



## **East Brookfield, Massachusetts 2006 Open Space & Recreation Plan**

March 2006

Prepared by the East Brookfield Master Plan Committee

Technical Assistance Provided by:  
The Central Massachusetts Regional Planning Commission

This project was completed using funds provided by the  
Quinebaug-Shetucket Heritage Corridor Inc. and the Opacum Land Trust

**OPEN SPACE & RECREATION PLAN**  
For the Town of  
**EAST BROOKFIELD, MASSACHUSETTS**

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**TOWN OF EAST BROOKFIELD**  
**OPEN SPACE & RECREATION PLAN**

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## **SECTION 1: Plan Summary**

Although East Brookfield was the last municipality in Massachusetts to come into being (incorporated in 1926), the Town is rich in history and contains a plethora of natural resources. The Town has managed to maintain its rural character in the face of regional development pressures that have resulted in urban sprawl for other communities in the Central Massachusetts area. East Brookfield has a multitude of environmentally sensitive lands, scenic vistas and special places, most of which are still in their natural state although many of these places are not permanently protected from future development. This will be East Brookfield's challenge regarding open space: finding a way to protect as many of its special places as possible with the limited funds available. Reaching this goal will require the Town to work with its neighbors, create partnerships and think creatively. East Brookfield planners will need to be proactive and seek out its open space preservation opportunities rather than sit back and react as the events of the world unfold around them.

The East Brookfield Master Plan Committee initiated this open space and recreation planning effort in 2004. The Committee was initially charged with performing a top-to-bottom review of the Town's zoning bylaw but soon realized that a wholesale rezoning effort should be based on a comprehensive plan for the community's future. At this point, the Committee began pursuing funding opportunities to prepare the Town's first ever Master Plan. The Committee sought the assistance of the Opacum Land Trust, a non-profit land trust operating in the southwest corner of Central Massachusetts. Opacum was able to secure a grant on the Town's behalf from the Quinebaug-Shetucket Heritage Corridor Commission, a federally-created Heritage Corridor operating under the jurisdiction of the National Park Service that covers that covers 35 communities in the Quinebaug-Shetucket watersheds that straddle Massachusetts and Connecticut. Through the grant secured by the Opacum Land Trust, the Town was able to hire the Central Massachusetts Regional Planning Commission (CMRPC) to provide technical assistance on the Open Space & Recreation Plan you see before you.

East Brookfield's Master Plan Committee made a concerted effort to involve the public in the open space planning process. The Committee sent Master Plan citizen survey to every household in the community in early 2005. Roughly 43% of East Brookfield's households responded to the survey, an outstanding response rate for such an effort. The Committee also sponsored a public forum on open space and recreation on the evening of March 23, 2005. The Committee met regularly on this project beginning in December 2004 and concluding in early October 2005 for one last review of this document.

Through the planning process, the East Brookfield Master Plan Committee was able to establish the following primary goals for its open space protection priorities and recreation facilities:

- Maintain the Town's rural, small town nature.
- Preserve existing open lands and wildlife habitat.
- Promote opportunities for the linkage of East Brookfield's open space.
- Promote the efficient management and maintenance of the open space and recreation areas of East Brookfield.
- Improve the Town's existing parks and playing fields as well as develop new recreation trails.
- Improve quality of ponds and protect the Town's water aquifer.

The goals of this Plan will serve as a guide for East Brookfield in its future efforts to protect open space and provide recreation resources for its citizens.

The document before you is intended to serve as two chapters of the upcoming Master Plan as required under Chapter 41, Section 81-D of Massachusetts General Laws: the Natural Resources Chapter (see the environmental resource inventory in Section 4 of this document), and the Open Space Chapter (see the inventory of conservation/recreation lands in Section 5 of this document). The remainder of the Master Plan will be completed over the next few years and will eventually be brought before the citizens of East Brookfield at a Town Meeting.

## **SECTION 2: Introduction**

### **A. Statement of Purpose**

The purpose of this Open Space and Recreation Plan is to provide a sound, comprehensive and rational framework within which the Town of East Brookfield can protect and enhance current and future open space and recreational opportunities for its residents. The goal is to balance the growth of residential development with an exceptional quality of life for East Brookfield residents.

The Central Massachusetts Regional Planning Commission (CMRPC) recently completed a “Buildout Analysis” for East Brookfield using methodology developed by the Executive Office of Environmental Affairs (EOEA). The analysis indicated that East Brookfield has 3,944 acres of vacant land available for development. Complete development of this land would result in the creation of up to 1,814 new residential lots under the Town’s current zoning standards. These newly created house lots would result in approximately 4,500 new residents and 991 new students. With a current population of 2,190 residents, East Brookfield planners realized that such an increase in population would impact the Town’s finances and its ability to provide services to its residents. Further, CMRPC’s regional policy plan entitled, The Development Framework: 2020 Growth Strategy for Central Massachusetts predicts that growth in its Western Subregion (home to East Brookfield) will become greatly accelerated in the near future. The wave of development in Massachusetts has been steadily moving westward over the past couple of decades, and it is fully anticipated that over the next decade, the escalation of development will continue to spread into and ultimately beyond the Town of East Brookfield.

In an effort to plan for the future, East Brookfield has established a Master Plan Committee that is charged with putting together a community Master Plan document in accordance with Chapter 41, Section 81-D of Massachusetts General Laws. The Committee was established in early 2004 and hopes to complete its work over the next few years. This document is intended to serve as the Natural Features and Open Space chapters of the eventual Master Plan for East Brookfield. This document also stands alone as an Open Space & Recreation Plan that will meet the standards for such plans established by the Executive Office of Environmental Affairs’ Division of Conservation Services, thus making the Town eligible for State grant opportunities relating to open space preservation and recreation facility planning.

East Brookfield’s anticipated growth has implications for both open space and recreational facilities, several of which are in need of repair or replacement. An Open Space and Recreation Plan is an important planning tool that can help guide future growth and preserve specific parcels of value for open space, recreation, or historic preservation. An Open Space and Recreation Plan is critical to East Brookfield’s efforts to embrace growth management planning, protect the region’s water supply and identify key parcels for preservation.

It is paramount that East Brookfield planners adopt and embrace this Open Space and Recreation Plan in order to plan for and establish reasonable controls on this development, acknowledging its inevitability as well as both its inherent benefits and constraints on municipal services and facilities.

## **B. Planning Process and Public Participation**

This Plan represents a strong collaboration between the various stakeholders in the community to collectively identify our needs, establish goals and develop strategies to meet future open space, conservation, recreation and historic preservation needs in order to ensure the best possible quality of life for all residents of East Brookfield now and in the future.

The Master Plan Committee utilized various mechanisms for soliciting public participation throughout the planning process. In addition to a series of regularly scheduled Committee meetings conducted during the planning process, the Committee held two community-wide forums to solicit input from the citizens of the community and to incorporate those suggestions and comments into the Plan.

A series of Committee meetings were held beginning in January 2005 and continuing into the summer months. All meetings were advertised public meetings and were open to participation by any and all interested citizens as well as members of other municipal boards and commissions. Committee members also conducted outreach efforts by attending the meetings of other local boards and commissions throughout the same period to discuss the purpose of the Plan. The Committee also made itself available to respond to citizen, board and commission questions relative to the formulation of the Plan and its recommendations.

In an effort to solicit public input, the Committee designed a Master Plan Citizen Survey, which was mailed to every household in East Brookfield in late January 2005. Additional surveys were left at the Town Hall, Library, and the Senior Center to provide all residents with an opportunity to participate in the planning process. The Committee contacted reporters from the New Leader, a regional newspaper, to provide information about the survey prior to its mailing and encouraged the attendance of reporters at its regular meetings. An announcement was also posted on the bulletin board on the Town Hall to remind residents to participate in the survey. East Brookfield planners also held a public forum on the evening of March 23, 2005 to solicit public input on the Town's open space and recreation needs and a lot of good ideas came from this meeting.

