives an immediate income tax deduction, and the grantee, usually a non-profit or municipal entity, receives assurance that the land will not be developed. Conservation Restrictions protect three areas within Tyngsborough which total 65.13 acres. Over half of that land, 37.87 acres, is in the Bridge Meadow Trust on Westford Road.

Agricultural Preservation Restrictions (APR). An APR is a form of Conservation Restriction designed to specifically help farmers maintain equity in their land, retaining the agricultural potential of the land, thereby preventing the farmer from having to sell the land to development interests out of economic necessity. There is one Agricultural Protection Restriction within Tyngsborough on a 20-acre parcel of farmland located on Farwell Road.

Table 12: Permanently Protected Lands within the Town of Tyngsborough

OWNERSHIP/PROTECTION	NUMBER OF PARCELS	TOTAL ACREAGE
Commonwealth of Massachusetts	17	480.43
Town of Tyngsborough	53	536.82
Massachusetts Land Conservation Trust	2	68.70
Agricultural Preservation Restrictions	1	20.00
Conservation Restrictions	3	65.13
Dracut Water Supply District	1	71.70
Total	77	1,242.78

B. Unprotected/Limited Protection Lands

Unprotected and limited protection lands of conservation and recreation interest include public lands that are currently held as open space or historic parcels, or recreation land, but which do not have permanent protection, as well as private parcels

with limited or no restrictions on development. Tables 13 and 14 on Page 51 provide specific information regarding the unprotected/limited protection publicly and privately owned lands with the community.

Private Lands

Tax Abatement Programs. Under Chapters 61, 61A and 61B of the Massachusetts General Laws (M.G.L.), a land owner who has 10 contiguous acres of land being actively used as forest (Chapter 61), or 5 contiguous acres in active agricultural use (Chapter 61A), or 5 contiguous acres of open space (Chapter 61B), is entitled to certain local tax abatements. These abatements are given in exchange for the property owner maintaining the use of the land as agriculture, forest or open space.

Tyngsborough currently has 1,153,34 acres of private land in forestry, agricultural or recreational uses enrolled in the Chapter 61, 61A and 61B tax abatement programs. Most of this land is comprised of 14 parcels of agricultural land in the Chapter 61 program, which accounts for almost 45 percent of the total acreage in tax abatement programs. Should the current land owner(s) decide to sell or develop property covered under these programs, the Town of Tyngsborough will have an opportunity to exercise its right of first refusal, or may alternatively elect to assign this right to a non-profit conservation organization or the Commonwealth of Massachusetts. A land owner who has property classified in Chapter 61, 61A or 61B, must notify the Chief Elected Official, the Board of Assessors, the Planning Board, the Conservation Commission and the State Forester, when all or a portion of the land is being sold or converted to a disqualifying use.

Institutional Lands. Tyngsborough has 563.49 acres of private institutional lands. These parcels primarily support research and educational uses owned by MIT (7 parcels), Innovation Academy Charter School (2 parcels), and Notre Dame Academy (3 parcels).

Publicly-owned Land Resources

While these lands are not permanently protected, there is no reason to believe that they will not continue in open space and/or recreational use.

School Resources. There are 131.07 acres of school property in Tyngsborough, including school athletic fields and playgrounds.

Town Parks. Parks, playgrounds and beaches, not associated with school property, owned by the town comprise 12.94 acres.

Cemeteries: Tyngsborough contains 28.15 acres of cemetery lands which are unlikely to change use.

Other: There are three parcels, comprising 79.33 acres, which make up the Greater Lowell Technical High School.

Table 13: Unprotected/Limited Protection Public Lands within the Town of Tyngsborough

OWNERSHIP	NUMBER OF PARCELS	ACREAGE
Town of Tyngsborough	34	204.51
Tax Title Lands	34	68.48
Greater Lowell Vocational Technical High School	3	79.33
Total	71	352.32

Table 14: Unprotected/Limited Protection Private Lands within the Town of Tyngsborough

CATEGORY	NUMBER OF PARCELS	ACREAGE
Chapter 61	14	501.77
Chapter 61A	14	314.14
Chapter 61B	9	337.43
Total	24	1,153.34

As indicated in Table 15, despite the strong pace of residential growth from 2002 to 2008, the actual acreage of land of conservation or recreation interest increased by just under 355 acres, with the largest increase being reflected in Town-owned land. There were very slight decreases in the Chapter 61, 61A and 61B acreages.

Table 15: Open Space Comparison - 2002 to 2008 (in Acres)

CATEGORY/OWNERSHIP	2002	2008
Commonwealth of Massachusetts	444.23	480.43
Town of Tyngsborough (full protection)	345.86	536.82
Massachusetts Conservation Land Trust	68.70	68.70
Agricultural Preservation Restrictions	151.50	20.00
Conservation Restrictions	65.00	65.13
Town of Tyngsborough (limited/no protection)	179.94	204.51
Dracut Water Supply District	71.70	71.70
Other Public	70.95	79.33
Tax Title	68.48	68.48
Chapter 61	484.44	501.77
Chapter 61A	352.54	314.14

Chapter 61B	194.94	337.43
Institutional and Other Private	620.35	563.49
Total	3118.63	3,311.93

C. Recreation Programs

Recreation Programs focus primarily on the town's youth, however, adult programs are also offered. The youth programs are well utilized, with an annual registration of 2,000 or more participants. The demand for recreational programs has grown with the influx of new residents. Youth programs offered by the Recreation Department include sports, arts, cultural and educational activities. The majority of the programs are held at the town's new Recreation Center. Some programs are held at various schools for gym usage. The Department is working on offering a wider variety of programming and increasing the adult offerings.

The issue of lack of athletic field space remains a concern in town. The demand for field use has increased substantially over the last five years. A growing population and introduction of new sports has taxed the fields. Currently there are six youth organizations vying for field space. In addition, nine of the high school and two of the middle school teams also use the Recreation Department fields. All the fields are maintained and scheduled by the Recreation Department, in coordination with the Highway Department Parks Manager. Some field maintenance is performed by the youth sport groups and while the assistance is helpful and appreciated by the town, it does not provide adequate time for field rest or cycling of fields. The Recreation Director is part of the Field Use Committee, charged with developing and constructing new fields for the town. New Facilities are being developed at the Elementary School that will provide much needed field space as well as basketball and tennis courts.

Annual events are held at minimal or no charge to the residents. In February, a Grandparents Breakfast is held at the Sportsmen's Club; in March the Shamrock Ball, a father-daughter dance, is held; April brings the start of girls youth softball; June activities include the summer camps, clinics and programs; July is the start of the track and field program; August consists of free movie nights; September starts the girls volleyball program; October is the annual pig roast and festival called the Pig & Apple Fest; October brings a jack-o-lantern display; and the year closes with the annual tree lighting festival.

The Tyngsborough Council on Aging, located at 180 Lakeview Avenue, offers recreational programs designed for the elderly population in Town. Educational programs in art, knitting and drawing are offered, along with activities that include quilting, bingo, card games, yoga and Tai Chi. The Council also sponsors day and bus trips, as well as walking groups.

The 2004 Tyngsborough Master Plan assessed the adequacy of the town's recreational facilities based on standards established by the National Recreation and Park Association, and concluded that the Town meets or exceeds the majority of these standards. Deficiencies were noted in the number of playgrounds and neighborhood parks.

TABLE 16 TYNGSBOROUGH INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST - UPDATE 2009

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
PROTECTED PARCELS														
PUBLIC LANDS														
State Lands														
2	40	0	120.00		89 Groton Road	910	R-1	Permanent	State	Mass Wildlife	Recreational/ Scenic	Excellent	NA	Yes
11	6	0	6.38		Rt 3	919	B-3	Permanent	State	Mass DPW	Highway Taking	NA	NA	NA
11	8	0	1.61		Rt 3	919	B-3	Permanent	State	Mass DPW	Highway Taking	NA	NA	NA
11	11	0	0.48		Rt 3	919	B-3	Permanent	State	Mass DPW	Highway Taking	NA	NA	NA
11	12	0	13.10		Rt 3	919	B-3	Permanent	State	Mass DPW	Highway Taking	NA	NA	NA
11	19	0	0.21		439 Middlesex	919	B-3	Permanent	State	Mass DPW	Highway Taking	NA	NA	NA
12	17	1	0.36		Locut Ave.	924	R-1	Permanent	State	Mass Highway	Highway Taking	NA	NA	NA
13	11	1	0.01		Cummings Rd.	924	I-1	Permanent	State	Mass Highway	Highway Taking	NA	NA	NA
13	19	1	19.31		Cummings Rd.	910	I-1	Permanent	State	DEQE/DCR	Environmental	Good	Fair	Limited
13	30	1	6.60		99 Kendell Rd	919	I-1	Permanent	State	Mass Highway	Commuter Lot	NA	NA	Yes
13	33	0	81.97	Flint Pond	Kendall Rd	901	B-2 & I-1	Permanent	State	Mass Wildlife	Recreation/ Scenic	Monitored	NA	Limited
14	8	0	1.94		484 Dunstable	911	R-1	Permanent	State	Mass Wildlife	Recreation/ Scenic	Monitored	NA	Limited
14	8	1	1.92		486 Dunstable	911	R-1	Permanent	State	Mass Wildlife	Recreation/ Scenic	Monitored	NA	Limited
14	8	2	2.69		488 Dunstable	911	R-1	Permanent	State	Mass Wildlife	Recreation/ Scenic	Monitored	NA	Limited
20	127	0	0.90		220 Middlesex	924	B-2	Permanent	State	Mass Highway	Highway Taking	NA	NA	NA
33	27	0	191.35	State Forest	Trotting Park Rd	911	R-1	Permanent	State	DEM/DCR	Recreation/ Scenic	Excellent	NA	Yes
33	75	0	31.60	State Forest	Althea Ave.	911	R-1	Permanent	State	DEM/DCR	Recreation/ Scenic	Excellent	NA	Yes
			<i>total</i>											
Town Lands														
1	1	0	77.45	Greene	202 Scribner	903	R-1	Permanent	Town	Board of Selectmen	Conservation	Good	Good	Yes
2	187	0	1.66		17 Connell Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
2	42H	0	0.99		9 Montana Dr.	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
3	2	0	5.00		110 Massapoag Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
3	15E	0	2.34		8 Connell Dr	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Fair	Yes
7	5	2	8.51		17 Chestnut Road	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
7	6	0	63.00		Primrose Lane	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
8	41	1	1.80		336 Westford Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Yes
8	63	28	3.17		15 Anderson Dr.	903	R-1	Permanenet	Town	Con. Comm.	Conservation	Good	Fair	Yes
9	24	0	10.00		Westford Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Fair	Limited
9	62	0	4.19		4 Faye Memorial Dr	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Fair	Yes
12	18	0	5.51		Locust Ave	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
12	20	0	12.36		Locust Ave	903	R-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
12	27	0	11.72		22 Locust Ave	903	I-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
12	29	0	0.71		Locust Ave	903	I-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
12	39	0	0.48		375 Middlesex Rd	903	B-3	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
13	5	0	0.29		Kendall Rd	903	I-1	Permanent	Town	Board of Selectmen	Open space	Good	Limited	Yes
16	19	0	26.32		12 Clover Hill	903	R-1	Permanent	Town	School	Recreation Fields	Excellent	Good	Yes
16	35	0	11.15		Paddock Road	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Yes
19	25	0	2.50		Joyce	903	R-1	Permant	Town	Open Space	Conservation	Good	Limited	None
19	35	0	7.40	Hunter Property	River Rd.	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Yes
19	50	0	14.70		River Rd.	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Excellent	Yes
19	91	0	1.98		145 Frost Rd	903	R-1	Permanent	Town	Water District	Water Supply	Good	Good	Yes
19	51	0	17.25		River Rd.	903	R-1	Permanent	Town	Con. Comm.	Open Space	Excellent	Excellent	Yes
19	60	0	6.87		76 Frost Rd	903	R-1	Permanent	Town	Rec. Comm.	Old Camp Ground	Poor	Good	None
19	81	0	0.67		20 Phalanx St.	903	R-1	Permanent	Town	Sewer Comm	Pump Station	NA	NA	None
19	82	0	0.76		14 Phalanx St.	903	R-1	Permanent	Town	Sewer Comm	Pump Station	NA	NA	None
20	21	0	15.12		4 Bryants Lane	903	I-1	Permanent	Town	Con. Comm.	Conservation	Good	Good	Yes
20A	57	0	0.23		Middelsex Rd	903	B-2	Permanent	TOWN	Board of Selectmen	Historic	Good	Good	Yes
20A	58	0	0.23	Veterans Memorial	Middlesex Rd	903	B-2	Permanent	Town	Board of Selectmen	Historic	Good	Good	Yes
22	1	0	14.61		120 Westford Rd	903	I-1	Permanent	Town	Rec. Comm.	Recreation Office	Excellent	NA	Yes
22	1B	0	1.90		147 Westford Rd	903	R-1	Permanent	Town	Sewer Comm	Pump Station	NA	NA	None
22	20	1	0.576		15 Tower Road	903	R-3	Permanent	Town	Water District	Water Supply	Good	Good	Limited
22	20	7	0.69		17 Tower Rd.	903	I-1	Permanent	Town	Water District	Water Supply	Good	Good	Limited
24	18	0	20.97		Norris Road	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Yes
24	15C	0	7.90	Barr Property	Norris Road (Rear)	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Limited
25	1	3	3.15		21 Chard Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Good	Yes
25	1	8	0.62		Chard Rd	903	R-1	Permanent	Town	Con. Comm.	Conservation	Excellent	Fair	None

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
Conservation Restrictions (all protected as part of subdivision approval)														
7	5	1	22.02	Shady Glade Trust	Primrose Lane	132	R-1	Permanent	Shady Glade Trust	Shady Glade Trust	Conservation	Good	Good	Yes
16	1	0	37.87	Bridge Meadow Trust	220 Westford Road	132	R-1	Permanent	Bridge Meadow Trust	Bridge Meadow Trust	Recreation	Good	Good	Yes
25	29	0	5.24	Sunny Meadows	31 Robert Rd	132	R-1	Permanent	Sunny Meadow Homes	Sunny Meadow Homes	Conservation	Good	Good	Yes
		<i>Total</i>	<i>65.13</i>											
TOTAL PROTECTED			1242.78											
LIMITED PROTECTION OR UNPROTECTED PARCELS														
PUBLIC LANDS														
Town														
3	12	0	23.00		Davis Rd	903		None	Town	Board of Selectmen		Good	Good	Yes
12	26A	0	1.00	Thompson Cemetery	Old Kendall Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
15	5	0	70.07	Tyngsborough Elementary School	205 Westford Road	903	R-1	None	Town	School Committee	Recreation	Good	Good	Yes
18	58	0	22.28	Memorial Cemetery	31 Fletcher Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
18	61	0	0.63	Fletcher Cemetery	Fletcher Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
20	30A	0	5.2	Winslow School	250 Middlesex Road	903	B-2	None	Town	School Committee	Recreation	Good	Good	Yes
20	100	1	0.21		37 Patricia Dr	903	R-1	None	Town	Board of Selectmen	Drainage basin	Good	Good	Yes
20	100	2	0.33		33 Patricia Dr	903	R-1	None	Town	Board of Selectmen	Drainage basin	Good	Good	Yes
20	100	8	0.23		Patricia Dr	903	R-1	None	Town	Board of Selectmen	Drainage basin	Good	Good	Yes
20	104A	0	8.80	Ball Park	17 Wicassee	903	R-1	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
20A	8	0	0.25		4 Kendall Rd	903	B-2	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
20A	14	0	0.19		Kendall Rd	903	B-2	None	Town	Board of Selectmen	Open Space	Good	Good	Yes

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
22	1A	0	2.52	Flint Cemetery	Westford Road	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
24	13	0	1.65		25 Descheneaux La.	903	R-1	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
24	19	1	1.73		21 Descheneaux La.	903	R-1	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
24	19	3	1.57		15 Descheneaux La.	903	R-1	None	Town	Board of Selectmen		Good	Good	Yes
24	45	0	45.10	High School	50 Norris Rd	903	R-1	None	Town	School Committee	Recreation	Good	Good	Yes
24	22A	0	0.23	Gould Cemetery	Norris Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
25	8	0	1.50		86 Frost road	903		none	Town	Board of Selectmen	Recreation	good	Good	Yes
26A	15	0	0.69	PT Ball Field	46 Walnut Rd	903	R-2	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
26A	19A	0	0.05	PT Ball Field	Poplar	903	R-2	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
26A	94A	0	1.00	Town Beach	44 Maplewood	903	R-2	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
27	72	0	1.00	Sherburne Cemetery	Coburn Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
27	5A	0	0.46	Drake Cemetery	Middlesex Rd	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
27	5B	0	0.03	Cemetery	Tyng Road	903	R-1	None	Town	Board of Selectmen	Historic	Good	Good	Yes
28	120	0	0.09		Tyng Road	903	B-1	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
31	42A	0	10.70	Lakeview School	135 Coburn Rd	903	R-2	None	Town	School Committee	Recreation	Good	Good	Yes
31A	1A	0	0.11	PT Soccer Field	1 Mt. Rock	903	R-2	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
31A	43A	0	0.10		Lakeview Avenue	903		None	Town	Board of Selectmen	Open Space	Good	Good	Yes
32A	141	0	0.82		Longwood Road	903	R-2	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
32A	144	0	0.38		Westland Road	903	R-2	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
32B	1	0	2.30	Soccer Field	186 Lakeview	903	R-2	None	Town	Board of Selectmen	Recreation	Good	Good	Yes
33	10A	0	0.12		Willowdale Avenue	903	R-1	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
33	34	0	0.18		Althea Avenue	903	R-1	None	Town	Board of Selectmen	Open Space	Good	Good	Yes
			<i>Total</i>											
Town Tax Title Lands														
2	125	0	10.55	Gibraltar	5 Vermont Rd	132	R-1	None	Town	Board of Selectmen				
2	135	0	4.09	Gibraltar	21 Nevada Rd	132	R-1	None	Town	Board of Selectmen				
2	169	0	7.27	Gibraltar	9 Oregon Rd	132	R-1	None	Town	Board of Selectmen				
2	177	0	9.01	Gibraltar	6 Idaho	132	R-1	None	Town	Board of Selectmen				

