

City of Marlborough
Open Space and Recreation Plan
2003-2008

MARLBOROUGH OPEN SPACE AND RECREATION PLAN

2003-2008

FINAL
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SECTION 1

EXECUTIVE SUMMARY

OPEN SPACE AND RECREATION PLAN EXECUTIVE SUMMARY

Marlborough's geographic location and solid infrastructure combine with its areas of open space and natural resources to form a community with continued potential for economic and residential development. This open space plan identifies the community's natural and cultural resources and determines what steps the city must take to preserve those resources while allowing for more responsible development.

The primary goals, as noted in section eight of this Open Space and Recreation Plan, are to preserve the unique natural resources and character of the city, to educate citizens about the benefits of these resources and to provide adequate recreational opportunities for the community. This 2003 Open Space and Recreation plan provides the inventory, history, needs analysis and action plan to implement these goals over the next five years.

The plan includes:

- A summary of achievements of the 1997 Open Space Plan
- An overview of the City's cultural history, population characteristics, growth and development patterns.
- An environmental inventory of the community's natural resources, scenic features, water resources, plants and wildlife.
- An inventory of lands of conservation and recreation interest. Included are maps of all city and state land used for recreation and conservation, as well as undeveloped parcels to provide a visual reference about which land remains undeveloped in the city.
- An analysis of conservation and recreation needs within the city, including management, planning needs and acquisition recommendations, to protect natural resources, and provide adequate open space and recreational facilities for a diverse and growing population.
- List of goals and objectives with a 5-year action plan.

Major recommendations provided in this plan include:

- Develop a watershed plan for Ft. Meadow Reservoir to enhance and protect water quality of this recreational water resource.
- Acquire as appropriate undeveloped parcels of land surrounding Ft. Meadow watershed for passive recreation and watershed protection purposes
- Construct additional multi-purpose recreational fields to meet the recreational needs of the community.
- Implement and seek funding for the management plan for all existing and future recreational facilities.
- Construct amenities to the Assabet River Rail Trail including a trail head park, additional parking areas and a formal bike trail link to the down town.
- Seek passage of a local Wetland Protection Ordinance to provide better protection to our rivers, streams, wetlands and vernal pools resources within the city.
- Establish an "adopt-a-stream" program with abutters to the brooks and streams throughout the city and develop an action plan for upgrading and enhancing the water quality and wildlife habitat in these corridors.
- Aggressively pursue state and/or private grant funds for improvements to recreation facilities and acquisition of land for open space.

Although the city was quite successful in achieving protection of 379 acres of open space since 1997, and upgrading and expanding several recreational facilities, the development pressures on the last remaining parcels of land within the city are strong. It will be up to the Mayor, City Council, city boards, committees and residents to push for the protection of these last remaining parcels to save the remaining open character of the city. It is critical that the City protect specific areas of land through conservation restrictions, open space development and/or land acquisition to ensure that future generations can enjoy a quality of life with clean lakes, clean drinking water, abundant wildlife, wooded and paved trails for passive recreation and adequate opportunities for active recreation. In addition, it is critical for the city to manage these open spaces and recreational facilities for future generations.

SECTION 2

INTRODUCTION

A. Statement of Purpose

As Marlborough's popularity among both businesses and homeowners continues to grow, the city is faced with the possibility of losing the very characteristic that sets it apart from other industrialized communities in eastern and central Massachusetts: its acres of parks and undeveloped land. This Open Space Plan reflects Marlborough's desire to try and preserve both the city's "country character" and its hospitality toward businesses wishing to locate here. The challenge today is greater than ever, as open land is fast disappearing to development.

This document takes an inventory of the existing open space, recreation and natural resources currently available in the city. The plan then looks to the future and seeks to evaluate our current and future needs. The final section of the plan provides a realistic five- year action plan on the specific actions and tasks necessary in order to meet these goals.

Successes of 1997-2002 Open Space and Recreation Plan

The successes of the 1997 Open Space and Recreation Plan from June 1997 through January 2003 are summarized below. The Mayor, City Council, Recreation Commission, Conservation Commission along with other boards and commissions made great headway into achieving many of the goals set out in the 1997 Open Space and Recreation Plan. The community found the plan to be the guiding tool to move projects forward. Below is the list of these noteworthy achievements.

1. The Water Supply Protection District Ordinance was passed in 1997 to protect Lake Williams and Millham Reservoir.
2. 21 parcels totaling of 379 acres of open space and recreation land were acquired through purchase, special permit requirement, deed restriction or gifted to the City. A List of these acquisitions is shown in the box below.
3. A set of new trail maps and trail signs were developed and installed at all the City's conservation lands. Trails were maintained, and summer interns were hired to manage and educated the public about conservation and wildlife issues.

Parcel/location	acres	cost to city
The Grove –Ft. Meadow Reservoir	16	\$470,000
Nt, /Ward- Langeliere Ln	71	\$834,246
Shaughnessy Land- Lower Pleasant St.	22	\$100,000
Mello Farm - Stow Rd.	16	\$600,000
Howe Pond (Tuttle)- Berlin Rd.	5	\$ 14,500
Sorabella Land–Boston Post Rd. (cemetery)	33.3	\$340,800
Kane Land- Stow Rd.	47	\$530,000
Maynard Parcel- Holts Grove	4.58	gift
Howe Pond (Winsky)- Berlin Rd.	27.6	\$165,000
ARRT Land (Mitrakas)- Fairbanks	8.49	\$125,000
Millham Woods Subdivision-Gregoir Dr.	11.68	OSD
Silvan Cove Subdivision-Simmons St.	7.79	OSD
Waters Edge Subdivision-Stevens St.	9	OSD
Thoroughbred Acres Subdivison-Berlin Rd.	4.22	OSD
Lavedure Pond- McNeil Cir.	24.3	Gift
Wayside Hollow- Raymond Rd.	6.8	OSD
Forest Grove- Ewald Ave.	18.2	OSD
Deer Run- Berlin Rd.	5.48	OSD
Erin's Run – Wellington St.	10.86	Gift
New Horizons- Hemenway St.	20.00	Conservation Restriction
New Horizons- former Blake Circle	10.5	Special Permit Gift
Total	21 Parcels	379.80 acres
		\$3,179,546

*OSD=Open Space Development

4. Uniform signage was provided at all historic cemeteries throughout the city, to identify these historic places.
5. The Recreation Dept. and the Forest & Parks Dept. at the DPW were reorganized to allow the DPW Forestry and Parks crew to do the physical management and maintenance of all the playing fields and allow the Recreation Department to focus on recreational program development. A new management system for all fields, including scheduling seasons to rest certain fields was implemented. This management structure has greatly improved the quality of the all the recreational facilities.
6. Of the 24 facilities used for recreation 10 of them were upgraded in the past five years. All upgraded facilities were required to meet handicapped accessibility requirements where feasible. New safer and accessible playground equipment, spectator and athlete access to equipment, fields and parking were all great improvements (see appendix G for details). In addition funding from Urban Self help program has assisted in the upgrade of the Jericho Hill Recreation area, formerly a ski hill. The facility is now being upgraded to provide year-round use of this facility.
7. The first three quarter mile section of the Assabet River Rail Trail has been constructed and is open to the public. The remainder of the trail

from Marlborough to Hudson has been designed and is ready for bid and construction in the summer of 2003.

The Challenges for the 2003-2008 plan

The city has taken some giant steps in its protection efforts, however the next five years will be even more critical to preserving the character of this city. Balancing development and quality of life issues will continue to be a challenge. Managing our natural resources, water supply, wildlife habitat and open areas for passive recreation will also be a challenge as more pressure is placed on the use and demands on these resources. Providing adequate recreation facilities both active and passive throughout the city with an ever-changing population both in age and culture provides additional challenges. This plan outlines the steps needed to ensure that the city's character and the quality of life we enjoy today is protected. Only by envisioning the future and planning for it, can we achieve these goals. This plan attempts to provide the city government and it's citizens with the steps needed to achieve that.

B. Planning Process and Public Participation

Mayor William J. Mauro, Jr appointed the Open Space and Recreation Committee (OSC) members in 2001. These members represent the City Council, Planning Board, Conservation Commission, Recreation Commission, Department of Public Works, Historic Commission, Sportsmen, and unaffiliated citizens, who have expressed a genuine interest in addressing the City's open space and recreation needs. The Committee met 10 times in 2001 - 2003 and established a list of current needs and goals, compiled an inventory of all City parcels not yet developed and prepared a draft plan for review.

A survey was distributed by the OSC members to a list of 28 civic, neighborhood, business and sports organizations throughout the city. 280+ surveys were distributed, 71 surveys were returned and the survey results indicated a great support for additional open space, and the need for more recreation facilities. A copy of the survey can be found in appendix A as well. The 1997 Open Space and Recreation Plans along with the 2002 survey, the Marlborough Recreation Department Field Report to City Council, October 26, 2000, and results from the discussions with various civic organizations within the community formed the basis for this 2003 Open Space and Recreation Plan.

A public meeting was held on April 10, 2003 to allow the public to review the draft document and provide comment. The public was notified of the availability of the draft report through news releases to the local media, civic organizations and the library. Ten residents of the City of Marlborough attended the public meeting and provided comments on the draft. Copies of comments and the public notices are included in Section 10 of this document. Overall comments were supportive of the plan and it's goals.

The goal of the Open Space Committee was to prepare a plan that best reflects the diverse views and needs of Marlborough's residents and establishes guidelines and recommendations to meet those needs.

SECTION 3

COMMUNITY SETTING

Regional Context

The City of Marlborough is located 17 miles east of Worcester and 25 miles west of Boston, on the western most perimeter of Middlesex County. The Framingham-Marlborough region is known as the Metro West area. It is located at the intersection of Route I-495, I-290 and Route 20. The Metro West area includes some of the wealthiest communities in the Commonwealth. The region has a higher per capita income, and a higher assessed valuation per capita than the state as a whole. Within the region, Marlborough, Framingham and Natick are the most industrialized communities, with the highest percentage of its tax base from commercial and industrial uses. Over the past ten years this region has seen a population increase which has outpaced the rest of the state.

The region contains many regional parks including such natural attractions as Callahan State Park, the Bay Circuit Trail, the Assabet River, the Desert/Memorial Forest/Hop Brook Reservation Conservation Land, the 2000 acres of Assabet River Wildlife Refuge (formerly the Fort Deven's Annex land) and parks owned and/or managed by the Audubon Society, Sudbury Valley Trustees, New England Wildflower Society, and other groups. The headwaters of the Sudbury and Assabet Rivers are located in the area and flow to the Concord River.

The region also boasts numerous reservoirs, lakes and streams. These water resources include: the Sudbury Reservoir, which extends into Southborough and is a back-up water supply to the Massachusetts Water Resource Authority; Millham Reservoir/Lake Williams the (city's water supply); Ft. Meadow Reservoir which extends into Hudson and is a shared recreation lake; and the headwaters of the Hop Brook Stream system which begins in Marlborough, and flows through Sudbury on its way to the Sudbury River. Hop Brook flows beside the world-renowned Wayside Inn Historic Site and "The Little Red Schoolhouse" in Sudbury, memorialized by Longfellow.

1. Regional Planning Efforts:

Regional open space resources: In the early 1990's the Conservation Commission was involved with a regional open space mapping effort spearheaded by the Metrowest Growth Management Committee (MWGMC). The purpose of the mapping project was to educate bordering towns about open space linkages and connecting parcels, both for conservation purposes and to provide wildlife corridors and ecological connections between municipalities. The result of this mapping effort was a map that illustrated Marlborough in the regional context. This regional view has since spawned three regional open space efforts at three of the four corners of Marlborough. These include the southeast corner- Greater Callahan Open Space Preservation and Greenway Plan and the Sudbury Reservoir Watershed System 2002 Public Access Plan Update; the northeast corner- Natural Resource Inventory & Management Plan for the Desert Project Area in Marlborough and Sudbury, and the northwest corner-Upper Assabet Riverway Plan. The southwest corner of the city has not had a formal plan but open space connections along this boundary with Northborough and Southborough should be pursued in the future. Each of these regional plans is describe briefly below. These areas are also illustrated on **Map #1**.

The Greater Callahan Open Space Preservation and Greenway Plan, produced in October 2000, was a collaborative effort of Marlborough, Framingham, Southborough, and Sudbury to look at regional land acquisitions. This document identifies the properties along the eastern and

southern corner of our city that are important to protect and preserve, including larger greenway corridors that overlap community boundaries. There are some key parcels in the area that will provide a vital link between existing large parcels of open space, thus protecting a large intact area of forested land for wildlife protection, aesthetic and recreational values.

The Sudbury reservoir is a backup water supply for the MWRA system supplying most of the Boston region with water. As such, it has been protected from access except for one trail link, which is part of the Bay Circuit trail. The Metropolitan District Commission is charged with the management of this reservoir; as such they have produced a plan called “Sudbury Reservoir Watershed System 2002 Public Access Plan Update”. There is interest in opening up more of the land to walkers along the reservoir. There are potential future links along the old aqueduct into the town of Framingham from Marlborough. These regional linear links in the future will likely be important recreational resources. Opening the Sudbury Reservoir to public access must be carefully balanced with protection of this water resource. Therefore, access to this property should be considered a privilege, not a right and must be used for passive recreation, with no dogs allowed.

In addition **Metrowest Knox Trail Heritage Corridor** has been established (Brochure included in appendix B). In this region the Metrowest Knox Heritage Trail comes east through Weston, Wayland, Framingham, Southborough, and up Rt. 85 and along Rt. 20 West in Marlborough then west through Northborough and beyond. This historic trail runs from Boston Harbor to Ft. Ticonderoga, NY. The Knox trail is marked throughout it’s route and has historic significance as the route used in the revolutionary war to bring important artillery from Ft. Ticonderoga to fight the Redcoats in Boston. As we improve roadways along this route the city should be sure where feasible, to promote this historic “automobile trail route” as a history to our past.

The Upper Assabet Riverway Plan completed in December 2002 has been an effort of representatives from Westborough, Northborough, Marlborough, Berlin and Hudson working together along with the Sudbury Valley Trustees and the Organization for the Assabet River to provide a plan with a vision for the Assabet River’s protection and enhancement over the next 15 years. The plan looks at the progress made to the river since 1986, assesses it’s current state and provides some guidance to the upper Assabet River Communities on local actions which should be implemented to protect the river greenbelt and improve water quality. The plan includes recommendations for land protection along the river as well.

The Desert Natural Area, Memorial Forest, Hop Brook Marsh, referred to as ‘The Desert/Memorial Forest’, combine 600 contiguous acres of forest, streams and open meadowland. In 1995, the city, working with the State Forest, managed by the Department of Environmental Management; the Memorial Forest, owned and managed by the Sudbury Valley Trustees and The Greater Federation of Women’s Clubs; and The Hop Brook Marsh owned and managed by the Sudbury Conservation Commission produced a joint management plan for the coordinated protection of the 600 acres of The Desert/Memorial Forest. The coordinated management effort has been very successful. The 2000+-acre transfer of the old Fort Deven’s Annex land from the US Army to the US Division of Fish and Wildlife in Hudson and Sudbury abuts the Desert Memorial Forest area. This new refuge is now called the Assabet River Wildlife Refuge. The refuge is expected to be opened to the public in 2003. Members of the Desert Memorial Forest stewardship committee are now working with the refuge planners

through the Friends of the Assabet River Wildlife Refuge to ensure that both these large areas are managed jointly for wildlife habitat protection.

The Assabet River Rail Trail (ARRT), a rails to trails conversion will be constructed into pedestrian/bicycle path, which when completed will be a 12 mile trail from the center of Marlborough to the South Acton Train station, running through Hudson, Stow and Maynard. This linear park will connect many town centers, schools, recreational fields and conservation land. The first section of the trail constructed in Marlborough between Fairbanks Blvd. and Fitchburg St. was dedicated on May 17, 2001. The section of the trail between Marlborough and Hudson Center will be constructed in 2003. The trail through Stow, Maynard and Acton will be acquired in 2003 with design and construction anticipated soon after. The completion of the entire 12 mile stretch of the ARRT is projected for 2008. A second trail runs through this region, known as the Central Mass line, there is support for the conversion of this railroad into a trail to called the Wayside Trail running from Waltham to Berlin, crossing the ARRT in Hudson. Regional support for both these proposed trails is strong and will bring much needed alternative transportation as well as a much-anticipated recreational facility.

2. Regional Water Supply Resources:

As noted above the Sudbury Reservoir which extends from Marlborough into Southborough and Framingham is a back up water supply for these communities and the MWRA water supply system. The protection of this reservoir for some open space recreation, wildlife habitat protection and most importantly water supply will be a delicate balancing act. With the requirements by the Environmental Protection Agency (EPA) for storm water improvements in the region, the treatment of storm water runoff from the City of Marlborough into the reservoir, should help to improve the water quality. A study done in June 1997, titled Watershed Protection Plan Sudbury Reservoir and Framingham Reservoir #3, revealed that Walker Brook, which drains the majority of the city's highly urbanized center, provides a large percentage of phosphorous and other nutrients and contaminants into the Sudbury Reservoir. The report recommends the reactivation of the MDC owned filter beds located between Rte. 85/Maple St. and Framingham Rd. as a best management practice to help settle/filter out most of the pollutants entering the reservoir from Walker Brook. Since future water demand throughout the region is expected to increase, the potential for future use of this reservoir as a primary water supply in the next 50 years exists. Therefore, every effort to keep this future use in mind as the area is developed will be critical for regional protection.

The town of Hudson has several drinking water wells that are located near the northern boundary of Marlborough. The first wellhead zone II of one well extends into The Desert area and vicinity that is residentially zoned and is not likely to see additional development. The second wellhead zone II is along Donald Lynch Blvd in Marlborough and Brigham St. in Hudson, this area is zoned Limited Industrial in Marlborough, however, a housing development called Jefferson at Wheeler Hill has been developed in this area. In this instance, the Town of Hudson was asked to review the plans to ensure protection of its wells. Any future development in these areas must be sensitive to these resource areas.

Historical Perspective

Changes in Marlborough's social fabric are due, in large part, to changes in its industrial base, and those changes have always been dramatically affected by the city's transportation systems.

For more than a century, Marlborough has served as a job center for the region. As those jobs have changed, so has its population.

In the Colonial era, Marlborough was a favored stop along the Boston Post Road, which still serves as the city's major highway (U.S. Route 20). Taverns and inns dotted the route, ready to service the travelers from Boston whose horses needed their first watering of the journey. At the time of the Civil War, Marlborough was said to be the fourth-largest manufacturer of shoes in the nation. Business boomed as local factories produced boots for Union troops. Craftsmen and fortune-seekers flocked here from Italy and Ireland, but the largest single immigrant group came from the French-speaking provinces of Canada. The influence of the French-Canadians lives on in the names of places: French Hill, Versailles Street, the convent of the Sisters of Saint Chretienne.

The once agrarian community, known previously as a violent battlefield in the King Philip's War, became the home of the nation's first electric streetcar in the 1860s. With links to Maynard and Milford, central Massachusetts' other manufacturing centers, the rail system helped the textile industry to grow.

The streetcars were replaced by buses in the 1920s and over the ensuing thirty years, the shoe factories closed their doors and moved south toward cheaper labor and more favorable climates. By the 1960s, Marlborough was a blue-collar community down on its luck, finally tearing up the streetcar tracks that had survived World War II reclamation efforts, as if in concession that its heyday had come and gone.

At the same time, the Commonwealth of Massachusetts was finishing Interstate 495, a piece of President Eisenhower's national highway system which, through political pressures, was brought through Marlborough's west side. Community leaders took the unusual step of zoning acres of apple orchards along the highway as industrial land, and bringing in water and sewer lines. And Marlborough waited.

In the early 1980s when, tired of the traffic congestion along "America's Technology Highway" in Waltham and Woburn, tiny computer manufacturers like Digital Equipment Corporation, Stratus Computer, and Apple began buying and building on Marlborough's west side. Easy access to all of New England's largest cities caught the attention of major hotel chains such as Best Western, Quality Suites and the Marriott, whose plans for a 17 story hotel were killed by a community that wanted industrial growth, but not that fast.