The survey and the public forum were useful in identifying the needs and concerns of East Brookfield residents regarding open space and recreation priorities. The results of the survey were used to develop goals, strategies and the associated Five-Year Action Plan contained herein. The Action Plan was also informed by input solicited from other municipal boards and commissions throughout the process. While recognizing the importance of soliciting input upon review of the draft Plan from the various boards and commissions in Town, the Committee firmly believed it was equally vital, if not essential, to involve those boards and commissions in the actual process of developing the Plan itself. Therefore, the Committee made a concerted effort to include all affected boards and commissions, either through the appointment of representatives to the Committee or as active participants in the planning process and development of the various components of the Plan.

The final Plan presented herein represents a culmination of town-wide efforts to bring all stakeholders having a vested interest in the Town's future into the planning process. The resulting document provides a framework for the citizens of East Brookfield to guide the destiny of the Town through future open space and recreation acquisition, projects, initiatives and plans.

## **SECTION 3: Community Setting**

### **A. Regional Context**

Comprised of 6,650 acres (6,445 acres of land and 205 acres of water), East Brookfield is bordered on the west by Brookfield, on the north by North Brookfield, on the east by Spencer and Charlton, and on the south by Sturbridge. The Town center is located along Route 9, which runs through East Brookfield in an east to west direction. Another State-numbered route (Route 49) extends through the eastern corner of Town in a north-to-south direction. Route 49 eventually connects to Route 20 in Sturbridge, which provides a connection to Route 90, better known as the Mass Pike.

East Brookfield is blessed with a wealth of water resources, including a portion of Lake Lashaway (shared with North Brookfield), and two major ponds: Quaboag Pond (shared with Brookfield) and Quacumquasit Pond (shared with Brookfield and Sturbridge). The East Brookfield River and Seven-Mile River join together just south of the downtown area and flow in an easterly direction into Brookfield, West Brookfield and other points east. Feeding into the confluence of the two rivers are two significant waterbodies: Quaboag Pond and Quacumquasit Pond. Other significant water resources include Allen Swamp, Mud Pond, Claypit Pond, a small pond located just south of Allen Road, Great Brook, and Dunn Brook which forms a portion of the Town's eastern boundary line.

The vast majority of the Town falls within the Chicopee River Watershed. The dividing line between the Chicopee River Watershed and the Quinebaug River Watershed is located in close proximity to the Town's southern boundary line and there are a few small areas of East Brookfield that fall within the Quinebaug River Watershed. According to the National Wetlands Inventory maintained by the US Fish & Wildlife Service, East Brookfield contains roughly 924 acres of wetlands. According to the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency, East Brookfield has approximately 1,284 acres falling within the 100-year floodplain.

East Brookfield's municipal water system utilizes a gravel-packed well off of West Street as its water supply source. This well is located in close proximity to the East Brookfield River and is drilled into the aquifer that underlies the River. The municipal water system serves roughly two thirds of East Brookfield's population.

### **B. History of the Community**

Before European settlers arrived, East Brookfield was home to the Lassaway and Quaboag Indian tribes, who used the Seven Mile and Quaboag rivers as routes of commerce. These same routes by land later became part of the historical Baypath and Boston Post Roads. In 1686, James Ford is the first name documented in association with the original settlement, Quaboag Plantation, later the Town of Brookfield. It is possible that Mr. Ford may have been part of a smaller group of pioneer settlers that chose this area because of its fertile land and abundant water supply. Although there were many turbulent times due to sickness and Indian hostilities, the Quaboag Plantation prospered.



In 1673, a significant portion of the plantation became the Town of Brookfield, which then included the villages of West Brookfield, North Brookfield, East Brookfield and Podunk. The early 1700s were a period of industrial expansion for our eastern township. This included the establishment of a series of mills along the Five Mile and Seven Mile Rivers. In 1738 inhabitants of the village of Podunk, a southern portion of East Brookfield, submitted the first of a number of petitions for separation from Brookfield. This petition was denied. Nevertheless, the village of East Brookfield was on its way to becoming an independent center of industrial activity and part of the great Industrial Revolution that swept Northeast America during the 1800s.



The Western Railroad arrived in East Brookfield in 1839, contributing greatly to its industrial expansion, as it connected our town to the major cities of Worcester and Springfield, with connections to Boston. Another form of railway transportation also serviced East Brookfield. In 1896 the Warren, Brookfield and Spencer Street Railway Company began service through our town. Trolley service expanded in 1901 with the Worcester, Brookfield and Spencer Street Railway Company. Industries such as textiles, shoes, pottery, brick, cast iron and steel tools, bicycles and carriage wheels all benefited greatly from

the railroads. In addition, a small group of enterprising officials from the street railway company purchased land on Lake Lashaway to create Lashaway Park for the summer amusement of people from the city.

Many residents of East Brookfield contributed to the development and success of our community. A small group of notable families and individuals gained recognition beyond our borders. Warren Tarbell moved to East Brookfield as a businessman and became very active in local and state politics. Mr. Tarbell eventually became a State Senator for Worcester and Hamden Counties and was instrumental in the separation and incorporation of East Brookfield. On March 23, 1920 the Massachusetts Senate passed a bill, which was signed into law the following day by Governor Calvin Coolidge formalizing the separation and incorporation of East Brookfield. The Plimpton family contributed with numerous innovations. James L. Plimpton revolutionized the design of roller skates and the sport of roller-skating. Henry Plimpton incorporated the use of ball and roller bearings for specific applications such as carriage wheels. In addition, Henry Plimpton was the first in this area to install electricity to his home through the assistance of his friend Thomas Edison. Our most noted citizen was Connie Mack (Cornelius McGillicuddy), “The Grand Old Man of Baseball”. Mr. Mack transformed major league baseball, yet he was widely known for his accomplishments as the highly successful manager, and owner of the Philadelphia Athletics (presently the Oakland A’s). The “Tall Tactician”, as known by fans and colleagues, became the oldest and most victorious manager in the major leagues with a managing career spanning nearly 50 years.

1929 marked a turning point for East Brookfield as industry felt the effects of the Great Depression. This began the transformation of an industrial center to a residential community. The Hurricane of 1938 and the Flood of 1955 also contributed as they forced some businesses to close permanently. Although some companies continued to flourish and develop into the 1970s, a steady transformation was taking place with perhaps the first housing development started in early 1939 along North Brookfield Road.

Today our Town's expansive woodlands and rural character attract many people who wish to live in a small country town but have easy commuting access to major metropolitan areas. Primarily a bedroom community, East Brookfield offers a friendly, safe, close-knit environment with strong family and civic values. Largely residential, our Town consists of mainly New England style single-family homes, some with historic significance, and boasts a diverse collection of small businesses and family restaurants. The residents of East Brookfield enjoy the services of a first rate Police, Fire, Highway and Water departments as well as an excellent school system. In addition, many popular community activities are offered throughout the year.

**C. Population Characteristics**

Between 1930 and 2000 East Brookfield saw its population more than double in size, as did many communities in CMRPC's Western Subregion. The highest rate of growth took place between 1940 and 1980, leveling off somewhat between 1980 and 2000. However, recent development activity in and around East Brookfield indicates that another growth spurt may be on the way. The Town Clerk's 2004 census effort pegged the Town's current population at 2,190 residents. The Massachusetts Institute for Social & Economic Research (MISER) projects that East Brookfield's population will be just shy of 2,400 residents by the year 2010.

**Table 1  
East Brookfield Population Growth**

	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010*</u>
<b>Population</b>	926	1,016	1,243	1,533	1,801	1,955	2,033	2,097	2,384
<b>Increase (%)</b>		9.7%	22.3%	23.3%	17.5%	8.6%	4.0%	3.1%	13.7%

Sources: US Census Bureau.

\* = Forecast for 2010 provided by the Massachusetts Institute for Social & Economic Research (MISER) UMass Amherst.