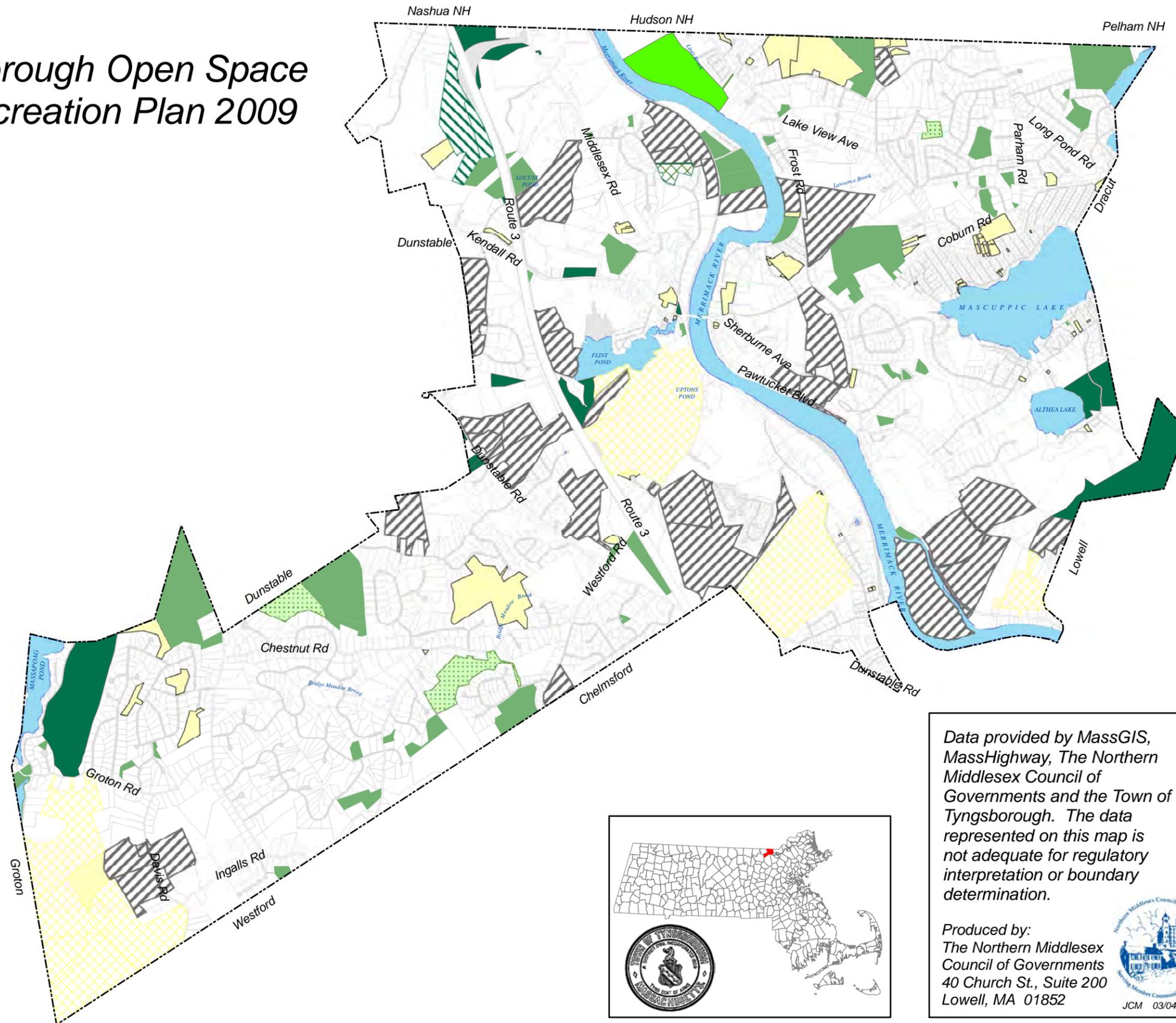
Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
Other Public														
34	2	0	1.61	Greater Lowell Technical High School	Pawtucket Rd	903	R-1	None	Tech HS	Tech HS	Education	Good	Good	Yes
34	6	0	75.19	Tech HS	250 Pawtucket Rd	903	R-1	None	Tech HS	Tech HS	Education	Good	Good	Yes
34	44	0	2.53	Tech HS	Sherburne Rd	903	R-1	None	Tech HS	Tech HS	Education	Good	Good	Yes
		<i>Total</i>	<i>79.33</i>											
PRIVATE LANDS														
Chapter 61 - Forest														
3	8	0	26.00		21 Davis Rd	101	R-1	Limited	Stepinski, Joseph	Stepinski, Joseph	forestry			private
12	43	0	61.18		Locust Rd	601	I-1	Limited	Bell, Edward B.	Bell, Edward B.	forestry			private
13	6	0	11.02		Route 3	601	I-1	Limited	Lacerte, Dorothy - Trustee	Lacerte, Dorothy - Trustee	forestry			private
13	7	0	38.65		Kendall Rd	601	I-1	Limited	Lacerte, Dorothy	Lacerte, Dorothy	forestry			private
14	21	0	4.68		Dunstable Rd	601	R-1	Limited	George, James Charles	George, James Charles	forestry			private
14	21	1	1.50		Dunstable Rd	601	R-1	Limited	George, James Charles	George, James Charles	forestry			private
14	22	0	18.30		Dunstable Rd	601	R-1	Limited	George, Charles	George, Charles	forestry			private
14	23	0	8.00		501 Dunstable Rd	601	R-1	Limited	George, Charles - Trustee	George, Charles - Trustee	forestry			private
14	25	0	3.00		Dunstable Rd	601	R-1	Limited	George, James Charles	George, James Charles	forestry			private
14	26	0	41.80		475 Dunstable Rd	601	R-1	Limited	George, Charles & Dorothy G.	George, Charles & Dorothy G.	forestry			private
15	72	0	35.10		137 Westford Rd	601	R-1	Limited	Karp, Richard C	Karp, Richard C	forestry			private
16	18	0	12.54		22 Swan Rd	601	R-3	Limited	Merrill, George, L.	Merrill, George, L.	forestry			private
22	26	0	187.00		24 Old Tyng Rd	601	I-1	Limited	Elkareh, Joseph & Mary	Elkareh, Joseph & Mary	forestry			private

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
28	117	0	53.00		Sherburne Rd	601	R-1	Limited	Lambert, John H. & J. Clark	Lambert, John H. & J. Clark	forestry			private
		<i>total</i>	<i>501.77</i>											
Chapter 61A Agriculture														
3	9	0	27.42		14 Davis Rd	712	R-1	Limited	Gagnon, Michael J.	Gagnon, Michael J.	agriculture			private
3	7	0	21.40		19 Davis Rd	718	R-1	Limited	Gagnon, Michael J.	Gagnon, Michael J.	agriculture			private
3	7A	0	2.02		17 Davis Rd	712	R-1	Limited	Gagnon, Michael J.	Gagnon, Michael J.	agriculture			private
7	1A	0	33.70		89A Red Gate Rd	717	R-1	Limited	Graham, Howard F.	Graham, Howard F.	agriculture			private
13	23	0	12.00		33 Cummings Rd	718	R-1	Limited	Hunter, Earl H.	Hunter, Earl H.	agriculture			private
13	25	0	35.00		11 Cummings Rd	717	R-1	Limited	GRM Realty Tr	GRM Realty Tr	agriculture			private
19	30	0	29.50		95 Farwell Rd	712	R-1	Limited	Parlee, Mark C.	Parlee, Mark C.	agriculture			private
19	31	0	8.00		89 Farwell Rd	715	R-1	Limited	Parlee, Mark C.	Parlee, Mark C.	agriculture			private
19	34A	0	12.00		95 Farwell Rd	722	R-1	Limited	Parlee, Mark C.	Parlee, Mark C.	agriculture			private
19	52	0	19.20		River Rd	712	R-1	Limited	Hunter, Earl H.	Hunter, Earl H.	agriculture			private
21	4	0	2.00		81 Westford Rd	814	I-1	Limited	Tyngsborough Sportsmen	Tyngsborough Sportsmen	agriculture			members
25	9	0	79.10		91 Frost Rd	712	R-1	Limited	Times, Kenneth	Times, Kenneth	agriculture			private
25	10	0	10.90		91 Frost Rd	712	R-1	Limited	Times, Kenneth	Times, Kenneth	agriculture			private
34	34	0	21.90		226 Sherburne Rd	109	R-1	Limited	Tatseos, George A.	Tatseos, George A.	agriculture			private
		<i>total</i>	<i>314.14</i>											
Chapter 61B - Recreation														
3	9	1	3.00		Davis Rd	722	R-1	Limited	Gagnon, Michael J.	Gagnon, Michael J.	recreation			private
20	74	0	9.45		45 Sherburne Rd	805	R-3	Limited	Tyngsboro Partnership	Tyngsboro Partnership	recreation			members
21	35	0	15.00		Route 3	800	I-1	Limited	George, Charles	George, Charles	recreation			private
21	5	0	43.00		90 Westford	377	I-1	Limited	Tyngsborough Sportsmen	Tyngsborough Sportsmen	recreation			members
24	12B	0	13.00		86 Norris Rd	101	R-1	Limited	Alexa, John J.	Alexa, John J.	recreation			private
26	2	0	55.70		46 Sherburne	380	R-1	Limited	Tyngsboro Partnership	Tyngsboro Partnership	recreation			members

Map	Block	Lot	Acres	Name	Address	Land Use Code	Zoning	Level of Protection	Owner	Manager	Use	Condition	Potential	Access
27	74	0	2.60		Pawtucket	805	R-1	Limited	Tyngsboro Partnership	Tyngsboro Partnership	recreation			members
27	73	0	17.80		80 Pawtucket Blvd	380	R-1	Limited	Tyngsboro Partnership	Tyngsboro Partnership	recreation			members
28	115	0	177.88		185 Pawtucket Blvd	380	R-1	none	Vesper Country Club	Vesper Country Club	recreation	Excellent	Excellent	members
		<i>total</i>	<i>337.43</i>											
OTHER PRIVATE LANDS														
Institutional Lands														
3	5	0	7.3		74 Groton Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	1	0	89.62		49 Davis Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	2	0	48.92		Westford Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	3	0	29.38		Westford Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	4	0	80		Westford Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	5	0	0.22		41 Davis Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
4	6	0	10.02		Davis Rd	904	R-1	none	MIT	MIT	research	Excellent	Excellent	limited
21	7	0	99.97		180 Middlesex Rd	904	I-1	none	Notre Dame Training Academy	Notre Dame Training Academy	education	Excellent	Excellent	limited
21	34	0	11.6		Middlesex Rd	904	I-1	none	Notre Dame Training Academy	Notre Dame Training Academy	education	Excellent	Excellent	limited
21	36	0	8.18		Middlesex Rd	904	I-1	none	Notre Dame Training Academy	Notre Dame Training Academy	education	Excellent	Excellent	limited
27	5	0	1.01		Middlesex Rd	904	R-1	none	Boston University	Boston University	education	Excellent	Excellent	limited
28	63	0	177.27		72 Tyng Rd	904	R-1	none	Boston University	Boston University	education	Excellent	Excellent	limited
		<i>total</i>	<i>563.49</i>											
TOT. LIMITED PROT.			2069.15											
GRAND TOTAL			3311.93											
last revision 4/23/09														

Tyngsborough Open Space and Recreation Plan 2009

Map 7: Open Space



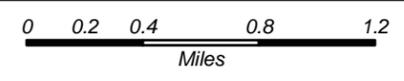
Legend

- Town Boundary
- Protected Open Space Lands**
- Public Lands
 - State Lands
 - Town Lands
 - Other Public Lands
- Private Lands
 - Conservation Restrictions
 - Land Trust Properties
 - Agricultural Protection Restrictions
- Open Space Lands with Limited Protection**
- Private Holdings
 - Chapter 61 Lands
 - Institutional Land
- Public Lands
 - Town Lands

Data provided by MassGIS, MassHighway, The Northern Middlesex Council of Governments and the Town of Tyngsborough. The data represented on this map is not adequate for regulatory interpretation or boundary determination.

Produced by:
The Northern Middlesex Council of Governments
40 Church St., Suite 200
Lowell, MA 01852

JCM 03/04/2009



SECTION 6: COMMUNITY VISION

A. Description of the Process

The 2009 Tyngsborough Open Space and Recreation Plan Update has been developed by the Tyngsborough Open Space and Recreation Plan Committee, with technical assistance from Northern Middlesex Council of Governments. The Committee includes representatives from the Planning Board, the Recreation Department, the Board of Selectmen, the Tax Assessor, and the Conservation Commission. The Committee met several times throughout the plan development process. These meetings were open to the public and properly posted in accordance with Massachusetts Open Meeting Law.

The public participation process consisted of the following:

- Two public meetings: A Visioning Session conducted on September 25, 2008, and a general public meeting on July 27, 2009 to present the draft document;
- A written survey that was distributed as part of the annual tax bill mailing and was available to citizens at the Town Hall;
- Informational items were posted on the Town's website; and
- Media coverage via the local cable television.

A summary of the survey results can be found in Section 7, with a more detailed data breakdown provided in Appendix B.

B. Statement of Open Space and Recreation Goals

In developing the 2009 Tyngsborough Open Space and Recreation Plan Update, the Committee has added goals in order to: reflect valuable and constructive input received through the public participation process; include updated information; and to address needs that have been identified since completion of the previous plan. For the next seven years, the goals of the Tyngsborough Open Space and Recreation Plan are as follows:

- Increase the quantity and quality of recreation space and facilities;
- Develop maintenance and management plans for existing recreational and conservation areas;
- Revitalize the Town Center;
- Educate the residents on the value of open space in the Town and region;
- Increase accessibility of all recreational resources, facilities and programs;
- Promote land use and permitting practices that foster Smart Growth and protect historic assets, open space, cultural assets and resource areas;

-
- Improve the overall water quality of the Town's surface water bodies and wetland resources; and
 - Establish greenways for recreation and habitat networks with a focus on creating local and regional links.

SECTION 7: ANALYSIS OF NEEDS

During the plan development process, many needs were identified through discussions with town departments, from input received during the public meetings and the visioning session, and through the written survey. These needs are described and outlined below, and were used as the basis for formulating the goals, objectives and action plan outlined in other sections of this document.

A. Summary of Resource Protection Needs

The Town of Tyngsborough contains many natural resources that are at risk from future development. Attention should be paid to protecting areas with agricultural lands, historic properties and resources, steep slopes, forested lands, riverfront areas, water bodies and water resources, wetland resource areas, floodplains, and wildlife habitat.

Protection of water resources is a continuing priority in Tyngsborough. The town has confronted the challenge of failing septic systems in some areas, and is attempting to extend the current sewer system. However, septic failures, eutrophication of ponds, potential groundwater pollution, and nonpoint source pollution from stormwater runoff, excessive fertilizer and pesticide use, household chemicals and other contaminants continue to threaten water quality. Tyngsborough has a local Wetlands By-law, which includes a 50-foot no structures zone, and a 30-foot "no touch" zone, around wetlands and water resource areas, and enhanced protection of vernal pools. Tyngsborough has also adopted a local by-law for stormwater management and is reviewing a proposed by-law for well head protection.

Public education and improved practices by residents are essential to water resource protection. All residents should be made aware of how they can reduce nonpoint pollution through their own practices. Residents with property abutting streams, ponds, and wetlands should receive information on how to protect these resources by reducing fertilizer and pesticide use, refraining from mowing to the edge of the resource area, and by not dumping grass clippings or other organic materials into water and wetland resource areas.

Clean water resources are important for the human residents of Tyngsborough, of course, but are also essential for wildlife. Streams, ponds, and wetlands serve as corridors or concentration points for wildlife. Preservation of habitat diversity in Tyngsborough is enhanced by the state forest. Protection of open space for wildlife habitat would add these existing protected areas, maintain wildlife corridors and networks, and create a buffer for water resources and wetlands.

B. Summary of Community Needs

Community needs were identified through input received from the written survey, at public meetings of the Committee, and as a result of the visioning process. The results of the survey and visioning process are discussed below.

Survey Results

A survey was formulated, a copy of which can be found in Appendix B, and distributed in January 2008 along with the annual property tax bills. A total of 4,100 surveys were mailed and 315 were returned, producing a return rate of 7.7%. The following tables provide a breakdown of the responses for all survey questions. Appendix B gives more detailed breakdowns, showing all responses received where the responses were enumerated at least five (5) times. It should be noted that in all tabulations, the numbers will not add up to exact percentages due to rounding and the columns will not add up to the number of respondents, since not all questions were answered by all respondents. It is significant to note that of the 315 surveys returned, 67 surveys contained at least one question that could not be included in the final tabulations, since questions were not answered in a manner that could be accurately quantified. In addition, 130 surveys were returned with at least one question unanswered.

Question 1

The first question in the survey asked the respondent to identify how long he or she has lived in Tyngsborough. As shown in Table 17 below, over forty percent of the respondents have resided in town for over twenty years, while over sixty-seven percent have lived in the community for over ten years.

Table 17: Length of Residency

RESPONSE	# OF RESPONSES	% OF RESPONSES
UNDER 5 YEARS	46	14.60
5 – 10 YEARS	56	17.77
11 – 20 YEARS	85	26.98
OVER 20 YEARS	128	40.63

Question 2

Respondent were asked to provide the age ranges of those individuals residing in the household. As detailed in Table 18 on the following page, the largest age group identified was persons 45-59 years of age. A trend became apparent during the survey response tabulation on age: in a majority of the surveys returned, there was only one age group circled, which may indicate that the person completing the survey only put

down his or her age and not the age groupings of all household members. This may also explain the relative low number of children under age 12.

Table 18: Age Distribution of Respondents and Household Members

RESPONSE	# OF RESPONSES	% OF RESPONSES
UNDER 4 YEARS	25	7.9
5 – 11 YEARS	54	17.1
12 – 19 YEARS	81	25.7
20 – 29 YEARS	42	13.3
30 – 44 YEARS	109	34.6
45 - 59 YEARS	165	53.4
OVER 59 YEARS	80	25.4

Question 3

The third question in the survey asked respondents to rank the top three public open spaces, recreational facilities, programs or places in town, that the respondent or other household residents use, on a scale of 1 – 3, with 1 being the most frequently used.

Table 19: Ranking of Public Open Spaces, Recreational Programs or Places

PROGRAM OR FACILITY	RANKING					
	1		2		3	
	Number of responses	Percent	Number of responses	Percent	Number of responses	Percent
Athletic fields/playgrounds	16	5.1	6	1.9	4	1.3
Recreational programs	5	1.5	12	3.8	2	0.6
Walking trails/conservation land	12	3.8	9	2.9	2	0.6
Town/state forest	2	0.6	7	2.2	5	1.5
Rivers and ponds	4	1.3	4	1.3	2	0.6
Mascuppic town beach and lake	1	0.3	2	0.6	1	0.3
Sherburne House and Nature Center	2	0.6	1	0.3	1	0.3
Historic sites	0	0	0	0	2	0.6
Other	0		0		0	

Question 4

Question 4 asked respondents to rank the top three "landscapes, views, buildings, recreational areas or outdoor experiences", whether public or private, that most symbolized Tyngsborough's unique character. The top three responses are shown

in Table 20 below, and include the Merrimack River, the Tyngsborough Bridge and the Town Center.

Table 20: Top Landscapes, Views, Buildings, Recreational Areas or Outdoor Experiences

RESPONSE	# OF RESPONSES	% OF RESPONSES
Tyngsborough Bridge	194	61.6
Merrimack River	68	21.5
Town Center	67	21.3

The term "Town Center" is inclusive of the buildings and landscapes in and around the Rt. 3A – Rt. 113 intersection, and includes the Old Town Hall, the Littlefield Library and the Winslow School. It is important to note that the individual responses were both positive and negative. While a number of individuals said this area was aesthetically pleasing and should be preserved, an almost equal number thought that the area and buildings were blighted and should be rehabilitated and/or demolished.

Question 5

The fifth question called for respondents to prioritize six recreation and open space programs on a scale of 1 to 6; with 1 being the most important to preserve and 6 being the least important. Table 21 below details the priorities identified by those who responded to the survey.

Table 21: Importance of Preservation of Open Space

PRESERVATION PROGRAM	RANKING											
	1		2		3		4		5		6	
	#	%	#	%	#	%	#	%	#	%	#	%
Active recreation	98	31.1	33	10.5	28	8.8	25	8.8	27	8.6	47	14.9
Passive recreation	44	14.0	65	20.6	52	16.5	47	14.9	31	9.8	13	4.1
Other activities	18	5.7	50	15.9	57	18.1	41	13.0	45	14.3	38	12.1
General conservation	39	12.4	30	9.5	45	14.3	52	16.5	48	15.2	34	10.8
Protect water supply	44	14.0	60	19.0	44	14.0	49	15.6	41	13.0	16	5.1
Historic buildings/ places	25	8.0	27	8.6	36	11.4	31	9.8	43	13.7	93	29.5

Given the grouping of the responses, it is clear that the preservation of historic buildings did not rank high on the public's priority list, but the preservation and maintenance of active recreation areas ranked very high. (This was reinforced by the responses to Questions 7 and 10.) The preservation of open space for water supply needs and passive recreation was also identified as a priority.

Question 6

Question 6 asked respondents to rate their satisfaction with "open space, recreational facilities, programs or places" that are currently in place for both adults and youth. As shown in Table 22 below, the majority of respondents are satisfied or very satisfied with the programs and facilities that are presently in place. Most of the "don't know" responses came from people who either did not use the facilities in town (as was indicated in Question 9 below) or were not users of one category of facilities, e.g. childless couples.