The building boom in 1990's saw a tremendous increase in commercial and business development in the southwest industrial park, including the development of the Solomon Pond Mall complex. By 2002 plans were on the books to develop all but one of these last remaining large parcels within this industrial park area. The completion of the long awaited 495 interchange onto Crane Meadow Rd. has encouraged this boom and has alleviated traffic congestion, for the time being, on the Rte. 20 corridor.

Today, Marlborough has a diverse economic base, including large companies such as Ken's foods, Shipley, Fidelity, Raytheon to name a few, and numerous hotels and restaurants, retail buildings and a convention center. This diverse economic base provides a wide range of

employment from the highly trained white color workers to the lower-skilled labor force. The number of jobs available in Marlborough is about 28,000 according to the state Department of Employment and Training. (2000 census data)

Population Characteristics

The 2002 U.S. Census data provides the following information:

Population -	2
Median income- \$56,879	-state rank 152 change from 1990- 6%
Percent of population with college degrees- 36% up from 26.6% in 1990	
Hispanic or Latino population	2,196 (increased 64.1%)
Asian Population	1,364 (increased 125.1%)
Housing units 14,903 change from 1990 12,152	
Population density per sq. mile of land use. 1,719.4 people per square mile and 706.8 housing units per square mile.	
Public School enrollment pre-K to 12, 2001 to 2002 – 4,754 students up from 4462 in 1997 an increase of 292 students.	

Source: 2000 US Census

The change in the population and demographic numbers from the 1990 census to the 2000 census, pointed to a changing population that required the Open Space Committee determine if the open space and recreation needs had changed as well.

A population increase of 4,442 people in the last 10 years is substantial. The projected full build out of the community population is 43,522, which is an additional total of 7,267 people over the current 2000 census numbers. This increasing population has and will require additional services from the community including water use, sewer capacity, recreational facilities, both passive and active, for children and adults. The Recreation Commission produced a report in October 2000 titled Marlborough Recreation Department, Fields Report to the Marlborough City Council outlining the need for additional fields within the city given the recent population increases, (this report is found in appendix C). The recreational demand for fields for all age groups has increased placing heavy demands on already over used fields. This coupled with the need to rest fields for maintenance has given rise to the search for additional fields. These needs are described in more detail in section 7.

The following chart illustrates they city’s population by age and the types of recreational needs each group has.

AGE	TOTAL	TYPE OF RECREATION USES
	#PERSONS	
NEEDED		
Infant toddler up to 4 years	2,554	Parks and recreation space
		should be distributed evenly throughout

		the city
Child to young adult 5-19	6,540	Parks and recreation space should be distributed evenly throughout the city.
Adult 20-44	15,234	Active recreation, walking, biking, passive recreation
Middle Age 45-64	7,820	Active recreation, walking biking passive recreation
Elderly 65+	4,188	Easily accessible open space, indoor facilities, passive recreation easily accessed.

Source: 2000 Census

Based on this data it appears that the city needs to focus some of its resources on ensuring that the recreation facilities for adults and middle age members of the community are being met along with the needs of the youth of the community.

The recent increase in Brazilian, Hispanic/Latino population has increased the interest and demand for soccer fields for kids and adults. As the level of education increases in the residents of the city, the demand for walking trails, bike-paths, places for roller-blading, running and jogging will also increase. These factors all were used to determine the needs of the community, which are discussed in detail in section 7.

D. Growth and Development Patterns

1. Patterns and Trends

The City of Marlborough is a business friendly community with many assets attractive to new and expanding industry: a central location with easy highway access to all of New England's major cities, excellent infrastructure designed specifically to attract new industry, a skilled labor force, diverse housing stock, and still some future development potential. The city has capitalized on its natural assets through pro-development policies. As a result, development trends in Marlborough are an anomaly in Massachusetts. Growth has continued to outpace statewide averages, as it did in Marlborough throughout the 1980s and 1990's.

One reliable indicator of development trends is job creation. According to the State Department of Employment and Training, the jobs in Marlborough have been increasing steadily from 1990.

In 1990 there were 20,531 jobs in the city, by 2000 during the height of the economic boom employment had risen to 28,869. Since the slow down in the economy the numbers have fallen somewhat. However, Marlborough still remains a place to do business given the current plan developments still coming in.

In 1999 the State Executive Office of Environmental Affairs did a build out analysis for the City of Marlborough which illustrates how, under current zoning rules, the could be developed. The chart found in D illustrates what changes could be seen in this city, perhaps as soon as 10 years, if development trends were to pick up and no aggressive land protection strategy is implemented.

Given this trend for continued growth and the pressure on land development still as strong as ever, the Open Space Committee felt the urgency to identify the key parcels of undeveloped land within the City and provide a plan to protect the parcels which provide important value to the Community whether for open space and recreation, water supply protection or aesthetic value. These parcels and their values are discussed further in Sections 4 and 7. Although the city councils and Mayors over the past 5 years have been aggressive at land acquisition and innovative protection measures with developers, the next 5 years will determine what the future character of the Community will be. Some large tracts of undeveloped land will soon have development pressure, and it is only by ensuring that some or all of this land is protected will the city preserve the quality of life now enjoyed by it's residences. Specific steps and actions are discussed further in sections 4,7, 8 and 9.

2. Infrastructure

a. Transportation

In the 1960's and 1970's, community leaders enacted new zoning regulations and began building water and sewer facilities designed to encourage industrial development in the southwest corner of the city bounded by Route 20 on the north and Interstate 495 on the east. With few residences and easy access to the interstate, development has and will occur in this area without significant impact on residential neighborhoods. Interstate 495 could be considered Marlborough's greatest transportation asset. With three existing interchanges, I-495 provides easy access to Marlborough's industrial parks from major cities throughout New England. By car, Marlborough is located approximately an hour from Hartford, Providence, and Manchester/Nashua. The drive to downtown Boston is 40 minutes, to Worcester is 20 minutes. If a company requires proximity to suppliers or customers throughout the Northeast, or access to air, sea or rail transportation in a suburban setting, Marlborough always ranks very high in the site selection process.

Upon arrival in Marlborough, new businesses reap the benefits of a phased improvement program for the local road network. Unlike many communities, where traffic improvements are a reaction to new development, Marlborough's improvements to its industrial area were planned in an area wide traffic study completed in 1982. The city, in conjunction with the State Highway Department and the private sector, will continue to plan for and implement those improvements. This long range planning means that builders are aware up front of the traffic mitigation measures that will be required to support their development.

The I- 495 and I- 290 interchange improvements are being proposed to improve safety of these on-off ramps from these two major highways. Numerous accidents throughout the years has

warranted the investigation of these interchange configurations and the need for improvement. Similarly, Route 20, the City's major east-west artery, is zoned for businesses for its entire length with some smaller pockets west of Route 85 also zoned for Limited Industry. Route 20 has seen increases in traffic congestion in the past 10 years; future development along this corridor will need to consider these impacts.

b. Water Supply System

Marlborough's drinking water comes from two sources, the Massachusetts Water Resources Authority (MWRA) supplies about 70% of the current average daily yield, and 30% is provided by the city's local sources. The MWRA supply originates at Quabbin Reservoir in western Massachusetts. The water is piped through a series of aqueducts, and then treated at the Walnut Hill treatment facility before being pumped directly into the city's distribution system.

The local source of water is the Millham Reservoir/Lake Williams system. Lake Williams is connected to Millham Reservoir by Millham Brook. An intake at Millham Reservoir pumps water to the adjacent treatment plant, which filters and treats the water before distributing it to the community. Over 98% of the city is serviced by municipal water. Only a few private drinking water wells remain in use throughout the city. Water service is thus available to all but a few residences. The city's average daily water usage is 4.99 million gallons per day, with a maximum of 9.6 million gallons per day available. The EOE's build out analysis indicates that at full build out the city will need 7.4 million gallons/day, which is just below the city's current allocated capacity. For ecological reasons and well as economic reasons, the wise use and protection of our local water sources will thus be important to the city's future planning efforts.

c. Sewer Service

The city provides its own sewer services, through two sewer treatment plants. The westerly plant which services most of the western section of the city, discharges to the Assabet River. The second plant is located on the eastern side of the city and discharges into the Hop Brook system which flows into Hager Pond and the Hop Brook pond system in Sudbury. The city treats an average of 8.4 million gallons of sewerage per day. The City is currently undergoing a Comprehensive Wastewater Management Plan to determine future sewer needs for the community in anticipation of upgrading both wastewater facilities in the next few years. The US EPA and State DEP will soon be issuing permits for both facilities, which are anticipated to require greater reduction of nutrients and costly upgrades of both facilities.

Sewer service is extended to all industrial areas and all but 10% of residences. The city's master plan schedule is to sewer all non-sewered areas within the next 19-20 years. With the availability of sewer service to almost all parts of the city, soil limitations for septic systems is no longer a building constraint, thus placing added pressure for development on the more marginal parcels which in the past were not suitable for septic systems due to ledge or poor soils.

In 1999 the City of Marlborough began a Comprehensive Waste Water Management Planning process to evaluate the capacity of the Westerly Wastewater Treatment Plant and determine what upgrades will be necessary to this facility to meet EPA's and DEP's standards. In addition the

city is awaiting a National Pollution Discharge Elimination System permit for the Easterly Wastewater Treatment Facility as well. Once this permit is issued, it will guide the city in determining what upgrades to this facility are warranted as well. The WWTP discharges into the Assabet River, the EWWTP discharges into the Hop Brook system and eventually flows into the Sudbury River.

d. Other Assets

Further enhancing the facility with which projects can be built in Marlborough is the City's form of government. Staff professionals, working with elected boards and commissions, are given the responsibility for ensuring that development occurs in an orderly fashion. Zoning changes and special permits are approved by the City Council and Planning Board, each of which meets twice a month. A pro-development attitude is evidenced through other means as well.

- In May 1994, the city received designation by the State Economic Assistance Coordinating Council as part of regional Economic Target Area. This designation permits the City to participate in the State's new Economic Development Incentive Program, offering packages of state and local tax incentives to qualified businesses. The Marlborough region was among the first areas so designated. This has been used to qualify for tax incentive programs some of the beneficiaries have been 3COM, Shipley, Butchers, Duke Engineering. This program phases in property taxes and qualifies the companies for state investment tax. Allows businesses to stay or come into Marlborough and thus increase employment opportunities for the region.
- The city has a history of working closely with the Marlborough Chamber of Commerce. Ongoing collaborative efforts include municipal financial support for the Chamber's Transportation Management Association (reduces transportation needs) and development of a package of marketing materials.
- The I-495 Initiative, is a regional collaborative of representative governments and businesses which stretch from Boxboro to Franklin along this highway corridor. The group is looking at infrastructure sewer/water /permitting and economic development. It is an regional planning entity.
- In 1999 the city hired a Planning Director to help the city plan for it's future. Over the past four years successes have included:
 - The Lift 7 bus service to provide much needed public transportation from Marlborough to the Framingham train station.
 - Yearly mini-master plans have helped the city to provide a vision for the downtown area, and focus for the various inner city neighborhoods.
 - Focus on redevelopment of inner city brownfield sites (hazardous waste site which have been abandoned and need cleanup) has given new hope for redeveloping some of the eyesores in the center city area.
 - In addition some much needed changes to ordinances to help improve efficiency and focus new developments and redevelopments to meet higher standards, for example landscaping, to bring some continuity to and upgrade the look of the city,

have been tackled.

However, the added pressure of the Ch. 40B state regulations, which allow for the development of affordable housing if the community has not reached its 10% required quota of affordable housing, has placed significant added pressure to the City of Marlborough. Two large units 274+ and 165+ units at both JPI and Avalon Bay respectively have added significant volumes of housing in areas where limited industrial development was planned. The continued threat of 40B projects in locations where the Community had not zoned for housing development will continue to put pressure on the community for the foreseeable future. In 2002 the community had attained 8% of affordable housing, only 2% below that needed to remove this unplanned development from the table.

Marlborough's desire to attract and keep commercial development has long been established. However, in order to preserve our community character, it is time to balance this longstanding pro-development attitude with attention to the city's diminishing open space and recreational resources. As development continues apace, the pressure on the city's water supply, wastewater disposal system, and remaining open space and wildlife habitats will continue to build. It is important to identify and set aside those areas that are important to our community from an ecological, recreational, scenic, or water resources standpoint before they are lost forever.

3. Longterm Growth and Development Patterns

a. Industrial Development

Although the City of Marlborough has experienced an unusual rate of industrial development over the past decade, a fair amount of its commercial/industrial zoned land remains available for development.

b. Changing Housing Stock

Census and housing data paint a similar picture of the city's population. Residents are becoming relatively more affluent and better educated, and new housing construction is primarily at the high end of the market. Although apartments abound the new affordable housing stock is still quite expensive and doesn't prevent some of the increased housing over crowding which has become a problem, especially with the immigrant population.

According to the U.S. Census Bureau, in the late 1970's and early 1980's, Marlborough's per capita income was at or slightly below the statewide average. From 1985 through the present, the local per capita income was higher than the statewide average, in one year by as much as 9 percent. In 1979, only 18.6 percent of the city's population over the age of 25 were college graduates, according to the 1980 U.S. Census. Twenty years later, the 2000 U.S. Census, shows that the percent of population with college degrees has increased to 36 percent.

c. Local Zoning Ordinances

Marlborough's development has been guided by the city's zoning and local ordinances. The zoning map is included in the plan and shown as **Map # 2**. Below are the local ordinances which guide development within the city:

The city has made some changes in zoning regulations as recommended in the 1997 Open Space Plan, including the implementation of the Water Supply Protection District, and the Historic Districts. These new ordinances along with the existing ordinances have helped to protect some of the city's open spaces and encouraged more green space in commercial and industrial developments. These changes reflect a stronger commitment by the city to be sure that development not only be sensitive to but also enhance, where feasible, the environmental, scenic and aesthetic qualities of the community. The following development initiatives have been implemented:

- **Water Supply Protection District:**
The Water Supply Protection District ordinance was passed in 1997. The main goals of this ordinance are to preserve the quality and quantity of water in the city's reservoirs (Lake Williams and Millham Reservoir), and to ensure that future growth within this watershed does not have an adverse impact on water quality. The ordinance limits impervious surfaces in commercial and industrial developments, requires storm water runoff treatment before being discharged into a tributary to the reservoir, and requires greater protection of wetlands surrounding these tributaries.
- **Open Space Development Ordinance: (zoning 200-25)**
The Open Space Development Ordinance (OSD) provides developers an option to develop to increase lot density beyond the zoning ordinarily allowed in exchange for dedicating a percentage of their land to open space protection in perpetuity. Since the ordinance was adopted in 1988, seven out of nine subdivision proposals have opted to develop subdivisions using the open space development ordinance and the city has preserved over 100 acres of land without any direct cost to the city. The OSD ordinance provides significant opportunity for the city to implement long term planning initiatives that include preserving greenway corridors that link to existing areas of open space and recreation.
- **Site Plan Review:**
The site plan review ordinance established in 1989 provides specific review criteria which require that all departments concerned with development in the city provide input on all new commercial development plans throughout the city. This ensures a comprehensive review of all plans, which might have a significant impact on the surrounding land. Departments included in the site plan review process are: Building, Fire, Police, Engineering, Planning, Conservation, and Board of Health departments.
- **Watershed Protection Fund for Land Acquisition:**
The city established a watershed protection fund in 1992. This fund dedicates 5% of the water billings to be set aside for the purchase of water supply land and water supply development. Through this fund, the city has purchased 120 acres of the Hillside School property, which is a significant portion of the undeveloped watershed to Millham Reservoir, also purchased was a 27-acre parcel of land on Berlin Rd.

➤ Zoning Landscape and Lot Coverage Ordinances:

The landscape and lot coverage provisions of the city's Zoning Ordinance require that 70% residential, 20%-business, and 40%-industrial, of any project be devoted to landscaped areas and/or green space islands within parking lots to provide green space and shade for these parcels. This is greatly improving the visual appearance of new development and softens the impact of development on surrounding businesses and residences. It also provides pervious surfaces through which rainwater can recharge the groundwater table. These provisions were past in 1987 and continues to be improved and to improve the appearance of the city.

➤ Scenic Roads:

M.G.L. Ch. 40, s.15C is enabling legislation that allows communities to adopt by-laws and ordinances for designating certain roads as "scenic". 22 roads throughout Marlborough were designated as scenic roads in 1992 these are: Parmenter Rd., Hemenway St. Sudbury St., Concord Rd., Stow Rd., Spoonhill Ave., Hosmer St., Stevens St., Ash St, Fitchburg St., Pleasant St., Berlin Rd., Westhill Rd., Elm St., Millham St, Bigelow St., Robin Hill Rd., Boundary St., Farm Rd. Clover Hill St, Beach St., Brigham St. The Scenic Road designation provides for independent review by the Planning Board of any plans for roadway construction that would impact trees and stonewalls on these roads. By protecting trees and stone walls, the rural character of these roadways is preserved. These stonewalls and tree lined ways provide a form of relief from the standard highway cross-section.

➤ Wetlands Protection:

In 1996 the Conservation Commission formally adopted a written wetland setback policy, establishing a 20 foot "no disturbance" buffer area around all wetlands to help protect the integrity of those areas. This is a small, but important step toward increased protection of Marlborough's waterways. However, continued development has put increasing pressure on the city's last remaining wetlands. A wetland protection ordinance is recommended in section 7 and 8 that will improve the ability of the city to protect these important resources.

The Massachusetts Wetlands Protection Act (MGL 131 §40) was amended in 1997 to include provisions to better protect rivers and river corridors. The law now requires a 200-foot riverfront area along rivers, defined as perennial streams, to be protected where the land is still pristine. A local ordinance could help provide added protection to these important wildlife corridors. Although much of the city's riparian land is already developed down to the shoreline, there are still some significant parcels within the city that are subject to these rules. The law also requires that storm water runoff meet high clean water quality standards for all development, and improve water quality for redevelopment of sites. Similar storm water standard have been adopted as a matter of good practice throughout the city, however, this should be made a more formal requirement in the planning board, site plan review and any building department requirements.

➤ Historic District:

Two historic districts have been established in the down town area of the city. The first was established in 1996 as recommended by the Historic Commission and is a very small Local Historic District known as Monument Square which includes the area around the monument near the main library on Main St. up Mechanic St. to Lincoln St. This district was established under the local historic district MGL Ch. 40C. The second district is the Marlborough Center National Register district approved, which includes Main St. from the Library to the Fire station.

All of these new regulations have helped to steer development to be more sensitive to the environment on which they are being built. Additional measures are still needed to improve environmental quality as well as recreational opportunities. These are discussed in more detail in the needs and analysis Section 7 and under the Goals and Objectives Section 8 and 9.

SECTION 4

ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Topography, Geologic Features and Soils

Marlborough's topography is dominated by a series of hills separated by three distinct drainage basins, which include five large surface water impoundments. There are 15 hills in the community that range in height from 395 to 590 feet above sea level. The city's three water supply tanks are located on three of the more prominent hills: Sligo Hill (elevation 590), Fairmount Hill (elevation 538), and Spoonhill (elevation 487) these three hills are visible landmarks.

Marlborough's lowest elevations occur at the easterly and westerly ends of the community. On the east side, Hop Brook leaves Marlborough at elevation 217 and flows into the town of Sudbury to Gristmill Pond. This pond is the headwater to the Old Gristmill located off Wayside Inn Road. On the west, the Assabet River flows out of the northwest corner of the city into the town of Hudson at elevation 210.

The hills of the community have slopes averaging 10% in grade and their base areas cover approximately 10% of the city's 22.2 total square miles. Portions of many of the city's hills do have slopes exceeding 15%. The remainder of the community is typically flatter in grade with several large areas of wetlands.

Soils in Marlborough are also typical of many communities in central Massachusetts. The United States Department of Agriculture, Soil Conservation Service has surveyed and mapped soils throughout the city and has identified over 70 different types of soils with the Charleton, Canton and Paxton groups dominating. These loamy, sandy soil types and the hill exposures in the southwest quadrant combined to provide excellent conditions for farming and agriculture during the late 19th and early 20th centuries.

Large gravel and sand deposits can be found in those areas adjacent to the Assabet River and Sudbury Reservoir as well as in the extreme northeast corner of the city known as "The Desert". Throughout the city there are several major wetlands with their inherent organic soil types including Flagg Swamp, Crane Meadow, Howe Pond, and the areas abutting Sudbury Reservoir in the vicinity of Farm Road, Broadmeadow Street and Parmenter Street. These wetlands, slopes and hills are shown on **Map# 3**.