East Brookfield's population growth has resulted in an increase in population density. Comprised of 6,272 acres of land (or 9.8 square miles), East Brookfield's average of persons per square mile grew from 94 in 1930 to 214 by the year 2000. East Brookfield falls somewhere in the middle when comparing its population density figure to those of its adjacent neighbors. Brookfield (197) and Sturbridge (209) have lower population densities, while North Brookfield (222), Charlton (265) and Spencer (356) have higher population densities.

**Table 2  
East Brookfield Age Characteristics**

<u>Age Group</u>	<u>Number</u>	<u>% of Total Population</u>
Under 5 Years of Age	124	5.9%
5 – 19	455	21.7%
20-44	721	34.4%
45-64	518	24.7%
65 Years of Age and Over	<u>279</u>	<u>13.3%</u>
Total:	2,097	100%

Source: US Census Bureau, 2000 Census.

Table 2 indicates that roughly one quarter of East Brookfield’s population consists of school-aged children or soon to be school-aged children. This represents a slight decrease from the 1990 Census when roughly 30% of the Town’s population consisted of school-aged or soon to be school-aged children.

The most significant decline since the 1990 Census has been in the 20-44 age group, which saw a decline from 43% in 1990 to 34% in 2000. The age group that saw the greatest increase was the 45-64 age group (or the soon to be senior citizens) that grew from 20% in 1990 to roughly 25% by 2000. The MISER population forecasts for the year 2010 indicate that East Brookfield can expect a moderate increase for all population groups, except the 20-44 age group and senior citizens (65 years of age and older), both of which are projected to decrease slightly. Census data indicate that the median age for East Brookfield residents has increased from 28.2 in 1970 to 38.6 in 2000.

**Table 3  
Households by Type**

<u>Type of Household</u>	<u>Number</u>	<u>% of Total Households</u>
Married Couple Family	511	65.7%
Male Householder	25	3.2%
Female Householder	64	8.2%
Non-Family Household	<u>178</u>	<u>22.9%</u>
Totals:	778	100%

Source: US Census Bureau, 2000 Census.

Table 3 indicates that nearly two thirds of East Brookfield households consist of married couple families. Families with children often expect to find a diverse selection of recreational opportunities (both passive and active) in their communities, whether provided by the municipality itself or by private entities.

**Table 4  
Median Household Income Comparison**

East Brookfield Median Household Income: \$51,860  
 State Median Household Income: \$50,502  
 Percent of State Average: 102.7%  
 Worcester County Median Household Income: \$47,874  
 Percent of Worcester County Average: 108.3%

Source: US Census Bureau, 2000 Census.

East Brookfield’s median household income is higher than the average for Worcester County and the State as a whole. This is an indicator of an affluent community that should be able to afford the cost of providing a diverse selection of recreational opportunities and open space amenities for its citizens, including the long-term maintenance of these resources.

**Table 5**  
**Per Capita Income Comparison**

East Brookfield Per Capita Income: \$22,629  
State Per Capita Income: \$25,952  
Percent of State Average: 87.2%  
Worcester County Per Capita Income: \$22,983  
Percent of Worcester County Average: 98.4%

Source: US Census Bureau, 2000 Census.

East Brookfield's per capita income is slightly lower than the average for Worcester County and significantly lower than the State as a whole. This raises the question: how can East Brookfield's median household income be higher than the County and State average, yet its per capita income be lower than the County and State average? The average household income is based on the combined income raised by all of the household members, while the per capita income figure is derived by taking the community's total income generated and dividing it by every single person in town whether they are in the labor force or not. That East Brookfield has a higher than average household income figure is indicative of households headed by wage earners with good paying jobs. That East Brookfield's per capita income figure is lower than average is indicative of a community that has a higher than average number of households containing members not in the labor force (children & the elderly).

A breakdown of East Brookfield's income categories is provided in the table below.

**Table 6**  
**East Brookfield Household Income Distribution**

<u>East Brookfield Income Distribution</u>	
Less than \$10,000:	9 households
\$10,000 - \$24,999:	59 households
\$25,000 - \$34,999:	65 households
\$35,000 - \$49,999:	87 households
\$50,000 - \$74,999:	182 households
\$75,000 - \$99,999:	104 households
\$100,000 - \$149,999:	72 households
\$150,000 and over:	20 households

Source: US Census Bureau, 2000 Census.

The 2000 US Census data further indicate that the majority of housing units are owner-occupied, another indicator of prosperity for East Brookfield residents. Of the 849 occupied housing units existing in East Brookfield as of 2000, 83.3% were owner-occupied housing units while the remainder (16.7%) consisted of rental units.

## Additional Demographics

**Jobs:** According to the most recent statistics of the Massachusetts Division of Career Services, there were 47 business establishments in East Brookfield as of 2003, employing an average monthly total of 419 people. East Brookfield's service industry had the highest number of these jobs followed by the construction industry.

**Labor Force:** DETMA statistics further indicate that East Brookfield had a labor force of 1,071 workers as of 2003, with an unemployment rate of 6.2% (slightly higher than the State average of 5.8%, but lower than the Worcester County average of 6.7%). East Brookfield's unemployment rate has fluctuated wildly during the past 14 years, with a low of 3.4% in 2001 and a high of 13.8% in 1991.

### D. Growth and Development Patterns

D-1. Patterns and Trends: The University of Massachusetts-Amherst has been tracking statewide land use data for the better part of the last century. The University uses aerial photographs and interprets them (now using GIS) based on land use categories. Table 7 on the following page outlines East Brookfield's land use totals for the last three Statewide land use mapping efforts.

**Table 7**  
**East Brookfield Land Use Changes Over the Years**

<u>1971</u>	<u>1985</u>	<u>1999</u>
484 developed acres (472 residential) (12 comm./ind.) (4,610 forestland) (614 farmland)	534 developed acres (510 residential) (24 comm./ind.) (4,458 forestland) (611 farmland)	761 developed acres (712 residential) (49 comm./ind.) (4,294 forestland) (466 farmland)

Source: UMass-Amherst land use data for 1971, 1985 and 1999.

The amount of developed land in East Brookfield has increased by 57.2% between 1971 and 1999. Percentage-wise, this increase has been evenly distributed amongst all three major development categories: residential, commercial, and industrial. In terms of sheer acreage, the residential sector has grown the most, adding 277 new acres of development between 1971 and 1999. Conversely, East Brookfield's farmland has declined by roughly 32% and forestland by 7% during the same time period. With only 761 developed acres out of a total land area of 6,445 acres (or 11.8% of the total), East Brookfield is still very much a rural small town despite the increase in development documented above.

The majority of new building lots in East Brookfield were created through the Approval Not Required (ANR) process, meaning that such plans do not receive any detailed municipal review of their potential impacts on the environment; rather, the Planning Board simply endorses the ANR plans as they are presented. East Brookfield has seen relatively little subdivision activity during the last 30 years, handling only a few definitive subdivision proposals during this timeframe. The creation of ANR frontage lots has not yet led to a deterioration of East Brookfield's natural ecology. Dense residential development along the shoreline of Lake Lashaway has been a factor in the decline of the Lake's water quality; however, the vast majority of these lots were created decades ago. The Town has been working with neighboring North Brookfield to explore the option of extending North Brookfield's

municipal sewer system to cover the shoreline of Lake Lashaway, but East Brookfield voters have yet to approve the funding necessary to begin a feasibility study, with the last rejection occurring at the 2005 spring Town Meeting.