Table 22: Satisfaction with Recreation Programs and Places

	ADULTS		YOUTH		
	Number	Percent		Number	Percent
Very satisfied	5	1.5	Very satisfied	5	1.5
Satisfied	24	7.6	Satisfied	14	4.4
Dissatisfied	9	2.9	Dissatisfied	8	2.5
Very Dissatisfied	6	1.9	Very Dissatisfied	5	1.5
Don't know	6	1.9	Don't know	10	3.2

Question 7

In Question 7, the respondents were asked to identify what they liked best and least about the open space, recreational facilities, programs or places that currently exist within Town. A number of respondents used this question, as well as Question 12, to indicate their displeasure with a number of issues in the town that were not recreation or open space-related. Among the issues mentioned were overdevelopment, traffic, blight, the lack of action on the repair of the bridge and the haphazard development of Middlesex Road.

The responses to this question were extremely varied, and in many cases contradictory. For instance, a number of respondents felt the "best" recreational facilities were the athletic fields, while a number of respondents felt the athletic fields were the "least" liked. As shown in Table 23 on the following page, the recreation programs and athletic fields were ranked at the top of the "most liked" responses. The Town Center and the lack of overall maintenance were the top responses in terms of what is least liked about the towns programs, open spaces and facilities, as shown in Table 24 on the following page.

Table 23: Best Liked Open Space, Recreational Facilities, Programs or Places

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Recreation programs	27	8.8
Athletic fields	22	7.0
Open space	21	6.7
Hiking trails	11	3.5
State Forest	8	3.1
Variety of programs	7	2.2
Sherburne House and Nature Center	6	1.9
Nothing	5	1.6

Table 24: Least Liked Open Space, Recreational Facilities, Programs or Places

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Town center	21	6.7
Lack of maintenance	18	5.7
Lack of playgrounds	15	4.8
Lack of tennis courts	9	2.9
Lack of Rec. Dept. advertising of programs	9	2.9
Lack of hiking and biking trails	7	2.2
Not enough recreation programs	7	2.2
Bridge	5	1.6

Question 8

The eighth question asked respondents what actions they would support to preserve additional open space, recreational facilities, programs or places. As shown in Table 25 below, there were a number of respondents (36.5%) who were willing to pay seasonal or annual fees for the use of the municipally-owned recreation facilities and programs. At the same time, the "do-nothing" response (22.9%) was significant. In the "other" category, over one-third of the respondents (17 respondents) indicated a willingness to donate volunteer time for recreation programs or to maintain facilities.

Table 25: Support for the Preservation of Additional Open Space, Recreational Facilities, Programs or Places

RESPONSE	# OF RESPONSES	% OF RESPONSES
Support seasonal or annual fees	115	36.5
Rewrite deed to limit future use of land	27	8.6
Donate or sell land to the town or land trust	13	4.1
Do nothing	72	22.9
Other	50	15.9

Question 9

Question 9 asked if the respondent went out of town to use open space, recreational facilities, programs or places, and if so, where he or she went and for what purpose. The places that people visited varied from the ocean, to the mountains of neighboring states, to adjoining towns. As shown in Table 26 below, nearly 64% of the respondents indicated that they went to another locale to use or enjoy "open space, recreational facilities, programs or places". As shown in Table 27, nearly one-third of the respondents visited another community for the purpose of hiking, walking or biking. New Hampshire was the top destination for such activities, as outlined in Table 28, while the neighboring communities of Lowell, Chelmsford, Westford, Groton and Pepperell were also among the top responses. Some of the places and activities, such as the ocean or downhill skiing, cannot be accommodated in Tyngsborough.

Table 26: Percentage of Respondents Utilizing Open Space and Recreation Programs and Facilities in Other Municipalities

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Yes	201	63.8
No	64	20.3

Table 27: Top 5 Activities for Which Respondents Leave Town

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Hiking/Walking	69	21.9
Biking	30	9.5
Ocean	26	8.3
Boating/canoeing	16	5.1
Camping	15	4.8

Table 28: Most Frequent Destination of Respondent's Visit to Another Community for Recreation and Open Space Purposes

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
New Hampshire	69	21.9
Lowell	17	5.4
Westford	17	5.4
Chelmsford	17	5.4
Groton	13	4.1
Pepperell	13	4.1

Question 10

The final question asked what specific actions the Town should take in the next five years to address open space and recreational issues. The responses contained significant editorializing on issues unrelated to open space and recreation, which were disregarded for purposes of this plan. As shown in Table 29 below, the maintenance of existing facilities was identified as the most important issue that needs to be addressed over the next seven years. The needs to improve the Town Center, and to acquire additional open space, were also identified as important actions that should be among the town's priorities.

Table 29: Most Important Open Space and Recreation Actions to be Undertaken Over the Next Five Years

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Maintenance of existing facilities	106	33.7
Improve the town center	41	12.4
Acquire open space	39	12.4

Visioning Session

The Visioning Session was conducted to provide input and assistance in the development of the Open Space and Recreation Plan goals and objectives. The session was held on September 25, 2008 at 7:00 P.M. in the Selectmen's Meeting Room, Tyngsborough Town Hall, and emphasized brainstorming and open discussion. The session was attended by seven participants who were asked to address the following:

- What are the Town's strengths /assets in terms of Open Space and Recreation facilities and programs?
- What are the community's weaknesses and liabilities in this regard?
- What opportunities does the Town have to improve upon or expand its existing open space and recreation facilities and/or programs?
- What challenges lie ahead? What concerns need to be addressed in order to move forward to meet the Town's open space and recreation needs?

The following were identified as the community's strengths and/or assets relative to open space and recreation facilities and programs:

-
- Recreation programs: The Recreation Program Building/Office on Westford Road offers a central location for the operation of all recreation department programs, as well as easy, ADA compatible access for town residents.
 - Campground: The former campground project offers significant potential for expanding recreation programs utilizing the Merrimack River.
 - Maintenance: The cooperation of the Town Highway Department in many projects especially the maintenance and upkeep of the Town Beach.
 - Recreation areas: Wicasse Park and Bridge Meadow are well known and utilized.
 - Athletic Facilities: The planned completion of the facilities at the Elementary School offers significant recreation potential, while the current High School fields are used year round.
 - Community Center: The Community Center offers many recreational opportunities and serves as the Town's Senior Center.
 - Town-sponsored events: The variety of recreation events sponsored by the town, e.g. tree lighting, the Night of Lights and the Pig and Apple Fest are well attended.
 - Water sports: The Town Beach and Lake Muscuppic have been cleaned of debris and the water quality improved. The Merrimack River and Lake Massapoag are seen as offering water oriented recreational opportunities.
 - State Forest: The State Forest and the town hiking trails offer opportunities for exercise in a natural setting.
 - Historic properties: The Sherburne Property is a town asset.

The following were identified as the community's weaknesses and liabilities relative to open space and recreation facilities and programs:

- Blight: The blighted town center and the closed bridge reflect negatively on the town.
- Field space: There is a lack of athletic fields and facilities, especially for basketball and tennis.
- Incomplete projects: The incomplete athletic fields at the Elementary School leave a significant gap in the availability of athletic fields and facilities.

-
- Maintenance: There is a lack of routine maintenance to many of the Towns facilities, due to a lack of manpower and funding for summer help.
 - Adult programs: There is a dearth of adult athletic programs, both active and passive.
 - Children facilities: There are no tot lots, inadequate playground space and equipment, and insufficient park land.
 - Access: There is no public access to the Merrimack River for boating or other recreational pursuits.
 - ADA compliance: While most activities are ADA compliant, there is a lack of ADA compliant restroom facilities.
 - Advocacy: There is no local, non-profit advocacy group for open space or recreational programs.

Participants identified the following as opportunities to improve upon or expand existing open space and recreation facilities and/or programs:

- New construction: The construction of a new senior center will present an opportunity for the adaptive reuse of the current building.
- Project completion: The planned completion of the athletic fields at the Elementary School and the former campground on the Merrimack River will significantly add to the ability of the Town to offer increased recreational fields and opportunities.
- Town Center: The new Town Center Master Plan offers an opportunity for revitalization of the area, including its historic buildings.
- Volunteers: The private youth sports organizations that contribute to the successful soccer, baseball, lacrosse, football and cheerleading programs need to be supported in their efforts.
- Clean water: The ability to maintain the water quality of Lake Mascuppic will increase the utilization of this valuable water resource.

The following were identified as challenges that need to be addressed in order to move forward in meeting the Town's open space and recreation needs:

-
- Funding: The most overriding concern, and the greatest challenge, is the lack of finances needed to carry out desired plans and programs, and to provide for the necessary personnel for maintenance.
 - Sidewalks: The provision of sidewalks, especially around the schools, is an unmet need.
 - Town Center: The revitalization of the Town Center remains a focus of the municipality.
 - Volunteers: There is a lack of volunteers to serve on Town boards and commissions.
 - Town Staff: The lack of professional staffing in Town Hall, such as a Town Engineer or Town Planner, limits the Town's capacity to handle open space and recreation projects.

Massachusetts Outdoors 2006: Statewide Comprehensive Recreation Plan (SCORP 2006)

Massachusetts Outdoors 2006: Statewide Comprehensive Recreation Plan (SCORP 2006), developed by the Massachusetts Executive Office of Energy and Environmental Affairs, Division of Conservation Services, assessed the recreational needs of the state by region. The intent of the document is to direct investment decisions in a manner that best meets the needs of the Commonwealth's citizens.

Within SCORP 2006, Tyngsborough is considered part of the northeastern region. According to the report, the most popular recreational activities within the region include swimming, walking, sightseeing, hiking and fishing. In addition, baseball, sunbathing, horseback riding, off-road vehicle driving, and snowmobiling, were identified as being more popular in the northeast region than in other areas of the state. Soccer, tot lots, and pond hockey were also found to be popular; these preferences reflect the abundance of water resources and conservation areas throughout the region.

According to the survey conducted for SCORP 2006, northeast region residents strongly support improving access to recreational facilities for persons with disabilities, and support prioritizing funding for maintenance of existing facilities and new open space acquisitions. Survey respondents also identified the following recreational needs for the region:

- Biking Facilities 14.1%
- Playgrounds 13.8%
- Swimming 12.6%

-
- Walking 11.8%
 - Golfing 9.1%
 - Baseball 8.3%
 - Tennis 7.6%
 - Fishing 6.5%
 - Mountain Biking 6.1%

C. Management Needs and Potential Changes of Use

Based on the input received during the plan development process, the top priority is the need to preserve open space for active recreation, as indicated by over 31% of the survey respondents. There was also a strong desire to preserve open space for passive recreation. The Town's athletic fields and walking trails are widely used by residents and there is a desire to improve and/or expand both.

Based on the survey responses, there appears to be a large constituency for additional hiking, walking and biking facilities within the Town. In addition, maintaining the existing facilities was identified as a priority, as opposed to the expenditure of funds on new facilities. These results reinforce similar findings in the following documents: (1) *2002-2007 Open Space and Recreation Plan for Tyngsborough, MA*, (2) *The Greater Lowell Regional Open Space Strategy: Analysis and Recommendations*, prepared by the Northern Middlesex Council of Governments for the Trustees of Reservations, and (3) the *2004 Master Plan for Tyngsborough, Massachusetts*.

While the specific recommendations of the *Town Center Master Plan* are still being weighed among town residents and officials, there is consensus that the Town Center must be addressed. The *Town Center Master Plan* outlines recommendations in the following areas:

- Re-Use of Town-Owned Properties, including the Winslow School, Littlefield Library and the Old Town Hall;
- Open Space and Recreation Improvements;
- Opportunities for New Development; and
- Infrastructure improvements.

The document sets forth a strategy to create a Town Center for Tyngsborough that reestablishes the historic and business functions of the area, as a means of stimulating economic development and improving the quality of life for the town's residents. The Plan includes recommendations to: establish two town greens located just south of the Church and at the site of the Old Flint Box Factory; develop a park between Flint Pond and Old Town Hall; establish a Park behind the Winslow School; and to create a Historic District in the Town Center.

The need to construct additional playing fields, and finish the fields and facilities at the Elementary School was identified as necessary to reduce the overuse of the existing facilities.

The results of the public process also pointed to a desire on the part of residents and participants to acquire additional open space, and to construct additional basketball and tennis courts, which is consistent with the findings in the SCORP 2006 report.

SECTION 8: GOALS AND OBJECTIVES

Goal 1: Increase the quantity and quality of recreation space and facilities

Objectives:

- Create more neighborhood playgrounds and parks
- Review use of existing school facilities and maximize utilization
- Complete recreation facilities at the Elementary School
- Expand adult athletic programs
- Improve and increase access to the Merrimack River

Goal 2: Develop maintenance and management plans for existing recreational and conservation areas

Objectives:

- Properly manage and maintain athletic facilities
- Properly managed open space and conservation areas
- Enhance partnerships with volunteer and private organizations

Goal 3: Revitalize the Town Center

Objectives:

- Implement recommendations outlined in the Town Center Master Plan, including those related to open space and recreation
- Investigate the feasibility of creating a Town Center Historic District
- Implement land use and zoning tools to enhance the Town Center

Goal 4: Educate the residents on the value of open space in the Town and region

Objectives

- Identify open space parcels at risk for development
- Create educational material on Chapter 61, 61A and 61B tax and open space benefits for property owners
- Preserve agricultural land and businesses

Goal 5: Increase accessibility of all recreational resources, facilities and programs

Objectives

- Make all recreational and athletic facilities fully ADA compliant

Goal 6: Promote land use and permitting practices that promote Smart Growth and protect historic assets, open space, cultural assets and resource areas

Objectives

- Encourage use of development practices that preserve open space
- Develop policies for utilizing conservation restrictions to permanently preserve open space
- Finalize and adopt the Middlesex Road Corridor Overlay zoning bylaw and design guidelines

Goal 7: Improve the overall water quality of the Town's surface water bodies and wetland resources

Objectives

- Use Best Management Practices (BMPs) to control non-point source pollution and other activities that impact water quality
- Increase public awareness relative to the importance of wetland resource areas
- Protect upland buffers to water resources and wetlands
- Preserve and protect wildlife habitat
- Monitor water quality of streams, ponds, lakes and the Merrimack River

Goal 8: Establish greenways for recreation and habitat networks with a focus on creating local and regional links

Objectives

- Create partnerships among the public sector, private sector, non-profits and civic organizations to promote the necessary linkages
- Develop "right of first refusal" agreements with private property owners whose property contains land necessary for greenway linkages, especially along the Merrimack River
- Expand the recreational trail system
- Develop and expand bike routes throughout the Town

SECTION 9: SEVEN-YEAR ACTION PLAN

The table below outlines the Seven-Year Action Plan for implementing the goals and objectives described in previous sections of this document. Many of these recommendations reflect those contained in the Town's *Master Plan*, the *Town Center Master Plan* (completed in 2008) and the *Tyngsborough Economic Development Plan* (completed in 2006). Implementation responsibility is identified and the timeframe for the implementation of individual actions is specified as follows:

- Ongoing: Implementation occurs on an ongoing basis throughout the seven-year implementation period;
- Short-term: Implementation is planned within 2 years;
- Intermediate: Implementation is planned between years 2 and 3; and
- Long-term: Implementation is planned in years 4 through 7.

Based on the variability of the many factors involved in implementing the Action Plan, such as funding, the need for town meeting approval, and legal and permitting issues, the Committee concluded that structuring the schedule in the timeframes outlined above was more practical and meaningful than the year-by-year schedule utilized in previous Open Space and Recreation Plans. Map 8 on Page 93 shows the location of some of the specific projects identified in the Seven-Year Action Plan.

GOAL 1: Increase the quantity and quality of recreation space and facilities

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Create more neighborhood playgrounds and parks</i>			
Inventory tax title parcels to identify properties suitable for neighborhood parks and tot lots	Planning Board, Assessor's Office, Recreation Director, Recreation Commission, Community Preservation Committee	Town budget	Ongoing
Ensure maintenance and public access to dedicated open space in new subdivisions through public access easements and maintenance agreements	Planning Board	Town budget	Ongoing

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Review use of existing school facilities and maximize utilization</i>			
Develop an inventory and utilization schedule of all school athletic facilities, including those at the regional school	Recreation Director, School Athletic Director, and Regional School Athletic Director	Town budget	Short-term
Develop and implement use schedule for all recreation and athletic facilities	Recreation Director, School Athletic Director	Town budget	Short-term
<i>Objective: Complete recreational fields at the Elementary School</i>			
Complete development of athletic fields	Board of Selectmen, Field Use Committee	Town budget	Ongoing/short-term
<i>Objective: Expand adult athletic programs</i>			
Prioritize recreation program needs for adults	Recreation Director, sports sponsors and volunteers	Town budget	Short-term
Identify land for possible expansion of athletic fields	Board of Selectmen, Planning Board, Recreation Director, sports sponsors and volunteers	Town budget; CPA	Ongoing
Pursue funding for expansion of facilities or development of new facilities	Town Administrator Recreation Commission, Recreation Director	CDBG funds, CPA funds, PARC funds	Short-term
<i>Objective: Improve and increase access to the Merrimack River</i>			
Complete redevelopment of the former campground property on Frost Road	Board of Selectmen Recreation Commission, Town Administrator	Town budget, CPA	Ongoing

GOAL 2: Develop maintenance and management plans for existing recreation and conservation areas

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Properly manage and maintain athletic facilities</i>			
Inventory management and maintenance needs for all athletic facilities, and develop a financing plan for addressing those needs on an on-going basis	Recreation Commission, Highway Department; Town Administrator; Youth Council, School Department	Town budget and/or state grant monies	Short-term
Implement the management and maintenance plan for athletic facilities	School Department, Highway Department, Recreation Commission, Town Administrator, volunteer athletic groups	Town budget, volunteer contributions, and/or state grant monies	Initiate implementation in an intermediate timeframe, and continue following the maintenance plan on an ongoing basis
<i>Objective: Properly manage open space and conservation areas</i>			
Develop management and maintenance plan for open space and recreation areas	Conservation Commission, Town Administrator	Conservation Commission funds; Town budget	Short-term
Implement management and maintenance plan	Conservation Commission, Town Administrator	Town budget, Conservation Commission funds	Intermediate
<i>Objective: Enhance partnerships with volunteer and private organizations</i>			
Develop a stewardship program for conservation Areas using volunteer citizens and civic organizations	Conservation Commission, Town Administrator, Non-profit volunteer groups, and civic organizations	Town budget	Short-term
Develop a stewardship program for recreational facilities using volunteer citizens and civic organizations	Recreation Commission. Town Administrator, volunteer groups and civic organizations	Town budget	Short-term

GOAL 3: Revitalize the Town Center

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Implement recommendations outlined in the Town Center Master Plan, including those related to open space and recreation</i>			
Continue to meet with area residents, property owners and businesses, as needed	Economic Development Committee, Board of Selectmen, Recreation Director, Conservation Director, Town Administrator	Town budget	Ongoing
Design and permit improvements outlined in the Town Center Master Plan	Economic Development Committee, Board of Selectmen, Historical Commission, Town Administrator, Conservation Commission, Recreation Commission	Town budget, CPA funds	Short-term
Solicit RFP for necessary work	Board of Selectmen, Economic Development Committee, Town Administrator	Town budget, CPA funds	Intermediate
Develop the Town owned land adjacent to Flint Pond as part of an overall trail system	Town Administrator, Conservation Commission, Conservation Director, Highway Department	Town budget, CPA funds	Long-term