B. Landscape Character

The center of the city is predominately built out and urban. As one moves away from the center the subdivisions of suburban homes become more and more spread apart and are separated by the hills and wetlands that abound throughout the city. On the outskirts of

the community, the country feel is still somewhat prevalent with open agricultural fields and forested woodlands.

Marlborough's hills are the community's most dominating geographic features. The hills provide significant scenic value, whether they are appreciated from a distance or serving as a location for viewing other areas within and outside of the city. The last remaining farm lands on Stow Rd., Berlin Rd., South St., and Robin Hill St. provide visual open spaces that contribute a sense of space and country. Remnants of the once-abundant old apple orchards have all disappeared and have been converted into residential subdivisions and office parks, except for the old abandoned orchard next to Glen St. Preserving these places in whole or in part will help preserve some of this beauty and history.

Only a few hills remain undeveloped, these are: one side of Shoestring Hill, a portion of West Hill, which is now a tree farm; and a portion of Stirrup Hill. However, with continued development pressure these too may soon be slated for development in the near future. Over the past 5 years several prominent hills were developed including Crane Hill (3COM), Wheeler Hill (JPI), and Hager Hill (Metro Park has been cleared), which are no longer available for protection. However, Mt. Ward and Jericho Hill are now protected by the city for conservation and recreation purposes and provide important views and vistas to the surrounding developed landscape.

C. Water Resources

I. Surface Water

Marlborough is fortunate to have no less than five large surface water impoundments within its limits, all serve distinct and different primary functions as well as provide secondary recreational and open space benefits.

Millham Reservoir and Lake Williams, totaling 150 acres, serve as the city's two drinking water supplies. Fort Meadow Reservoir, which covers 290 acres, is the city's only active recreational water body, providing swimming, boating and fishing opportunities. A portion of the Metropolitan District Commission's Sudbury Reservoir extends into Marlborough on the southeast corner and serves as a backup drinking water supply for the Boston area. Hager Pond, located on the east side of the community, is a privately owned body of water covering 24 acres and is the backdrop for the historic Wayside Country Store.

Another important water resource is the city's many rivers and streams, including twelve main streams. The largest of these is the Assabet River, which flows through the northeast portion of the city. This Class B river has long been a favorite of local canoeists and fishermen, both upstream and downstream of the flood control facility known as Tyler Dam. Two new boat

access points along the river below the Tyler Dam are being proposed and should be constructed by spring 2003. All the city's major streams are shown on **Map #4**. In some instances, these streams are prominent features in the landscape, while in others, they are barely noticeable or hidden behind development.

2. Flood Hazard Areas

The FEMA flood map information has been incorporated into the city's Floodplain and Wetland Protection District ordinance map. The high flood hazard areas lie along the major tributaries. Along many of the significant streams a 50' or 30' set back requirement has been instituted through this zoning ordinance to eliminate building close to streams that have flooding potential.

3. Wetlands

Marlborough has many small wetlands and several large areas of wetlands including 200 acres Crane Meadow, 86 acres Flagg Swamp, 40 acres Howe Pond, the South Street swamp more than 50 acres and large parcels of land abutting the Sudbury Reservoir off Farm Road and Broadmeadow Road.

Wetlands are important resources to the community wildlife. Wetlands have long been recognized as resources, which help attenuate storm water flows and improve water quality. The city's Conservation Commission through the state's Wetland Protection Act manages protection and preservation of these areas.

4. Surface Water Recharge Areas and Aquifers

Beginning in 1974, the city took the first steps to protect its surface water supplies by acquiring over 200 acres of land abutting Millham Reservoir. This land was originally acquired for expansion of the reservoir itself; however, the cost to develop it for this purpose was later judged to outweigh the benefit of a very marginal estimated increase in supply. The land has remained undeveloped in order to protect the reservoirs watershed. Passive recreational use of these areas is not permitted due to water supply regulations.

In 1992, the city also acquired 122 acres of land immediately adjacent to Millham Reservoir when it purchased a portion of the property owned by Hillside School. Public access on this land is also not permitted due to state and federal water supply regulations.

In 1997 the City Council passed the Water Supply Protection District Ordinance which limits and controls development within the watersheds of Lake Williams and Millham Reservoir by prohibiting and/or limiting certain uses of these properties and requiring a 50 foot non-developable buffer zones along wetlands, streams and rivers within the watershed. The watershed boundary is shown on the enclosed **Map #4** as watershed area #3.

Although Marlborough does not have any local groundwater drinking supplies, the Massachusetts Department of Environmental Protection (DEP) has identified several areas as areas with high potential for aquifer locations. In spite of several studies, which investigated the feasibility of developing certain of these areas as municipal drinking water supplies, no site has

been found to provide both adequate volume and water quality to meet municipal drinking water standards. Since these areas have been determined through studies not to be significant for drinking water supplies, they have never been mapped on city resource maps. However, a copy of the USGS Aquifer Map is located in the city's Conservation office and the Department of Public Works GIS office.

Along the northern border the town of Hudson has two drinking water wells. The protected areas around these wells extend into the city limits. Any development in these areas should honor the protection of these water sources and consultation from the Town of Hudson should be solicited.

The city is divided into six major watersheds, which are also shown on **Map # 4** and include Millham Reservoir watershed, Sudbury Reservoir watershed and Wachusett open channel, Ft. Meadow Reservoir watershed and Ft. Meadow Brook, and Hop Brook watershed. The Millham, Ft. Meadow Reservoirs and Hop Brook systems are all part of the Assabet River watershed.

D. Vegetation

Marlborough has some significantly large woodland areas remaining, despite the community's explosive development during the 1960's, mid-1980's and again in the 1990's. These wooded areas, which include the watersheds to the Millham and Sudbury reservoirs, two state forests, and numerous conservation lands including The Desert, Cider Knoll, Mt. Ward, Jericho Hill, Holts Grove, Felton Conservation land and a city forest, have been preserved through the efforts of both the community and state.

Between 1997 and 2002, 200+ acres of open space previously identified as land of conservation value were lost to development. The remaining large tracts of forested lands not currently protected and listed in section 6 are Hillside School's large agricultural and forested land north of Robin Hill St. in the north west corner of the city, South St. Swamp, West Hill and Shoestring Hill along with several pieces of farm land. These are among the largest tracts of woodland areas remaining

Oaks, maples, ash, beech, birch, poplar and other species common to the Central Massachusetts region dominate woodlands in the city. Pockets of white and red pines are present along the Millham Reservoir, state forest and Sudbury Reservoir areas. Many of these pine stands were planted for timber use and as part of old watershed management practices.

E. Fisheries and Wildlife

Marlborough's many water bodies, wetlands and woodlands provide substantial environs for fish and wildlife. The Open Space Committee identified nine large areas within the city that currently provide substantial wildlife habitat. Some of these are privately owned, some are in public ownership and others are a mixture of the two. These areas are shown on **Map# 5** and are listed below:

The numbers correspond to the numbers representing these areas on Map # 5 Wildlife Habitat Areas and Corridors.

#	General Location of Wildlife Habitat Area	Ownership	Type of Habitat
1.	Desert	Public/non-profit	Scrub Oak, Pitch Pine and Red Pine forest, ponds, marshes, and pristine cold-water streams
2.	Mt. Ward/ Ghiloni Park	Private Public	Mixed woods/wetland/streams/open field at treatment plant/recreational fields
3.	Sudbury Reservoir/ Callahan State Park	Public	Open water/marshes/pine & deciduous forest
4.	Millham Reservoir	Public	Open water/streams/marshes/pine & deciduous forest
5.	Millham Brook	Private	Stream, woodland, wetland/marsh
6.	Flagg Swamp	Private/public	Large marsh, deciduous forest, pristine cold water stream
7.	South St. Swamp	Private/public	Two hills, large marsh, stream, pond, deciduous forest
8.	Assabet River Corridor	Private	Large marshes, deciduous forest, pristine cold water stream
9.	Cider Knoll/Mello Farm and open field	Public	Stream, rocky outcrops, pond, wetland
10.	Holts Grove/Stevens St. Red Spring Road	Private/public	Streams, woodland, wetlands

These areas represent the last contiguous combinations of woodland, lakes, streams, fields and swamps in the community. Those properties, which remain in private ownership, should be considered priority parcels in the city for acquisitions and/or preservation of wildlife and greenway corridors.

The following wildlife inventory is not exhaustive and simply illustrates the diversity of wildlife and wildlife habitats within the community. Species diversity is greatest in areas where combinations of habitats occur and where tracts of land are contiguous and large. The wildlife observed are those common to the central part of the state.

1. Wildlife Inventory

Mammals: The largest known wildlife species inhabiting Marlborough is the white tail deer, although there have been periodic sightings of bear and moose on rare occasion it is not likely that they are breeding here. Deer have been spotted throughout every portion of the city with the possible exception of the central business district. As development continues in the city these animals are being forced to those protected areas of forested land. The healthy deer population has also given rise to the migration of coyote that now inhabit much of the Millham Reservoir watershed, Cider Knoll, and the Desert area.

Other mammals indigenous to the community include red tail fox, woodchuck, raccoon, skunk, gray squirrel, chipmunk, red squirrel, bats, porcupine, and the cottontail rabbit.

Fish: Marlborough's rivers, streams and reservoirs provide suitable habitat for a number of fish species and ample opportunity for open water and ice fishing. The community's previously mentioned surface water impoundments contain pickerel, large and small mouth bass, and in certain tributaries native brook trout. In fact Marlborough lays claim to two of only three native brook trout streams in Central Massachusetts.

Birds: The city's diverse habitats are home to a wide variety of common bird species and include: Cardinal, mourning dove, downy woodpecker, nuthatch, tufted titmouse, English sparrow, house wren, Baltimore Oriole, barred and barn owls, jonquil, chickadee, mockingbird, purple finch, robin, goldfinch, flicker, blue-jay, wild turkey, grouse, pheasant, woodcock, wood ducks, oven bird, cat bird, rufous-sided towhee and cuckoo have been observed in Marlborough. Warblers migrate through the city in their spring migration north. Many hawk varieties, including red-tailed and broad-winged hawks, are common sightings.

2. Corridors for Wildlife Migration

As shown on **Map #5**, the wildlife corridors follow the parcels of undeveloped contiguous land and streams. These corridors should be preserved in their entirety wherever possible to help maintain a healthy diversity of wildlife species. Where full protection is not feasible, developments should be designed to allow some portion of the corridor to exist undisturbed. Roads and development tend to inhibit migration of smaller mammals and amphibians, which are either prevented from migrating due to these obstructions, or are killed en-route. The more natural the corridor, the more likely the corridor can serve as a wildlife corridor for many species. The Natural Heritage and Endangered Species program through their aerial photography have identified 80+ potential vernal pools. Vernal pools are habitat to species that use these temporary pools for breeding, including wood frogs, mole salamanders, fairy shrimp to name a few. Of these potential vernal pools identified by the state, have been certified, 20 have been investigated and are pending certification, and the remainder need to be investigated to determine if they are vernal pools. With greater development pressures these important pools, which are not always protected under the Wetlands Protection Act, will be lost and their importance to biodiversity within the area will also be gone forever

3. Rare or Endangered Species

The Natural Heritage and Endangered Species program has identified one area in the city as a

protected habitat for an endangered species. To protect that species from exploitation, the Committee has chosen to provide only its general location, which includes Mt. Ward north to the intersection of Sudbury St. and west to Hemenway Streets. A second area, which includes Cider Knoll, is also a habitat for an endangered species as well and has yet to be registered with the NH&ESP

F. Scenic Resources and Unique Environments

1. Scenic Resources

Marlborough is fortunate to have many scenic locations and several areas of unique environment. A 1981 inventory of Massachusetts by the Department of Environmental Management identified only three areas in Marlborough that were "noteworthy" from a scenic quality perspective. These were the landscapes around Sudbury Reservoir, Millham Reservoir and the Assabet River. Many other locations throughout the city provide wonderful views and perspectives due to their elevation, open water and open fields. These scenic areas comprise both publicly - and privately - owned properties (see Map #3 Landscape features). These locations with their respective viewshed are listed below:

	Locatin Viewshed	Ownership	
1.	Jericho Hill	Sudbury Reservoir looking northwest	public
2.	Farm Hill	Sudbury Reservoir looking south	private
3.	Spoonhill	Wachusett Mt. looking northwest	private
4.	Addition Hill	Ft. Meadow Reservoir looking north	private
5.	Fairmount Hill	Points west of Marlborough	private
6.	Sligo Hill	Points west of Marlborough	public
7.	Lake Williams	From Rt. 20 and Williams St.	public
8.	Hager Pond	From Rt. 20 wayside country store	private
9.	Sudbury Reservoir	From Farm Rd. and Sherman Rd.	public
10.	Mt. Ward	From Rt. 20 up the hill	public
11.	South Street	Over looking Shoestring Hill & farms	private
12.	West Hill	Houde's Tree farm- view to the west	private

Other scenic areas include the 22 scenic roads designated under the scenic road ordinance. All of these roads are somewhat narrow, tree-lined, and many still have remnants of stonewalls, providing a scenic drive and country feel. The trees and stonewalls are protected by the Scenic Road Act and may not be removed without a public hearing with the Planning Board and Tree Warden.

Among the areas of unique environment is Callahan State Park, the Desert Conservation Land, Cider Knoll, Ghiloni Park area and the watersheds to the Sudbury and Millham reservoirs, which are discussed in more detail in Section 7.

2. Cultural, Historic and Archeological

Boston Post Road (Route 20), is part of the historic road network from Boston to the Connecticut River. This route was lined by apple orchards and dairy farms, which, along with shoe factories, were the primary commercial operations in the city. Most of these farms have been replaced by businesses, residential developments, and office parks.

Lake Williams is the only true natural lake in the city and historically was a focal point for recreation. Before the settlers used this lake it was a gathering place for American Indians. However, today it is an important part of the city's water supply and no longer a recreational resource.

Two historic districts have been established in the downtown area of the city. The first was established in 1996 as recommended by the Historic Commission and is a very small Local Historic District known as Monument Square which includes the area around the monument near the main library on Main St. up Mechanic St. to Lincoln St. This district was established under the local historic district MGL Ch. 40C. The second district is the Marlborough Center National Register district, which includes Main St. from the Library to the Fire station. The Historic Commission has also compiled an inventory of all historic properties within the city. All historic properties including houses, cemeteries, and landscapes have been documented and inventoried. The inventory is thorough and provides important documentation of these historic sites, however there are no rules or ordinances local or state, which currently provide protection to any of these structures. The hope is that as people realize the historic values of these properties, they may be more willing to help protect them. Historic structures help to provide a sense of history to any community and lend their character to the community.

3. Area of Critical Environmental Concern

The city does not have any Areas of Critical Environmental Concern.

G. Environmental Challenges

Marlborough's environmental problems are typical of most communities in Massachusetts. Over the years, the city has dealt with several hazardous waste issues ranging from leachate control at its closed and capped sanitary landfill on Hudson Street, to the all-too-frequent gasoline and oil releases from gasoline stations and other storage facilities. Environmental concerns such as storm water and wastewater discharge, erosion control and air quality are dealt with on a case-by-case basis through the community's site plan review process.

Hazardous waste sites:

One area of the community identified by DEP as contaminated at numerous locations is lower Maple Street. This area has been zoned for commercial and automotive use for many years and for many of those years there has been insufficient monitoring of the underground, and in some instances, above-ground storage facilities in this corridor. New detection techniques and monitoring practices have enabled the community, working with DEP and other state agencies, to identify several known sources of contamination in this area. Short-and long-term remediation plans have been developed for those identified sites and remediation is now under way. Although the state is responsible for oversight of the cleanup procedures on all of these

sites, some oversight and review by the local Conservation Commission and Fire Dept. to ensure that the cleanups don't lag forever would be helpful in ensuring full cleanup of these areas within the next 10 years.

Old Landfill:

Another area of environmental concern is the former site of the city's sanitary landfill on Hudson Street. Although all of the problems discovered at this site during the early 1980's have been corrected, it is absolutely critical that the community continue to monitor this site for any evidence of leachate and slope erosion. Fort Meadow Reservoir abuts the landfill to the north and would be immediately impacted by a leachate release or soil erosion. Keeping the landfill cap free of large trees is also important to maintaining the integrity of the clay cap that encapsulates the landfill.

Ft. Meadow Reservoir:

In 1999, the majority of street drainage draining off of Bolton St. was diverted into the detention basin at the base of the old landfill. This has allowed for the water to be filtered before discharging into Ft. Meadow Reservoir. This should eliminate the large delta of sand, which has historically accumulated in front of the St. Marks boathouse. Ongoing diligence in cleaning catch basins around the lake and to educate residence within the Ft. Meadow Reservoir watershed will be critical in the long-term health of the lake.

In 1999, Eurasian Water milfoil was discovered in Ft. Meadow Reservoir. This invasive, non-native weed can have a devastating effect on the ecological balance of the lake as well as the recreational value. Other communities throughout New England have grappled with ways of controlling this weed, which left uncontrolled, will overtake a lake within a matter of a few years. The city hired a consultant to do lake treatment in 2002 with ongoing monitoring to continue through 2004. Continued diligence with identifying weed growth within the lake will be critical in keeping the weed growth in the lake under control.

Assabet River & Hop Brook:

The Assabet River and Hop Brook both are experiencing excessive growth of weeds, known as eutrophication. Both receive treated discharge from the city's two wastewater treatment facilities, are the recipients of large amounts of untreated urban runoff contributing nutrients, as well as man-made dams which impede the natural flushing of nutrients within these impoundments. The Assabet River Consortium had been looking at ways that all communities with waste water treatment plants, along the Assabet River can work together and improve water quality and down stream base flows within this river. On going discussions with the DEP and EPA are looking for permanent solutions to the Hop Brook issues.

Millham Reservoir and Lake Williams:

There is a real threat to our local water supply every day. Rte. 20 runs directly along the shores of Lake Williams. Currently there are little or no drainage controls within this stretch of roadway, which could help control a spill from any number of petroleum, industrial chemicals, or auto-accident spills. Of high priority should be the redesign of this section of the roadway to improve the drainage system including emergency spill containment facilities. These measures will help to ensure the control of water quality impacts of Rte. 20 into our drinking water supply.

In addition more education to all residences and businesses within the watershed needs to be provided to ensure that no one is dumping illegal substances down the storm drain system.

Erosion and Sedimentation controls:

Erosion controls are installed on all projects, which require a Wetlands permit. However, there are a few projects throughout the city that do not seek review from the Conservation Office and are not required to install erosion controls. All erosion that enters a drainage system, has a potential impact on the water quality of our streams and ponds. The cumulative impact of sedimentation from many small projects, can over time have a devastating affect on a wetland resource area, causing lakes and ponds to become wet marshes rather than open water areas. To keep our ponds and streams pristine, additional erosion control measures are required throughout the city for all projects. A local ordinance should be passed to require more comprehensive erosion control for all developments.

This environmental inventory provided the basis for evaluating the needs analysis discussed in section 7.

SECTION 5

INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

Open Space Inventory Matrix

The open space inventory was compiled into two maps and corresponding spreadsheets. The first map, **Map # 6 titled Open Space Plan-Protected Land**, identifies all land which has already been protected either by state, local or private entities. These are parcels with are legally protected by state and or federal statute and therefore cannot easily be subject to adverse development and are considered permanently protected open space. Each parcel is labeled and the corresponding data on each parcel is provided on the “Protected Land” spreadsheet. The second map, **Map # 7 titled Open Space Plan – Unprotected Land**, identifies all land which is undeveloped as of the writing of this plan, or only partially developed land which is significant

to open space protection either on it's own or as it provides a link or connection to adjoining protected or unprotected parcels of conservation or recreation interest. Again each parcel is labeled and the corresponding data on each parcel is provided on the "Unprotected Land" spreadsheet.

The following are the keys to the labels used on the following spreadsheets and on the Maps:

Map Label - This letter and number label corresponds to the on the open space Plan Maps # 6 and Map # 7. Parcels beginning with:

M are municipally owned,

S are state owned,

P are privately owned.

The second letter refers to the reason for protection

W is watershed protection,

P is parkland,

C is conservation land,

A is agricultural land, and

U is unprotected.