#### D-2. Infrastructure

East Brookfield is a small rural community with minimal municipal infrastructure. The Town does not have a municipal sewer system all sewage disposal needs are met through the use of on-lot septic systems. The Town does have a small municipal water system that serves the cluster of development along Route 9 and a few of the rural roads south of the Sevenmile River. There is no direct access to the interstate highway system, and there are only two State roads (Routes 9 & 49) within the Town's boundaries. The majority of roads in Town are low-volume rural roadways.

a. Transportation Network: East Brookfield does not have direct access to the interstate highway system, although Route 49 does eventually leading to Route 20 and I-90 in Sturbridge. Route 9 serves as a major east-west highway for the town and the region. This lack of direct access may represent an important factor in East Brookfield's failure to develop significant industry. Unlike the neighboring towns of Charlton and Spencer, East Brookfield remained primarily rural away from Route 9 and the town center.

b. East Brookfield Municipal Water Supply System: With 609 service connections serving approximately 1,550 people, East Brookfield's municipal water system provides service to roughly two thirds of the population. The service area covers the length of Route 9, the land north of Route 9, and an area of Route 9 between the East Brookfield River and Podunk Road. The water system obtains its water from one gravel-packed well located off of West Street. The well is drilled into the aquifer that underlies the East Brookfield River. The well has the capacity to delivery roughly one million gallons of water per day (gpd); however, its daily usage is roughly 100,000-gpd. Peak demand occurs in the summer months when the system's demand is roughly 150,000-gpd. The water is not filtered through a treatment plant. The treatment that occurs is the addition of potassium hydroxide to raise the pH level for corrosion control purposes. There is a water storage tank off of Doane Avenue that can hold 250,000 gallons. In case of emergency, East Brookfield would utilize the North Brookfield municipal water system as an emergency backup water supply. Roughly 98% of the water connections are metered, with the exception of the small cottages around Lake Lashaway. According to the Town's 2004 annual report to the State Department of Environmental Services, the municipal water system had only 9.3% of its water unaccounted for (leaks, faulty meters, etc.) in 2004, and this represents a very low rate of water loss. The Water Department utilizes a non-profit consultant (Northeast Rural Water Inc.) to perform leak detection analysis. The Department is currently looking for another suitable well location so that the system is not entirely dependant on its single well.

#### D-3. Long-Term Development Patterns:

In 1999, the Massachusetts Executive Office of Environmental Affairs (EOEA) began a statewide effort to prepare a buildout analysis for each community in the State. A buildout analysis attempts to determine the number of developable lots and the town's total population at full buildout, that is, if the town were completely developed under the standards of current zoning. Existing developed lands, protected lands and land with environmental constraints are taken out of the equation, and the remaining developable land is divided by the standards of the local zoning bylaw. The regional planning commissions were contracted to perform buildout studies for each community in their respective regions.

In East Brookfield’s case, the Central Massachusetts Regional Planning Commission (CMRPC) completed a buildout analysis for the Town in early 2001. A summary of East Brookfield’s buildout analysis is presented on the following page. The first section details the amount of new development that East Brookfield could accommodate if its remaining vacant developable land were fully built out, while the second section adds the buildout potential to East Brookfield’s current land use figures to estimate what East Brookfield would look like upon achieving full buildout.

**Table 8  
East Brookfield Buildout Analysis**

Remaining Acres of Vacant, Developable Land:	3,944
Additional New Residential Housing Lots:	1,814
Additional New Population:	4,500
Additional New School-Age Children:	991
Total House Lots at Full Buildout:	2,704
Total Population at Full Buildout:	6,690
Total School-Age Children:	1,493

Source: CMRPC Buildout Analysis for East Brookfield, Spring 2001.

East Brookfield’s buildout analysis indicates that the Town is slightly less than one third (32.7%) of the way towards full buildout under the current standards of the zoning bylaw. Enough vacant developable land exists to triple the Town’s population and number of housing units. It should be noted that a buildout analysis does not attempt to determine *when* a community will reach full buildout; rather, it is simply an attempt to determine what a community would look like if its remaining vacant land were developed according to the town’s current zoning standards. The town could alter its buildout results by making changes to dimensional requirements for new lots (lot size, frontage) or by permanently protecting more land in town. Thus a buildout analysis is fluid and represents but a snapshot in time. Since 1985, East Brookfield has averaged 8.1 new residential building permits per year, with a high of 52 in 1987 and a low of 2 in 2001.

East Brookfield’s zoning scheme is comprised of three districts. The Residential-Agricultural (RA) district covers two thirds of the Town’s land area, primarily south of Route 9. The RA district’s most prominent use is single-family homes and the minimum lot size is one acre. The Residential (R) district covers much of the Town’s frontage along Route 9, but also dips south covering both sides of Podunk Road and Howe Street, coinciding with the presence of municipal water. Single-family homes also predominate the Residential district, but because of the presence of municipal infrastructure, the minimum lot size is 30,000 square feet. East Brookfield also has 23% of its land area zoned commercially, with select areas along Route 9 falling within the Commercial district, as well as land to the east of Route 49 and much of Allen Swamp. Small-scale commercial, service and professional uses predominate in the Commercial district. A graphic depiction of East Brookfield’s zoning scheme is presented on the following page as Map 1 (East Brookfield Zoning Map).

East Brookfield will most likely retain its present land use pattern of scattered and dispersed development surrounding corridors of suburban residential clusters, a strip roadside development concentrated along Route 9. These patterns are expected to remain the same as long as the Town continues to rely on on-site septic systems to handle its waste disposal needs.