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Investigate the feasibility of creating a Town Center Historic District</i>			
Establish boundaries for either a National Register of Local Historic District	Economic Development Committee, Planning Board, Board of Selectmen, Historical Commission, Town Administrator	Town budget	Short-term
Meet with potentially affected property owners to provide information and receive input	Economic Development Commission; Planning Board; Historical Commission, Board of Selectmen, Town Administrator	Town budget	Short-term
Apply for Massachusetts Historical Commission (MHC) Survey and Planning grant to develop application for district designation	Board of Selectmen, Historical Commission, Town Administrator	CPA funds, Town budget	Intermediate
Complete application process for historic district designation	Historical Commission, Board of Selectmen, Town Administrator	MHC Survey and Planning Grant and/or CPA funds	Long-term
<i>Objective: Implement land use and zoning tools to enhance the Town Center</i>			
Finalize Draft Town Center Overlay District By-law and seek Town Meeting approval	Town Administrator, Planning Board, Economic Development Committee, Town Meeting	Town budget	Short-term
Adopt and implement design guidelines	Planning Board	Town budget	Intermediate

Goal 4: Educate the residents on the value of open space in the Town and the region

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Identify open space parcels at risk for development</i>			
Maintain the inventory of lands of recreation and conservation interest	Tax Assessor, Planning Board, Community Preservation Committee	Town budget	On-going
Pursue funding opportunities for open space preservation and acquisition	Recreation Director, Conservation Director, Community Preservation Committee, Board of Selectmen, Town Meeting	Town budget	On-going

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Create educational material on Chapter 61, 61A and 61B tax and open space benefits for property owners</i>			
Develop written material and web site information outlining Chapter 61, 61A and 61B programs	Tax Assessor, Conservation Commission, Town Administrator	Town budget	Short-term
Conduct annual public meetings for property owners to provide information on Chapter 61, 61A and 61B programs	Tax Assessor, Conservation Commission, Town Administrator	Town budget	Ongoing
<i>Objective: Preserve agricultural lands and businesses</i>			
Educate farmers on the Agricultural Preservation Restriction (APR) program	Tax Assessor, Conservation Commission, Town Administrator	Town budget	Short-term
Consider implementing a "Right to Farm" By-law	Conservation Commission, Town Meeting, Planning Board	Town budget	Intermediate
Consider establishing an Agricultural District zoning classification	Conservation Commission, Town Meeting, Planning Board	Town budget	Intermediate
Considering establishing an Agricultural Commission	Board of Selectmen, Planning Board, Conservation Commission	Town budget	Intermediate

Goal 5: Increase accessibility of all recreational resources, facilities and programs

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Make all recreational and athletic facilities fully ADA compliant</i>			
Inventory and prioritize recreation facilities for ADA compliance	Recreation Director, Recreation Commission, ADA Coordinator	Town budget	Short-term
Develop schedule and funding plan for implementing necessary accessibility improvements	Recreation Director, Town Administrator, ADA Coordinator	Town budget	Intermediate
Retrofit facilities according to schedule	Town Administrator, ADA Coordinator	CDBG Funds	Long-term

Goal 6: Promote land use and permitting practices that foster smart growth and protect historic assets, open space, cultural assets and resource areas

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Encourage development practices that preserve open space</i>			
Review current bylaws, rules and regulations in light of best practices and with an objective to streamline the approval process as recommended in the town's Master Plan	Planning Board, Conservation Commission, Zoning Board of Appeals, Board of Health	Town budget	Short-term
As recommended in the current Master Plan, adopt "as of right" open space residential development regulations	Planning Board, Conservation Commission, Conservation Director, Board of Selectmen, Zoning Board of Appeals, Town Meeting	Town budget	Intermediate
Establish, with owner's consent, Institutional/Open Space Zoning District for Golf Courses	Planning Board, Town Meeting	Town budget	Long-term
<i>Objective: Develop policies for utilizing conservation restrictions (CRs) to permanently preserve open space</i>			
Educate town boards and commissions on state requirements for using Conservation Restrictions	Conservation Commission, Planning Board, Zoning Board of Appeals, Board of Selectmen	Town Budget, Conservation Commission funds	Short-term
Encourage developers permanently protect open space using conservation restrictions	Conservation Commission, Planning Board, Conservation Director, Zoning Board of Appeals	Town budget	Ongoing
<i>Objective: Finalize and adopt the Middlesex Road Corridor Overlay zoning by-law and design guidelines</i>			
Meet with area residents and businesses to receive input on the draft Middlesex Road Corridor Overlay Zoning Bylaw and corresponding design guidelines	Town Administrator, Planning Board, Economic Development Committee, Board of Selectmen	Town budget	Short-term

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
Based on input provided, finalize draft bylaw and design guidelines, and seek town meeting approval	Economic Development Commission, Planning Board, Board of Selectmen, Zoning Board of Appeals	Town budget	Short-term
Implement Middlesex Road Corridor Overlay Bylaw and design guidelines	Planning Board, Zoning Board of Appeals	Town budget	Intermediate

Goal 7: Improve the overall quality of the Town's surface water bodies and wetland resources

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
<i>Objective: Use Best Management Practices (BMPs) to control non-point source pollution and other activities that impact water quality</i>			
Finalize and adopt wellhead protection by-law	Water Districts, Planning Board, Conservation Commission, Town Meeting	Town budget	Short-term
Monitor septic systems and enforce Title V regulations	Board of Health	Part of current town budget	Ongoing
<i>Objective: Increase public awareness relative to the importance of wetland resource areas</i>			
Continue to take advantage of public education efforts connected with the Phase II Stormwater Plan to tie together open space protection and water resources protection	Conservation Commission, Sewer Commission, Planning Board, Board of Health	Part of current town budget	Ongoing
Work with schools to develop an educational program related to the importance of wetland resource protection	Conservation Commission, Conservation Director, School Department	Town budget	Short-term
Develop wetlands informational booklets for homeowners and residents	Conservation Commission, Conservation Director	Town budget, Conservation Commission funds	Short-term
Develop local cable TV informational programming	Conservation Commission, Conservation Director	Town budget, Conservation Commission funds	Ongoing

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
Objective: Protect upland buffers to water resources and wetlands			
Continue inspection and enforcement actions of Stormwater Bylaw	Conservation Director, Board of Health	Part of current town budget	Ongoing
Identify and prioritize upland wetland buffers and seek protection through conservation easements or acquisition	Conservation Commission, Community Preservation Committee	Town budget, CPA funding	Short-term
Objective: Preserve and protect wildlife habitat			
Prioritize parcels needed for establishing interconnected wildlife corridors	Conservation Commission, Planning Board	Town budget	Ongoing
Document rare and endangered species, and survey wildlife and vegetation communities	Volunteers, Conservation Commission, Natural Heritage and Endangered Species Program	Volunteers, state funding, town budget	Ongoing
Identify and prioritize key habitat areas along the River, streams and ponds, for future protection and/or acquisition	Conservation Commission, Planning Board, volunteers	CPA Funds	Ongoing
Objective: Monitor water quality of streams, ponds, lakes and the Merrimack River			
Actions	Responsible Party	Potential Funding Sources	Timetable
Identify needs for further water quality monitoring and testing of streams, ponds, and lakes	Board of Health, Merrimack River Watershed Council, Northern Middlesex Council of Governments	Town budget, State grant monies, volunteers	Ongoing
Appoint town representative to focus on water issues and participate in the Merrimack Stream Team	Board of Selectmen	Town budget	Short-term

Goal 8: Establish greenways for recreation and habitat networks with a focus on creating local and regional links

Actions	Responsible Party	Potential Funding Sources	Implementation Schedule
Objective: Create partnerships among the public sector, private sector, non-profits and civic organizations to promote the necessary linkages			
Identify stakeholders for establishing a collaborative planning effort	Town Administrator, Recreation Director, Conservation Commission	Town budget	Ongoing
Objective: develop "Right of First Refusal" agreements with private property owners whose property contains land necessary for greenway linkages, especially along the Merrimack River			
Meet with property owners of key parcels along the River to negotiate	Town Administrator, Board of Selectmen, Conservation Commission	Town budget	Ongoing
Develop necessary legal documents	Town Administrator,	Town budget	Short-term
Objective: Expand the recreational trail system			
Work with surrounding municipalities to develop regional trail linkages	Town Administrator, Recreation Director, Conservation Commission	Town budget	Ongoing
Prioritize parcels needed to expand regional trail system, as recommended in the Master Plan	Planning Board, Recreation Commission, Conservation Commission, Board of Selectmen	Town budget	Short-term
Seek funding opportunities to continued development of the regional trail network	Board of Selectmen, Town Administrator, Recreation Commission, Recreation Director, Northern Middlesex Council of Governments, MassHighway, Department of Conservation and Recreation	Town budget, state grant monies	Intermediate
Identify, map, and mark new multi-use trails on conservation and recreation land, as appropriate	Conservation Commission, Recreation Commission, Recreation Director, volunteers	Town budget, volunteers	Intermediate
Develop a town-wide trail plan, including a funding and implementation plan	Recreation Commission; Recreation Director	Town budget and state grant monies	Short-term

Work toward implementing the town-wide trail plan as funding permits	Conservation Commission, Planning Board, Board of Selectmen, Zoning Board of Appeals	CPA monies, town budget, state and federal grant monies	Long-term
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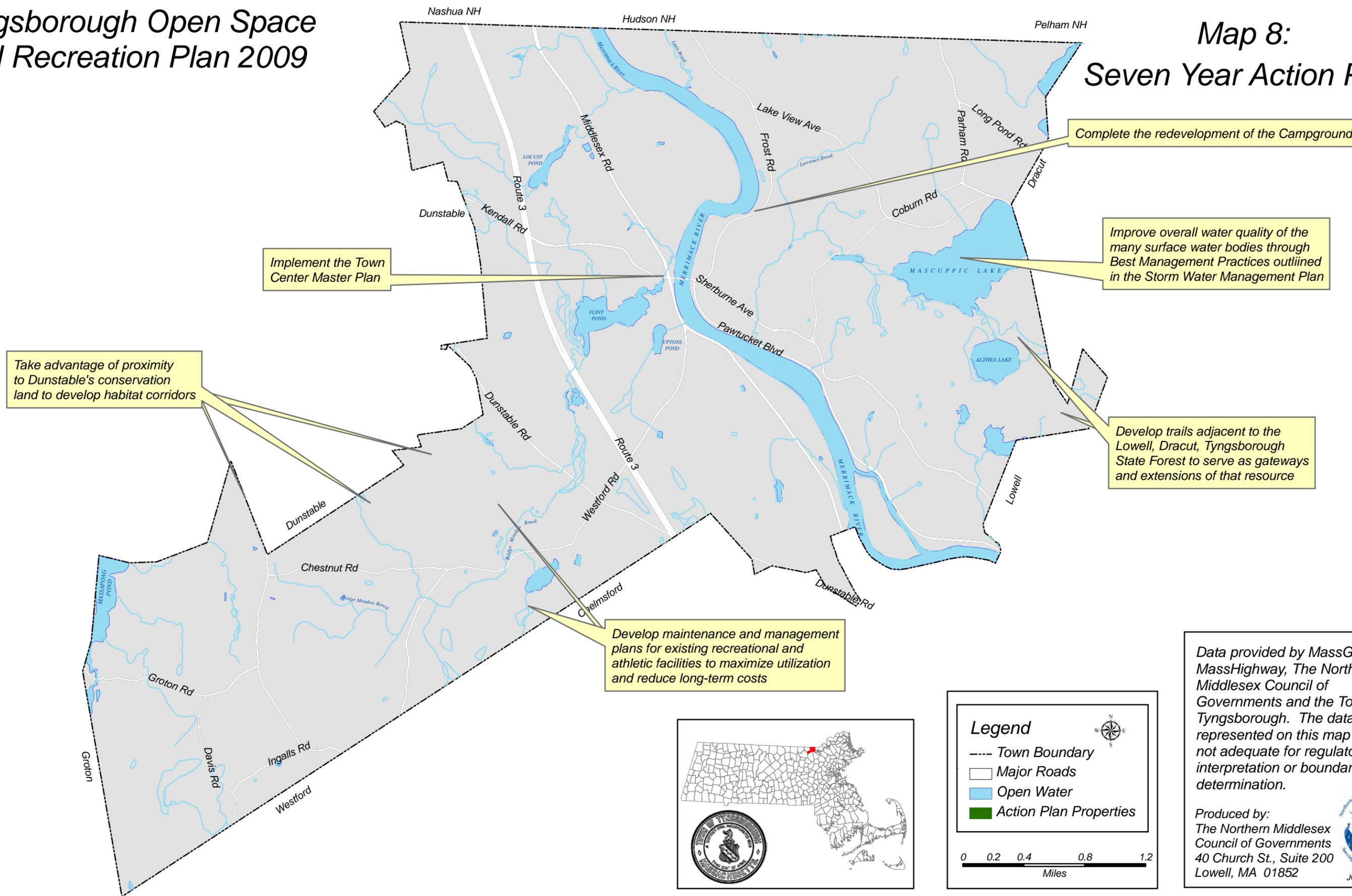
Objective: Develop and expand bike routes throughout the Town			
Work with the development community to include bicycle and pedestrian accommodations within project designs	Planning Board, Conservation Commission, Zoning Board of Appeals	Town budget, development community	Ongoing
Create designated bike routes throughout town on appropriate roadways	Board of Selectmen, Highway Department	Town budget	Long-term

Acronyms used:

- CDBG: Community Development block Grant
- CPA: Community Preservation Act
- PARC: Parkland Acquisition and Renovation for Communities

Tyngsborough Open Space and Recreation Plan 2009

Map 8: Seven Year Action Plan



Data provided by MassGIS, MassHighway, The Northern Middlesex Council of Governments and the Town of Tyngsborough. The data represented on this map is not adequate for regulatory interpretation or boundary determination.

Produced by:
The Northern Middlesex Council of Governments
40 Church St., Suite 200
Lowell, MA 01852

JCM 03/04/2009

SECTION 10: PUBLIC REVIEW AND COMMENTS

The Tyngsborough Open Space and Recreation Plan 2009 Update was released for public review and comment on July 27, 2009 at a public meeting held to receive comments from the public, town boards and committees and other interested stakeholders. A copy of the draft document was made available on the Town website and on the Northern Middlesex Council of Government's website. Hard copies were delivered to Town boards and commissions and were also made available at the Town Hall/Town Library. (See distribution list in Appendix A.)

Comments were received from the Conservation Commission, the recreation Committee and the Planning Board. (See letters in Appendix A.) Based on comments received, which were very positive, the final draft Plan was revised and then presented to the Board of Selectmen on August 3, 2009 for approval. The final draft of the Plan was then submitted to the Division of Conservation Services (DCS) for review.

The DCS granted a conditional approval through October 2014. The comments provided by DCS as part of the conditional approval were addressed and the final Open Space and Recreation Plan were resubmitted to DCS in December 2009. DCS granted final approval on January 4, 2010 through October 2016.

SECTION 11: REFERENCES

The Open Space Planner's Workbook, Executive Office of Environmental Affairs, February 2001.

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Massachusetts Outdoors 2000! Statewide Comprehensive Outdoor Recreation Plan. Executive Office of Environmental Affairs, 2001.

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1990 and 2000 U.S. Census.

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Tyngsborough Build Out Analysis, prepared by Northern Middlesex Council of Governments, 2000

2020 Vision: Planning for Growth in the Northern Middlesex Region, prepared by Northern Middlesex Council of Governments, 2000.

Greater Lowell Regional Open Space Strategy, prepared by Northern Middlesex Council of Governments, 2002.

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Natural Heritage and Endangered Species Program, priority habitat inventory, NHESP website.

Town of Tyngsborough, Assessors Office Database.

Town of Tyngsborough Town Center Master Plan, 2008 Concord Square
Planning and Development, Inc.

Town of Tyngsborough, Tyngsborough Economic Development Plan, 2006
Northern Middlesex council of Governments

Merrimack River 5 Year Watershed Action Plan, 2002-2007, Massachusetts
Executive Office of Energy and Economic Affairs

APPENDIX

APPENDIX A

MEETING NOTICES AND AGENDAS

AND LETTERS OF SUPPORT

**Tyngsborough Open Space and Recreation Plan
Meeting of the Open Space and Recreation Plan
Committee**

Town Hall, 25 Bryants Avenue

7:00 P.M.

TO: OSRP Committee

FM: George Russell, AICP
NMCOG

RE: Open Space and Recreation Plan Update meeting

DATE: July 27, 2009

Agenda:

- Presentation of the Plan for public discussion
- Discussion and recommendations for completion of the draft Plan
- Final adoption and submission to the State

TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN

PUBLIC MEETING

**Tyngsborough Town Hall
25 Bryants Lane**

July 27, 2009

AGENDA

1. Welcome
2. Overview of the Open Space and Recreation Plan process
3. Components of the Plan
4. Survey and visioning results and Plan goals
5. Public Comments
6. Adjournment

TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN COMMITTEE

The Town of Tyngsborough Open Space & Recreation Plan Committee will conduct a public meeting on Monday, July 27, 2009 at the Tyngsborough Town Hall, 25 Bryants Lane, Tyngsborough on the following: 7:00 PM the Committee will review the Tyngsborough Open Space and Recreation Plan as Updated for 2009. Public Comments are welcome.

Respectfully submitted
Edward Smith, Chairman

Published in the Lowell Sun on July 20, 2009.

A copy of the draft Plan was sent to the following for review and comment:

Planning Board

Recreation Commission

Open Space Committee

Conservation Commission

Board of Selectmen



TOWN OF TYNGSBOROUGH
Office of the Selectmen
25 Bryants Lane
Tyngsborough, MA 01879
Tel: 978 649-2300 Ext. 100 Fax: 978 649-2320

September 18, 2009

George Russell
Senior Planner
Northern Middlesex Council of Governments
40 Church Street, Suite 200
Lowell, MA 01852

RE: Open Space and Recreation Plan

Dear Mr. Russell:

At a meeting on August 3, 2009, the Board of Selectmen approved the "Tyngsborough Open Space and Recreation Plan, 2009 Update".

This document is an important planning tool for the Town of Tyngsborough. Not only will this comprehensive plan ensure that the Town is planning properly for the protection and use of its open space and recreational properties, but also that the Town will continue to be eligible for certain grants.

This plan has been thoroughly prepared by you, Beverly Woods, and others at NMCOG, and we thank you for your efforts.

Sincerely,

Rosemary Cashman
Town Administrator



Town of Tyngsborough
Planning Board

25 Bryants Lane
Tyngsborough, Massachusetts 01879-1003
Office: (978) 649-2300, ext. 115
Fax: (978) 649-2301

RECEIVED

SEP 11 2009

N.M.C.O.G.

September 10, 2009

George Russell, Senior Planner
NMCOG
40 Church Street, Suite 200
Lowell, MA 01852-2686

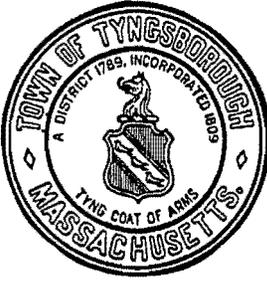
Dear Mr. Russell,

The Tyngsborough Planning Board formerly endorses the "Draft Tyngsborough Open Space and Recreation Plan 2009 Update", as submitted on July 27, 2009 by the Tyngsborough Open Space and Recreation Plan Committee. The Board has found the report to be extremely well prepared and thorough. The plan beautifully showcases Tyngsborough's open space, recreation, and conservation land and will be a valuable resource for our community and its residents.

The Planning Board would like to thank you and your staff for your efforts on Tyngsborough's behalf.

Respectfully for the Planning Board,

Caryn DeCarteret
Chairman



***Town of Tyngsborough
Conservation Commission***

25 Bryants Lane,
Tyngsborough, Massachusetts 01879-1003
Office: (978) 649-2300 ext. 116
Fax: (978) 649-2301

RECEIVED

AUG 17 2009

N.M.C.O.G.