CM is cemetery

Site /Location - Provides the name and location of the open space site

Map-parcel - Assessors Map and Parcel Number

Acreage - Acreage of the parcel or parcels if several are combined in one area

Owner/manager - Name of entities who own the parcels and the agency/department responsible for management of protected parcels. For the unprotected parcels this indicates the owner of record as found in the assessor's office database.

Use/Condition - For protected parcels only, this label indicates the most common or major uses of the site. It also indicates the general character of a parcel and what amenities for recreation it might contain. (For recreation parcels not all uses are listed, please refer to the detailed list in the Appendix #E for more specific details on the facilities each of these recreation parcels offers). Conservation indicates parcels protected primarily for wildlife habitat with or without trails as noted.

Funds used - The funding mechanism used in the acquisition of the protected parcel, where available. Where the list says "unknown" no list of funding mechanisms used to acquire the land was found and deed search needs to be done to fill in the blanks.

Recreational Potential - Indicates whether the site could be expanded onto or used for either passive or active recreation.

-**High** means the parcel lends itself to use for recreation,

-**Medium** means the site has some limitations but still can be used for recreation,

- **Low** indicates that the site has low use as recreation - however it may have a high use for wildlife habitat or watershed protection these are predominately wetland areas.

Public Access - Indicates whether there is formal public access to the site.

Yes - means there is formal access with parking

Potential - means that some access could be developed

No - indicates that it is neither feasible nor practical to provide public access.

Zoning - Describes in which land use zone the parcel is located.

Degree of protection - Indicates what degree of protection the property holds.

In perpetuity- by designation as Conservation or Recreation land under MGL Ch. 40 or Water Dept. land, or through a Conservation Restriction (**CR**); or designated by the deed and acceptance of City Council for the purposes of watershed, conservation or recreation land.

Ch. 61A- agricultural land or **Ch. 61B**- recreation land where the owners are given a reduced tax rate for this less intensive use, in return, the city has the right of first refusal to buy the property when the owner wishes to sell it. These properties are not protected, but the city will be notified and can choose to purchase the property when the property comes for sale.

Several items on this inventory need the following clarification:

■ **Parcel Management**

There are a number of parcels of land, which through the inventory gathering process were found to be municipal parcels (shown as MU# on the protected land map) for which no city department has ever been designated to manage the property, and other cases where one department is managing land when in fact the acquisition and deed indicated that another department is to be the manager. These parcels are highlighted in the matrix as: MU# and Manager- undesignated. A dialogue with all city land manager departments and then a recommendation to the City Council to vote to designate parcels for specific purposes should be done to clarify the records and ensure that the best use of these parcels is provided.

■ **Unprotected Land of Conservation and Recreation Interest**

The list of unprotected land includes a comment section which is intended to be used to note when parcels change hands are developed or acquired. The Conservation Commission should be charged with keeping this list updated. This will be useful when the plan is updated in the next five years.

(charts are attached as a separate excel worksheet document)

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MC-1	Fiddlehead- PLEASANT ST, PERRY LANE	42-2	11.02	City of Marlborough	Conservation Com.	Wooded hillside. No trails	Open Space Development Land	no
MC-2	Desert Parcel- Desert-CONCORD RD	4-2	14.50	City of Marlborough	Conservation Com.	Wooded with excellent trail system.	Eminent Domain taking	High
MC-3	Cider Knoll- Pinewoods- HUCHINSON DR.	9-50	10.15	City of Marlborough	Conservation Com.	Wooded with excellent trail system.	Gift-subdivision requirement land	High
MC-4	Cider Knoll-Kane Parcel - STOW RD	9-1	22.44	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	City funds	High
MC-5	Cider Knoll- Kane parcel-STOW RD	9-3	19.40	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	City funds	High
MC-5	Cider Knoll- Kane parcel- STOW RD	21-40	0.39	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	City funds	
MC-5	Cider Knoll- Kane parcel- STOW RD	21-38	5.23	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	City funds	
MC-5	Cider Knoll- Lavender Pond- McNEIL CIR	21-1	24.30	City of Marlborough	Conservation Commission	Wooded with pond and wetland and trails	Donation as part of subdivision	High
MC-5	Cider Knoll- Mello Family Meadow- STOW RD	20-149	13.62	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	City funds	High
MC-6	Holt's Grove- STEVENS ST	31-1	15.49	City of Marlborough	Conservation Com. / Parks & Recreation	Wooded, with pond and trails	Eminent Domain City	High
MC-7	Howe Pond Parcel- BERLIN RD.	40-7	27.90	City of Marlborough	Conservation Commission/ DPW watershed land	Wooded with pond.	unknown	medium
MC-8	Howe Pond Parcel- BERLIN RD.	40-22	5.18	City of Marlborough	Conservation Commission/ DPW watershed land	Wooded with pond.	unknown	medium
MC-9	Paternoster Land- Berlin Rd.	26-18	1.28	City of Marlborough	Conservation Com.	At corner of roadway to be left natural no trails	Gift	Low

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MC-11	Howe Pond Parcel-Bigelow St.	40-27	9.00	City of Marlborough	Conservation Com.	Wooded with pond.	City funds	Medium
MC-12	Howe Pond Parcel-Bigelow St.	40-25	15.60	City of Marlborough	Undesignated	Wooded with pond.	Taking	Medium
MC-13	Holts Grove-Stevens St.	18-93A	4.58	Maynard, J.	Conservation Com.	Wooded, with pond and trails		
MC-14	Kensington Woods-Langelier Ln. Rt. 20	48-5A	9.94	Toll Brothers, Inc.	Conservation Com.	Wooded hill with trails	Gift from subdivision-Sudbury Valley Estates	High
MC-15	Kensington Woods-Langelier Ln. Rt. 20	48-32	0.00	Toll Brothers, Inc.	Conservation Com.	Wooded hill with trails	Gift from subdivision-Sudbury Valley Estates	High
MC-16	Harvard Land-Parmenter Rd.(Near paper st. Norris Rd.)	108-1	6.92	City of Marlborough	Conservation Com.	Wooded Trails abuts Callahan State Park	Gift/Negotiated for waterline	High
MC-17	Faddoul Property-Jericho Hill-Brigham St.	103-10	27.35	City of Marlborough	Conservation Com. / Recreation (previously Ch. 61B property)	Wooded hill and open ski slope-trails will be developed - X-country ski	City Funds- Ch. 61B purchase-Renovations with Urban Self Help funding	High
MC-18	Thoroughbred acres- BERLIN RD	54-8	5.48	to be conveyed	Conservation Commission/ DPW watershed land	Wetlands, Millham Brook, field and woodland	Open Space Development Land	low
MC-19	Mt. Ward-LANGELIER LN.	48-1	71.70	City of Marlborough	Conservation Commission	Wooded hill with trails	Gift	high
MC-20	Forest Grove Open Space	60-95	11.39	to be conveyed	Conservation Commission	Wooded trails connects with Ghiloni Park	Open Space Development Land	high
MC-21	Deerfield village Subdivision BERLIN RD.	27-7	4.33	to be conveyed	OSD-open space parcel	Wooded with ledge outcrops, trail to be constructed	Open Space Development Land	High
MC-22	Desert Parcel-Desert-CONCORD RD	24-5A	6.33	City of Marlborough	Conservation Commission	Wooded with excellent trail system.	gift from	high
MC-23	Flagg Swamp-Matheson Dr.	28-21	23.75	City of Marlborough	Conservation Commission	Wooded swamp and upland area. Trails to be constructed	gift from Wellen from subdivision plan	high
MC-24	Raymond Rd. Open Space	22-120	3.65	City of Marlborough	Conservation Commission	Wooded area with connecting trail	Open Space Development Land	High

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MC-24	Raymond Rd. Open Space	35-104	3.15	City of Marlborough	Conservation Commission	Wooded area with wetlands	Open Space Development Land	low
MC-25	Hemenway St. New Horizons Parcel (was Blake Circle Subdivision)	34-76	10.50	City of Marlborough	Conservation Commission	Wooded with streams and wetland, has connecting trail	Special permit required mitigation	high
MC-25	All these parcels are shown on the assessors maps as part of the proposed subdivision	34-70	0.00					
MC-25		34-77	0.00					
MC-25		34-71	0.00					
MC-25		34-69	0.00					
MC-25		34-50	0.00					
MC-25		47-50	0.00					
MC-25		47-3G	0.00					
MC-25		47-51	0.00					
MC-25		47-49	0.00					
MC-25		47-3F	0.00					
MC-25		47-52	0.00					
MC-25		47-3E	0.00					
MC-25		47-48	0.00					
MC-25		47-3D	0.00					
MC-25		47-54	0.00					
MC-25		47-3C	0.00					
MC-25		47-3B	0.00					
MC-25		47-3A	0.00					
MC-26	Mitrakis - Near bike trail-Ash St.	43-4	8.00	City of Marlborough	Conservation Commission	Wooded with stream, trail will be constructed	City funds	high
MC-27	Hemenway St. Extension	10-30	5.88	City of Marlborough	Conservation and DPW	Pump station-and open space	Gift from subdivision-Goodale Farm	low
MC-27	Concord Rd.	3-26	2.27	City of Marlborough	Conservation and DPW	Pump station-and open space	Gift from subdivision-Goodale Farm	
MC-28	Waters Edge Open Space-Stevens St.	18-141	1.30	to be conveyed	Conservation Commission	Wooded with trail	OSD	
MC-28	Waters Edge Open Space-Stevens St.	18-175	1.76	to be conveyed	Conservation Commission	Wooded with trail	OSD	
MC-28	Waters Edge Open Space-Stevens St.	18-93	7.47	City of Marlborough	Conservation Commission	Wooded with trail	OSD	High

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MC-29	Orchard Estates III, Stow Rd.	9-60	12.24	to be conveyed	Conservation Commission	Wooded, and old orchard field, trail to be constructed	OSD	
MC-30	Gregoire Dr.	65-98	11.68	City of Marlborough	Conservation Commission/DPW Watershed	Wooded near Millham Brook	OSD	low-water land
MC-31	Simmons St.	65-19	12.29	City of Marlborough	Conservation Commission	Wooded and wetland, connecting trail	OSD	high
MC-32	Orchard Estates III, Stow Rd.	8-162	included in MC-29 totals	to be conveyed	Conservation Commission	Wooded, and old orchard field, trail to be constructed	OSD	
MC-33	Felton Conservation Area-ELM St.	66-148	58.38	City of Marlborough	Conservation Com.	Hay fields, woods, and swamp, has trail system. License agreement with farmer	Self Help Grant	High
MC-34	Conservation Land-Desert-Concord Rd.	4-3	27.00	City of Marlborough	Conservation Com.	Conservation trails, x-country ski	Eminent Domain (\$133,000)	High
MC-35	The Grove, Bolton St.	16-4	18.50	City of Marlborough	Conservation Commission	Field, Ft. Meadow Reservoir, wooded, with trails	Self Help	
MC-37	Conservation Land-Desert-Concord Rd.	4-1	10.70	City of Marlborough		Wooded with excellent trail system.	Eminent Domain (\$133,000)	High
MC-38	Shaughnessy Land, Lower Pleasant St.	15-21	22.82	Shaughnessy, Juanita		Wooded and wetlands - Trails to be constructed	City funds	high
MC-39	City Forest, Parmenter Rd.	108-2	13.00	City of Marlborough	Conservation Commission	Wooded, and old field Trails connecting into Callahan State Park	unknown	High
	CEMETERY LAND							
MCM-1	Evergreen Cemetery-WILSON ST	47-6	21.80	City of Marlborough	Cemetery Dept.	Cemetery		
MCM-1	Evergreen Cemetery-WILSON ST	60-34	33.30	City of Marlborough	Cemetery Dept.	Future Cemetery, wetlands and woodland.		possible connection
MCM-1	Evergreen Cemetery-WILSON ST	60-33	10.00	City of Marlborough	Cemetery Dept.	Cemetery & wooded	Municipal	
MCM-1	Evergreen Cemetery-WILSON ST	60-35	1.22	City of Marlborough	Cemetery Dept.	Cemetery & wooded	Municipal	Yes
MCM-2	Maplewood Cemetery- PLEASANT St.	55-230	14.00	City of Marlborough	Cemetery Dept.	Cemetery		

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MCM-3	Rocklawn cemetery- STEVENS ST	57-368	5.00	City of Marlborough	Cemetery Dept.	Cemetery		
MCM-3	Rocklawn cemetery- STEVENS ST	57-369	2.93	City of Marlborough	Cemetery Dept.	Cemetery		
MCM-4	Weeks cemetery- SUDBURY ST.	10-11	0.72	City of Marlborough	Cemetery Dept.	Historic Cemetery		
MCM-5	Spring Hill Cemetery- SPRINGHILL AVE.	57-115	2.62	City of Marlborough	Cemetery Dept.	Cemetery		
PCM-1	St. Mary's Cemetery- Beach St.	81-31	3.07	St. Mary's church	private	Cemetery		
PCM-1	St. Mary's Cemetery- Beach St.	81-30	0.55	St. Mary's church	private	Cemetery		
PCM-2	I.C. Cemetery- Beach St.	81-100	13.04	I.C. Church	private	Cemetery		
PCM-3	St. Mary's Cemetery- Beach St.	81-100A	4.40	St. Mary's church	private	Cemetery		
	RECREATION LAND							
MP-1	Memorial Beach- HOSMER ST.	7-49	10.00	City of Marlborough	Parks & Recreation Dept.	Swimming beach		
MP-2	Carisbrook/Byrne Field-HAWKINS LN	36-85	7.95	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-3	Marlborough Middle School- UNION ST.	44-16	25.86	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-4	Ghiloni Park- CONCORD RD	46-41	58.94	City of Marlborough	Parks & Recreation Dept.	Playing fields, Rec. Dept. Offices*	Urban self-help funds	High
MP-5	City Land on Bolton St.	30-4A	0.59	City of Marlborough	Dept. of Public Works	Open field must be mowed	City	High, over for b
MP-6	Old Steven's Estates- STEVENS ST.	57-361	6.56	City of Marlborough	Parks Dept.	Wooded-natural	Eminent Domain	High
MP-7	Kelleher Field- HUDSON ST	56-177	1.93	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-8	Ward 6 Play Area- JEFFERSON ST.	56-159	2.04	City of Marlborough	Parks & Recreation Dept.	Playing field*		High

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MP-9	Farrell Field-HILDERTH ST	70-350	7.60	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-10	Freeman School-BOLTON ST	70-18	1.73	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-11	Korean Veterans Field-MILLHAM ST	66-5	6.24	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-12	Ghiloni Park-CONCORD RD(and fire station)	59-7	15.00	City of Marlborough	Parks & Recreation Dept.	woodland and fire station and trails		
MP-14	Stevens Howe Playground-BROAD ST	68-53	0.00	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-15	Pappascosmos "Pappas" Playground-JOHN ST	82-115A	0.90	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-16	Richer Elementary School-MCGEE AVE.	79-25	12.45	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-17	Jericho Hill Recreation Area-BRIGHAM ST.	103-9	19.24	City of Marlborough	Parks & Recreation Dept.	Recreation building, playing field and courts		High
MP-18	Ghiloni Park-CONCORD RD	46-46	0.66	City of Marlborough	Parks & Recreation Dept.	Playing fields, Rec. Dept. Offices*	Urban self-help funds	High
MP-19	Ghiloni Park-CONCORD RD	46-47	5.18	City of Marlborough	Parks & Recreation Dept.	Playing fields, Rec. Dept. Offices*	Urban self-help funds	High
MP-20	Veteran's Park-Bolton St.	93-56	0.16	City of Marlborough	Parks & Recreation Dept.	Playing field*		
MP-21	Assabet River Rail Trail- Between Jefferson St. and I-290 Connector Rd.	ROW	UKN	City of Marlborough	to be designated (Recreation Dept. DPW)	Paved bicycle pedestrian path	State grants including: PWED, T-21, MassHiway Dept.	high
MP-22	Artemas Ward Park-NEW ST	69-394	7.60	City of Marlborough	Parks & Recreation Dept.	Playing field*	?	high
MP-23	Jaworeck School-Hosmer St.	19-229A	13.52	City of Marlborough	Recreation Dept.	Playing field*		High

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MP-24	Kane Elementary School-Farm Rd.	84-106	9.70	City of Marlborough	Parks & Recreation Dept.	Playing fields*		High
MP-25	Simpson Road Playground-Simpson Rd.	8-16A	2.50	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
MP-26	Ft. Meadow Playground-Second Rd.	6-31	0.20	City of Marlborough	Parks & Recreation Dept.	Playground*		High
MP-27	Marlborough Senior High School-Stevens St.	30-12	62.04	City of Marlborough	Parks & Recreation Dept.	Playing field*		High
	CITY OWNED LAND UNDESIGNATED							
MU-2	Desert Parcel-Sudbury St.	36-12	15.90	City of Marlborough	Undesignated	mostly wetland	?	High
MU-3	City Land on Bolton St.	30-4C	8.66	City of Marlborough	Dept. of Public Works	Golf driving range - private license agreement	City	High
MU-4	City Land on Bolton St.	30-4B	5.00	City of Marlborough	Dept. of Public Works	Golf driving range - private license agreement	City	High
MU-5	City Land on Bolton St.	30-4	5.00	City of Marlborough	Dept. of Public Works	Old landfill capped-golf driving range, field	City	High, over for b
MU-6	Bigelow St. Parcel-BIGELOW ST.	40-46	2.80	City of Marlborough	Undesignated	Natural wooded, swamp	Taking tax title	Yes
MU-7	Old Landfill-BOLTON ST.	30-4D	0.00	City of Marlborough	Dept. of Public Works	capped landfill, field	city	no
MU-8	Easterly Treatment Plant-BOSTON POST RD.	61-16	71.89	City of Marlborough	DPW-Water & Sewer Dept.	Treatment facility, but has an old field for habitat, part developed	City	No
MU-9	Kings Grant Rd.	44-104	7.41	City of Marlborough	?	?		
MU-10	SEWER TAKING LAND- KINGS GRANT RD. AND CLINTON ST AREA	ROW	?	City of Marlborough	DPW - Water and Sewer Dept.	sewer line, could be trail?		
MU-11	SEWER TAKING LAND- KINGS GRANT RD. AND CLINTON ST AREA	57-396	1.99	City of Marlborough	DPW-Water & Sewer Dept.	sewer line, could be trail?		

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MU-12	Conservation Land - Desert Parcel-CONCORD RD.	3-21A	35.00	City of Marlborough	Undesignated	Natural wooded with excellent trail system	City funds	High
MU-14	Assabet Valley Vocational High School-Fitchburg St.	16-1	26.44	Assabet Valley Vocational High School	Assabet Valley Vocational High School	Playing fields*	Regional funds	
MU-15	Assabet Valley Vocational High School-Fitchburg St.	16-2	64.67	Assabet Valley Vocational High School	Assabet Valley Vocational High School	Playing fields*	Regional funds	High
	WATERSHED LAND							
MW-1	Spoon hill - water tank	20-2	14.23	City of Marlborough	DPW- Water Dept.			
MW-2	Millham Reservoir, watershed-Boundary St.	76-1A	2.15	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-3	Millham Reservoir, watershed-Boundary St.	76-3	40.00	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-4	Millham Reservoir, watershed-Boundary St.	76-4	10.03	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-5	Millham Reservoir, watershed-Boundary St.	76-5	0.11	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-6	Millham Reservoir, watershed-Boundary St.	64-6	3.54	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-7	Millham Reservoir, watershed-Boundary St.	76-1	10.70	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-8	Millham Reservoir, watershed-Boundary St.	88-5	24.10	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-9	Millham Reservoir, watershed-Boundary St.	77-7	11.50	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-10	Millham Reservoir, watershed-Boundary St.	77-8	7.66	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	No	No
MW-11	water tower-BROAD ST.	68-80	5.20	City of Marlborough	Dept. of Public Works - Water Dept.			