## SECTION 4: Environmental Inventory and Analysis

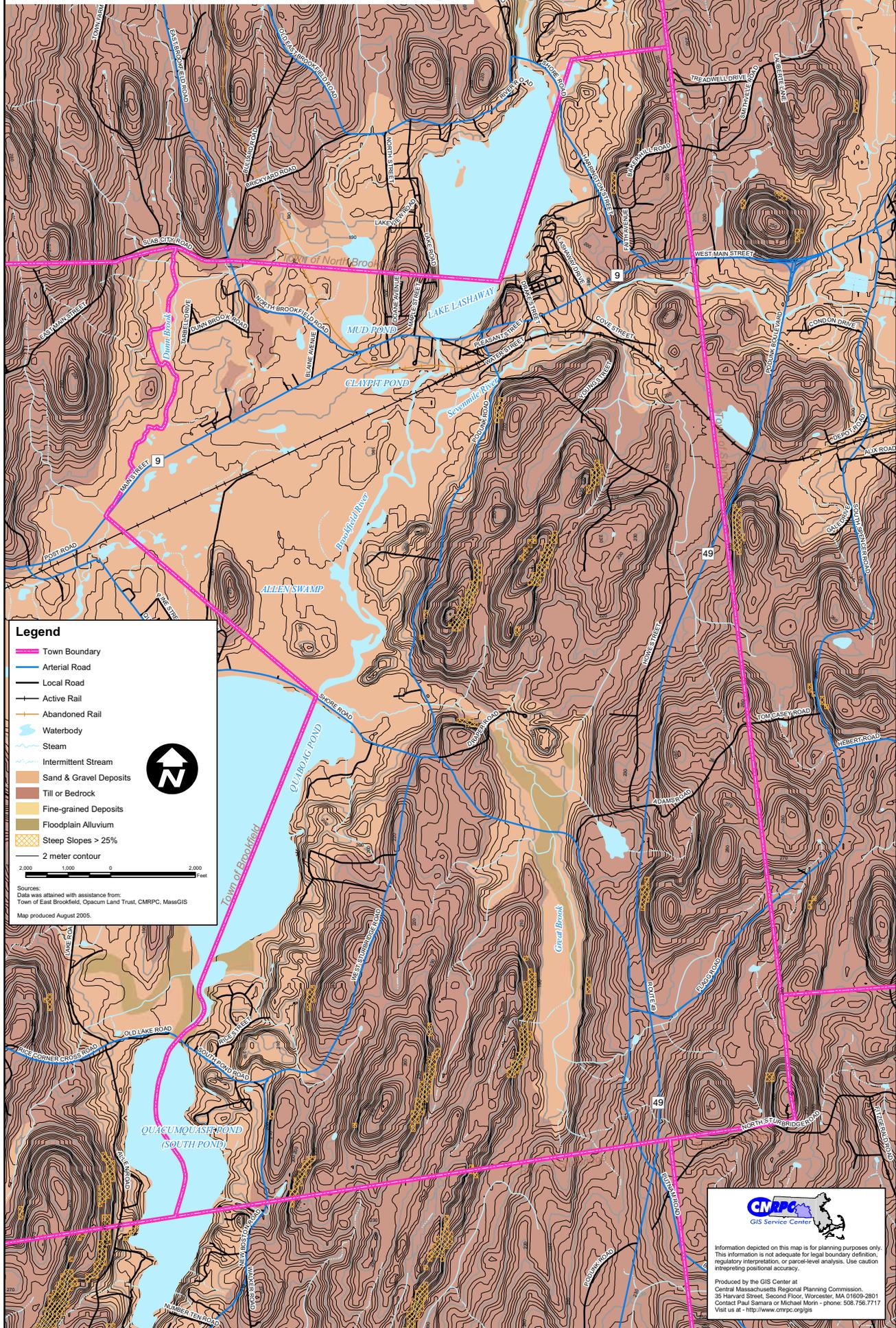
### A. Geology, Soils & Topography

Geology: The most recent US Geological Survey's surficial geology maps constitute East Brookfield's primary source of geologic information. MassGIS (the State GIS data center) further digitally enhanced these maps in 1992. The USGS surficial geology maps indicate that East Brookfield's geology is split between two major geologic categories: sand and gravel deposits and till/bedrock deposits. East Brookfield's sand and gravel deposits underlie the northwestern section of Town, taking in the Brookfield River, Sevenmile River, Lake Lashaway, Allen Swamp, the shorelines of Quaboag Pond and South Pond and the shoreline of Great Brook. East Brookfield's till/bedrock deposits underlie the eastern half of Town as well as a large area between the shorelines of Quaboag and South Ponds and Great Brook. East Brookfield's bedrock deposits are part of the Merrimack Belt, which extends at least 250 miles from Connecticut into Maine. The sediments that formed these rocks were deposited several hundred million years ago, in the Silurian and Devonian Periods. The sediments gave rise to sedimentary rocks, which were subsequently subjected to heat and pressure, producing the metamorphic rocks that comprise the Merrimack Belt today. Floodplain alluvium deposits can be found along the shoreline of Great Brook and a small section of South Pond's shoreline. A graphic depiction of East Brookfield's surficial geology can be found on Map 2 (Soils and Geologic Features Map).

Soils: According to the 1992 report, Soil Survey of Worcester County, Massachusetts – Southern Part, prepared by the USDA's Natural Resource Conservation Service (NRCS), East Brookfield's soil properties can be generalized into three major categories. A description of these categories and their locations in East Brookfield is provided below.

- Paxton-Woodbridge-Ridgebury Soils: Nearly level to steep, very deep, well drained to poorly drained soils on glaciated uplands. This soil type consists of soils on upland hills and ridges dissected by many small drainage ways. Stones cover more than 3% of the surface in most areas. The soils were formed in glacial till derived from schist, gneiss and granite. In East Brookfield, this soils type appears in the same general locations as the Town's bedrock/till deposits as depicted on Map 2, essentially encompassing the eastern half of Town as well as a large area between the shorelines of Quaboag and South Ponds and Great Brook.
- Brookfield-Brimfield Soils: Gently sloping to steep, very deep and shallow, well-drained and somewhat excessively drained soils on glaciated uplands. This soil type consists of soils on upland hills and ridges that have rock exposures throughout. Stones cover more than 3% of the surface. The soils were formed in glacial till derived from micaceous schist. In East Brookfield, this soil type appears in the same general locations as the Town's sand and gravel deposits as depicted on Map 2, essentially encompassing the northwestern section of Town and adjacent to the Town's major water resources.
- Freetown-Swansea-Saco Soils: Nearly level, very deep, very poorly drained soils on uplands, outwash plains, and floodplains. This soil type consists of soils on broad flats that have small depressions. These soils are in old glacial lakes or small ponds adjacent to streams. The soil formed in organic deposits and alluvium. In East Brookfield, this soil type appears to encompass either side of the Brookfield River from its intersection with Quaboag Pond north to Claypit Pond.

# Town of East Brookfield Soils & Geologic Features Map



**Legend**

- Town Boundary
- Arterial Road
- Local Road
- Active Rail
- Abandoned Rail
- Waterbody
- Stream
- Intermittent Stream
- Sand & Gravel Deposits
- Till or Bedrock
- Fine-grained Deposits
- Floodplain Alluvium
- Steep Slopes > 25%
- 2 meter contour

2,000 1,000 0 2,000  
Feet

Sources:  
Data was attained with assistance from:  
Town of East Brookfield, Opacum Land Trust, CMRPC, MassGIS  
Map produced August 2005.

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regulatory interpretation, or parcel-level analysis. Use caution  
interpreting positional accuracy.

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Topography: East Brookfield's topography ranges from a high of 962 feet above sea level (Wheelock Hill and Teneriffe Hill) to a low of 610 feet above sea level in the vicinity of Allen Swamp. Stone Hill (951 feet), Carpenter Hill (915 feet) and Teneriffe Hill (870 feet) are also prominent hills within Town. The High Rocks looking out over Great Brook are another prominent landscape feature.

## **B. Landscape Character**

The majority of East Brookfield's landscape south of Route 9 is comprised of a series of drumlins followed by low-lying wetlands. The Town's western boundary is the exception here, as it is comprised of the low-level areas surrounding Quaboag Pond and South Pond. The land west and north of the East Brookfield and Sevenmile Rivers is relatively level, but numerous wetlands (Allen Swamp being the most prominent) and several small ponds (Mud Pond, Claypit Pond and a tip of Perry Pond). According to the National Wetlands Inventory maintained by the US Fish & Wildlife Service, East Brookfield contains roughly 924 acres of wetlands, or 14.3% of the Town's total land area. The 1999 MassGIS statewide land use mapping effort identified roughly 4,294 acres of forestland in East Brookfield, or two thirds of the community. With the exception of the Route 9 corridor, the majority of East Brookfield's landscape remains rural, natural and undeveloped.