August 13, 2009

George Russell, Senior Planner
NMCOG
Gallagher Terminal, Floor 3B
115 Thorndike Street
Lowell, MA 01852-3308

Dear Mr. Russell,

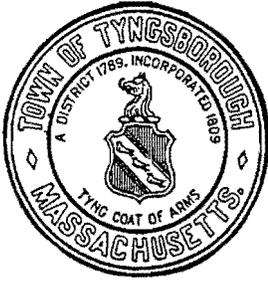
The Tyngsborough Conservation Commission formerly endorses the "Draft Tyngsborough Open Space and Recreation Plan 2009 Update", as submitted on July 27, 2009 by the Tyngsborough Open Space and Recreation Plan Committee. The Commission has found the report to be extremely well prepared and thorough. The plan beautifully showcases Tyngsborough's open space, recreation, and conservation land and will be a valuable resource for our community and its residents.

The Commission would like to thank you and your staff for your efforts on Tyngsborough's behalf.

Respectfully for the Conservation Commission,

Matthew S. Marro
Conservation Director

Cc: Board of Selectmen
Rosemary Cashman, Town Administrator
Community Preservation Committee
Planning Board
Allison McNamara, Recreation Director



Town of Tyngsborough

Recreation Department

25 Bryants Lane - Tyngsborough, Massachusetts 01879-1003

Phone: (978) 649-2300, Ext. 150 - Fax: (978) 649-2301

amcnamara@tyngsboroughma.gov

Alison McNamara - Director

September 4, 2009

George Russell, AICP

Senior Planner

Northern Middlesex Council of Governments (NMCOG)

40 Church Street, Suite 200

Lowell, MA 01852-2686

RECEIVED

SEP 15 2009

N.M.C.O.G.

Re: Open Space and Recreation Plan

Dear Mr. Russell,

The Tyngsborough Recreation Committee would like to formally endorse the "Tyngsborough Open Space and Recreation Plan 2009 Update", as submitted on July 27, 2009 by the Tyngsborough Open Space and Recreation Plan Committee. The plan is very thorough and well prepared and the Recreation Committee finds it to be a great resource for the Tyngsborough community.

The Tyngsborough Recreation Committee thanks you and your staff for all the great work you have done for our community.

Sincerely,

Alison McNamara

Town of Tyngsborough - Recreation Director

Cc: Board of Selectman

Rosemary Cashman, Town Administrator

Community Preservation Committee

Planning Board

Recreation Committee

tc



Northern Middlesex Council of Governments

September 4, 2009

A Multi-Disciplinary
Regional Planning
Agency Serving:

Melissa Cryan
Grants Manager
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Billerica
Chelmsford
Dracut
Dunstable
Lowell
Pepperell
Tewksbury
Tyngsborough
Westford

Dear Ms Cryan:

The Northern Middlesex Council of Governments (NMCOG) has reviewed the Draft Open Space and Recreation Plan for the Town of Tyngsborough. NMCOG staff finds the Plan to be thorough and consistent with the *Greater Lowell Open Space and Recreation Plan*. The Plan complies with the guidelines set forth by your office, and provides town decision-makers with specific guidance for protecting and enhancing the community's open space, recreation and agricultural resources.

Such a coordinated and well-planned initiative will ensure that the special places that make Tyngsborough unique can be enjoyed by future generations. By undertaking this plan, the Town recognizes that protection and stewardship of its natural, cultural and historic resources is essential to the overall quality of life, health, economic vitality and sustainability of the community.

James G. Silva
Chair

Please feel free to contact me directly should you have questions regarding NMCOG's support for the updated Plan or if you require additional information. NMCOG looks forward to the successful implementation of the Action Plan over the upcoming years and commends the Town for its efforts.

Beverly A. Woods
Executive Director

Sincerely,

Beverly Woods
Executive Director

40 Church Street, Suite 200
Lowell, MA
01852-2686

TEL: (978) 454.8021

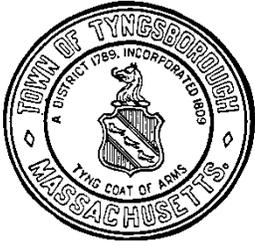
FAX: (978) 454-8023

www.nmcog.org

cc: Rosemary Cashman, Town Administrator
NMCOG Councillors

APPENDIX B

COMMUNITY SURVEY AND SURVEY RESULTS SUMMARY



TOWN OF TYNGSBOROUGH
Open Space and Recreation Plan Committee

OPEN SPACE AND RECREATION PLAN UPDATE
SURVEY OF TYNGSBOROUGH RESIDENTS

The Tyngsborough Open Space and Recreation Plan Committee would like your opinion about open space and recreational issues in Tyngsborough. The Town needs to update its Open Space and Recreation Plan every 5 years and submit the document to the State. Not only does an up-to-date plan ensure that the Town is planning properly for the protection and use of open space and recreational properties and programs, but also that the Town will continue to be eligible for certain grants.

Should more than one resident per address wish to complete the survey, extra copies can be downloaded from the Town's website (www.tyngsboroughma.gov) or may be picked up at the Town Offices.

PLEASE CHECK OR FILL IN THE APPROPRIATE RESPONSE TO EACH QUESTION.

1. How long have you lived in Tyngsborough?
 Less than 5 years 5-10 years 11-19 years 20+ years
2. Which age groups reside in your household? 4 years or under 5-11 years
 12-19 years 20-29 years 30-44 years 45-59 years 60+ years
3. Rank the top three public open spaces, recreational facilities, programs, or places in Tyngsborough that you and/or your family use by placing the number 1, 2, and 3 next to the appropriate item, with 1 being the most frequently used.

- Athletic fields and playgrounds
- Recreational programs
- Walking trails and conservation land
- Town/State forest
- Rivers and ponds
- Mascuppic Town Beach and Lake
- Sherburne House
- Historic Sites
- Other _____
- Other _____

4. What landscapes, views, buildings, locations, recreational areas, or outdoor experiences most symbolize Tyngsborough's unique character to you, whether public or private? Please rank in order of importance, with 1 being the most important.

1. _____
2. _____
3. _____

Please answer questions on the other side.

5. How important is the preservation of the following? Please rank in order of importance from 1 to 6, with 1 being the most important.

- Open space for active recreation (such as athletic fields, playgrounds, beach, programs)
- Open space for passive recreation (such as trails for hiking)
- Open space for other activities (such as ponds for fishing)
- Open space for general conservation purposes
- Open space for protection of water supply
- Buildings or places of historical value

6. How satisfied are you with open space, recreational facilities, programs, or places in Tyngsborough for adults and youth:

Adults: very satisfied satisfied dissatisfied very dissatisfied don't know

Youth: very satisfied satisfied dissatisfied very dissatisfied don't know

7. What do you like best/least about Tyngsborough's open space, recreational facilities, programs, or places?

Best: _____

Least: _____

8. Would you do any of the following to preserve additional open space, recreational facilities, programs, or places? (Check all that apply)

- Support seasonal or annual fees
- Rewrite your deed to limit future use of some of your land (for example: conservation restriction)
- Donate or sell some of your land to the Town or a land trust
- Do nothing
- Other _____

9. Do you go out-of-town for open space, recreational facilities, programs, or places? Yes No
If yes, where and for what purpose?

10. What actions should the Town take in the next five years for open space and recreational issues? For example, should the Town acquire a specific piece of property, save a particular existing resource, initiate a particular program, and/or concentrate on maintenance? Please rank in order of importance, with 1 being the most important.

- 1. _____
- 2. _____
- 3. _____

Please return the surveys by January 15.

Completed surveys can be dropped off in the lobby at the Town Offices on 25 Bryants Lane or returned in the mail to the Selectmen's Office, Town Offices, 25 Bryants Lane.

THANK YOU FOR YOUR TIME AND COOPERATION.

TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN

TALLY OF RESPONSES GIVEN FIVE OR MORE TIMES

A survey was formulated, a copy of which can be found in Appendix B, and distributed in January 2008 along with the annual tax bills. A total of 4,100 surveys were mailed and 315 were returned producing a return rate of 7.7%. The following tables give a breakdown of the gross responses for all categories combined. Appendix B gives more detailed breakdowns showing all responses received that were enumerated at least five (5) times. It should be noted that in all tabulations, the numbers will not add up to exact percentages due to rounding and the columns will not add up to the number of respondents since not all questions were answered by all respondents. It is significant to note that of the 315 surveys returned, 67 surveys contained at least one question that could not be included in the final tabulations since questions were not answered in a manner that the results could be accurately determined. For instance, many respondents answered questions three and five (see below) by ranking all entities with the same number or used the same number multiple times. In addition, 130 surveys were returned with at least one question unanswered on the form.

Question 1: How long have you lived in Tyngsborough?

RESPONSE	# OF RESPONSES	% OF RESPONSES
UNDER 5 YEARS	46	14.60
5 – 10 YEARS	56	17.77
11 – 20 YEARS	85	26.98
OVER 20 YEARS	128	40.63

Question 2: Which age groups reside in your household?

RESPONSE	# OF RESPONSES	% OF RESPONSES
UNDER 4 YEARS	25	7.9
5 – 11 YEARS	54	17.1
12 – 19 YEARS	81	25.7
20 – 29 YEARS	42	13.3
30 – 44 YEARS	109	34.6
45 - 59 YEARS	165	53.4
OVER 59 YEARS	80	25.4

Question 3: Rank the top three public open spaces, recreational facilities, programs or places in Tyngsborough that you and/or your family use by placing the number 1, 2 Or 3 next to the appropriate item, with 1 being the most frequently used.

PROGAM	RANKING					
	1		2		3	
	Number	Percent	Number	Percent	Number	Percent
Athletic fields/playgrounds	16	5.1	6	1.9	4	1.3
Recreational programs	5	1.5	12	3.8	2	0.6
Walking trails/conservation land	12	3.8	9	2.9	2	0.6
Town/state forest	2	0.6	7	2.2	5	1.5
Rivers and ponds	4	1.3	4	1.3	2	0.6
Mascuppic town beach and lake	1	0.3	2	0.6	1	0.3
Sherburne house	2	0.6	1	0.3	1	0.3
Historic sites	0	0	0	0	2	0.6
Other	0		0		0	

Question 4: What landscapes, views, buildings, locations, recreational areas, or outdoor experiences most symbolize Tyngsborough's unique character to you, whether public or private? Please rank in order of importance, with 1 being the most important.

RESPONSE	# OF RESPONSES	% OF RESPONSES
The Tyngsborough Bridge	194	61.6
The Merrimack River	68	21.5
The Town Center	67	21.3
Fields/open space/farms	41	13.0
Lake Mascuppic	37	11.7
Sherburne	32	10.2
Town athletic fields	21	6.7
Schools	16	5.1
Town hall/library	8	2.5
Sullivan's Ice Cream	7	2.2
Country club	7	2.2
Hiking trails	5	1.6

Question 5: How important is the preservation of the following? Please rank in order of importance from 1 to 6, with 1 being the most important.

- ___ Open space for active recreation (such as athletic fields, playgrounds, beach, programs)
- ___ Open space for passive recreation (such as trails for hiking)
- ___ Open space for other activities (such as ponds for fishing)
- ___ Open space for general conservation purposes
- ___ Open space for protection of water supply
- ___ Buildings or places of historical value

PRESERVATION PROGRAM	RANKING											
	1		2		3		4		5		6	
	#	%	#	%	#	%	#	%	#	%	#	%
Active recreation	98	31.1	33	10.5	28	8.8	25	8.8	27	8.6	47	14.9
Passive recreation	44	14.0	65	20.6	52	16.5	47	14.9	31	9.8	13	4.1
Other activities	18	5.7	50	15.9	57	18.1	41	13.0	45	14.3	38	12.1
General conservation	39	12.4	30	9.5	45	14.3	52	16.5	48	15.2	34	10.8
Protect water supply	44	14.0	60	19.0	44	14.0	49	15.6	41	13.0	16	5.1
Historic buildings/places	25	8.0	27	8.6	36	11.4	31	9.8	43	13.7	93	29.5

Question 6: How satisfied are you with open space, recreational facilities, programs or places in Tyngsborough for adults and youth?

	ADULTS		YOUTH		
	Number	Percent	Number	Percent	
Very satisfied	5	1.5	Very satisfied	5	1.5
Satisfied	24	7.6	Satisfied	14	4.4
Dissatisfied	9	2.9	Dissatisfied	8	2.5
Very Dissatisfied	6	1.9	Very Dissatisfied	5	1.5
Don't know	6	1.9	Don't know	10	3.2

Question 7: What do you like best/least about Tyngsborough's open space, recreational facilities, programs or places?

Best:

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Recreation programs	27	8.8
Athletic fields	22	7.0
Open space	21	6.7
Hiking trails	11	3.5
State Forest	8	3.1
Variety	7	2.2
Sherburne House	6	1.9
Nothing	5	1.6

Least:

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Town center	21	6.7
Lack of maintenance	18	5.7
Lack of playgrounds	15	4.8
Lack of tennis courts	9	2.9
Lack of Rec. Sept. advertising programs	9	2.9
Lack of hiking and biking trails	7	2.2
Not enough recreation programs	7	2.2
Bridge	5	1.6

Question 8: Would you do any of the following to preserve additional open space, recreational facilities, programs, or places? (Check all that apply)

- Support seasonal or annual fees
- Rewrite your deed to limit future use of some of your land (for example: conservation restriction)
- Donate or sell some of your land to the Town or a land trust
- Do nothing
- Other

RESPONSE	# OF RESPONSES	% OF RESPONSES
Support seasonal or annual fees	115	36.5
Rewrite deed to limit future use of land	27	8.6
Donate or sell land to the town or land trust	13	4.1
Do nothing	72	22.9
Other	50	15.9

Question 9: Do you go out-of-town for open space, recreational facilities, programs, or places? ___ Yes ___ No. If yes, where and for what purpose?

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Yes	201	63.8
No	64	20.3

Out of Town Activity (minimum of 5 responses):

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Hiking/Walking	69	21.9
Biking	30	9.5
Ocean	26	8.3
Boating/canoeing	16	5.1
Camping	15	4.8
River walk	13	4.1
Tennis	12	3.8
Swimming	12	3.8
Children's programs	12	3.8
Playgrounds	11	3.5
Fishing	11	3.5
Skiing	8	2.5
Clean lake	8	2.5
Team Sports	7	2.2
Mountains	5	1.6

Out of destination (minimum of 5 responses):

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
New Hampshire	69	21.9
Lowell	17	5.4
Westford	17	5.4
Chelmsford	17	5.4
Groton	13	4.1
Pepperell	13	4.1
Maine	12	3.8
Dunstable	12	3.8
"The Ocean"	11	3.5
Carlisle	10	3.2
Dracut	9	2.9
Cape Cod	7	2.2

Question 10: What actions should the Town take in the next five years for open space and recreational issues? For example, should the Town acquire a specific piece of property, save a particular existing resource, initiate a particular program, and/or concentrate on maintenance? Please rank in order of importance, with 1 being the most important.

RESPONSE	# OF RESPONSES	% OF RESPONDENTS
Maintenance of existing facilities	106	33.7
"Fix" the town center	41	12.4
Acquire open space	39	12.4
Develop the campground	13	4.1
Develop sports fields	12	3.8
Boat access to the River	11	3.5
Playgrounds	10	3.2
Develop bike paths	8	2.5
Develop a river walk	6	1.9
Advertise rec. programs	6	1.9
Develop hiking trails	5	1.6

APPENDIX C

VISIONING SESSION: AGENDA, HANDOUTS AND SUMMARY OF COMMENTS

**TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN
VISIONING SESSION**

AGENDA

September 25, 2008

7:00 P.M.

Tyngsborough Town Hall

1. Welcome
2. Introductions
3. Overview of the Open Space and Recreation Plan process
4. Purpose of the Visioning Session
5. Additional Opportunities for Public Involvement
6. Adjournment

Tyngsborough Open Space and Recreation Plan

Questions and Answers

1. What are the benefits of developing an updated Open Space and Recreation Plan?

Developing an updated Open Space and Recreation Plan (OSRP) provides Tyngsborough with an opportunity to maintain and enhance the open spaces that play an important role in preserving the community's character and uniqueness. Planning the infrastructure of Tyngsborough's open space, which includes farms, forests, recreation areas, trails, rivers, conservation lands, wildlife habitat and waterways, will contribute to the quality of life and increase Tyngsborough's desirability as a place to live, work and play.

Completion of the OSRP will help guide the town's future decision making relative to the protection of natural resources and the implementation of recreation projects that best meet the needs of the residents. A department of Conservation Services (DCS) approved Plan will make the town eligible to receive DCS grant money. In order to maintain eligibility for the funds, the Plan must be updated every five years.

2. What are the components of the OSRP?

An OSRP must contain, at a minimum, the following components in order to be approved by DCS:

Section 1 Plan Summary

Section 2 Introduction

- A. Statement of Purpose
- B. Planning Process and Public Participation.
- C. Accomplishments Since 2002

Section 3 Community Setting

- A. Regional Context
- B. History of the Community
- C. Population Characteristics
- D. Growth and Development Patterns
- E. Infrastructure

Section 4 Environmental Inventory and Analysis

- A Geology, Soils and Topography

- B. Landscape Character
- C. Water Resources
- D. Vegetation
- E. Rare, Threatened and Endangered Species
- F. Fisheries and Wildlife
- G. Corridors
- H. Scenic Resources and Unique Environments
- I. Areas of Critical Environmental Concern
- J. Environmental Problems

Section 5 Inventory of Lands of Conservation and Recreation Interest

- A. Permanently Protected Lands
- B. Limited Protection or Unprotected
- C. Recreation Programs

Section 6 Community Vision

- A. Description of the Process
- B. Statement of Open Space and Recreation Goals

Section 7 Analysis of Needs

- A. Summary of Resource Protection Needs
- B. Summary of Community Needs
- C. Management Needs

Section 8 Goals and Objectives

Section 9 Five-Year Action Plan

Section 10 Public Review and Comments

Section 11 References

3. Purpose of the Visioning Session

A visioning session emphasizes brainstorming and open discussion, and in the case of the Open Space and Recreation Plan, the results will be used to help develop the goals and objectives of the Plan. During the visioning session, [participants will be asked to address the following:

- What are the Town's strengths/assets in terms of Open Space and Recreation?
- What are the Community's weaknesses or liabilities?
- What opportunities does the Town have to improve upon or expand its existing open space and recreation facilities and programs?

- What challenges lie ahead? What concerns needs to be addressed in order to move forward or address the Town's open space and recreation needs?

4. Are there any additional opportunities for the public to participate in the development of the OSRP?

There are several ways in which the interested citizens can participate in the development of the Plan: a written survey will be distributed and posted on the Town's website; a public hearing will be held when the draft Plan is prepared and the Open Space Committee will meet periodically to discuss the plan and its development. These meetings are open to the public and the meeting notices are posted at the Town Clerk's office and on NMCOG's website at www.NMCOG.org.

Tyngsborough Open Space and Recreation Plan

Visioning Session Summary

Overview

The Visioning Session was conducted to provide input and assistance in the development of the Open Space and Recreation Plan goals and objectives. The session was held on September 25, 2008 at 7:00 P.M. in the Selectmen's Meeting Room, Tyngsborough Town Hall, 25 Bryants Lane and emphasized brainstorming and open discussion. The session was attended by twenty participants who were asked to address the following:

- What are the Town's strengths /assets in terms of Open Space and Recreation facilities and programs?
- What are the community's weaknesses and liabilities in this regard?
- What opportunities does the Town have to improve upon or expand its existing open space and recreation facilities and/or programs?
- What challenges lie ahead? What concerns need to be addressed in order to move forward to meet the Town's open space and recreation needs?

Strengths and Assets

The following were identified as the community's strengths and/or assets relative to open space and recreation facilities and programs:

- Recreation programs: The Recreation Program Building/Office on Westford Road offers a central location for the operation of all recreation department programs, as well as easy, ADA compatible access for town residents.
- Campground: The new campground project offers significant potential for expanding recreation programs utilizing the Merrimack River.
- Maintenance: The cooperation of the Town Highway Department in many projects especially the maintenance and upkeep of the Town Beach.
- Recreation areas: Wicasse Park and Bridge Meadow are well known and utilized.