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
MW-12	Former Hillside School land-Robin Hill St.	52-2A	122.13	City of Marlborough	Dept. of Public Works - Water Dept.	Watershed protection	5% Water user fee tax	No
MW-13	Lake Williams Reservoir-Williams St.	80-124	113.40	City of Marlborough	Dept. of Public Works - Water Dept.	Watershed protection-wooded open water		No
MW-14	Millham Reservoir, watershed-Boundary St.	76-2	152.04	City of Marlborough	Dept. of Public Works - Water Dept.	Wooded, streams, wetland, open space	City	No
MW-15	Former Hillside School land-Robin Hill St.	64-4	3.54	City of Marlborough	Dept. of Public Works - Water Dept.	Watershed protection	5% Water user fee tax	No
	PRIVATE PROTECTED PARCELS							
PP-1	Thomas Stow Farm	45-72	6.29	Thomas Stow Farm Homeowners Assoc. Inc.	Homeowners	Wetland, wooded, natural	Open space development	Low
PP-2	Jefferson at Wheeler Hill-DONALD LYNCH BLVD.	14-7	?	CR to be conveyed	JPI			
PP-3	Avalon Orchards	58-50	?	CR to be conveyed	Avalon Bay	Walking Trail		
PP-4	Gay Conservation Restriction-WILLIAMS ST.	113-7	2.00	George Gay	Sudbury Valley Trustees	Field? Trail	Sudbury Valley Trustees	High
PP-5	New Horizons-HEMENWAY ST..	34-53	0.00	CR	Conservation Commission/New Horizons			
PP-6	New Horizons-HEMENWAY ST..	34-8	0.00	CR	Conservation Commission/New Horizons			
PP-7	The Desert Conservation Land-Old Concord Rd.	12-1	35.00	MASS Federation of Womens club	MASS Federation of Womens club			
PP-8	New Horizons-HEMENWAY ST..	34-8	0.00	CR	Conservation Commission/New Horizons			
PP-9	Union Common-MAIN ST.	70-292	0.00	Union Common				
PP-10	Indian Hill Conservation Restriction	74-4	0.00	CR	Conservation Commission/Fafard			

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
PP-11	Jericho Hill Estates-Kelleher St.	102-61	9.66	Residents of Jericho Hill Estates	Homeowners	Wooded hillside	Subdivision Open Space	High
PP-12	Jericho Hill Parcel-Kelleher St	102-32	0.87	Residents of Jericho Hill Estates	Homeowners	Wooded hillside	Subdivision Open Space	High
PP-13	Jericho Hill Parcel-Kelleher St	102-62	12.55	Residents of Jericho Hill Estates	Homeowners	Wooded hillside	Subdivision Open Space	High
PP-14	Gay Conservation Restriction-WILLIAMS ST.	113-7	2.00	George Gay	Sudbury Valley Trustees	Field? Trail	Sudbury Valley Trustees	High
	STATE OWNED LAND							
SF-1	Desert - Conservation Land-Concord Rd.	3-5	14.88	DEM Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SF-2	Marlborough State Forest (part of Desert area)-Concord Rd.	11-4	98.00	DEM Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SF-3	Marlborough State Forest-Concord Rd. Hemenway St.	34-7	2.80	DEM Commonwealth of MA	City Conservation Commission/Parks & Recreation agreement	Wooded with excellent trail system	State	High
SF-4	Marlborough State Forest-Concord Rd. Hemenway St.	34-9	16.80	DEM Commonwealth of MA	City Conservation Commission/Parks & Recreation agreement	Wooded with excellent trail system		
SF-5	Marlborough State Forest-Concord Rd. Hemenway St.	47-1	13.40	DEM Commonwealth of MA	City Conservation Commission/Parks & Recreation agreement	Wooded with excellent trail system	State	High
SF-6	Marlborough State Forest-Concord Rd. Hemenway St.	47-28	32.80	DEM Commonwealth of MA	City Conservation Commission/Parks & Recreation agreement	Wooded with excellent trail system	State	High

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
SP-1	Callahan State Park - Broadmeadow St.	86-4	5.62	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SP-2	Callahan State Park - Broadmeadow St.	98-10	34.40	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-3	Callahan State Park - Broadmeadow St.	98-5	1.68	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-4	Callahan State Park - Broadmeadow St.	98-4	0.73	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-5	Callahan State Park - Broadmeadow St.	109-5	3.30	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SP-9	Callahan State Park- Broadmeadow St.	98-6	9.50	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system		
SP-10	Callahan State Park- Broadmeadow St.	98-7A	13.69	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system		
SP-12	Navin Memorial Skating Rink- Bolton St.	30-12A	5.33	Commonwealth of MA	DEM/Private partner	Skating rink	State	Medium
SP-13	Callahan State Park- Broadmeadow St.	87-1	62.88	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-15	Callahan State Park- Broadmeadow St.	98-8	7.08	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-16	Callahan State Park - Broadmeadow St.	74-1	23.48	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SP-17	Callahan State Park - Broadmeadow St.	86-3	50.89	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-18	Callahan State Park - Broadmeadow St.	97-2A	23.49	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SP-19	Callahan State Park - Broadmeadow St.	98-2A	6.27	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-20	Callahan State Park - Broadmeadow St.	97-1	6.23	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	

MAP LABEL	SITE/LOCATION	MAP PARCEL	ACRES	OWNER	MANAGER	USE/CONDITION	FUNDS USED	RECREA
	CONSERVATION LAND							
SP-21	Callahan State Park - Broadmeadow St.	98-11	3.30	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	High
SP-22	Callahan State Park - Broadmeadow St.	97-3	21.46	Commonwealth of MA	Dept. of Environmental Management	Wooded with excellent trail system	State	
SW-1	Assabet River Wetlands-Robin Hill St.	63-5	11.00	MWRC Commonwealth of MA				
SW-2	Assabet River Wetlands-Robin Hill St.	50-1	3.50	MWRC Commonwealth of MA	Metropolitan Resource Commission	Flood control land		
SW-3	Tyler Dam-Robin Hill St.	64-5	30.00	MWRCCommonwealth of MA	Metropolitan Water Resource Commission	Open fields / wetalnds / dams / wooded areas		
SW-4	Sudbury Reservoir -Farm Rd. Parmenter Rd.	84-86	?	MDC Commonwealth of MA	Metropolitan District Commission	Watershed protection, trails	State	High
SW-5	Maple Street Skating Pond- MAPLE ST	93-98	3.84	MDC Commonwealth of MA	Metropolitan District Commission	Formerly skating rink, now just open meadow and pond	State	High
SW-6	Maple Street Skating Pond- MAPLE ST	93-94	0.23	MDC Commonwealth of MA	Metropolitan District Commission	Formerly skating rink, now just open meadow and pond	State	High
SW-8	Filter Beds, Sudbury Reservoir, Walker St.	MDC	25.57	MDC Commonwealth of MA	Metropolitan District Commission	Filter Bed property	State	high

Unprotected Land
Use with Map #7

MAP LABEL	SITE/LOCATION	MAP-PARCEL	ACRES	Owner of Record	ZONING
PA-1	HEMENWAY ST	47-5	10.00	MAURO ERNEST A	A-1 & RR
PA-2	BERLIN RD	41-25	37.18	HOUDE SR ERNEST A	RR
PA-3	BERLIN RD	41-37B	10.09	HOUDE JR ERNEST A	RR
PA-4	BOSTON POST RD EAST	73-28	13.62	MCGEE VIRGINIA D	A-2
PA-5	BOSTON POST RD EAST	73-27	1.98	MCGEE VIRGINIA D	A-2
PA-5	BOSTON POST RD EAST	73-26	0.55	MCGEE VIRGINIA D	A-2
PA-6	BOSTON POST RD EAST	73-24	9.00	MCGEE VIRGINIA D	A-2
PA-7	MILLHAM ST	65-25	19.86	MARLBORO FISH & GAME	RR
PA-8	ELM ST	77-2	4.33	MARLBORO FISH & GAME	RR
PA-9	BROADMEADOW ST	85-12	7.09	TROMBETTA CHARLES P	LI
PA-10	MUDDY LN	77-6	17.04	MARLBORO FISH & GAME	RR
PA-11	MARLBOROUGH COUNTRY CLUB-CONCORD RD	46-33	65.15	MARLBOROUGH COUNTRY CLUB INC	A1
PA-12	MUDDY LN	77-4	1.05	MARLBORO FISH & GAME	RR
PA-13	BROADMEADOW ST	85-19	12.75	GULBANKIAN DONALD	LI
PA-14	MUDDY LN	77-3	1.04	MARLBORO FISH & GAME	RR
PA-15	MUDDY LN	77-9	2.30	MARLBORO FISH & GAME	RR
PA-16	SOUTH ST	93-30	5.49	RAIANO FRANCIS J	A-1
PA-17	SOUTH ST	93-30A	1.25	RAIANO FRANCIS J	I
PA-18	SOUTH ST	93-3	5.70	RAIANO ALFRED	A-1
PA-19	SOUTH ST	93-6	5.00	RAIANO ALFRED F	A-1
PA-20	LAROSE DR	103-12	5.00	DITULLIO BATTISTA A	A-1
PA-21	MILL ST	104-31	7.44	LUPO ROBERT P	I

PA-22	MARLBOROUGH COUNTRY CLUB- CONCORD RD	59-1	58.50	MARLBOROUGH COUNTRY CLUB INC	A-1
PA-23	CLOVER HILL ST			Check to see if this is still in 61A	
PA-24	WILLIAMS ST	91-7	9.42	JACKSON J DONALD	A-1
PA-25	SOUTH ST	81-228	2.16	RAIANO ALFRED F	A-1
PA-26	ROBIN HILL ST	14-3A	4.02	CARNEY PAUL V	LI
PA-27	ROBIN HILL ST	14-3	8.30	CARNEY PAUL V	LI
PA-28	BOLTON ST	30-13	10.95	ESTABROOK LI EST ESTHER H	A-2
PA-29	BOLTON ST	30-14	0.62	ESTABROOK LI EST ESTHER H	A-2
PU-15	GOODALE ST	2-5	17.28	CHANCELLOR ASSOC LTD PTNRSHIP	RR
PU-15	ROBIN HILL ST	13-4	2.00	CURLEY RICHARD T	LI
PU-16	KELBER DR	43-86	7.66	HOWE DWIGHT W	A-2
PU-17	HANLON DR	24-4	3.60	SILBERMAN NORMAN B	RR
PU-18	PLEASANT ST	15-12D	3.15	METRO PARK CORPORATION	A-2
PU-19	SUDBURY ST	24-9	3.19	SPIELMAN DAVID	RR
PU-21	BIGELOW ST	13-5	3.40	MACULEVICH WILLIAM P	LI
PU-22	BIGELOW ST	13-7	1.60	INHABITANTS OF HUDSON	LI
PU-23	RIVER RD	13-6	4.00	NEW ENGLAND POWER COMPANY	LI
PU-24	SUDBURY ST	24-10	3.48	NEITERMAN ELIN W	RR
PU-25	BIGELOW ST	26-1	6.50	CASACELI FRANK M	LI
PU-26	PLEASANT ST	15-12E	1.21	MADDEN WILLIAM F	A-2
PU-27	SLOCUMB LN	36-79	1.12	MARLBOROUGH SAVINGS BANK	
PU-28	SUDBURY ST	24-11	3.61	ENSCORE DAVID J	RR
PU-29	RESERVOIR ST	30-9	1.25	ST. MARKS BOATHOUSE	A-2
PU-30	FITCHBURG ST	16-16	4.40	STANIUNAS ALEXANDER A	LI
PU-31	LOWER PLEASANT ST	28-20	52.12	COMMONWEALTH OF MASS. MASSHIGHWAY	A-2

PU-32	SUDBURY ST	24-1	1.46	POLLINGER ROBERT J	RR
PU-33	PLEASANT ST	42-70A	55.06	STRATUS COMPUTER INC	A-2
PU-34	PLEASANT ST	29-2	1.19	DONNELLY MASS REALTY TRUST	A-2
PU-35	SLOCUMB LN	36-80	1.18	MARLBOROUGH SAVINGS BANK	RR
PU-36	BERLIN RD	40-10	8.70	WEST HILL LLC	LI
PU-37	BERLIN RD	27-3	18.00	WEST HILL LLC	A-2
PU-38	ROBIN HILL ST	39-26B	26.90	CAZAROPOULOS COSMA P	LI
PU-40	ROBIN HILL ST	52-1	51.89	HILLSIDE SCHOOL	LI
PU-41	BOSTON POST RD EAST	62-3A	23.00	TEMPLE DAVID B	RR
PU-42	BOSTON POST RD EAST	61-7	19.83	SISTERS OF SAINT ANN'S	B
PU-43	WAYSIDE INN RD	62-4A	7.80	HUTCH FRANCIS J	RR
PU-44	SLOCUMB LN	36-81	1.14	MARLBOROUGH SAVINGS BANK	RR
PU-45	BOSTON POST RD EAST	59-9	7.24	DONNELLY MASS REALTY TRUST	B
PU-46	BOSTON POST RD EAST	59-10	9.50	ELXSI	B
PU-47	BOSTON POST RD EAST	62-15	152.59	RAYTHEON COMPANY	B
PU-48	BOSTON POST RD EAST	61-27	38.45	INDIAN DEVELOPMENT CORP	B
PU-49	COOK LN	71-36	17.20	MAURO ERNEST A	B & A-3
PU-50	SOUTH ST	92-32A	4.00	CHIRES DEMOSTHENES	A-1
PU-53	HAGER ST	75-1	4.98	RAYTHEON COMPANY	RR
PU-54	SLOCUMB LN	36-82	1.55	MARLBOROUGH SAVINGS BANK	RR
PU-55	BROADMEADOW ST	75-2	22.44	ARON ROBERT L	RR
PU-56	FARM RD	73-14	4.20	MARLBOROUGH AIRPORT PROPERTIES	A-2
PU-57	BEACH ST	92-24	8.00	RAWCHUCK NICHOLAS	A-1
PU-58	BROADMEADOW ST	98-2	6.56	ODONNELL COLUM P	RR
PU-59	BEACH ST	92-22	0.70	BIGGS JOSEPH D	A-1

PU-60	SOUTH ST	92-33	2.00	DEW ROBERT A	A-1
PU-61	BEACH ST	92-23A	0.60	SEYMOUR SAMUEL	A-1
PU-62	BEACH ST	92-19	2.00	RAWCHUCK NICHOLAS	A-1
PU-63	SOUTH ST	92-32	42.37	RAWCHUCK NICHOLAS	A-1
PU-64	STEVENS ST	44-42	24.00	CHAOUSIS JAMES	A-2
PU-66	BRIGHAM ST	91-37	8.70	HILL JR THOMAS H	A-1
PU-67	HAYES MEMORIAL DR	99-1	67.71	GUTIERREZ TR ARTURO J	I
PU-68	SOUTH ST	103-19	36.00	RAWCHUCK NICHOLAS	A-1
PU-69	PARMENTER ST	109-1	14.00	ROUSSEAU JR ALBERT J	RR
PU-70	BRIGHAM ST	103-34	2.62	MALEY RICHARD J	A-1
PU-71	WILLIAMS ST	113-1	19.06	CUPAK LI EST JOSEPHINE K	LI
PU-72	WILLIAMS ST	113-5	18.00	NEW ENGLAND POWER COMPANY	LI
PU-73	CEDAR HILL ST	116-5	8.06	BP CRANE MEADOW LLC	I
PU-74	SLOCUMB LN	49-17A	0.00	MARLBOROUGH SAVINGS BANK	RR
PU-75	CEDAR HILL ST	116-3A	16.51	JOHNSON CAMBELL REALTY INC	LI
PU-76	ROBIN HILL ST	38-1A	28.62	HILLSIDE SCHOOL	RR
PU-77	ROBIN HILL ST	64-1	122.30	HILLSIDE SCHOOL	LI
PU-78	ASH ST	43-1	5.59	MIDURA LAWRENCE E	A-3
PU-79	GREENWOOD ST./WELLINGTON ST.	83-157	10.69	CERQUEIRA ROSEMARY	A-2
PU-80	BOSTON POST RD WEST/ GLEN ST	78-12	66.08	GUTIERREZ TR ARTURO J	B & LI
PU-81	BROADMEADOW ST	98-2	6.56	ODONNELL COLUM P	RR
PU-82	GLEN ST/MILLHAM BROOK	89-3A	1.60	FORBES JUSTINA B	LI

PU-83	SLOCUMB LN	49-16	1.01	MARLBOROUGH SAVINGS BANK	RR
PU-84	AMES ST	89-3B	15.76	GUTIERREZ TR ARTURO J	I
PU-85	BRIGHAM ST	103-11	8.65	LATTUCA ROSARIO L	A-1
PU-87	FARM RD	84-103	7.77	LABRACHE RACHEL	A-3
PU-88	MECHANIC ST	42-57	3.80	WEST CLARENCE R	A-3
PU-89	RUSSELL ST	55-214	2.25	SINIAWSKI LEONARD O	A-2
PU-90	STOW RD	20-63	9.71	?	A-1
PU-91	FOREST ST	90-2	26.10	DEPIETRI DAVID	LI
PU-92	FOREST ST	100-14	10.61	METLIFE INS.	A-3
PU-93	PLEASANT ST/ASH ST	29-16	5.00	STRATUS COMPUTER INC	A-2
PU-94	SLOCUMB LN	49-14	1.53	MARLBOROUGH SAVINGS BANK	RR
PU-95	ASH ST	42-78D	4.17	MCCOOK WILLIAM	A-3
PU-96	FARM RD	73-15A	3.00	MARLBOROUGH AIRPORT PROPERTIES	LI
PU-98	SLOCUMB LN	49-14A	0.44	MARLBOROUGH SAVINGS BANK	RR
PU-99	SLOCUMB LN	49-15	2.49	MARLBOROUGH SAVINGS BANK	RR
PU-101	STEVENS ST	44-41	3.25	SILVA BLANCA N	A-3
PU-102	FREMONT ST	56-175	0.14	MORRIS DONALD	RB
PU-102	HIGHLAND ST	56-173	0.36	MORRIS DONALD C	RB
PU-102	JEFFERSON ST	56-160	0.88	MORRIS DONALD C	RB
PU-103	LINCOLN ST	69-338A	3.44	FOSSILE NIEL	B-CA
PU-103	LINCOLN ST	69-339A	0.44	FOSSILE NIEL	B-CA
PU-103	LINCOLN ST	69-339	0.16	FOSSILE NIEL	B-CA
PU-103	LINCOLN ST	69-337	0.79	FOSSILE NIEL	B-CA
PU-103	LINCOLN ST	69-338	0.58	FOSSILE NIEL	B-CA

PU-104	ELM ST	67-47	4.86	LIZOTTE ALBERT A	LI
PU-105	LAKESIDE AVE	67-45	24.96	GUTIERREZ TR ARTURO J	LI
PU-106	CHESTNUT ST	69-76	0.89	DIAS JOSEPH	RB
PU-106	PLEASANT ST	69-92	0.11	DIAS JOSEPH	RB
PU-107	WINTER ST	68-28	4.20	SOUMOULIS PETER	A-3
PU-108	BOND ST	68-30A	6.25	GUTIERREZ TR ARTURO J	LI
PU-109	LINCOLN ST	80-51	1.71	COPPER BEECH TREE LLC	RC
PU-110	HEMENWAY ST	22-12F	1.15	KRASILOVSKI LOIS	RR
PU-112	NEWTON ST	82-27	23.37	MASS ELECTRIC CO	?
PU-113	FAIRFIELD ST	83-105	4.61	GROGAN ET AL MARTIN E	A-2
PU-115	EXETER ST	83-89	1.72	GROGAN MARTIN E	A-2
PU-116	DARTMOUTH ST	83-164A	0.74	HIGHLAND RIDGE CORP	A-2
PU-117	DARTMOUTH ST	83-163A	0.58	HIGHLAND RIDGE CORP	A-2
PU-118	DARTMOUTH ST	83-162A	0.15	HIGHLAND RIDGE CORP	A-2
PU-119	DONALD J LYNCH BLVD	26-31	21.02	BGI HOLDINGS III LLC	LI
PU-120	FARM RD	94-67A	3.80	VALCHUIS ROBERT	A-2
PU-120	FARM RD	94-26B	0.54	PLUMB VERA F	A-2
PU-120	FARM RD	94-26A	1.49	PLUMB VERA F	A-2
PU-120	FARM RD	94-66	1.74	BOMBARD THOMAS J	A-2
PU-120	FARM RD	94-67	1.96	VALCHUIS ROBERT	A-2
PU-120	FARM RD	94-27A	5.83	VALCHUIS ROBERT J	A-2
PU-120	FARM RD	94-71B	0.37	MONTI CHRISTOPHER	A-2
PU-120	FARM RD	94-71A	0.85	MONTI CHRISTOPHER	A-2
PU-120	FARM RD	94-71	1.64	MONTI CHRISTOPHER	A-2
PU-120	FARM RD	94-69	1.60	MAC CORMAC WILLIAM K	A-2