## **C. Water Resources**

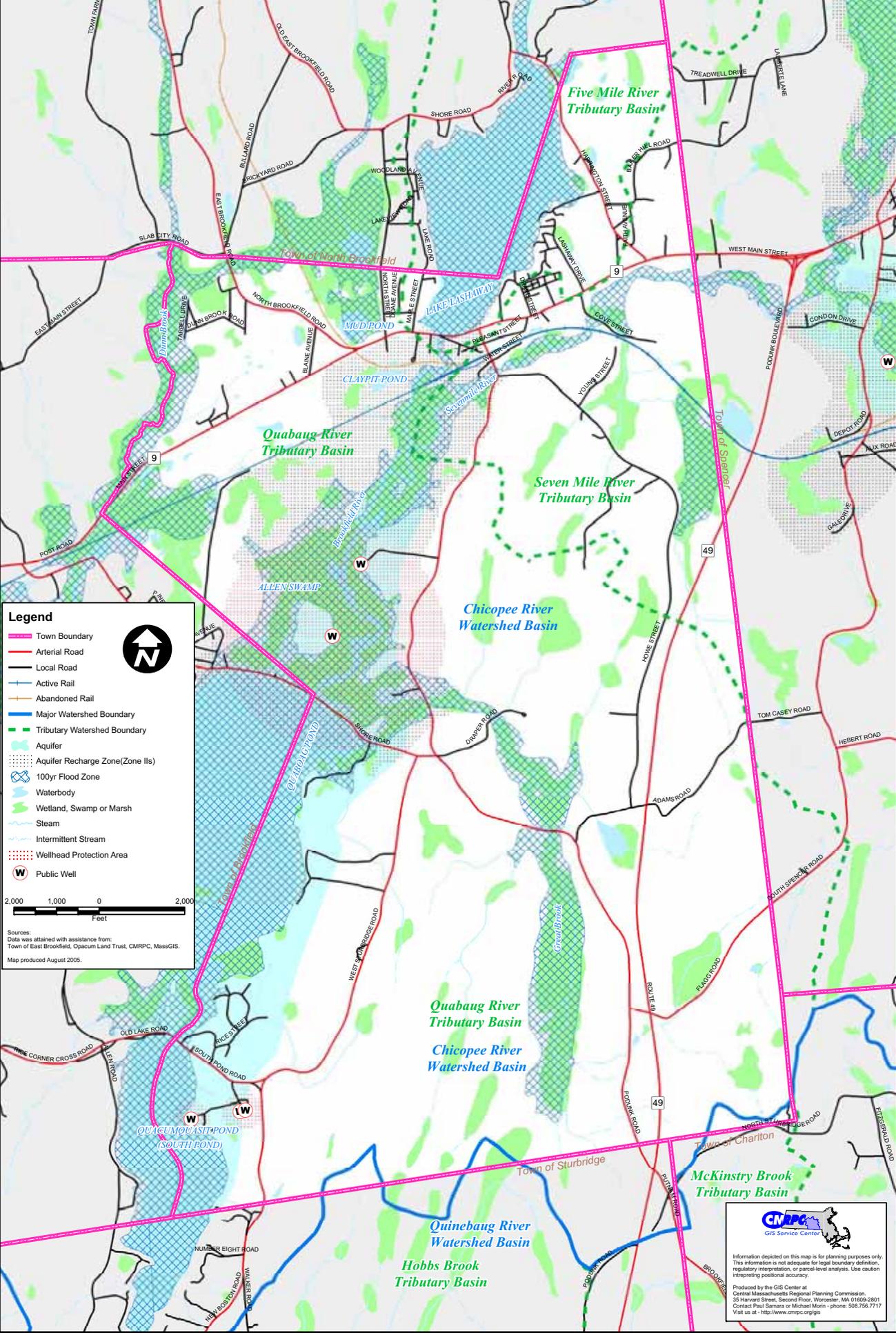


East Brookfield contains numerous surface waterbodies, including a portion of Lake Lashaway (shared with North Brookfield), two major ponds: Quaboag Pond (shared with Brookfield) and Quacumquasit Pond, also known as South Pond (shared with Brookfield and Sturbridge), and several minor ponds (Mud Pond, Claypit Pond, and a small portion of Perry Pond). The East Brookfield River and Seven-Mile River join together just south of the downtown area and flow in an easterly direction into Brookfield, West Brookfield and other points east. Quaboag Pond and South Pond feed into the confluence of these two rivers. Other significant water resources include Allen Swamp, Great Brook, as well as Dunn Brook, which forms a portion of the Town's eastern boundary line.

The vast majority (99%) of the Town falls within the Chicopee River Watershed. The dividing line between the Chicopee River Watershed and the Quinebaug River Watershed is located in close proximity to the Town's southern boundary line and there are a few small areas of East Brookfield that fall within the Quinebaug River Watershed (a little less than 1% of the Town's total land area). East Brookfield is further divided into five tributary basins, the boundaries of which are depicted on Map 3 (Water Resources Map):

- Quaboag River Basin: 5,152 acres or 77% of the Town. This basin covers the majority of the Town south of Route 9.
- Sevenmile River Basin: 1,049 acres or 16% of the Town. This basin takes in a northeast section of Town, with Teneriffe Hill serving as the basin's divide.
- Fivemile River Basin: 403 acres or 6% of the Town. This basin takes in the very northeast corner of Town, essentially the area north of Route 9.
- Hobbs Brook Basin: 30 acres or 0.07% of the Town. Primarily located in Sturbridge, this basin dips north into East Brookfield at two locations along the shared boundary line.

# Town of East Brookfield Water Resources Map



**Legend**

- Town Boundary
- Arterial Road
- Local Road
- Active Rail
- Abandoned Rail
- Major Watershed Boundary
- Tributary Watershed Boundary
- Aquifer
- Aquifer Recharge Zone (Zone IIs)
- 100yr Flood Zone
- Waterbody
- Wetland, Swamp or Marsh
- Stream
- Intermittent Stream
- Wellhead Protection Area
- Public Well

2,000 1,000 0 2,000  
Feet

Sources:  
Data was attained with assistance from:  
Town of East Brookfield, Openium Land Trust, CMRPC, MassGIS.  
Map produced August 2005.

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- McKinstry Brook Basin: 16 acres or 0.03% of the Town. Primarily located in Sturbridge and Charlton, this basin dips north into East Brookfield at the very southeast corner of Town.

According to the National Wetlands Inventory maintained by the US Fish & Wildlife Service, East Brookfield contains roughly 924 acres of wetlands. According to the Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency, East Brookfield has approximately 1,284 acres of land falling within the 100-year floodplain. The United States Geological Survey (USGS) has also identified a 726-acre aquifer that appears as a large swath starting at the Sevenmile River, continuing south under the East Brookfield River, Allen Swamp, Quaboag Pond and ending in East Brookfield in the vicinity of South Pond beyond the Town's boundary line. The vast majority (90%) of this aquifer is considered by the USGS as a high-yield aquifer, with its outer edges being designated as a medium-yield aquifer. East Brookfield's Zone II aquifer recharge zone for its public drinking water wells is located in an area between Allen Swamp and Podunk Road. All of the resources mentioned in this paragraph are graphically depicted on Map 3 (Water Resources Map).



#### D. Vegetation



According to the document, Classification of the Natural Communities of Massachusetts, prepared in 2001 by the Natural Heritage and Endangered Species Program within the Division of Fisheries and Wildlife, East Brookfield falls within the Worcester/Monadnock Plateau. The Plateau contains the most hilly and mountainous areas of the Commonwealth's central upland, with elevations ranging from 500 to 1,800 feet above sea level. Transition hardwoods are common, but northern hardwoods also occur. Forested wetlands are common, and forested and non-forested peatlands are abundant. As mentioned previously, roughly two thirds of East Brookfield

consists of forestland. East Brookfield is located at the southern end of the Transition Hardwoods-White Pine-Hemlock Zone, near the border of the more southern Central Hardwoods-Hemlock-White Pine Zone. The dominant vegetation in the latter includes a variety of oaks (black, red, white, chestnut, and scarlet), chestnut, red maple, shagbark and bitternut hickories and black birch. The former zone contains smaller amounts of most of these species mixed with the northern hardwoods (sugar maple, beech and yellow birch) and white ash. White pine and hemlock are of variable abundance in both zones, and their presence is strongly influenced by historical factors like fire and land use history.

Slope position has much to do with the forest types found in East Brookfield. Low areas are usually dominated by red maple along with yellow birch, American elm and sometimes hemlock. Moist but well drained sites with relatively rich soils support sugar maple, white ash and red oak. Drier sites, including ridges and hilltops, typically contain a mixture of oaks in which black, white and red oaks are prominent along with some hickory and red maple. White pine can be abundant in woods originating on abandoned pastures, but is only occasional in other areas. Hemlock is most frequent in damp areas and in stream valleys. Several non-forest vegetation types are represented in East Brookfield. These include marshes and shrub swamps associated with several ponds and streams.

Prominent examples occur within Allen Swamp along the shorelines of the East Brookfield and Sevenmile Rivers, along the shorelines of Quaboag and South Ponds, as well as Great and Dunn Brooks. Alfalfa, clovers and various grasses (most of which are non-native) dominate the region's hayfields. Abandoned fields undergoing succession typically support some combination of gray birch, aspen, white pine and red maple.