- **Athletic Facilities:** The planned completion of the facilities at the Elementary School offer significant recreation potential, while the current High School fields are used year round.
- **Community Center:** The Community Center offers many recreational opportunities and serves as the Town's Senior Center.
- **Town sponsored events:** The variety of recreation events sponsored by the town, e.g. tree lighting, the night of lights and the Pig and Apple Fest are well attended.
- **Water sports:** Town Beach and Lake Muscuppic have been cleaned of debris and the water quality improved. The Merrimack River and Lake Massapoag are seen as offering water oriented recreational opportunities.
- **State Forest:** The State Forest and the town hiking trails offer opportunities for exercise in a natural setting.
- **Historic properties:** The Sherburne Property is a town asset.

The following were identified as the community's weaknesses and liabilities relative to open space and recreation facilities and programs:

- **Blight:** The blighted town center and the closed bridge reflect negatively on the town.
- **Field space:** There is a lack of athletic fields and facilities, especially for basketball and tennis.
- **Incomplete projects:** The incomplete athletic fields at the Elementary School leave a significant gap in the availability of athletic fields and facilities.
- **Maintenance:** There is a lack of routine maintenance to many of the Town's facilities, due to a lack of manpower and funding for summer help.
- **Adult programs:** There is a dearth of adult athletic programs, both active and passive.
- **Children facilities:** There are no tot lots, inadequate playground space and equipment, and insufficient park land.

- Access: There is no public access to the Merrimack River for boating or other recreational pursuits.
- ADA compliance: While most activities are ADA compliant, there is a lack of ADA compliant restroom facilities.
- Advocacy: There is no local, non-profit advocacy group for open space or recreational programs.

The following were identified as opportunities that the Town does have to improve upon or expand its existing open space and recreation facilities and/or programs:

- New construction: The construction of a new senior center will present an opportunity for the adaptive reuse of the current building.
- Project completion: The planned completion of the athletic fields at the Elementary School and the campground on the Merrimack River will significantly add to the ability of the Town to offer increased recreational fields and opportunities.
- Town Center: The new Town Center Master Plan addresses the issue of the revitalization of the area features including its historic buildings.
- Volunteers: The private youth sports organizations that contribute to the successful soccer, baseball, lacrosse and football cheerleading programs need to be supported in their efforts.
- Clean water: The ability to maintain the water quality of Lake Muscuppic will increase the utilization of this valuable water resource.

The following were identified as challenges that need to be addressed in order to move forward in meeting the Town's open space and recreation needs:

- Funding: The most overriding concern, and the greatest challenge, is the lack of finances needed to carry out desired plans and programs, and to provide for the necessary personnel for maintenance and
- Sidewalks: The provision of sidewalks, especially around the schools, is an unmet need.
- Town Center: The revitalization of the Town Center remains a focus of the municipality.

- Volunteers: There is a lack of volunteers to serve on Town boards and commissions.
- Town Staff: The lack of professional staffing in Town Hall, such as a Town Engineer or Town Planner, limits the Town's capacity to handle open space and recreation projects.

Challenges and Concerns

The following were identified as challenges that lie ahead and the concerns that need to be addressed in order to move forward to meet the Town's open space and recreation needs:

- Funding: The most overriding concern, and the greatest challenge, is the finances necessary to carry out desired plans and programs and to provide the necessary personnel for maintenance and program operation as well as professional town staff.
- Sidewalks: The provision of sidewalks, especially around the schools, is an unmet need.
- Town Center: The revitalization of the Town Center remains a focus of the municipality.
- Volunteers: There is a lack of volunteers to serve on Town boards and commissions.

APPENDIX D

FRIENDS OF THE FOREST INFORMATION

Friends of the Forest

About the Forest

[Home](#)
[About the Forest](#)
[About Us](#)
[Contact Us](#)
[Calendar and Events](#)
[Community News](#)
[Trail Map](#)
[Hunting schedule and info](#)
[Anne Welcome Woods](#)
[Links to Websites and Resources](#)
[Photo Album Page](#)



Lowell-Dracut-Tyngsboro State Forest DCR Website
Massachusetts Dept of Fish and Game

NATURAL FEATURES

The forest is large enough to enclose a natural drainage system all of its own

- hills and springs as a source of water, with brooks, swamps and lakes that act as holding basins. Just outside the forest to the south, this drainage area joins the larger system of the Merrimac watershed. Visitors will also find these natural features in the forest: Whortleberry Hill, Huckleberry (Gage) Hill, Claypit (Second) Brook, Scarlet Brook, Flagg Meadow Brook, Spruce Swamp and Lake Althea (Mud Pond). The forest is the habitat of mammal species, large and small that include coyote, fox -- silver and red -- rabbits, raccoons, squirrels and deer, and even the occasional moose. There are also several beaver lodges in this drainage system.

HISTORIC SITES

The forest is a unique place to explore the history of the area and the human interaction with the landscape. The indigenous people in this area, the Pawtucket and Wamesit tribes of the Pennacook Nation called this region Augumtcooke.

A recent archeological dig unearthed the remains of a native person and has verified human

occupation of the forest dating back nearly nine thousand years, to the Early Archaic Period. In the forest you can find evidence of numerous populations that have live in or around it, from the earliest settlements just mentioned to more recent developments in the nineteenth and twentieth centuries.

LANDMARKS

Whortleberry/Huckleberry Hills

Though a modest 350 feet above sea level, Whortleberry Hill is the highest elevation area in the forest. Huckleberry (Gage) Hill, next to it, is fifty feet lower. Both hills are in Dracut Township.

Technically they are called 'drumlins,' formations made-up of debris deposited and left behind when the Wisconsin Glacier withdrew from this region -- about 15,000 years ago. The hills are now covered with birch, oak, and pine which dominate this third-growth forestation. The hills offer their loveliest view looking north, from below Spruce Swamp, a thousand yards away.

Vernal Pools

Vernal pools are transient pools of water, or temporary ponds. They appear late in winter and during the early spring thaw. Because they come and go in relatively little time, lasting perhaps two or three months, the inhabitants of vernal pools must complete their reproductive activity in quick order. Some organisms are adapted so they live only in temporary pond conditions. Frogs and salamanders arrive in March and April, court, mate, deposit their gelatinous eggs, and depart. In April, the waters of these vernal pools are alive with small crustaceans. For most of the year, however, these pools are nearly dry. Eggs of shrimp, cysts of flatworms, and dormant mollusks lie buried in the bottom mud. The diversity of organisms alone make these ephemeral pools worth further study and protection.

Beaver Lodge

Nearly hunted to extinction, the beaver has made a remarkable comeback in recent decades. One reason for this return is the secure shelter it makes for itself, the beaver lodge. The lodge is built in flowing water from trees and branches felled by the beaver, creating a dam that makes its own pond where the beaver can find a reliable food supply. A beaver lodge is made of one room but it is expanded as needed to accommodate larger communities. The lodge is accessible only underwater, making it secure from possible predators.

Spruce Swamp

Spruce Swamp used to be Indian Head Lake before the construction of Carney Road interrupted the natural flow. Like all wetlands, swamps abound in a variety of lifeforms. Fish, amphibians, insects, birds, and several varieties of plants thrive in this environment. The ecology of the swamp begins with the abundant nutrients that are found in areas of aquatic vegetation. Among the plants at Spruce Swamp are white water lilly, yellow dock, and pickerel weed. One plant in the Forest is the purple iris, known locally as flagg. The name has been applied to Flagg Meadow Brook which rises in the Forest and flows into the Merrimack. Among the reptile population of Spruce Swamp are varieties of turtle (Painted, Box, Snapping) and snakes (Decay, Black Race). Bird species include ducks, osprey, eagles, geese and owls. Great Blue Heron have been sighted here, as well as White Egret on occasion. Recently, a bird-watching party reported sighting 'only' 32 varieties on a single morning's outing.

Carney Road/Pine Stand

Carney Road connects Totman Road with Trotting Park Road. The road was built in 1936 for fire protection service. Two years later, a hurricane caused severe damage in the forest. Consequently, this part of the forest was logged and reforested with the stands of pine that you see from Carney Road. Reforestration continued into the 1950s. Many of these trees are Pennsylvania red pine which is not native to this area. They were planted as a cash crop, to be harvested for use as telephone poles. That plan never reached fruition. Laid out at a time when the effect of roads on ecology was not understood, Carney Road was constructed bisecting Indian Head Lake which turned into a marsh-like area now known as Spruce Swamp.

Sites of the Greater Lowell Indian Cultural Association

Two sites, comprising about 250 acres, have particular meaning for members of Greater Lowell Indian Cultural Association (GLICA). The Association uses these locations for events that celebrate and commemorate the local Native American community. Some of these events mark the stages in the earth's yearly cycle of production and rest. There is a New Moon Festival every twenty-eight days, making for a thirteen month calendar. There are also Maple, Strawberry, Planting, and Harvest Festivals. Every year GLICA holds a Men's Weekend and a Women's Weekend. There is a Children's Day as well, for persons of either gender, twelve years of age and under. Most of these celebrations are open to the general public.

Quarries

In the area where glacial boulders were deposited, residents of the area quarried granite and gneiss originally for farm use and later, in the 1820s, as building material for Lowell's canal system and as foundation stone for the city's textile mills. There are over 70 quarry sites in the Forest including an existing ledge quarry where tourists may find tools for cutting the stone still embedded in the rock wall. In excavation quarries, the ledge had first to be exposed by digging before stone could be cut up and carted away. There were, then, three different sorts of quarry enterprise in the Forest: boulder, ledge, and excavation.

Sheep Rock

One of the large glacial boulders located in the Forest is called Sheep Rock, once belonging to George Carney whose land made up much of this part of the Forest. Legend has it that during a severe blizzard, the sheep belonging to farmer William Parham, found refuge in the overhang of the Rock, on its southern side. Because the sheep knew enough to get out of the wind, the shape of the rock and the direction of the wind worked together to make a snow drift that sheltered the animals in its hollow. The sheep survived several days without food, until rescued by local residents. The rock bears the inscription,

*Sheep Rock
George Carney
Born June 13, 1835 Died April 24, 1906*

Indian Head Rock

Another of the glacial boulders has been named "Indian Head Rock." This stone shows its distinctive profile facing North to visitors standing on the trail. A natural spring nearby was the source used by The Indian Head Water Company. This company and others in the Forest did a thriving business in Lowell because the City's water was contaminated by the operations of the textile mills.

Saw Mill Dams

Along Claypit Brook -- also called Second Brook -- are the remnants of three dams built from local stone much like the stone walls you see in the Forest. The three dams created a mill pond of approximately 100 acres. This created an adequate supply of water for the sawmill operated at the site during the 1700s by Timothy Coburn of Dracut. A few artifacts from that operation were found as late as the 1970s. There were hundreds of these mill sites built

throughout New England during the two hundred years after European settlement -- beginning in the 1630s. The combination of vast forests which covered North America and abundant water power made lumbering a leading enterprise. In this way, as in many ways, the Lowell-Dracut-Tyngsboro State Forest is typical of the history of the region.

PDF File of Forest Brochure

APPENDIX E

GLOSSARY OF TERMS

**REPORTABLE HAZARDOUS MATERIAL
RELEASES**

Reportable Release Lookup

The search returned 54 results. Search Keywords >> Town: "TYNGSBOROUGH" | Sorted by: "Town, Address, RTN" | Data last updated: 01/28/2009

RTN	City/Town	Release Address	Site Name/Location Aid	Reporting Category	Notification Date	Compliance Status	Date	Phase	RAO Class	Chemical Type	Site File Viewer
3-2010348	TYNGSBOROUGH	11 12 WATERWAY PL	DESOSA FAMILY TRUST	120 DY	6/17/1994	DPS	12/29/2005	PHASE II		Hazardous Material	
3-2011257	TYNGSBOROUGH	95 97 WESTFORD RD	PROPERTY	120 DY	5/30/1996	REMOPS	2/20/2007	PHASE V		Oil and Hazardous Material	Yes
3-2013702	TYNGSBOROUGH	95 97 WESTFORD RD	MOBIL FACILITY NO 12369	72 HR	2/21/2001	RTN CLOSED	7/13/2004	PHASE II		Hazardous Material	
3-2014645	TYNGSBOROUGH	95 97 WESTFORD RD	MOBIL GAS STATION	TWO HR	1/25/2003	RTN CLOSED	5/27/2004			Oil	
3-2014322	TYNGSBOROUGH	26 CUMMINGS RD	PICONICS INC	72 HR	5/29/2002	RAO	11/28/2003	PHASE II	B1	Hazardous Material	
3-2014130	TYNGSBOROUGH	33 DAVIS ST	POLE 8	TWO HR	12/19/2001	RAO	2/22/2002		A1		
3-2011439	TYNGSBOROUGH	DUNSTABLE RD	TRANSFORMER RELEASE	TWO HR	10/15/1996	RAO	12/16/1996		A2	Oil	
3-0025866	TYNGSBOROUGH	385 DUNSTABLE RD	NO LOCATION AID	TWO HR	5/8/2006	RAO	7/6/2006		A1	Oil	Yes
3-2000135	TYNGSBOROUGH	385 DUNSTABLE RD	BFI	NONE	7/1/1985	RAO	10/31/1997		A3	Oil and Hazardous Material	
3-2010921	TYNGSBOROUGH	385 DUNSTABLE RD	BFI FACILITY	72 HR	9/18/1995	RTN CLOSED	9/17/1996			Oil	
3-2000136	TYNGSBOROUGH	475-530 DUNSTABLE RD	CHARLES GEORGE LANDFILL	NONE	1/15/1987	TIER 1A	10/1/1993				
3-2011489	TYNGSBOROUGH	37 FOREST PARK AVE	NEAR LAKE MASCUPPIC	TWO HR	11/19/1996	RAO	1/17/1997		A2	Oil	
3-2012350	TYNGSBOROUGH	FROST RD	FROST RD VENTURI VAULT	TWO HR	4/13/1998	RAO	4/20/1999		A2	Hazardous Material	
3-0028230	TYNGSBOROUGH	8 INDUSTRIAL WAY	EL HARVEY FACILITY	TWO HR	12/22/2008	RAO	1/23/2009		A2	Oil	Yes
3-2013767	TYNGSBOROUGH	KENDALL RD	CONCRETE SYSTEMS	TWO HR	4/5/2001	RAO	5/14/2001		A1	Oil	
3-2014581	TYNGSBOROUGH	45 KENDALL RD	LEE MARCHAND INC ROADWAY RELEASE	TWO HR	12/6/2002	RAO	7/9/2003		A1	Oil	
3-2015810	TYNGSBOROUGH	LAKE VIEW AND FROST ST	MOORES LUMBER YARDS & BUILDING CENTERS	TWO HR	7/6/2005	RAO	8/11/2005		A1		
3-2015022	TYNGSBOROUGH	117 LAKEVIEW AVE	JUDITH SWENSON	120 DY	11/21/2003	RAO	11/21/2003		B1	Oil	
3-2011751	TYNGSBOROUGH	1 LAKEVIEW ST	BIRCHMONT ST	TWO HR	6/5/1997	RAO	7/18/1997		A1		

3-2001063	TYNGSBORO UGH	66 MASCUPPIC TRL	RESIDENCE	NONE	8/6/1993	RAO	2/8/1996	PHASE II	A2	Oil	
3-2001046	TYNGSBORO UGH	75 MASCUPPIC TRL	RESIDENTIAL PROPERTY	NONE	7/15/1993	RAO	3/23/1995	PHASE II	A3	Oil	
3-2000137	TYNGSBORO UGH	257 MIDDLESEX RD	TYNGSBORO UGH TIRE AND GAS INC	NONE	1/15/1987	RAO	8/16/2001	PHASE III	B1	Oil	
3-2015340	TYNGSBORO UGH	271 MIDDLESEX RD	USED CAR DEALERSHIP	120 DY	7/23/2004	REMOPS	10/26/2007	PHASE V		Oil and Hazardous Material	Yes
3-2000392	TYNGSBORO UGH	292 MIDDLESEX RD	292 MIDDLESEX RD PROPERTY	NONE	4/15/1988	TIER1D	7/7/2008				
3-0027657	TYNGSBORO UGH	342 MIDDLESEX RD	NO LOCATION AID	TWO HR	4/28/2008	UNCLASSIFIED	4/28/2008			Hazardous Material	Yes
3-0027919	TYNGSBORO UGH	342 MIDDLESEX RD	RESIDENCE	TWO HR	8/21/2008	UNCLASSIFIED	8/21/2008			Hazardous Material	Yes
3-0028098	TYNGSBORO UGH	342 MIDDLESEX RD	NO LOCATION AID	120 DY	10/21/2008	UNCLASSIFIED	10/21/2008			Hazardous Material	Yes
3-2012737	TYNGSBORO UGH	397 MIDDLESEX RD	TEXACO STATION	TWO HR	4/2/1999	RAO	2/25/2003	PHASE V	A2	Hazardous Material	
3-2013877	TYNGSBORO UGH	397 MIDDLESEX RD	TEXACO STA	TWO HR	6/25/2001	RAO	2/25/2003			Hazardous Material	
3-2014066	TYNGSBORO UGH	397 MIDDLESEX RD	MIDDLESEX PETROLEUM	72 HR	10/26/2001	RAO	2/25/2003			Hazardous Material	
3-2014845	TYNGSBORO UGH	397 MIDDLESEX RD	TEXACO GAS STATION	TWO HR	7/18/2003	RAO	10/6/2003		A1	Oil	
3-2014572	TYNGSBORO UGH	431 MIDDLESEX RD	SMOKEY BONES RESTAURANT	TWO HR	12/2/2002	RAO	2/7/2003		A1	Oil	
3-2010341	TYNGSBORO UGH	440 MIDDLESEX RD	TJ MAXX PLAZA	72 HR	6/16/1994	RAO	6/22/1995		A2	Hazardous Material	
3-2010743	TYNGSBORO UGH	440 MIDDLESEX RD	TJ MAXX PLAZA	72 HR	4/21/1995	RAO	4/23/1996		B1	Hazardous Material	
3-2000814	TYNGSBORO UGH	451 MIDDLESEX RD	STATE LINE SUNOCO FMR	NONE	4/15/1991	RAO	5/17/2004	PHASE IV	A2		
3-2012843	TYNGSBORO UGH	397 MIDDLESEX ST	TEXACO STA	TWO HR	6/24/1999	RAO	2/25/2003			Hazardous Material	
3-2015734	TYNGSBORO UGH	123 NORRIS RD	BROWNING FERRIS INDUSTRIES	TWO HR	5/3/2005	RAO	10/7/2005		A1	Oil	
3-2012727	TYNGSBORO UGH	54 PAWTUCKET BLVD	STATELINE AUTO RECOVERY	72 HR	3/25/1999	TIER 1C	7/18/2000	PHASE IV		Oil	Yes
3-2013538	TYNGSBORO UGH	54 PAWTUCKET BLVD	STATE LINE AUTO RECOVERY CORP	72 HR	11/2/2000	RTN CLOSED	12/29/2000			Oil	
3-2016213	TYNGSBORO UGH	54 PAWTUCKET BLVD	FMR STATELINE RECOVERY SERVICES	72 HR	4/26/2006	RTN CLOSED	6/26/2006			Hazardous Material	
3-2014305	TYNGSBORO UGH	58 PAWTUCKET BLVD	TRANSFORMER RELEASE	TWO HR	5/12/2002	RAO	7/3/2002		A2		

3-2013840	TYNGSBORO UGH	17 PHALANX ST	MARK DESOUSA FAMILY TRUST	TWO HR	6/1/2001	DPS	7/17/2006			Hazardous Material
3-2014189	TYNGSBORO UGH	RTE 3 @ EXIT 35	SOUTHBOU ND HIGH SPEED LANE	TWO HR	2/11/2002	RAO	4/12/2002	A2		Oil
3-2011432	TYNGSBORO UGH	SCRIBNER RD	POLE 3	TWO HR	10/11/1996	RAO	12/10/1996	A1		Oil
3-2012345	TYNGSBORO UGH	SCRIBNER RD	POLE 2	TWO HR	8/12/1998	RAO	10/19/1998	A2		Oil
3-2014192	TYNGSBORO UGH	10 SPRUCE AVE	RESIDENCE	TWO HR	2/19/2002	RAO	1/31/2003	A2		Oil
3-2000428	TYNGSBORO UGH	WESTTECH DR	WEST TECH INDUSTRIAL PARK	NONE	10/15/1988	WCSPRM	1/13/1993			Oil
3-0026790	TYNGSBORO UGH	95 WESTFORD RD	MOBIL GASOLINE STATION	TWO HR	4/27/2007	RAO	8/29/2007	A1		Oil Yes
3-0026243	TYNGSBORO UGH	95-97 WESTFORD RD	MOBIL FACILITY S/S #01-E5Y	72 HR	9/21/2006	RAO	11/20/2006	A1		Oil
3-2014757	TYNGSBORO UGH	95-97 WESTFORD RD	EXXON STATION	TWO HR	5/6/2003	RAO	9/12/2003	A1		Oil
3-2013640	TYNGSBORO UGH	97-95 WESTFORD RD	EXXON MOBIL STA E54	72 HR	1/2/2001	RAO	2/27/2001	A1		Oil
3-2000216	TYNGSBORO UGH	235 WESTFORD RD	PROPERTY LOT 15 & 16	NONE	7/15/1993	DEPNDS	9/2/1993			
3-2014504	TYNGSBORO UGH	129 WILLOWDALE RD	TRANSFORMER RELEASE POLE 23-49	TWO HR	10/6/2002	RAO	12/4/2002	A2		
3-2011080	TYNGSBORO UGH	2 WORDEN RD	RESIDENCE	TWO HR	1/24/1996	RAO	1/30/1997	A2		Oil

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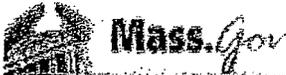
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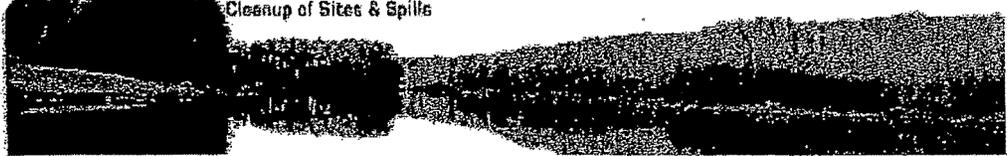
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Service Center

MassDEP Quick Links:



Definitions of Fields Listed in Search Results

Release Tracking Number (RTN):

The number assigned to every site /reportable release. This number is preceded by 1, 2, 3, or 4 depending on the region where the release/site is located (e.g., 3-0001234). Corresponding regions are:

- Western Region
- Central Region
- Northeast Region
- Southeast Region

Additional information about RTNs may be found at toknow.htm.