PU-121	HAYES MEMORIAL DR	88-29	17.48	JOHNSON STUART R	A-2
PU-122	NICKERSON RD	88-34	8.10	JOHNSON STUART R	LI
PU-123	BOLTON ST	29-23	19.00	FORT MEADOW ASSOC RLTY TR	LI
PU-124	FOREST ST	100-10	2.40	FOSSILE NIEL	I
PU-125	FOREST ST	100-19	26.06	BNP LEASING CORP	I
PU-126	FOREST ST	99-3	16.23	GUTIERREZ TR ARTURO J	I
PU-127	CRANE MEADOW RD	112-10A	13.34	SYNOPSIS INC	I
PU-128	BARTLETT ST	110-13	3.62	BUTCHER WAX	I
PU-129	SPRING ST	55-40	18.35	FOSSILE NIEL S	A-2
PU-130	ELM ST	54-17	24.00	LEPERCQ CORP INCOME FUND LP	LI
PU-131	ELM ST	68-19	12.10	MACNEILL HARRIS L	LI
PU-132	ELM ST	68-20B	6.34	MACNEILL HARRIS L	LI
PU-133	WOODCOCK LN	36-84	17.22	GRISTMILL CONSTRUCTION INC	RR
PU-134	ROOSEVELT ST	55-52	3.25	MACNEIL HARRIS L	
PU-135	ELM ST	68-1	1.60	REGER FRANK J	
PU-136	PARMENTER ST	108-3	41.71	PRESIDENT AND FELLOWS OF HARVARD	RR
PU-137	OLD CONCORD RD	3-6	0.08	ELLIOT CHARLES	RR
PU-138	OLD CONCORD RD	3-10	0.06	PERKINS RAYMOND	RR
PU-139	HEMENWAY ST	11-3	16.80	MUTTI CHRISTOPHER M	RR
PU-140	HEMENWAY ST	11-43	5.68	MCKEOWN DOREEN M	RR
PU-141	HEMENWAY ST	11-40	2.35	MUTTI CHRISTOPHER M	RR
PU-143	HEMENWAY ST	10-41	1.43	MUTTI CHRISTOPHER M	RR
PU-144	RESERVOIR ST	5-3	3.60	LATTUCA ALBA M	A-2
PU-145	HEMENWAY ST	11-39	1.19	WHITMAN RICHARD E	RR
PU-146	PLEASANT ST	15-3	24.61	MITRAKAS GREGORY	LI

PU-147	SUDBURY ST	24-6	4.00	RHODES TODD J	RR
PU-148	PLEASANT ST	15-1	3.22	J R R B C INC	LI
PU-149	WOODCOCK LN	36-84A	1.05	GRISTMILL CONSTRUCTION INC	RR
PU-150	HANLON DR	24-2	3.10	BRASSARD PATRICIA J	RR
PU-151	PLEASANT ST	15-12	13.73	METRO PARK CORPORATION	A-2
PU-152	PLEASANT ST	14-1	3.34	J R R B C INC	LI
PU-158	SUDBURY ST	24-8	3.11	MORADI IRADJ	RR
PU-153	HEMENWAY ST	22-6	11.73	GRISTMILL CONSTRUCTION INC	RR
PU-154	HANLON DR	24-3	3.60	LEISMAN TIMOTHY	RR
PU-155	SUDBURY ST	24-7	3.20	CURTIN HAROLD F	RR
PU-156	ROBIN HILL ST	14-3B	3.86	GUIDOTTI JR HUGO G	LI
PU-157	FITCHBURG ST	29-1	20.04	METRO PARK CORPORATION	A-2
PU-159	RED SPRING RD	30-10	48.90	MORSE JOYCE J	A-2
PU-160	FARM RD			GIBSON	

SECTION 6

COMMUNITY VISION

A. Description of Process

As described in Section 2, the Open Space and Recreation Committee distributed the 2002 Open Space and Recreation Plan survey to over 28 different civic, recreation and volunteer groups throughout the city to gain some insight into what residents felt about the current and future status of our open space and recreational needs. A list of the groups contacted is found in Appendix A. At least ten surveys were distributed to each of these groups by a member of the Open Space Committee. The results of the survey and the feedback each member gained from their discussion with these groups, informed the recommendations, goals and action items identified in this plan. In addition the report done in 2000 by the Recreation Department titled “Marlborough Recreation Department Fields Report, to Marlborough City Council, Oct. 26, 2000”, (in Appendix C) was used to assess the needs for recreational facilities within the city.

In drafting this document the OSC used the 1997 plan as the jumping off point and expanded on its recommendations. With such a great diversity of interests represented on the OSC the Committee was able to cover much information.

A public meeting was held on April 10, 2003 to review the draft document and solicit public comment. The public was notified of the availability of the draft report through news releases to the local media, civic organizations and the library. Comments received during the review of the draft are included in Section 10 and are incorporated into this final document.

The goal of the Open Space Committee was to prepare a plan that best reflects the diverse views and needs of Marlborough's residents and establishes guidelines and recommendations to meet those needs.

B. Statement of Open space and Recreation Goals

The overall goals for this plan are to: preserve the unique natural resources and character of the city, to educate citizens about the benefits of these resources and to provide adequate recreational opportunities for the community.

The ideal open space and recreation system for the community would include the following:

1. Protection and enhancement of the city's natural resources
2. Quality recreational facilities and adequate recreational opportunities for all city residents for both passive and active recreation.
3. Preservation of the country character, historic, and cultural resource of the community.
4. Promotion and development of regional open space and recreational opportunities.

The remaining sections 7, 8 and 9 of this plan set the groundwork for meeting these broad goals.

SECTION 7

ANALYSIS OF NEEDS

The Open Space Committee generated the following analysis of needs from the results of the 2002 survey and information gathered from the various boards and committees represented on the Open Space and Recreation Plan Committee. This section summarizes the major open space and recreation needs as defined by this group. These needs are divided into the following categories:

- A. Natural Resource Protection Needs
 - B. Community Needs
 - C. Management Needs
-

A. Natural Resource Protection Needs

Marlborough's Natural Resource Protection needs can be separated into three general categories; water resources, wildlife habitat, trails and greenway corridors. These categories are detailed below.

I. Water Resource Protection

Rivers, streams, lakes and ponds throughout the city are facing the threat of pollution as the community becomes increasingly urbanized. Several streams are still pristine, with water sufficiently cool and clean to support native brook trout. However, as the rate of development increases in Marlborough, runoff from roadways, parking lots, and lawns will continue to degrade our water resources and accelerate weed and algae growth within the receiving ponds and lakes. Listed below are each of the major water resources in the community with their corresponding water quality problems and recommended actions, to protect its water quality.

A. Lake Williams and Millham Reservoir

These two reservoirs provide approximately 30 % of the city's drinking water and yet there are only a few controls in place to protect or otherwise maintain the water quality in each of them. The huge steps taken in the past have been the acquisition of several large tracts of land adjoining Millham Reservoir for watershed protection; however there is still significant potential for contamination of both reservoirs from continued development of impervious surfaces and landscaped areas, and accidents on existing roadways. Additional protection for these critical areas should be implemented.

The Water Supply Protection District (WSPD) ordinance, passed in 1997 provides some restrictions to new development and redevelopment of existing lots within the watershed area. Over time as areas are developed and redeveloped, systems to improve water quality from parking lot runoff and roadway runoff will be installed. The recommendation is to ensure full enforcement of this ordinance to ensure long term improvements within the watershed. Some key features of the ordinance are as follows:

- Elimination of all direct discharges of stormwater runoff to the reservoirs and their main tributaries;
- Reduces the impervious area allowed within each zoning district.
- Prohibits uses that are hazardous or pose potential hazards to the water quality.
- Requires a 50-foot no disturbance buffer zone along all wetland areas.
- Requires the use of best management practices and maintenance schedules as outlined in the State Stormwater Management Policy for all new stormwater discharges.

In addition to the implementation and enforcement of the WSPD the following items also need to be addressed in order to have better control over the longterm water quality of the reservoirs.

- Develop an Erosion Control Ordinance that will require all developments, commercial and residential, regardless if they are near wetlands, to install erosion controls on the property during construction. This ordinance should be enforceable by the Building Dept., DPW Engineering Dept. and the Conservation Department.

- Request from the Mass. Highway Dept. a reduction of road salt on sections of Rt. 20 and I-495 that drain into this watershed. When road improvements are proposed for either highway, improvements to the stormwater drainage system that would improve water quality should also be requested.

B. Sudbury Reservoir

Sudbury reservoir is a backup drinking water supply for the metropolitan Boston area. The land is controlled by the Metropolitan District Commission (MDC) and the water is managed by the Massachusetts Water Resources Authority (MWRA). Over the past 5 years, several roadways were improved within the Sudbury Reservoir, Farm Rd. being the largest one. Extensive water quality improvements were implemented as part of this project, where none existed before.

In June of 1997 the MDC and MWRA produced a study titled "Watershed Protection Plan Sudbury Reservoir and Framingham Reservoir #3". Of particular concern to the Sudbury Reservoir water quality are the excess nutrient, sand and silt draining through the Marlborough tributaries to the reservoir. The stream providing the highest nutrient loading was identified as Walker Brook, which drains the majority of the center of the city. The study makes several recommendations that the Open Space Committee agrees the city should implement. These are as follows:

- Support the MDC in the development and implementation of a monitoring program to help assess the health of the reservoir and provide a basis for developing land use management controls and other regulatory and non-regulatory development of riparian buffer zones wherever possible in non-MDC owned lands along tributaries of the reservoir. City departments and land owners should be encouraged to allow re-growth of shoreline vegetation in all but small highly visible areas throughout the Sudbury Watershed.
- Work with local nurseries and golf courses to encourage the use of Integrated Pest Management as part of their lawn maintenance practices.
- When upgrading roadways within the watershed, the city and MassHighway will need to implement best management practices for stormwater management on these roadways, as was done in 2002 for Farm Rd.
- Institute reduced road salt practices throughout the Sudbury Watershed area.
- Develop a preliminary design of modifications that can be made to the

Marlborough filter beds to re-use them for detention and settling. Other alternatives besides simple removal of sand and soil and blocking under drains may also be available, but cost will be a major consideration. Maintenance considerations should also be a key to preliminary design considerations.

- Begin monitoring the pre-filter bed water quality prior to construction, during construction and post-construction so that the effectiveness of the use of these filter beds can be tracked and modifications can be made.

C. Ft. Meadow Reservoir

Marlborough's only public recreational water body experiences elevated levels of nutrients and solids loading throughout the year due to the urbanized nature of its watershed and numerous street drains that discharge directly into the lake.

The south side of the reservoir along Red Spring Road remains unsewered. The existing septic systems along this road were designed for summer cottages, now converted to year-round use. As recommended in the 1997 OS&RP, the City hired ENSR a consulting firm, to test the groundwater quality along the shorelines of the cottages on Red Spring Road to determine the extent of impact the septic systems may be having on the lake. The study is titled "Assessment of Septic System Impact on Fort Meadow Reservoir" prepared by ENSR, June 2000. The results of the study were surprising. There were no elevated levels of nutrient loading from these septic systems. Therefore, the recommendation to sewer this area for water quality purposes is no longer as strong an argument. However, the Board of Health has checked several systems on Red Spring Road that required extensive upgrading to meet Title V. Therefore, when feasible, the landowner and homeowners on Red Spring Road may want to consider pursuing installation of sewer service in the area. Upgrading septic systems may require extensive removal of trees, thus changing the entire character of this nice wooded neighborhood.

In an ongoing effort to monitor the lakes water quality at Fort Meadow Watershed Neighborhood Association was formed in 1998 to provide the city with some assistance in gathering water quality data and monitoring the weed growth in the lake. The City and the FMWNA received a Volunteer Monitoring Grant from the State EOEPA to perform the testing and monitoring program. As a result of this work it was discovered that Ft. Meadow had an abundant amount of Eurasian Water milfoil, an invasive non-native weed that has infested and choked many ponds throughout New England. The city hired the consulting firm ENSR in 2000 to map out the weed infestation and to provide a recommendation as to what treatment was necessary. In 2001 the city received a Lake and Pond Grant to hire a consultant, Lycott Environmental, to do the chemical application recommended in the ENSR study. The lake was treated with the herbicide Reward in the summer of 2002 with good results. The consultant has guaranteed the treatment for three years and will be monitoring the lake through the summer of 2004, and treating as needed.

As part of the management effort and education program to inform residence about the nuisance weeds and water quality improvements, the city purchased storm drain markers which were installed by a local eagle scout throughout half of the watershed, the remaining half is to be marked by a second eagle scout in 2003.

During the winter draw down of 2002, the city's DPW was able to remove large amounts of street sand which had deposited at the end of the storm drains throughout the lake. This is a very important step to helping remove sediments and nutrients from the lake and was very successful.

Recommendations for ongoing protection of Ft. Meadow Reservoir are:

- Finish storm stenciling and door hanger distribution program around the Ft. Meadow Watershed.
- Develop a street sand removal program with the DPW at the end of all storm drains discharging into the lake during the lake draw downs.
- Make sure ongoing monitoring of weeds continues after the 2004 contract with the consultant expires. Have the FMWNA or Ft. Meadow Commission take the lead on this weed monitoring project and report to the Conservation Commission in Hudson and Marlborough their findings.
- Ongoing fliers and workshops should be held for lake owners and land owners

within the watershed to educate landowners about “lake Friendly” lawn care and land use practices.

- Develop a watershed protection ordinance for the protection of the water quality around the lake.

D. Hager Pond

This privately-owned pond serves as the backdrop for the historic Wayside Inn Country Store, like Sudbury Reservoir and Fort Meadow Reservoir, Hager Pond experiences elevated nutrient and solids loading due to surface water runoff from Rt. 20, and adjacent impervious areas and discharge from the Easterly Wastewater Treatment Plant, just upstream. During the summer months, excessive algal blooms and weed growth become a problem. The following recommendations were made for Hager Pond.

- When improvements are made to the Rte. 20 the storm drains discharging into Hager Pond the drainage structures should be retrofitted or replaced with larger sumps and oil separator units so that runoff water can be treated before being discharged into Hager Pond.
- Work with EPA and DEP and down stream communities to find a holistic the long term solution to the downstream water quality improvements to Hager Pond and the Hop Brook Pond System.

E. Small Ponds

There are several small ponds throughout the city, which deserve mention: Cider Knoll Pond, Muddy Pond, and Howe Pond. All are quite clean and contain abundant wildlife. Any new drainage discharges to any of these ponds should be carefully sited to ensure that they are kept clean.

Once again, it is critical that all efforts be made to implement appropriate best management practices to control erosion and stormwater runoff before, during and after construction.

F. Wetlands

The importance of bordering vegetated wetlands as well as other resource areas listed in the state Wetland Protection Act regulations has long been recognized in the Commonwealth. All too often, however, non-permitted encroachments occur when areas adjacent to these wetlands are developed. Strict adherence by builders to local permits from the Conservation Commission and the state's regulations is critical to maintaining the integrity of these areas. As more and more marginal lots are developed, the encroachment into wetland areas has become more apparent. It

is therefore recommended that:

- A Wetlands Protection Ordinance be implemented which will give the City stronger control over developments on very marginal wet lots.
- Ongoing monitoring of construction projects, and education to all landowners throughout the city of Marlborough will be an important step in the long term protection of wetlands.

G. Major Brooks and Streams

The streams throughout the city serve as an important resource for wildlife habitat, a source of water for Marlborough's recreational bodies of water, and the principal means of replenishing the community's local drinking water supplies. As with other wetland resource areas, brooks and streams are immediately impacted when inadequate steps are taken to prevent construction-related pollution. These systems are also affected by releases of hazardous materials, especially when they are directly connected to closed drainage systems. The city should work on raising awareness in the community about the importance of brooks and streams to wildlife, recreation, and water supply.

- It is recommended that educational materials be distributed to all households regarding stormwater drainage protection to protect our local brooks and streams.

2. Wildlife Habitat Protection

As stated in section four of this Open Space and Recreation Plan, nine areas within the city have been identified as valuable wildlife habitat. Each area supports a diversity of wildlife because of their size, landscape characteristic and/or location.

These areas are listed below and are shown on map #4 titled Wildlife Habitat and Greenway Corridor Areas. (The numbers correspond to the numbers on the plan)

	LOCATION	OWNERSHIP
1.	Desert	Public
2.	Mt. Ward/Ghiloni Park	Public
3.	Sudbury Reservoir/Callahan St. Pk.	Public
4.	Millham Reservoir	Public
5.	Millham Brook/Glen St.	Private
6.	Flagg Swamp/ Ft. Meadow Reservoir	Private/Public
7.	South St. Brook/ Swamp	Private
	Jericho & Shoestring Hill	Private
8.	Assabet River Corridor	Private
9.	Cider Knoll/Mello Farm	Public
10.	Holts Grove/Stevens St./ Red Spring Rd.	Public/Private

These areas represent the last vestiges of contiguous combinations of woodland, lakes, streams, fields and swamps in the community. We recommend that:

- Those properties, which remain in private ownership within these areas and are not protected from development by wetlands or other regulations should be considered priority parcels in the city for acquisition or conservation restrictions. (See Map 10 and Section 9 for a list of top priority parcels.)

3. Trails and Greenway Corridor Enhancement

The Open Space Committee identified several corridors of land with potential for interconnecting trail systems and greenway corridors. These greenway corridors are shown on map # 5 and trails are shown on Map # 8. These corridors benefit both humans and wildlife. Green corridors are well-suited to hiking trails used by walkers, bikers, birders, and other kinds of passive recreational users. These areas are also important to the many species of wildlife that use them to travel between different habitat areas.

- The map of potential trails and greenway corridors is a useful planning tool for city officials, boards, and commissions. Using both maps those with oversight over development in the city can direct that development away from greenway corridors and into less sensitive areas.
- The city should consider acquisition of parcels within the greenway corridor, where no other alternatives exist for preservation. This plan should also be consulted when open space developments are proposed.
- Creation of the intercommunity trail, illustrated in concept on Map #8. This trail will help to connect all existing park and conservation land together with an interconnected trail system, using woodland, sidewalks and roadways to make this connected loop. The vision is to ensure that anyone in the city is only a 10-minute walk to the nearest trail link, and can walk around the entire community.

B. Summary of Community needs:

The following community needs analysis was developed from:

The 2002 Open Space Questionnaire
 Recommendations from the Parks and Recreation Commission
 Recommendations from the Conservation Commission
 Review of Marlborough's 1997 Open Space plan
 Information gathered by the Open Space Committee

1. 2002 Open Space Questionnaire:

In 2002 the OSC distributed questionnaires to 28 separate civic associates, clubs, neighborhood organizations and business groups. At least 10 surveys were distributed to each group. Of the 280+ questionnaires distributed only 71 were returned. A copy of the survey and the results from the survey can be found in Appendix A. The results of the survey revealed the following:

- Most residents said they used a park or conservation area at least weekly.
- Walking and biking locations as well as playgrounds were ranked high on what

residents want to see more of.

- The majority of the residents felt that the athletic and conservation land facilities were being well managed and maintained.
- Most residents wanted to see more conservation land for passive recreation.
- Lack of adequate numbers of athletic fields was noted often.

2. Park and Recreation Recommendations:

Marlborough has 22 public recreational facilities. These includes softball, baseball, soccer, hockey, and football fields, tennis courts, swimming pools, basketball courts, tracks, a sledding slope, skate park, half pipe BMX course and playgrounds.

After complaints about the lack of fields and inadequate parking at recreation facilities the City Council Open Space Committee requested a report from the Recreation Department to evaluate the status of field needs. The results of the “Marlborough Recreation Department Fields Report dated Oct. 26, 2000” are listed below. As stated in this report:

“Currently there are 2,600 children in Marlborough who haven’t reached eligible status for any youth sport. In the next 5 years enrolment will be near 6,500. This will add 1,200 new children into the already “busting at the seams” youth organizations.”