The Natural Heritage Endangered Species Program within the Division of Fisheries and Wildlife have identified several plant species in East Brookfield that are considered endangered or threatened:

- Endangered species are native species that are in danger of extinction throughout all or part of their range, or are in danger of extirpation from Massachusetts, as documented by biological research. The Variable Sedge is the only endangered vascular plant species identified in East Brookfield.
- Threatened species are native species that are likely to become endangered in the foreseeable future, or that are declining or rare as determined by biological research. Threatened vascular plant species in East Brookfield include: Long's Bulrush, Alternate-Flowered Water-Milfoil, Climbing Fumitory and Lipocarpa Micrantha.

#### **E. Fisheries and Wildlife**

East Brookfield supports most of the wildlife that one can expect to find in forest, marsh, pond and residential habitat in Central Massachusetts. The extensive areas of forested land without public access in hills and valleys south of Route 9 provide appropriate habitat for species with large home ranges and those that are sensitive to human disturbance. Moose and bears have been sighted in Town on numerous occasions. Raccoons, foxes, skunks, opossums, beavers, muskrats and coyotes are all common, the latter sometimes preying on domestic animals. Deer are common in the rural area south of Route 9, feeding on ornamental plantings and vegetables. Fishers also appear to be fairly common. Cottontails are present, though not especially common.



The Natural Heritage Endangered Species Program within the Division of Fisheries and Wildlife have identified several animal species in East Brookfield that are considered endangered, threatened or are of special concern:

- Endangered species are native species that are in danger of extinction throughout all or part of their range, or are in danger of extirpation from Massachusetts, as documented by biological research. Endangered species in East Brookfield include: the American Bittern, Bald Eagle, and the Pied-billed Grebe.
- Threatened species are native species that are likely to become endangered in the foreseeable future, or that are declining or rare as determined by biological research. The King Rail (bird) is the only threatened animal species identified in East Brookfield.

- Species of Special Concern are native species that have been documented by biological research to have suffered a decline that could threaten the species if allowed to continue unchecked, or that occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become threatened within Massachusetts. Species of Special Concern in East Brookfield include: the Blue-Spotted Salamander, Four-Toed Salamander, Triangle Floater Mussel, Spotted Turtle and Wood Turtle.

The Division of Fish & Wildlife has certified eight vernal pools in East Brookfield and local conservationists believe there are many more, especially in the vicinity of Allen Swamp and other low-lying wetland areas. East Brookfield’s State-certified vernal pools and its potential vernal pools are shown on Map 4 (Unique Features and Scenic Resources Map).



Vernal pools are unique wildlife habitats best known for the amphibians and invertebrate animals that use them to breed. Vernal pools, also known as ephemeral pools, autumn pools and temporary woodland ponds, typically fill with water in the autumn or winter due to rising groundwater and rainfall and remain ponded through the spring and into summer. Vernal pools dry completely by the middle or end of summer each year, or at least every few years. Occasional drying prevents fish from establishing permanent populations. Many amphibian and invertebrate species rely on breeding habitat that is free of fish predators.

Some vernal pools are protected in Massachusetts under the Wetlands Protection Act regulations as well as several other federal and state regulations. The Natural Heritage Endangered Species Program (NHESP) serves the important role of officially “certifying” vernal pools that are documented locally. As certification is the first step towards protection, East Brookfield conservationists would do well to document the Town’s vernal pools and submit said documentation to the NHESP for certification.

#### **F. Scenic and Unique Environments**

The East Brookfield Master Plan Committee identified 33 locations in Town as being unique and/or scenic. In developing this listing, the Committee made use of public input derived from the Master Plan citizen survey and the open space/recreation public forum held in early 2005.

The Town’s scenic and unique environments and their locations are graphically depicted on the following page as Map 4 (Unique Features and Scenic Resources Map). The sites range from historic buildings and properties, to unique geological features, working farms, scenic mountaintops and significant wildlife habitat areas.

# Town of East Brookfield Unique Features and Scenic Resources Map



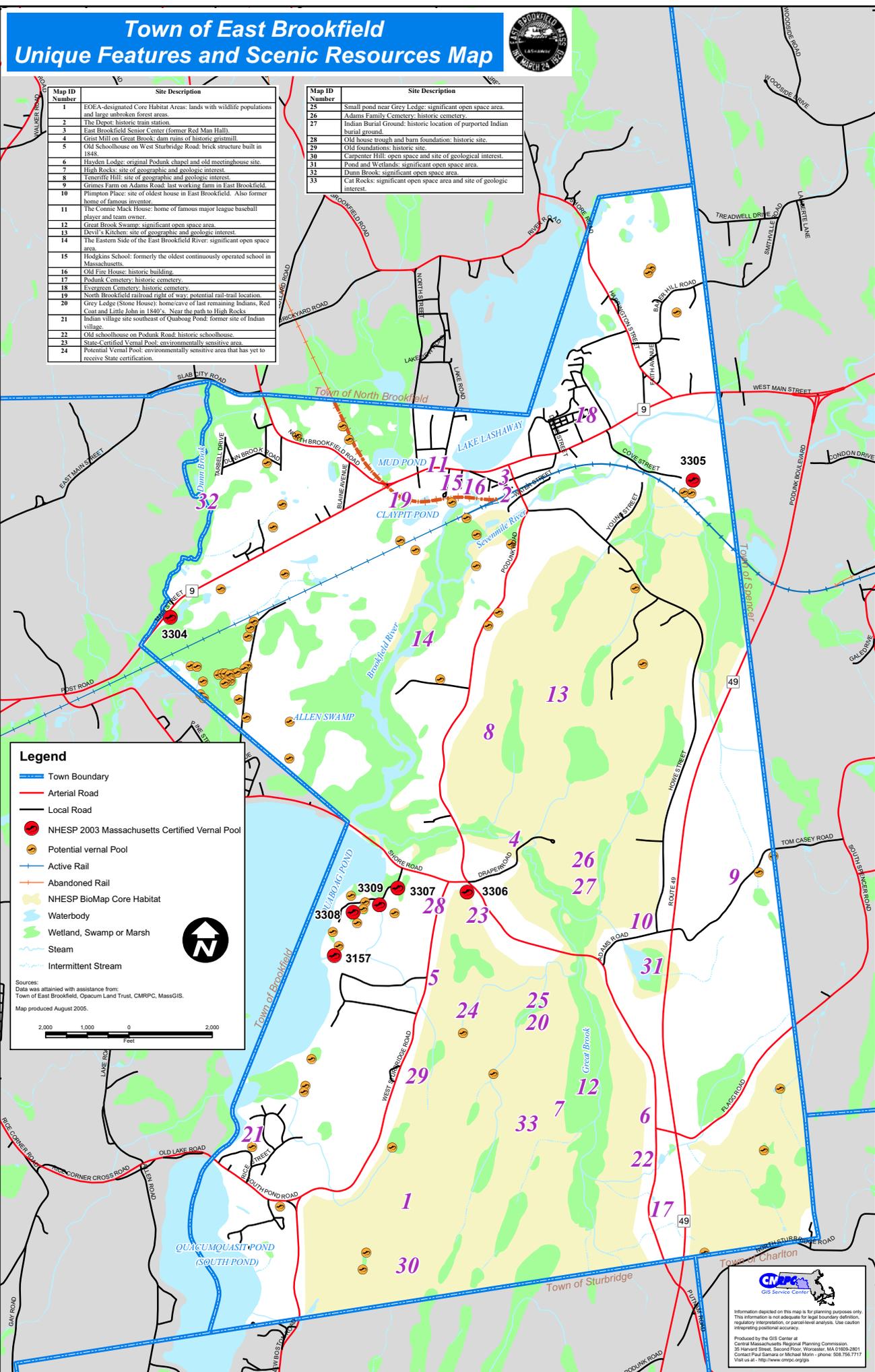
Map ID Number	Site Description
1	EOEA-designated Core Habitat Areas: lands with wildlife populations and large unbroken forest areas.
2	The Depot: historic train station.
3	East Brookfield Senior Center (former Red Man Hall).
4	Grist Mill on Great Brook: dam ruins of historic gristmill.
5	Old Schoolhouse on West Sturbridge Road: brick structure built in 1848.
6	Hayden Lodge: original Podunk chapel and old meetinghouse site.
7	High Rocks: site of geographic and geologic interest.
8	Tenorth Hill: site of geographic and geologic interest.
9	Grimes Farm on Adams Road: last working farm in East Brookfield.
10	Plimpton Place: site of oldest house in East Brookfield. Also former home of famous inventor.
11	The Conic Mack House: home of famous major league baseball player and team owner.
12	Great Brook Swamp: significant open space area.
13	Devil's Kitchen: site of geographic and geologic interest.
14	The Eastern Side of the East Brookfield River: significant open space area.
15	Hodgkins School: formerly the oldest continuously operated school in Massachusetts.
16	Old Fire House: historic building.
17	Podunk Cemetery: historic cemetery.
18	Evergreen Cemetery: historic cemetery.
19	North Brookfield railroad right of way: potential rail-trail location.
20	Grey Ledge (Stone House): home/cave of last remaining Indians, Red Coat and Little John in 1840's. Near the path to High Rocks.
21	Indian village site southeast of Quabog Pond: former site of Indian village.
22	Old schoolhouse on Podunk Road: historic schoolhouse.
23	State-Certified Vernal Pool: environmentally sensitive area that has yet to receive State certification.
24	Potential Vernal Pool: environmentally sensitive area that has yet to receive State certification.