City/Town:

The city or town where the release of oil or hazardous material occurred. Boston and Barnstable are also broken down by neighborhood or village (e.g., Boston-Brighton, Barnstable-Hyannis)

Release Address:

The number and street that most accurately describe the site/release location.

Site Name/Location Aid:

Describes the site in terms of its location, use, or type ("Bob's Gas Station" or "Across from Building 1").

Reporting Category:

How quickly a release must be reported to DEP. The potential severity of a release dictates how soon it must be reported. Reporting categories are 2 hours, 72 hours, and 120 days.

Notification Date:

The date DEP uses to establish 21E deadlines. This date is usually the date when the site/release was reported to DEP. However, for some sites, especially those dating before 1993, the notification date may be later than the date DEP first learned about the site.

Compliance Status:

21E sites compliance status definitions:

- **ADEQUATE REG (Adequately Regulated):** A site/release where response

actions are deemed adequately regulated under another DEP program or by another government agency.

- **DEPMOU (Memorandum of Understanding):** A site/release where DEP has a Memorandum of Understanding or other written agreement with a responsible party.
- **DPS (Downgradient Property Status):** A site where a DPS Submittal to DEP has stated that contamination on the property is coming from an upgradient property.
- **DPSTRM (Downgradient Property Status Terminated):** A site where Downgradient Property Status has been terminated.
- **INVSUB (Invalid Submittal):** An RAO Statement that was submitted for the site has been determined to be invalid by DEP.
- **RAO (Response Action Outcome):** A site/release where an RAO Statement was submitted. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.
- **REMOPS (Remedy Operation Status):** A site where a remedial system which relies upon Active Operation and Maintenance is being operated for the purpose of achieving a Permanent Solution.
- **RTN Closed:** Future response actions addressing the release associated with this Release Tracking Number (RTN) will be conducted as part of the response actions planned for the site under another "primary" RTN.
- **SPECPR (Special Project):** The site has Special Project status.
- **STMRET (Statement Retracted):** An RAO Statement that had been submitted for the site has been retracted.
- **TCLASS (Tier Classification):** A site/release where a Tier Classification Submittal was received, but the classification type has not been confirmed by DEP.

Note: Sites are usually Tier Classified using the Numerical Ranking System (NRS). The NRS scores sites on a point system based on a variety of factors. These include the site's complexity, the type of contamination, and the potential for human or environmental exposure to the contamination. In addition, some sites are automatically classified as Tier 1 sites if they pose an imminent hazard, affect public water supplies, or miss regulatory deadlines.

- **TIER 1A:** A site/release receiving a total NRS score equal to or greater than 550. These sites/releases require a permit and the person undertaking response actions must do so under direct DEP supervision.
- **TIER 1B:** A site/release receiving an NRS score of less than 550 and equal to or greater than 450. These sites/releases also require a permit, but response actions may be performed under the supervision of a Licensed Site Professional (LSP) without prior DEP approval.
- **TIER 1C:** A site/release receiving a total NRS score of less than 450 and equal to or greater than 350. A site/release receiving a total NRS score of less than 350, but which meets any of the Tier 1 Inclusionary Criteria specified in 310 CMR 40.0520(2)(a), is also classified a Tier 1C. These sites/releases also require a permit, but response actions may be performed under the supervision of an LSP without prior DEP approval.
- **TIER 2:** A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.



- **TIER 1D:** A site/release where the responsible party fails to provide a required submittal to DEP by a specified deadline. Note: formerly **Default Tier 1B**.
- **UNCLASSIFIED:** A release that has not reached its Tier Classification deadline (usually one year after it was reported), and where an RAO Statement, DPS Submittal, or Tier Classification Submittal has not been received by DEP.

The following definitions apply to sites that were reported to DEP prior to October 1993 and which were regulated under an older version of the MCP:

- **DEPNDS:** DEP Not a Disposal Site means that DEP has determined that these locations did not need to be reported and are not disposal sites.
- **DEPNFA:** DEP No Further Action means that response actions were conducted and DEP determined that no further action was needed for the site.
- **LSPNFA:** LSP No Further Action means that response actions were conducted and an LSP has determined that no further action was needed for the site.
- **PENNDNS:** Pending Not a Disposal Site means a document was submitted to DEP asserting that these locations did not need to be reported and are not disposal sites. These submittals are considered pending until DEP audits them.
- **PENNFA:** Pending No Further Action means a document was submitted to DEP asserting that a site assessment had determined that no further action was required. These submittals are considered pending until DEP audits them.
- **WCSPRM:** A Waiver Completion Statement has been submitted to DEP.

Compliance Status Date:

The date a release/site was listed as its current compliance status.

Phase:

Indicates the release/site cleanup phase.

- **No Phase:** Phase report not required or not submitted.
- **Phase I:** Initial Site Investigation, including Tier Classification. In this phase, samples are collected and analyzed to determine the types, amounts, and location of contaminants.
- **Phase II:** Comprehensive Site Assessment. During Phase II, the risks posed to public health, welfare, and the environment are determined.
- **Phase III:** Identification, Evaluation, and Selection of Comprehensive Remedial Action Alternatives and the Remedial Action Plan. In Phase III, cleanup options are assessed and a cleanup plan is selected.
- **Phase IV:** Implementation of the Selected Remedial Action Alternative and Remedy Implementation Plan. The cleanup plan is implemented in Phase IV.
- **Phase V:** Operation, Maintenance, and/or Monitoring. During Phase V, long-term treatment processes are implemented and monitored to track cleanup progress.

RAO Class:

The class of Remedial Action Outcome submitted to the Department:

- **Class A RAO**- Remedial work was completed and a level of "no significant risk" has been achieved.

A1: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

A2: A permanent solution has been achieved. Contamination has not been reduced to background.

A3: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

A4: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented. Contamination is located at a depth of >15 feet but evaluation has determined that it is not feasible to reduce it.

- **Class B RAO**- Site assessment indicates that "no significant risk" exists. No remedial work was necessary.

B1: Remedial actions have not been conducted because a level of No Significant Risk exists.

B2: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more Activity and use Limitations (AULs) that have been implemented.

B3: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more Activity and use Limitations (AULs) that have been implemented, and contamination is located at a depth of >15 feet but evaluation has determined that it is not feasible to reduce it.

- **Class C RAO**- A temporary cleanup. Although the site does not present a "substantial hazard", it has not reached a level of no significant risk. The site must be evaluated every five years to determine whether a Class A or Class B RAO is possible. All sites are expected eventually to receive a Class A or B RAO.

*Note: **Activity and Use Limitations (AULs)** are legal restrictions used in the context of the Massachusetts Contingency Plan to limit future exposure to contaminants remaining at a site. See [Guidance on Implementing Activity and Use Limitations](#) for additional information.*



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APPENDIX F

WILDLIFE, RARE AND ENDANGERED SPECIES INFORMATION

Tyngsborough Wildlife

In the list updated in November 2008 by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), the latest documented observation of threatened (T) endangered (E) or special concern (SC) species in Tyngsborough is as follows:

Threatened

- Blanding's Turtle (*Emydoidea blandingii*), last documented in 2006
- Clubtail dragonfly (*Stylurus spiniceps*) last documented in 2004

Special Concern

- Blue-Spotted Salamander (*Ambystoma laterale*), last documented in 1995
- Wood Turtle (*Clemmys insculpta*), last documented in 1999
- Cobra Clubtail Dragonfly (*Gomphus vastus*), last documented in 1917
- Twelve-Spotted Tiger Beetle (*Cicindela duodecimguttata*), last documented date unknown
- Purple Tiger Beetle (*Cicindela purpurea*), last documented in 2004.
- New England Blazing Star (*Liatris scariosa*) last documented in 1915
- Umber Shadowdragon (*Neurocordulia obsoleta*) last documented in 2004

Endangered

- New Jersey Tea Inchworm (*Apodrepanulatrix liberaria*), last documented in 1918
- Riverine Clubtail (*Stylurus amnicola*) last documented in 2004

An "endangered" species (E) is a native species that is in danger of extinction throughout all or part of its range or which is in danger of extirpation from Massachusetts, as documented by biological research and inventory.

A "threatened" species (T) is a native species that is likely to become endangered in the foreseeable future, or which is declining or rare as documented by biological research and inventory.

A "special concern" species (SC) is a native species that has been documented by biological research and inventory to have suffered a decline that could threaten the species if allowed to continue unchecked, or that occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become threatened within Massachusetts.

(Definitions are from the NHESP.)

The following is a list of Amphibians, Reptiles, Birds, and Mammals, currently believed to be present within the Town. Species are listed in alphabetical order by common name; bird groupings are based generally and broadly on accepted relationships. The list does not distinguish between common and rare species, or, in the case of birds, among over-wintering, migratory, breeding, and year-round populations. Residents are encouraged to report to the Open Space and Recreation Plan Committee any sightings of rare or new species. Names are taken from Richard M. DeGraaf & Mariko Yamasaki, 2001, New England Wildlife, University Press of New England, Hanover, NH.

(I: introduced; E: endangered; SC: special concern; T: threatened)

AMPHIBIANS

Blue-Spotted Salamander (*Ambystoma laterale*)
Bullfrog (*Rana catesbeiana*)
Eastern American Toad (*Bufo americanus*)
Gray Treefrog (*Hyla versicolor*)
Green Frog (*Rana clamitans melanota*)
Northern Leopard Frog (*Rana pipiens*)
Northern Red-Backed Salamander (*Plethodon cinereus*)
Northern Spring Peeper (*Pseudacris crucifer crucifer*)
Northern Two-lined Salamander (*Eurycea bislineata*)
Pickerel Frog (*Rana palustris*)
Red-Spotted Newt (*Notophthalmus viridescens viridescens*)
Spotted Salamander (*Ambystoma maculatum*)
Wood Frog (*Rana sylvatica*)

REPTILES

Blanding's Turtle (*Emydoidea blandingii*) (T)
Common Musk Turtle (*Sternotherus odoratus*)
Common Snapping Turtle (*Chelydra serpentina serpentina*)
Eastern Garter Snake (*Thamnophis sirtalis sirtalis*)
Eastern Milk Snake (*Lampropeltis triangulum triangulum*)
Eastern Painted Turtle (*Chrysemys picta picta*)
Northern Black Racer (snake) (*Coluber constrictor constrictor*)
Northern Water Snake (*Nerodia sipedon sipedon*)
Spotted Turtle (*Clemmys guttata*) (SC)
Wood Turtle (*Clemmys insculpta*) (SC)

MAMMALS

Beaver (*Castor canadensis*)
Big Brown Bat (*Eptesicus fuscus*)
Black Bear (*Ursus americanus*)
Canada Porcupine (*Erethizon dorsatum*)
Coyote (*Canis latrans*)
Eastern Chipmunk (*Tamias striatus*)
Eastern Cottontail (Rabbit) (*Sylvilagus floridanus*)
Eastern Gray Squirrel (*Sciurus carolinensis*)
Eastern Mole (*Scalopus aquaticus*)
Ermine (Short-tailed Weasel) (*Mustela erminea*)
Fisher (*Martes pennanti*)
Gray Fox (*Urocyon cinereoargenteus*)
House Mouse (*Mus musculus*)
Long-Tailed Weasel (*Mustela frenata*)
Masked Shrew (*Sorex cinereus*)
Meadow Jumping Mouse (*Zapus hudsonius*)
Meadow Vole (*Microtus pennsylvanicus*)
Mink (*Mustela vison*)
Moose (*Alces alces*)
Muskrat (*Ondatra zibethicus*)
Norway Rat (*Rattus norvegicus*)
Porcupine (*Erethizon dorsatum*)
Raccoon (*Procyon lotor*)
Red Fox (*Vulpes vulpes*)
Red Squirrel (*Tamiasciurus hudsonicus*)
River Otter (*Lutra canadensis*)
Southern Red-Backed Vole (*Clethrionomys gapperi*)
Southern Flying Squirrel (*Glaucomys volans*)
Striped Skunk (*Mephitis mephitis*)
Virginia Opossum (*Didelphis virginiana*)
White-Footed Mouse (*Peromyscus sp.*)
White-Tailed Deer (*Odocoileus virginianus*)
Woodchuck ("Groundhog") (*Marmota monax*)

BIRDS

Water Birds, Shorebirds

American Black Duck (*Anas rubripes*)
Blue-Winged Teal (*Anas discors*)
Canada Goose (*Branta canadensis*)
Common Merganser (*Mergus merganser*)
Common Goldeneye (*Bucephala clangula*)

Double-Crested Cormorant (*Phalacrocorax auritus*)
Great Blue Heron (*Ardea herodias*)
Great Egret (*Ardea alba*)
Green Heron (*Butorides virescens*)
Green-Winged Teal (*Anas crecca*)
Herring Gull (*Larus argentatus*)
Hooded Merganser (*Lophodytes cucullatus*)
Mallard (*Anas platyrhynchos*)
Ring-Necked Duck (*Aythya collaris*)
Spotted Sandpiper (*Actitis macularia*)
Wood Duck (*Aix sponsa*)

Game Birds, Pigeons, Doves, etc.

American Woodcock (*Scolopax minor*)
Common Snipe (*Gallinago gallinago*)
Killdeer (*Charadrius vociferus*)
Mourning Dove (*Zenaida macroura*)
Northern Bobwhite (*Colinus virginianus*)
Ring-Necked Pheasant (*Phasianus colchicus*) (I)
Rock Dove ("Pigeon") (*Columba livia*) (I)
Ruffed Grouse ("Partridge") (*Bonasa umbellus*)
Wild Turkey (*Meleagris gallopavo*)

Hawks, Owls, Eagles, Vultures

American Kestrel ("Sparrow Hawk") (*Falco sparverius*)
Bald Eagle (*Haliaeetus leucocephalus*) (E)
Barn Owl (*Tyto alba*)
Barred Owl (*Strix varia*)
Cooper's ("Chicken") Hawk (*Accipiter cooperi*)
Eastern Screech Owl (*Otus asio*)
Great-Horned Owl (*Bubo virginianus*)
Merlin ("Pigeon Hawk") (*Falco columbarius*)
Northern Harrier ("Marsh Hawk") (*Circus cyaneus*) (T)
Northern Saw-Whet Owl (*Aegolius acadicus*)
Osprey (*Pandion haliaetus*)
Red-Tailed Hawk (*Buteo jamaicensis*)
Sharp-Shinned Hawk (*Accipiter striatus*) (SC)
Turkey Vulture ("Buzzard") (*Cathartes aura*)

Swifts, Swallows, Kingfishers, Hummingbirds, Nighthawks

Barn Swallow (*Hirundo rustica*)

Belted Kingfisher (*Ceryle alcyon*)
Chimney Swift (*Chaetura pelagica*)
Cliff Swallow (*Petrochelidon pyrrhonota*)
Common Nighthawk (*Chordeiles minor*)
Northern Rough-Winged Swallow (*Stelgidopteryx serripennis*)
Purple Martin (*Progne subis*)
Ruby-Throated Hummingbird (*Archilochus colubris*)
Tree Swallow (*Tachycineta bicolor*)

**Blackbirds, Orioles, Meadowlarks, Tanagers, Crows, Jays, Cuckoos,
Starlings**

American Crow (*Corvus brachyrhynchos*)
Baltimore Oriole (*Icterus galbula*)
Black-Billed Cuckoo (*Coccyzus erythrophthalmus*)
Blue Jay (*Cyanocitta cristata*)
Bobolink (*Dolichonyx oryzivorus*)
Brown-Headed Cowbird (*Molothrus ater*)
Common Grackle (*Quiscalus quiscula*)
Eastern Meadowlark (*Sturnella magna*)
European Starling (*Sturnus vulgaris*) (I)
Red-Winged Blackbird (*Agelaius phoeniceus*)
Scarlet Tanager (*Piranga olivacea*)

Woodpeckers

Downy Woodpecker (*Picoides pubescens*)
Hairy Woodpecker (*Picoides villosus*)
Northern Flicker (*Colaptes auratus*)
Pileated Woodpecker (*Dryocopus pileatus*)
Red-bellied Woodpecker (*Melanerpes carolinus*)

Flycatchers, Larks, Waxwings

Cedar Waxwing (*Bombycilla cedrorum*)
Eastern Kingbird (*Tyrannus tyrannus*)
Eastern Phoebe (*Sayornis phoebe*)
Eastern Wood Pewee (*Contopus virens*)
Great Crested Flycatcher (*Myiarchus crinitus*)
Horned Lark (*Eremophila alpestris*)
Least Flycatcher (*Empidonax minimus*)
Olive-Sided Flycatcher (*Contopus cooperi*)

**Thrushes (incl. Robins, Bluebirds, Kinglets), Mimic Thrushes,
(Mockingbirds)**

American Robin (*Turdus migratorius*)
Eastern Bluebird (*Sialia sialis*)
Brown Thrasher (*Toxostoma rufum*)
Gray Catbird (*Dumetella carolinensis*)
Hermit Thrush (*Catharus guttatus*)
Northern Mockingbird (*Mimus polyglottos*)
Ruby-Crowned Kinglet (*Regulus calendula*)
Veery (*Catharus fuscescens*)
Wood Thrush (*Hylocichla mustelina*)

Chickadees, Titmice, Nuthatches, Creepers

Black-Capped Chickadee (*Poecile atricapillus*)
Brown Creeper (*Certhia americana*)
Red-Breasted Nuthatch (*Sitta canadensis*)
Tufted Titmouse (*Baeolophus bicolor*)
White-Breasted Nuthatch (*Sitta carolinensis*)

Sparrows, Finches, Grosbeaks, Buntings, Towhees, Juncos, Cardinals

American Goldfinch (*Carduelis tristis*)
American Tree Sparrow (*Spizella arborea*)
Chipping Sparrow (*Spizella passerina*)
Common Redpoll (*Carduelis flammea*)
Eastern Towhee (*Pipilo erythrophthalmus*)
Evening Grosbeak (*Coccothraustes vespertinus*)
Dark-Eyed Junco (*Junco hyemalis*)
Field Sparrow (*Spizella pusilla*)
Fox Sparrow (*Passerella iliaca*)
House Finch (*Carpodacus mexicanus*)
House ("English") Sparrow (*Passer domesticus*) (I)
Indigo Bunting (*Passerina cyanea*)
Northern Cardinal (*Cardinalis cardinalis*)
Pine Siskin (*Carduelis pinus*)
Purple Finch (*Carpodacus purpureus*)
Rose-Breasted Grosbeak (*Pheucticus ludovicianus*)
Savannah Sparrow (*Passerculus sandwichensis*)
Snow Bunting (*Plectrophenax nivalis*)
Song Sparrow (*Melospiza melodia*)
White-Crowned Sparrow (*Zonotrichia leucophrys*)
White-Throated Sparrow (*Zonotrichia albicollis*)

Wrens , Warblers, Vireos

American Redstart (*Setophaga ruticilla*)
Black-and-White Warbler (*Mniotilta varia*)
Blackburnian Warbler (*Dendroica fusca*)
Black-Throated Blue Warbler (*Dendroica caerulescens*)
Blue-Winged Warbler (*Vermivora pinus*)
Carolina Wren (*Thryothorus ludovicianus*)
Chestnut-Sided Warbler (*Dendroica pensylvanica*)
Common Yellowthroat (*Geothlypis trichas*)
House Wren (*Troglodytes aedon*)
Ovenbird (*Seiurus aurocapillus*)
Pine Warbler (*Dendroica pinus*)
Red-Eyed Vireo (*Vireo olivaceus*)
Winter Wren (*Troglodytes troglodytes*)
Yellow Warbler (*Dendroica petechia*)
Yellow-Rumped Warbler (*Dendroica coronata*)

APPENDIX G

SECTION 504 SELF EVALUATION

2008 TYNGSBOROUGH OPEN SPACE AND RECREATION PLAN UPDATE

SECTION 504 SELF-EVALUATION

Designation of Section 504 Coordinator:

The designated Section 504 Coordinator is Mark Dupell, Building Inspector.