With the knowledge that more children and adults will be demanding recreation programs and facilities in the years to come, the Recreation Commission and the Open Space Committee determined that the following items would need to be addressed. These are as follows:

1. Development of Additional Playing Fields

The results of the 2000 Fields report indicated the need for active recreation field space requires a minimum of:

- Four soccer fields, with each meeting the minimum size dimensions of DiRico/Vietnam Vets Fields at Ghiloni Park,
- One little League Field (this was completed in 2002)
- One Girl’s Youth Softball Field
- One regulation sized football field for Marlborough Pop Warner Youth Football, including a practice area
- One Men’s Regulation Softball Field
- One Jr. Babe Ruth baseball diamond (this was completed in 2002) but still needs fencing.

2. Management Plan:

Development of a comprehensive management plan for all fields and recreation facilities. Standards for field maintenance and a schedule for resting fields should be provided.

This long term management planning will ensure that the fields we have can withstand the use with no longterm harm. This plan will also provide the much needed structure to ensure that demand for fields doesn’t allow misuse or over use of these fields.

3. Indoor Facilities

A plan to evaluate and identify indoor recreation facilities needs to be considered after 2008. It is not a high priority for this plan, but should be evaluated again when the next plan is written.

4. Ongoing Maintenance

The 5 year capital plan for Parks Construction Projects (see appendix F for a copy) should be funded and supported to ensure that the city provides the normal maintenance and upkeep of playgrounds and athletic fields, so as not to incur costly repairs in the future and to keep these facilities safe for use.

5. Brochure

Develop a brochure using the city's new GIS mapping tools to provide information about the location of fields and the availability of recreational facilities throughout the city.

6. Parks Clean-Up Day

Establish a parks cleanup day, to encourage all athletic groups, and citizens using these facilities to help with springtime cleanup on athletic facilities. A few groups already do this, but it should be encouraged more.

7. Jericho Hill

Continue to upgrade the Jericho Hill sledding hill and recreational field and courts as outlined in the Urban Self Help grant currently being implemented. This plan includes the establishment of passive recreational trails through the woods along the hill as shown on the approved plans. The building has been completely renovated and is handicapped accessible. A lift will be added in 2003. This new facility will be used year round as a recreation program area for both indoor and outdoor programs.

8. Memorial Beach

Develop a plan for the upgrading of the Memorial Beach facility. The building needs to be updated, and the access walkway is in need of repair. A plan to redevelop this site should include the ability to make this facility handicapped accessible since it currently is not easily accessible to the handicapped community, upgrade of the restrooms, septic system, and dock area.

9. Assabet River Rail Trail

The conversion of the Old Marlborough Rail roadbed into the Assabet River Rail Trail (ARRT) is now underway for recreation and as an alternative mode of transportation for commuters. The Assabet River Rail Trail begins in Marlborough at Lincoln Street and will, when completed, continue for 12 miles to a terminus in South Acton at an existing commuter rail station. The next phase of this project in Marlborough should be the acquisition of the old railroad depot site, or other sites in the center city that can provide a "trail head" for this regional trail system. The city should continue to support the development of this linear park, which will be a major asset to the city's recreation and

transportation facilities. The trail should be integrated into the center city.

10. Ft. Meadow Boat Access- St. Mark's Boathouse

Currently the City and the town of Hudson lease the St. Mark's Boathouse on Reservoir St. to provide public access to the lake for residents of Marlborough, Hudson and Southborough. The purchase and protection of this only public access to the lake will be a benefit to the city. The purchase of this parcel of land and the redevelopment of the parcel to accommodate parking for the boat ramp should be pursued in the next few years.

11. Ward Park Improvements

A plan for ongoing improvements of the football field and other facilities at this location has been developed. The implementation of this plan over the next five years will be important to improving the access and usefulness of this park that is in the middle of the city.

3. Conservation Commission Recommendations:

The Conservation Commission manages nine large areas and many small parcels of land in the city shown on Map # 6. The city is lucky also to have other large state or non-profit owned parks and forest land for use by the residents of Marlborough and adjacent communities. Additional acquisitions to protect wildlife areas and provide adequate open spaces and passive recreation facilities for this growing community are essential to protecting the current quality of life.

The 1989 passage of the Open Space Development ordinance has already protected over 100 acres of land at no cost to the city. To date, the Planning Board, which regulates the Open Space Development Ordinance, has focused it's attention on identifying appropriate locations within the open space parcels of the developments, for developing walking or hiking trails and where appropriate interconnecting them with other existing or proposed trails. In most cases, the developer has been required to build the trail as a condition of plan approval.

In view of Marlborough's continuing rapid growth, it is essential that the city protect its priority list of parcels, including areas shown on the Wildlife Habitat Map #5. The Conservation Commission and the Open Space Committee have also identified the following priority parcels for protection: the remaining parcels around Ft. Meadow Reservoir, Flagg Swamp, the area within the vicinity of Mt. Ward, South St. Swamp and Spoonhill and Glen St., Hillside School, and the Tree Farm on Berlin Rd. The city's toolbox for land conservation should include appropriate use of open space development plans, conservation restrictions, and outright fee purchase.

The city also should develop a system to identify roadways, which could provide bicycle lanes for safety to both the bicyclist and motorists. The MetroWest Bicycle plan is included in as **Map # 9** and should be referenced when developing this plan. The Metrowest Bicycle plan identifies the streets that are appropriate for bike use and those that, due to traffic patterns and narrow road widths are too dangerous. The city should be sure that when roadways are reconstructed and widened that, where feasible, a bike lane be added to improve the safety of bicycle riders.

The full or partial acquisition of the city's last remaining parcels under Ch. 61A (agricultural use) should be a priority. Marlborough was once known for its many apple orchards and dairy farms. Sadly, only four farms remain of that agricultural legacy. The Open Space Committee recommends that the city keep these farms in continuing agricultural use, or if that is not possible, as protected open space. The city is strongly encouraged to find a way to keep these farms active, as they contribute greatly to Marlborough's scenic landscape and provide useful products, too!

Of the nine areas noted on the Wildlife Habitat and Greenway Corridor Map, (map #5) the following items of conservation interest are noted below to provide a better understanding of their importance within the natural community and recommendations on how each area can be better protected.

a. Desert (shown as site #1)

The main work on this 600 + acre property in Marlborough and Sudbury is to continue to implement the management plan developed in 1996 with the Marlborough, Sudbury Conservation Commissions, Federation of Women's Clubs land managed by the Sudbury Valley Trustees and the DEM Dept. of Forests and Parks. One large parcel within this area shown as MU12 on Map # 6 was never specifically designated to be managed by any particular entity in the city. Within this parcel are 10 small isolated parcels, which should be acquired as gifts, tax title, or purchase to make this area contiguous conservation land. These individual parcels are not shown on the plan but are represented as PU 137 & 138 on the plan. The Conservation Commission has been managing parcel MU12 along with the MC2 parcels behind it as one large conservation area. MU12 should be officially designated by the city as conservation land by the City Council. Because of its regional ecological significance, it should be designated as Conservation Land and protected in perpetuity.

b. The Mt. Ward/Ghiloni Park area (shown as site #2)

The acquisition of Mt. Ward and the Sorabells land next to Evergreen Cemetery has protected a scenic vista, preserved a wooded landscape, and provides a buffer between the city's Easterly Wastewater Treatment Plant and the Sudbury Valley Estates subdivision. This area has an abundance of wildlife and recreation potential and could become part of a trail system that connects Callahan State Park and Ghiloni Park. The acquisition of the small abutting undeveloped parcels within this area should be protected through well-planned open space developments, conservation restrictions, easements or fee.

c. Assabet River area (shown as site #8):

Development continues along the Assabet River corridor in Marlborough. This area is zoned for business and has the necessary infrastructure to support the planned growth. Because the river is such a significant recreational and scenic resource, the Open Space

Committee recommends that development proposals incorporate a greenway corridor along the river that allows for walking trails and/or protects the scenic view from the river for boaters. This corridor should be protected through a conservation restriction, deed restriction, or other easement.

The Hillside School property on the north side of Robin Hill Street and southeast of the Assabet River should also be considered for conservation restrictions. A portion of this land, which is the site of an operating farm, does have a limited restriction placed on it, but the majority of the remaining Hillside School property does not. This area is one of the few remaining roadway corridors within the city having a rural scenic appearance. Some type of long-term protection on this property should be sought.

d. Flagg Swamp/ Ft. Meadow Reservoir area (shown as site #6)

Flagg swamp is the headwaters to Ft. Meadow Reservoir. Flagg Brook is one of the few brooks in the city containing native brook trout due to the cool and clean nature of this stream. Protection of this large wetland and its stream systems is extremely important to the protection of water quality within Ft. Meadow Reservoir. Over the years this recreational lake has experienced weed growth, over time if non-point sources of pollution is not controlled the water quality of the lake may be jeopardized. Therefore, the protection of all parcels within this area should be a priority either through acquisition or well planned open space development and conservation restrictions. Three parcels of high priority are:

The Massachusetts Highway Department owns a large parcel of land shown as PU31, which abuts the Rt. 85 connector Road and has frontage on Lower Pleasant St. This 52 acre parcel abuts other city conservation land. In 2002 this parcel was to be conveyed to the State Division of Fisheries and Wildlife for permanent protection. Confirmation of this transfer is still pending as of this publication. However it is anticipated. Protection of the stream corridor from the headwaters at Flagg Swamp to Ft. Meadow will have a long term positive benefit to the water quality of the lake. This area is also extremely important to wildlife habitat protection.

e. Sudbury Reservoir/Callahan State Park (shown as site #3)

The Sudbury Reservoir and Callahan State park provide hundreds of acres to the city's open space. These two parks are part of the Bay Circuit Trail, which is a nearly continuous trail of green space, which loops 100 miles from Plum Island on the North Shore, around Boston and communities to the west and down to Duxbury on the South Shore. The Greater Callahan Plan recommends the acquisition of the Rousseau property shown as PU 69 on the unprotected Land map # 7. Callahan State park extends into Framingham and support for acquisitions in both Framingham and Southborough which will provide connections into the Marlborough sections of state park helps to expand this regional treasure for all the abutting communities.

f. Holts Grove/Stevens St. (shown as site #10)

With the protection of additional acres around Holts Grove from the Waters Edge Development there remains one large undeveloped portion of this maze of properties. This last remaining parcel shown as PU 159 is of high priority for protection, to provide protection to the lake from further development in the watershed, as well as providing some much needed open space in this densely developed portion of the community.

g. Millham Brook/Glen St. (shown as site #5)

The section of Millham Brook, which flows from Lake Williams to Rt. 20, will need to be protected to protect water quality of Millham Reservoir. The Open Space Committee noted that this area is zoned industrial and limited industrial and includes a large wetland between Glen St. and Rt. 20. This area should be protected through local development regulations and through acquisition for park or conservation land due to its location. Proposed developments within this area must ensure best management practices of all stormwater, and where feasible create an undisturbed corridor along this stream system for both water quality and wildlife habitat protection as recommended in the proposed Water Supply Protection District ordinance. This area was also once an apple orchard and if some of this land is to be developed, strict protocol to ensure that the pesticides in the soil are control so as not to impact public health.

h. South St. Swamp (shown as site #7)

The South St. Swamp area is currently protected under the Inland Restricted Wetlands Act MGL 131 s.40A, therefore, the swamp itself already receives protection and would not be a priority acquisition, however a portion of Shoestring Hill has not yet been developed and would provide a buffer, and open space area for residents. Its steep slopes have precluded development, but as development pressure on land continues, even these marginal parcels of land may some day be developed. Therefore protection of this hill in whole or in part is recommended.

i. Howe Pond (shown between site #4 and #6)

Howe Pond and the land surrounding it was purchased for watershed protection, and should remain a protected area. However, the pond offers fishing and wildlife viewing opportunities, additional land has been acquired around it for open space purposes. Creating a trail system through this parcel should be considered and weighed against the watershed protection needs. If the two can be accommodated together, a trail system, which honors the wildlife habitat in the area should be created.

C. Management Needs

One of the greatest needs identified during the development of this plan was the need for better management of the city's recreation and conservation facilities and land.

1. Recreation Facilities Management:

As mentioned in the Community Needs section of this plan, the consensus of those who participated on the plan's preparation was that developing a formal management plan for the city's recreation facilities is critical so that current facilities are kept up and preventative, ongoing maintenance be a critical part of this management. The Recreation Dept. and the DPW Parks division have been working well together to ensure that the fields are being managed adequately. This needs to continue.

The current management practices for all recreation facilities has included:

1. Better turf management
2. Resting fields for the season to rejuvenate them
3. Purchasing new and better equipment for more effective management
4. Staff training on best turf management practices
4. Establishing maintenance schedules for all fields
5. Providing a realistic five year capital plan
6. Enlisting local neighborhood groups in the planning, maintenance and management of these facilities where appropriate.

It was agreed that these management practices and procedures should be documented in a Recreation Facilities Management Plan, to ensure that the positive results that have been achieved thus far are not lost as staff or administrations change.

The Jericho Hill recreation area renovations are being funded through an Urban Self Help grant. The new plan calls for multi-use of this area. A hiking trail on the top of the hill should be developed for summer time use and cross country skiing. Discussions with the homeowners with the abutting parcel of open space should be consulted, and if agreeable include the trail through this parcel as well. The Jericho Hill area is an important parcel for both recreation, a wonderful view, and wildlife habitat. The building has been renovated to include handicap accessibility, recreation space for summer youth camps, and year round program facilities for youth and adults.

Finally, the Open Space Committee recommends that the Recreation Department continue to develop programs which encourage citizens of all age groups to make use of the communities many facilities and resources.

2. Conservation Land Management:

Seven large and prominent parcels of land have been acquired and developed over the years for conservation purposes are the Felton Conservation Land, the Holts Grove parcel, the Desert Conservation Land, Cider Knoll, Mt. Ward and the city forest next to Ghiloni Park. All have trail and are actively managed during the summer months. Continued use of summer intern(s) whose sole responsibility is to manage the city's conservation land, and coordinate volunteer efforts to maintain and enhance these areas is strongly recommended.

Brochures, trail maps and kiosks, with rules and regulations, have been placed at all conservation lands with trail networks. These will continue to be updated as new trail connections are provided and as new parcels are acquired and trail systems developed. As soon as the city has a web site, these will be posted so that the public has access to them.

Parking facilities are available at all the conservation land except for the newly acquired Mello Family Meadow on Stow Rd. A parking lot is expected to be built in the spring of 2003 at this location.

The nature trail at Ghiloni Park has been maintained by the local Girl Scout troop and a local farmer who has permission to use the fields for producing hay mows the fields of the Felton Conservation Land. The pond and trail system at Holt's Grove are used extensively by students from the High School.

A management plan and stewardship committee have already been developed for The Desert Conservation land. This is a unique effort in that the management of this area is a cooperative effort between the town of Sudbury, city of Marlborough, Federation of Women's Clubs (managed by the Sudbury Valley Trustees) and the Massachusetts Department of Environmental Management (DEM). This group continues to meet annually to discuss management issues as they arise and ensures that problems are addressed promptly.

Several parcels of land identified through the inventory process as owned by the city have never been assigned for management purposes to any particular department. These parcels are identified in the inventory matrix in chapter 5, and should be designated to a particular city department for management. This will ensure that all city-owned land is accounted for and being managed appropriately. These parcels are shown as MU on the plans.

The city needs to develop a more active volunteer network, both to promote its wonderful natural resource assets and to encourage local citizens to become better stewards of these natural resources.

If these management recommendations are implemented the city residence will be better served and conservation land better protected.

D. Handicapped Access Inventory - Section 504 Self-Evaluation

The city has accomplished a great deal in the way of ADA compliance over the past six years. Ten of the twenty-one recreation facilities throughout the city, including some of the fields at the schools, have been upgraded. These upgrades have included replacement of playground equipment to meet safety and handicapped accessibility requirements, providing adequate parking and access to the recreational fields and equipment, including accessible paths. Five more facilities are due for upgrades over the next five years that will bring the majority of the recreational facilities into ADA compliance. All new conservation land parking areas are to be designed to meet ADA accessibility and where feasible, trails will be built to accommodate such access. An inventory of how to make the existing conservation land trails accessible is part of the five-year action plan outlined in section 9.

The city had an ADA Compliance Study completed in May of 1994. This was reviewed and updated for this 2003 plan. An evaluation for and transition plan for each of these recreation and conservation facilities is included in Appendix G. In summary about half of the fields and playgrounds which have been recently renovated are now handicapped accessible

The city has a very active Commission on Disabilities who provide comment on new projects and work to ensure their accessibility. A staff from the Department of Public Works familiar with ADA requirements is the city's designated ADA compliance field reviewer and is currently overseeing the reconstruction and upgrade of several of the playgrounds and recreation areas throughout the city. All new construction and reconstruction projects are now required to meet the new ADA requirements.

It was through our discussions with the Commission on Disabilities and the review of the current facilities status that the city realized it had accomplished a great deal in meeting ADA requirements. At a meeting with the Chairman of the Commission on Disabilities, Pat Winske, she expressed an appreciation for the upgrades to recreational facilities throughout the city that made them handicapped accessible. The Commission on Disabilities will continue to be strong advocates and work with city departments to keep the momentum going.

The four buildings, which the recreation department manages, were reevaluated. Three of the four have been upgraded as shown in Appendix G and are noted below:

The Barn and restroom facilities - at Ghiloni Park - Concord Rd.-is now accessible
Recreation Office Building - Ghiloni Park - Concord Rd.-is now accessible to the front desk.

Memorial Beach Building - Hosmer St.-is NOT accessible yet

Jericho Ski Club - Brigham St. is now accessible on both floors, however a lift will be installed in spring 2003 to provide accessibility between the two floors.

Appendix G provides the Handicapped Access Inventory and Transition Plan for each of the recreation facilities.

SECTION 8

GOALS AND OBJECTIVES

Goal I PROTECT AND ENHANCE THE CITY'S NATURAL RESOURCES

OBJECTIVE:

- A. Preserve and protect the City's drinking water supplies through the proper management of Lake Williams, Millham Reservoir, and Sudbury Reservoir and their respective watersheds.

- B Preserve and protect watersheds to wetland and water resource areas including rivers, streams and ponds.

- C. Preserve and protect wildlife, wildlife habitats and corridors and maintain and enhance biodiversity.

- D. Preserve and protect other natural areas particularly those of unique features-hilly topography, scenic meadows, wetlands, wooded areas.

- E. Acquire, expand and enhance existing and new open space lands and related easements and conservation restrictions.

- F. Provide educational materials, signage, workshops for the public and schools to help in the protection and enhancement of our Natural Resources as identified in A, B, C and D above.

Goal 2 PROVIDE QUALITY RECREATIONAL FACILITIES AND ADEQUATE RECREATIONAL OPPORTUNITIES FOR ALL CITY RESIDENTS

OBJECTIVE:

- A. Promote, develop, and update management plans for all active recreational facilities including maintenance schedules.
- B. Promote, develop, and update management plans for all conservation land and land with conservation restrictions including maintenance schedules and parking plans if necessary.
- C. Take advantage of funding programs for acquisition and adequate maintenance of recreational facilities and open space parcels.
- D. Develop an intercommunity trail system to link all open spaces and recreation lands together.

Goal 3 PRESERVE THE CHARACTER OF THE COMMUNITY

OBJECTIVE:

- A. Develop a city-wide plan for encouraging agricultural and open space use of land to preserve the "country" feel of the city.
- B. Preservation and enhancement of local historic landscapes, especially those that complement local historic structures, and preserve natural landscapes to protect the viewshed from and to those historic structures.

Goal 4 PROMOTE REGIONAL OPEN SPACE AND RECREATIONAL OPPORTUNITIES

OBJECTIVE:

- A. Work with adjacent communities to understand their open space and recreation needs and coordinate the purchase and development of conservation and recreation land acquisitions, trails and recreational facilities as appropriate.

- B. Promote the development of regional bicycle/pedestrian paths for transportation and recreation purposes.
- C. Continue to work with state agencies, local land trusts, and adjacent communities to create corridors, expand and protect parks, forest, and conservation land and facilities in the city and on the municipal boundaries.

SECTION 9

5 YEAR ACTION PLAN

The following is a list of actions necessary to meet the goals and objectives of this Open Space and Recreation Plan. All of these items have been described in depth throughout this document, especially in section 7. Map #10 also illustrates the key actions of this 5-year action plan.