Grievance Procedures:

Persons wishing 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 Tyngsborough, should make the complaint in writing according to the grievance procedure adopted by the Town and detailed in the attached document.

Public Notification Requirements:

Employment applications and advertising contain non-discriminatory statements. (See attached application.)

Participation of Individuals or Organizations Representing the Disabled Community:

The Town of Tyngsborough does not have a Disability Commission.

Program Accessibility:

All government, recreation, elder services and public service programs provided by the Town of Tyngsborough are readily accessible and useable by persons with disabilities. These programs are held in buildings and facilities that provide full accessibility.

Transition Plan:

Since the 2002 Open Space Recreation Plan, the town has been actively studying ways to upgrade facilities to accommodate disabled persons. These upgrades include:

- The Recreation Center, and associated parking, on Westford Road has been brought up to current ADA standards and is fully accessible.
- The athletic fields and restroom facilities at Bridge Meadow have been made ADA compliant.
- Bids for the completion of the athletic fields at the Tyngsborough Elementary School, including total ADA compliance, have been received, the funds approved and contracts signed. It is estimated that construction will be completed in the 2009 calendar year.

Facilities Inventory:

All recreation facilities associated with the public schools are fully ADA Compliant. Those facilities managed by the Conservation Commission or the Recreation Department are owned by the Town and all are listed on the facility inventory forms. Most of the land managed by the Conservation Commission contain extensive wetlands and are not intended for public access.

The accessibility of private facilities is unknown.

Employment Practices

Tyngsborough is an equal opportunity employer.



TOWN OF TYNGSBOROUGH

Office of the Town Administrator

25 Bryants Lane

Tyngsborough, MA 01879

Tel: 978 649-2300 Ext. 100 Fax: 978 649-2320

E-mail: rcashman@tyngsboroughma.gov

September 21, 2009

Melissa Cryan
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Tyngsborough Open Space and Recreation Plan

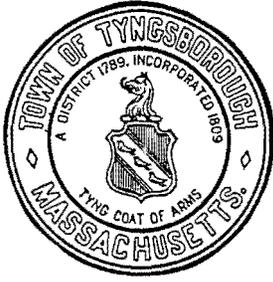
Dear Ms. Cryan:

Mark Dupell is the Building Commissioner in Tyngsborough. He also serves as the ADA Coordinator as prescribed in the enclosed policy entitled "Town of Tyngsborough, Massachusetts ADA Grievance Procedure".

If you have any questions, please let me know.

Sincerely,

Rosemary Cashman
Town Administrator



**Town of Tyngsborough
Building Department**

25 Bryants Lane
Tyngsborough, Massachusetts 01879
Office: (978) 649-2300 Ext. 112

March 20, 2009
Ms. Melissa Cryan
Executive Office of Energy & Environmental Affairs
100 Cambridge St., Suite 900
Boston, MA 02114

Re: Tyngsborough Open Space and Recreation Plan

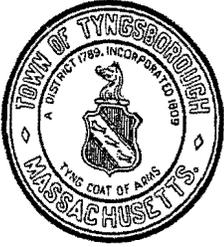
Dear Ms. Cryan,

I am writing to certify that the Town of Tyngsborough employment practices are in compliance with the Americans with Disabilities Act in the following categories: personnel actions, leave administration, training, tests, medical exams and questionnaires, social and recreation programs, fringe benefits, collective bargaining agreements and wage and salary administration.

Respectfully,

Mark E. Dupell
Building Commissioner
Town of Tyngs. ADA Coordinator

Cc/ Board of Selectmen
Rosemary Cashman, Town Administrator



Town of Tyngsborough

25 Bryants Lane
Tyngsborough, MA 01879-1003

Board of Selectmen
Town Administrator
Assistant Town Administrator

Tel: 978 649-2300 Ext. 100
Fax: 978 649-2320

TOWN OF TYNGSBOROUGH, MASSACHUSETTS

ADA GRIEVANCE PROCEDURE

(Adopted pursuant to the Americans with Disabilities Act)

28 CFR PART 35

Purpose:

The Board of Selectmen, on behalf of the Town of Tyngsborough, adopted this procedure on Monday, August 19, 2002. It is to ensure a prompt and equitable resolution of complaints by any Employee, Applicant, Service Recipient, or Member of the General Public that the Town of Tyngsborough has subjected him or a specific class of individuals to discrimination on the basis of disability. Any Grievant may, by her or himself file a complaint under 28 CFR Part 35 with a Federal Agency or the Town within 180 days of the date of the alleged discrimination, unless the time for filing is extended by the Town, or Federal Agency for good cause.

Applicability:

This grievance procedure has been adopted by all agencies of the Town of Tyngsborough, with the exception of the Tyngsborough Public Schools and the Tyngsborough Housing Authority, both of which maintain separate grievance policies in accordance with regulations issued by the Massachusetts Office of Education and the Massachusetts Executive Office of Education and Development, respectively.

Standing:

Any Town Employee, Applicant, Service Recipient or Member of the General Public may bring a grievance. Only the Grievant shall have official standing; that is, the grievance must be brought directly by the Grievant seeking redress or remedy, unless, the Grievant is unable, because of a disability, to represent her/himself. However, other family members or friends may accompany the Grievant at any meeting or hearing, not to exceed two (2), if she/he desires.

However, such others have no standing in this procedure and their participation may be limited at the discretion of the hearing officer.

This grievance policy does not supplant any provision of an existing collective bargaining agreement with an employee representation group. Any grievance processed (or in process) under the terms of collective bargaining agreement may not be submitted through this ADA Grievance procedure.

Legal Representation:

This grievance procedure is meant to be informal, and cannot be legally binding on either party. Therefore, legal representation on the behalf of either party is discouraged and shall only be allowed in special circumstances. Such legal representation obviously carries with it the threat of litigation and is thus contrary to the intent of this policy. Similarly, any grievance or complaint involving existing or threatened civil or criminal litigation cannot be addressed by this policy.

Procedure:

This procedure has been structured to try to resolve problems at the operating level; that is, at the level of the department or agency that would be responsible for implementing any action resulting from the grievance.

Step 1 – Department Level:

The Grievant shall first attempt to resolve the complaint at the level of the department exercising jurisdiction; i.e. with responsibility for the action, program, or service at issue. This grievance may be oral or written, and shall be submitted to the Department Head (or designee), who shall meet with the Grievant as necessary.

The Department Head shall notify the ADA Coordinator upon receipt of the grievance.

The Department Head shall issue a written finding, with copies to the Grievant and to the ADA Coordinator, within twenty (20) working days of submission of the grievance.

Step 2 – Building Inspector (ADA Coordinator):

If the complaint is not resolved to the satisfaction of the Grievant, or if the Department Head lacks authority or jurisdiction, the Grievant may submit the grievance to the ADA Coordinator.

ADA Grievance

Page three

Said submission must be in writing and filed within ten (10) working days of the finding of the Department Head.

The ADA Coordinator (or designee) shall meet with the Grievant and shall issue a written finding within twenty (20) working days of submission of the Step 2 grievance, and shall provide a copy of the finding to the Grievant.

Step 3 – The Board of Selectmen:

If the complaint is not resolved to the satisfaction of the Grievant, she/he may submit the grievance to the Board of Selectmen.

Said submission must be in writing and filed within ten (10) working days of the findings of the ADA Coordinator.

The Board of Selectmen (or designee) shall meet with the Grievant and shall issue a written finding within twenty (20) working days of the submission of the step 3 grievance and shall provide a copy of the findings to the Grievant.

Note:

Any decision or recommendation that requires approval of actions or commitment of funds beyond the level of normal departmental authority must be submitted by the ADA Coordinator to the appropriate Board or Commission, together with his recommendation for action. Said Board or Commission must approve the recommendation prior to implementation and must seek any necessary funding from the Town Meeting.

Tyngsborough Handicap Commission:

The Department Head and ADA Coordinator may refer a grievance or complaint or any part thereof to the Disability Commission for advice and for technical assistance and support on a formal or informal basis.

Adopted by the Board of Selectmen

Kevin V. O'Connor, Chairman

Rich B. Lemoine, Vice-Chair

Peter J. Nicosia, Clerk

Howard A. Hackett

Donald A. Lampron

APPLICATION FOR EMPLOYMENT

We consider applications for all positions without regard to race, color, religion, creed, sex, national origin, disability, sexual orientation, citizenship status or any other legally protected status.

(PLEASE PRINT)

Position(s) Applied For	Date of Application
How Did You Learn About Us?	
<input type="checkbox"/> Advertisement	<input type="checkbox"/> Relative
<input type="checkbox"/> Employment Agency	<input type="checkbox"/> Friend
	<input type="checkbox"/> Inquiry
	<input type="checkbox"/> Other _____

Last Name	First Name	Middle Name
Address	Number	Street
		City
		State
		Zip Code
Telephone Number(s)	Social Security Number (Voluntary)	

Best time to contact you at home is::..... AM
PM

If you are under 18 years of age, can you provide required proof of your eligibility to work? Yes No

Have you ever filed an application with us before? Yes No

..... If Yes, give date _____

Have you ever been employed with us before? Yes No

If Yes, give date _____

Do any of your friends or relatives, other than spouse, work here? Yes No

Are you currently employed? Yes No

May we contact your present employer? Yes No

Are you prevented from lawfully becoming employed in this country because of Visa or Immigration Status

Proof of citizenship or immigration status will be required upon employment. Yes No

Date available for work ___/___/___ What is your desired salary range? _____

Are you available to work: Full-Time (please indicate 1 2 3 shift)

Part-Time (please indicate Mornings Afternoon Evenings)

Temporary (please indicate dates available ___/___/___ - ___/___/___)

Are you currently on "lay-off" status and subject to recall? Yes No

Can you travel if a job requires it? Yes No

WE ARE AN EQUAL OPPORTUNITY EMPLOYER

EDUCATION

	Name and Address of School	Course of Study	Number of Years Completed	Diploma Degree
Elementary School				
High School				
Undergraduate College				
Graduate Professional				
Other (Specify)				

Describe any specialized training, apprenticeship, skills and extra-curricular activities.

Describe any job-related training received in the United States military.

EMPLOYMENT EXPERIENCE

Start with your present or last job. Include any job-related military service assignments and volunteer activities. You may exclude organizations which indicate race, color, religion, gender, national origin, disabilities or other protected status.

1.	Employer		Dates Employed		Work Performed
			From	To	
	Address				
	Telephone Number(s)		Hourly Rate/Salary		
			Starting	Final	
Job Title		Supervisor			
Reason for Leaving					
2.	Employer		Dates Employed		Work Performed
			From	To	
	Address				
	Telephone Number(s)		Hourly Rate/Salary		
			Starting	Final	
Job Title		Supervisor			
Reason for Leaving					
3.	Employer		Dates Employed		Work Performed
			From	To	
	Address				
	Telephone Number(s)		Hourly Rate/Salary		
			Starting	Final	
Job Title		Supervisor			
Reason for Leaving					
4.	Employer		Dates Employed		Work Performed
			From	To	
	Address				
	Telephone Number(s)		Hourly Rate/Salary		
			Starting	Final	
Job Title		Supervisor			
Reason for Leaving					

If you need additional space, please continue on a separate sheet of paper.

List professional, trade, business or civic activities and offices held.

You may exclude membership which would reveal gender, race, religion, national origin, age, ancestry, disability or other protected status:

FOR PERSONNEL DEPARTMENT USE ONLY

Position(s) Applied For Is Open: Yes No

Position(s) Considered For: _____

Date _____

NAME: _____ POSITION: _____ DATE: ____/____/____

APPLICANT'S STATEMENT

I certify that answers given herein are true and complete.

I authorize investigation of all statements contained in this application for employment as may be necessary in arriving at an employment decision.

This application for employment shall be considered active for a period of time not to exceed 45 days. Any applicant wishing to be considered for employment beyond this time period should inquire as to whether or not applications are being accepted at that time.

I hereby understand and acknowledge that, unless otherwise defined by applicable law, any employment relationship with this organization is of an "at will" nature, which means that the Employee may resign at any time and the Employer may discharge Employee at any time with or without cause. It is further understood that this "at will" employment relationship may not be changed by any written document or by conduct unless such change is specifically acknowledged in writing by an authorized executive of this organization.

In the event of employment, I understand that false or misleading information given in my application or interview(s) may result in discharge. I understand, also, that I am required to abide by all rules and regulations of the employer.

Signature of Applicant

Date

FOR PERSONNEL DEPARTMENT USE ONLY

Arrange Interview Yes No

Remarks _____

INTERVIEWER

DATE

Employed Yes No Date of Employment _____

Job Title _____ Hourly Rate/
Salary _____ Department _____

By _____
NAME AND TITLE DATE

This Application For Employment is sold for general use throughout the United States. Amsterdam Printing and Litho assumes no responsibility for the use of said form or any questions which, when asked by the employer of the job applicant, may violate State and/or Federal Law.

504 FACILITIES INVENTORY AND TRANSITION PLAN

The following inventory includes those facilities that are under the jurisdiction of the Conservation and/or Recreation Departments. Parcels not intended for public use or access, including most lands under the jurisdiction of the Conservation Commission, are not listed. In addition, all recreation programs and facilities associated with the public schools are held in buildings that have adequate access, parking and restrooms for disabled persons. Some of the facilities and programs that are on school property, and are ultimately under the control of the School Committee, are run by the Town's Recreation Department and are thus listed here for clarification.

Facility: Recreation/Conservation Office
Location: Town Hall
Manager: Board of Selectmen

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved Parking	Marked handicapped parking	Recreation Programs are accessible
Office	Standard office equipment	Not accessible	
Restrooms	Handicapped facility	Accessible	N/A

Facility: Town Beach
 Location: Muscuppic Trail
 Manager: Recreation Department.

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Unpaved	Not accessible	None
Beach	NA	Not accessible due to sand	None
Restrooms (portable)	Handicapped facility	Accessible	NA

Facility: Recreation Program Office
 Location: 120 Westford Road
 Manager: Recreation Department

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved with handicapped spaces	Accessible	NA
Recreation Offices	Standard office equipment	Accessible	NA
Restrooms	Handicapped facility	Accessible	N/A

Facility: Community Center Fields
 Location: Lakeview Ave
 Manager: Recreation Department

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved with handicapped spaces	Accessible	NA
Athletic Fields	NA	Accessible	NA
Restrooms Permanent and portable	Handicapped facility	Accessible	NA

Facility: Wicasse Field
 Location: 17 Wicasse Road
 Manager: Recreation Department

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved parking lot with handicapped spaces	Accessible	NA
Restrooms (portable)	Handicapped facility	Accessible	NA
Athletic Fields	NA	Accessible	NA
Playground	Standard playground equipment	Accessible	NA

Facility: Elementary School
 Location: 205 Westford Road
 Manager: Board of Selectmen/School Committee

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved parking lot with handicapped spaces	Accessible	NA
Athletic Fields (incomplete at this time)	NA	Accessible	Long range plans are to complete fields with full ADA compliance

Facility: Tyngsborough High School
 Location: Norris Road
 Manager: School Committee

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved parking lot with handicapped spaces	Accessible	NA
Restrooms	Handicapped facility	Accessible	NA
Athletic Fields/Basketball courts	NA	Accessible	NA

Facility: Lakeview School
 Location: 135 Coburn Road
 Manager: School Committee

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved parking lot with handicapped spaces	Accessible	NA
Restrooms	Handicapped facility	Accessible	NA
Athletic Fields	NA	Accessible	NA

Facility: Old Winslow School
 Location: Middlesex Road
 Manager: Board of Selectmen

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Paved parking lot with handicapped spaces	Accessible	NA
Restrooms (portable)	Handicapped facility	Accessible	NA
Athletic Fields	NA	Accessible	NA

Facility: Bridge Meadow
 Location: 12 Clover Hill Rd.
 Manager: Recreation Department

ACTIVITY	EQUIPMENT	ASSESSMENT	TRANSITION PLAN
Parking	Unpaved parking	Accessible	NA
Restrooms (portable)	Handicapped facility	Accessible	NA
Athletic Fields	NA	Accessible	NA

AUXILLARY AIDS CONTACT LIST

Sign Language Interpreters

Mass. Commission on Deaf and Hard of Hearing
150 Mt. Vernon Street, 5th Floor
Boston, MA 02108
617-740-1600
800-882-1155

Signers charge \$60-120/hr. Over 45 minutes, must hire two interpreters depending on the meeting situation.

Braille Translation

Center for the Blind and Visually Impaired
Lowell Association for the Blind
174 Central Street
Lowell, MA 01852
978-454-5704

Mass. Association for the Blind
200 Ivy Street
Brookline, MA 02146
617-738-5110

Devices for hard of hearing or any other aid requested

Mass. Office on Disability
One Ashburton Place
Boston, MA 02108
617-727-7440
800-322-2020 (TTY)

Information Center for individuals with disabilities

Fort Point Place
27-43 Wormwood St.
Boston, MA 02210
617-727-5540
800-462-5015