GOAL I: PROTECT AND ENHANCE THE CITY'S NATURAL RESOURCES

Objective A: Preserve, protect and improve the drinking water supplies in the community through the proper management of Lake Williams and Millham Reservoir (primary water supply), Sudbury Reservoir (backup water supply) and their respective watersheds.

Action.	Schedule
1. Acquire parcels and conservation easements within the watershed of Millham Reservoir and Lake Williams to ensure greater protection of our water supply.	2003- process will be on going
2. The city DPW and Conservation Commission must work with MassHighway to institute a reduced salt use policy within: <ul style="list-style-type: none"> a. The 495 and Rte. 20 highway sections, which drain to the Lake Williams and Millham Reservoir watersheds. b. Sudbury Reservoir area 	2003 send inquiry to MassHighway 2004 goal for implementation 2005 have policy in place

<p>3. Acquire properties within the Sudbury Reservoir watershed for protection of this back up water supply.</p>	<p>2003- on going</p>
<p>4. Reactivate the filter beds on Walker St. to help filter out urban runoff before entering Sudbury Reservoir. a. Develop plans b. Develop monitoring program c. Implement plan</p>	<p>2003 2003 2005</p>
<p>5. Strongly encourage developers to design subdivisions using the city's open space development ordinance within the watershed to save more open space and reduce runoff and improve water quality.</p>	<p>2003- on going</p>
<p>6. Develop an erosion control ordinance to cover all developments throughout the city</p>	<p>2004</p>

Objective B: Preserve and protect watersheds to other lakes ponds and wetland resource areas, including rivers, streams and ponds.

Action:

Schedule

<p>1. Develop a watershed protection plan for Ft. Meadow Reservoir to enhance and protect water quality, to include (but not limited to): a. Formation of an active group either through the Fort Meadow Commission or the Ft. Meadow Watershed Neighborhood Association to help implement the plan. b. On going water quality and weed monitoring by the watershed association(s). c. Educational workshops, brochures to lake residents to provide an understanding about the need to protect the lake. d. Plan should include goals and budget to implement such a plan.</p>	<p>2003 - development of plan. 2004 - on going Work to implement the plan</p>
<p>2. Acquire the remaining parcels of land surrounding Ft. Meadow Reservoir for passive recreation and watershed protection purposes a. Acquire or protect in some fashion the land owned by the Commonwealth of Massachusetts Highway including Flagg Swamp</p>	<p>2003 - on going 2003 confirm transfer 2004-ongoing</p>

<p>b. Acquire other available open parcels or portions of parcels as appropriate to protect water quality.</p>	
<p>3. Formalize boat access points around the lake</p> <p>a. Acquire through long-term agreement or acquisition permanent public motor boat access from the St. Marks Boathouse</p> <p>b. Install a canoe access ramp at The Grove, which is handicap accessible.</p>	<p>2003 - St. Marks Boathouse</p> <p>2004- boat access ramp</p>
<p>4. Develop a long-term sand removal and stormdrain maintenance program around Ft. Meadow Reservoir.</p>	<p>2003 - establish plan</p>
<p>5. Mark all storm drains and distribute information door hangers in all watersheds throughout the city.</p>	<p>2003 through 2005</p>
<p>6. The city should address the algae and weed problems in the Hop Brook Pond System by looking at a holistic view of the stream system. This should include:</p> <p>a. The Easterly Wastewater Treatment Plant will need to be redesigned and upgraded to accommodate higher nutrient removal to improve water quality</p> <p>b. Identify and address non-point sources of pollution contributing to this stream system.</p> <p>c. Investigate dam removals or other in-stream management practices to help flush out the stream system.</p>	<p>2004 - on going</p> <p>2004-on going</p> <p>2004 begin with Storm water Phase II program.</p>
<p>7. City Council should adopt by ordinance the storm water management standards set forth by the DEP Stormwater Policy to govern all stormwater designs throughout the city. This ordinance should be adopted to be implemented by all departments which regulate or review drainage Planning Board, Siteplan Review, Conservation Commission. The ordinance should include stricter erosion control standards as well.</p>	<p>2004 adopt an ordinance</p> <p>2005 implementation it under the Storm water Phase II program</p>
<p>8. Establish an adopt-a-stream program with volunteer groups and abutters to the brooks and streams throughout the city and develop and action plan for upgrading and enhancing the water quality and wildlife habitat values in these corridors. This project can involve schools, neighborhoods, and civic and volunteer groups.</p>	<p>2004 establish a program with volunteers</p>

<p>9. Continue to fund and support DPW programs for cleaning and removing silt, street sand, fallen brush when obstructing flow and trash from all major brooks and streams throughout the city.</p>	<p>2003 - ongoing Annual program</p>
<p>10. Seek passage of a local Wetlands Protection Ordinance which will:</p> <p>a. Provide a larger protected buffer zone around wetlands.</p> <p>b. Protect vernal pool habitats and upland surrounding these pools.</p> <p>c. Provide greater protection to wetlands beyond that provided by the state Wetlands Protection Act.</p>	<p>2003 priority to establish ordinance</p>
<p>11. When Rte 20 near Hager Pond is redeveloped have Mass Highway install improved drainage structures along this section to remove sand from being discharged into the pond.</p>	<p>2004 make request to Mass Highway</p>

Objective C: Preserve and protect wildlife, wildlife habitats and corridors and maintain and enhance biodiversity.

Action	Schedule
<p>1. Protect through conservation restrictions, open space development planning and/or fee acquisition parcels of open space located within the wildlife habitat areas and corridors shown on Map #--.</p>	<p>2003 - On going</p>
<p>2. Develop public education programs aimed at publicizing important wildlife habitats and how they can be protected and how humans and wildlife can coexist. Get information from Mass. Fish and Wildlife and distribute as needed to newspapers, schools and library. Include this information on the kiosk at the trailheads.</p>	<p>2004 - 2005 Summer internship project or School science project.</p>
<p>3. Work with local groups to improve habitat areas where appropriate:</p> <p>a. Install bird boxes in the two city fields maintained over the old landfill on Bolton St. and the capped settling tanks at the Easterly Wastewater Treatment Plant. (To provide nesting habitat for bluebirds, and other field dependent birds)</p> <p>b. Locate other areas throughout the city on private and public land to determine what</p>	<p>2003-2005</p> <p>Scouts and School programs</p> <p>City land, Private and public school/recreation</p>

types and where additional bird boxes can be installed to improve bird habitat. Encourage homeowners, school programs, scout group, garden clubs etc. to install bird boxes as well. c. Control invasive non-native species on city conservation and recreation property	land, garden clubs
4. Vernal pool inventory and certification a. Work with volunteers and school groups to identify and certify vernal pools b. Provide educational program for children and adults about vernal pool protection. c. Once certified, determine program for regular monitoring.	2003 - on going With scouts, summer interns and school programs. Certify 2-3 per year.

Objective D: Preserve and protect other natural resource areas particularly those of unique features-hilly topography, scenic meadows, wetlands and wooded areas.

Action	Schedule	Comments
1. Develop a plan for the protection of hilltops and other areas, which provide vistas and scenic views. Development of these areas should consider the impact both from the view out as well as the view in from other hills or roadways. These hilltops and scenic areas are listed in section 4 of the document.	2003- on going	
2. Develop a plan for the protection of existing fields and farms, which provide scenic views throughout the city. Work with farmers to see how to protect these vistas.	2003 - on going	

Objective E: Acquire, expand and enhance existing and new open space lands and related easements and conservation restrictions.

Action	Schedule
1. Provide large versions of Map #6, 7, to City Council, Site Plan Review, Planning Board, Conservation Commission, Recreation Department, Dept. of Public Works, to be used in reviewing plans and when doing long range planning projects within the city to ensure, where feasible, that wildlife corridors and open space and recreation links are protected.	2003 - provide plans to these committees
2. Work with developers in the preliminary stages of design for all projects to	2003 - ongoing

identify appropriate areas for open space protection.	
<p>3. Develop a priority plan for the acquisition of significant parcels of open space, which should be protected, for open space or recreation land. The plan should include acquisitions, conservation restrictions, public/private partnerships etc. Use Map 7 Unprotected parcels and section 7.</p> <p>a. Have Mayor send letter to landowners of significant parcels to request status of property.</p> <p>c. Based on these responses develop priority target parcels for consideration.</p>	2003- ongoing

Objective F: Provide educational materials, signage, workshops for the public and schools to help in the protection and enhancement of our Natural Resources as identified in A, B, C and D above.

Action	Schedule
1. Educate and inform residential and commercial property owners within the watersheds of our drinking water supplies, recreational lakes, streams and ponds, about appropriate measures to help preserve and improve water quality in these water bodies. These informational fliers can be sent out with water bills, distributed to local media outlets on a regular basis and promoted by city council and city departments.	2003-ongoing-The following should be promoted by the DPW, Conservation Commission, Recreation Department
2. Lawn care maintenance with less water/ less fertilizers, herbicides and pesticide use.	2004-ongoing
3. Promote integrated pest management and encourage the reduction or elimination of chemicals, hazardous materials from being stored on the premises or used in processing	2004 -ongoing
4. Work towards saving large trees on private property. Develop and inventory of these large trees. If there are many, then develop a plan to help preserve these trees and identify them for protection when the properties are slated	2004- ongoing work with city tree warden

for development or renovation.	
5. Revise Planning Board and Siteplan Review regulations to promote tree saving methods.	2003 - Director of Planning
6. Do an inventory of street trees to develop a database for a street tree replacement program. And an inventory of unusual and champion trees.	2004 - Tree Warden
7. Mark all storm drains and provide door hanger fliers throughout the city to ensure that all residents are aware that nothing should be dumped down the drain.	2003 through 2005
8. On properties with large lawns, encourage facilities to use their own wells rather than treated potable city water. And encourage them to naturalize their lawns into a wildflower meadow, needing less maintenance and little or no watering.	2004 develop a program
9. Continue to explore other innovative methods for reducing water use throughout the city.	2003-ongoing

GOAL 2: PROVIDE QUALITY RECREATION FACILITIES AND ADAQUATE RECREATIONA OPPORTUNITIES FOR ALL CITY RESIDENTS:

Objective A: Promote, develop, and update management plans for all active recreational facilities including maintenance schedules.

Action	Schedule
1. The Recreation Department and the Department of Public Works shall provide in writing a comprehensive management plan for the maintenance of all recreational facilities throughout the city a. Write the plan b. Recreation Commission and DPW shall approve the plan c. Implement the plan	2003 2004 on going
2. The Recreation Department and the DPW shall implement the 5 year capital outlay plan to improve and upgrade recreational facilities (see list in the appendix F)	2003-2005
3. Develop a brochure, using the new GIS system, with a map to better promote recreation land within the city, providing information about what	2003- keep updated

facilities are available at which locations.	
4. Establish a parks cleanup day in the spring of each year that encourages community-wide participation in the upkeep of our public recreational facilities.	2003
5. Follow up on the recommendations of the Recreation Commission fields report of Oct 26, 2000 to meet the following needs: a. Four new soccer fields (include MDC filter beds, Assayed School Fields, Hudson St. driving range) b. One girls youth softball field c. One regulation size football field d. One regulation softball field e. One Sr. Ruth baseball diamond.	2004- ongoing
6. Jericho Hill continue to upgrade facility and finish implementing current reuse plan.	2003 to be completed
7. Memorial Beach develop a plan for upgrading this facility and then implementing the plan as funds allow.	2004

Objective B: Promote, develop, and update management plans for all conservation land and land with conservation restrictions including maintenance schedules and parking plans if necessary.

Action	Schedule
1. Conservation Commission Interns and volunteers shall mark all new trail systems with signs and maintain existing signage each year.	2003 ongoing
2. Develop a brochure and map of the city's conservation and recreation facilities, as well as state parklands to inform the public of these resources and their locations.	2003 create brochure 2004 put on city web site. And keep updated.
3. Develop and maintain a management plan for all conservation land and include inspection schedules. Seek assistance from graduate students, interns and school projects to prepare these plans and to do the inventory.	2003 ongoing
4. Unmanaged parcels a. Where parcel are in city ownership, but have not been designated for any specific use or management, determine appropriate uses. b. For each parcel noted above, have the City Council formally designate both its use and the department responsible for	2003 recommend to city council

managing the property.	
5. Where appropriate, and provided that public safety is not jeopardized, the conservation commission shall hold public hearings to allow hunting on large tracts of city-owned conservation land in order to better manage wildlife populations. This shall be reviewed annually by the Conservation Commission to ensure no use conflicts have occurred and that the areas still have a healthy safety margin.	August of Each year
6.Hire summer interns to manage conservation land, maintain trails and provide interpretive program to provide information about the natural habitat values and to encourage appropriate use of conservation land.	Annually
7. Coordinate stewardship/volunteer groups to help manage conservation land. Schedule spring and fall cleanups for conservation land.	2003 ongoing

Objective C: Take advantage of funding programs for acquisition and adequate maintenance of recreational facilities and open space parcels.

Action	Schedule
1.The Recreation Department, Conservation Commission, City Planner, DPW and CDA should aggressively pursue state and or private funding for improvements to recreation facilities and acquisition of land for open space. a. Compile list of available grants b. Pursue funding as appropriate	2003 ongoing 2003 compile list
2. The city should investigate use of innovative municipal mechanisms to raise funds (such as, revolving funds for land acquisition and long term maintenance of recreational facilities, user fees, designated voluntary contributions on tax bills, land banking etc.)	2003
3. Create carefully crafted/public Private partnership opportunities to carry out the goals of the open space plan.	2003 ongoing
4. Review and update the present user fee schedule for recreation programs.	2004
	2003 ongoing

5. Work with local land trust to help in the acquisition of key parcels. (i.e. Sudbury Valley Trustees, The Trustees of Reservations, Trust for Public Lands.)	
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Objective D: Develop an intercommunity trail system to link all open spaces and recreation lands together with a walking trail

Acton:	Schedule
1. Set up a committee to review the conceptual intercommunity trail plan. Map #8	2003
a. Establish where acquisitions or easements will be needed	2004
b. Determine areas where sidewalks will be needed.	2004
c. Determine priorities	2005
d. Provide the plan to the City Council, Planning Board, Siteplan Review and Conservation Commission for implementation when reviewing plans from developers, which could incorporate the intercommunity trail.	

GOAL 3: PRESERVE THE CHARACTER OF THE COMMUNITY

Objective A: Develop a citywide plan for encouraging agricultural and open space uses of land to preserve the "country" feel of the City.

Action	Schedule
1. Develop and implement strategies to preserve remaining agricultural areas for that use. This may include creation of a business plan to increase agricultural sales in Marlborough and/or other funding mechanisms available for protection of agricultural land. The last remaining farms are: Riano's Farm, Houdes Tree Farm, Gulbankian fields, Magee's fields and other Ch. 61A parcels found on Map #7 and in Section #5 of the plan.	2003

Objective B: Preserve and enhance historic landscapes, especially those that complement local historic structures, and preserve natural landscapes to provide the view shed for those historic structures.

Action	Schedule
1. The city planner should work with the Historic Commission to identify sites deemed to have importance because of their historic landscapes and develop a plan to enhance those historic landscapes.	2004

2. The Rice Homestead should be acquired or permanently preserved in some fashion, at its current site.	2003
3. The Building Department and Director of Planning should be required to review all projects on the historic list to encourage the protection of these structures and landscapes as feasible. A policy should be established to accomplish this goal.	Ongoing-
4. An inventory of historic structures was completed by the historic commission; this list shall be consulted whenever a demolition permit or construction project is proposed on or near these structures. Recommendations from the Director of Planning and consultation with the Historic Commission should be provided to see if any preservation could be obtained.	Ongoing- Historic Commission, Director of Planning
5. Expand a local historic zoning district that provides standards for construction, recommendations or other changes to properties within the district.	2004
6. Develop a plan for an historic Marlborough walking trail, complete with brochure, for visitors to the city.	2005
7. Provide a map showing the historic sites within the city to the Planning Director, and Building Commissioner for their easy reference.	2006

GOAL 4: PROMOTE REGIONAL RECREATIONAL OPPORTUNITIES

Objective A: Work with adjacent communities to understand their open space and recreational needs and coordinate the purchase and development of conservation and recreation land acquisitions, trails, wildlife corridors and recreational facilities as appropriate.

Action	Schedule
1. Inventory contiguous open space and recreation facilities on the city's borders and communicate Marlborough's intentions with the bordering communities,	2003 ongoing

<ul style="list-style-type: none"> a. Greater Callahan Project- Sudbury, Framingham and Southborough b. Upper Assabet Riverway-Hudson, Berlin, Northborough, Westborough c. Walnut Hill- SVT, Northborough d. The Desert- Sudbury, Hudson 	
<p>2. Identify allowed uses in open space parcels within the region (i.e. where mountain biking, horseback riding, dirt-bike riding, swimming, etc. is allowed) and encourage appropriate public use of these areas through civic group presentations and new releases.</p>	2004
<p>3. Promote regional recreational complexes, which the city can share, use of: Fields at filter beds, driving range, link recreational facilities together.</p>	2003

Objective B: Promote the development of regional bicycle and pedestrian paths for transportation and recreation.

Action	Schedule
<p>1. Support the conversion of regional abandoned railroads into bicycle paths.</p> <ul style="list-style-type: none"> a. Assabet River Rail Trail - Marlborough to South Acton b. Central Mass line- Waltham to Berlin 	2003 ongoing
<p>2. Incorporate the Metro West Bicycle Map into the city's street improvement master plan. Require, where feasible, that street construction projects involving streets on the map incorporate bicycle lanes or shoulder areas into the roadway cross-section.</p>	2004

Objective C: Continue to work with state agencies, local land trusts, and adjacent communities to create corridors, expand and protect parks, forests, and conservation land and facilities in the city and on the municipal boundaries.

Action	Schedule
<p>1. Continue to work with state Department of Environmental Management, Sudbury Valley Trustees, and Sudbury Conservation Commission on the Management of the Desert/Memorial Forest Natural Area</p>	ongoing
<p>2. Continue to work with the MDC and DEM to manage the Sudbury Reservoir and Callahan State Park.</p>	ongoing

3. Continue to work with the town of Hudson on the lake management of Ft. Meadow Reservoir	ongoing
4. Update the Open Space and Recreation Plan	2008

SECTION 10

PUBLIC COMMENTS

The Open Space Committee held a public hearing on April 10, 2003 to provide an opportunity for the public to hear about the plan and provide input on the draft. Ten residence of Marlborough attended the hearing including many members of the Open Space Committee. Comments from the meeting were in support of the plan as presented. Several questions were raised about the status of specific parcels, which were on the plan. However, overall comments at the hearing reflected approval of the goals and objectives presented in the plan.

All major departments of the city interested in development, recreation and conservation issues were provided copies of the draft for review and comment. No written comments were received, however, the Recreation Department, Department of Public Works, Planning Board and Planning Department, and several City Council members all indicated that the plan covered all the issues they had wanted raised and were satisfied that the plan addresses the needs for the future of Marlborough in the next five years.

Written comments were received from Pat Winske of the Commission on Disabilities. Her comment was to ensure that all new facilities are built in compliance with the ADA requirements and all renovations to older buildings are also brought into compliance with ADA. These recommendations and practices are already included in the plan and are part of the current practice for the city.

Copies of the public notice, press release, press coverage, and written comments from the Division of Conservation Services and the Commission on Disabilities follow in this section.

All maps referenced in this document can be found at:

http://www.marlbrough-ma.gov/Gen/MarlbroughMA_PublicWrks/MarlbroughMA_GeoInfSrv/Conservation1

APPENDIX A

2002 Open Space and Recreation Survey
List of Organizations that received survey
2002 Survey results

APPENDIX B

Knox Trail Heritage Brochure

APPENDIX C

Marlbrough Recreation Department Fields Report, Oct. 26, 2000

APPENDIX D

APPENDIX E

Recreation Facilities Inventory
Recreation Program Summary 2001-2002

Conservation Land Inventory
Conservation Nature Hikes 2002

APPENDIX F

Department of Public Works 5-year Capital Improvement Plan for Parks

APPENDIX G

ADA Requirements

Part I - Administrative requirements:

1. Designation of ADA Coordinator
2. Grievance Procedures
3. Public Notification Requirements
4. Participation of Marlborough Commission on Disabilities

Part II – Program Accessibility

1. Facility Inventory
2. Transition Plan

Part III- Employment Practices