Map ID Number	Site Description
25	Small pond near Grey Ledge: significant open space area.
26	Adams Family Cemetery: historic cemetery.
27	Indian Burial Ground: historic location of purported Indian burial ground.
28	Old house trough and barn foundation: historic site.
29	Old foundations: historic site.
30	Carpenter Hill: open space and site of geological interest.
31	Pond and Wetlands: significant open space area.
32	Dunn Brook: significant open space area.
33	Cat Rocks: significant open space area and site of geologic interest.

**Legend**

- Town Boundary
- Arterial Road
- Local Road
- NHESP 2003 Massachusetts Certified Vernal Pool
- Potential vernal Pool
- Active Rail
- Abandoned Rail
- NHESP BioMap Core Habitat
- Waterbody
- Wetland, Swamp or Marsh
- Steam
- Intermittent Stream

Sources:  
Data was attained with assistance from:  
Town of East Brookfield, Opacum Land Trust, CMRPC, MassGIS.  
Map produced August 2005.



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<b>Map#</b>	<b>Site</b>	<b>Reason</b>
1	Lands with wildlife populations and large unbroken forest areas including the Podunk Area	Open space: core habitat defined by the State containing the best wildlife and plant species.
2	The Depot	Historic: Old train station.
3	Red Man Hall (Senior Center)	Former home of East Brookfield's chapter of the Redman, a very old American organization originally known as the Sons of Liberty. The town was also established at this site via separation meetings and signing of the town charter.
4	Grist Mill on Great Brook	Historic: Dam ruins of old gristmill.
5	Old schoolhouse on West Sturbridge Road	Historic: 1848 brick schoolhouse.
6	Hayden Lodge	Historic: Original Podunk chapel and old meetinghouse site.
7	High Rocks	Open space, site of geological interest and rare species.
8	Teneriffe Hill	Open space and site of geological interest.
9	Grimes Farm on Adams Road	Last farm in East Brookfield.
10	Plimpton Place	Historic: Site of oldest house in East Brookfield. Also former home of famous inventor.
11	The Connie Mack House	Historic: Birthplace of famous baseball player and team owner.
12	Great Brook Swamp	Open space.
13	Devil's Kitchen	Site of geographical interest.
14	The Eastern Side of the East Brookfield River	Open space and aquifer re-charge area for town well.
15	Hodgkins School	Historic: Formerly the oldest continuously operated school in Massachusetts.
16	Old Fire House	Historic building.
17	Podunk Cemetery	Historic cemetery.
18	Evergreen Cemetery	Historic cemetery.
19	North Brookfield railroad right of way	Recreation: Potential for trail.
20	Grey Ledge (Stone House)	Historic/Geological interest: Home/cave of last remaining Indians, Red Coat and Little John in 1840's. Near the path to High Rocks.
21	Indian village site southeast of Quaboag Pond	Historic: Former site of Indian village.
22	Old schoolhouse on Podunk Road	Historic schoolhouse.
23	Old Well near Grey Ledge	Historic stone well.
24	Potential Vernal Pool location	Environmentally sensitive area.
25	Small pond near Grey Ledge	Open space.
26	Adams Family cemetery	Historic cemetery.
27	Indian Burial ground	Historic: Purported Indian burial ground.
28	Old horse trough and barn foundation	Historic.
29	Old foundations	Historic.
30	Carpenter Hill	Open space and site of geological interest.
31	Pond and wetlands	Open space.
32	Dunn Brook	Open space.
33	Cat Rocks	Open space and site of geological interest.

In addition to the scenic and unique environments identified by the residents as part of the planning process for this document, it should be noted that much of East Brookfield south of Route 9 has been identified by the NHESP as "Core Habitats" for aquatic, plant and wildlife species. In 2001 with funding from the EOE, the NHESP developed a BioMap for the entire Commonwealth in order to identify the areas most in need of protection to ensure native biodiversity. The BioMap identified Core Habitat areas based on verified data that corresponds to actual locations on the ground. The areas mapped were determined by biologists to be those most suitable to support viable plant and wildlife species. The NHESP's Living Waters Project attempted to identify and map the State's most critical

sites for maintaining freshwater aquatic biodiversity. These Core Habitat sites represent where the State will focus its conservation priorities. Taken together, the Core Habitat areas identified in East Brookfield as part of the BioMap effort and Living Waters Project comprise roughly two thirds of the Town and almost all of the land area south of Route 9, extending south into neighboring communities.

**G. Environmental Challenges**

G-1. Surface Water Pollution

East Brookfield’s primary environmental challenge is improving the water quality of its lakes, ponds, rivers and streams. Development has resulted in a host of negative impact to East Brookfield’s water resources, including failing septic systems, excessive shoreline development, poor erosion control, or non-point pollution such as washed away salt from roadway maintenance efforts, manure seepage from agricultural uses, fertilizers from lawn maintenance, or pesticide applications. Both State and local water quality monitoring efforts highlight the Town’s water quality issues.

The Department Environmental Protection Agency (DEP) designates six classes of water quality, based largely on the standards of the Federal Clean Water Act. In Massachusetts, Class A refers to those surface water resources that are used as water supply sources. Class B waters are considered safe for fishing, swimming and boating. The remaining four water quality categories cover those surface water resources with lesser water quality. The majority of the surface water resources in the Chicopee Watershed meet the Class B water quality standards. There are, however, several ponds and river segments that do not meet the Class B standards.

Under the regulations of the Federal Clean Water Act, states are required to file a report every two years that identifies those surface waters that are not expected to meet the Act’s surface water quality standards (Class A, Class B, etc.). This report, known as the Massachusetts Section 303(d) Lists of Waters, was last prepared in 2004 through a joint effort of the Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP). The table below lists those surface waters in East Brookfield that, according to the 2004 303(d) report, *do not* meet the water quality standards of the Federal Clean Water Act.

<u>Surface Water Resource</u>	<u>Sub-Watershed</u>	<u>Pollutants/Stressors</u>
Lake Lashaway	Fivemile River Basin	exotic aquatic species
Dunn Brook	Quaboag River Basin	organic enrichment/low dissolved oxygen
Quaboag Pond	Quaboag River Basin	metals/exotic aquatic species
South Pond	Quaboag River Basin	metals/exotic aquatic species
Sevenmile River	Sevenmile River Basin	pathogens

The State has also identified Lake Lashaway and South Pond as being mercury-impaired. In the report entitled, A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters, prepared jointly by the EOEA and DEP, Lake Lashaway and South Pond are categorized as Class C4 waters, meaning they are waterbodies impaired by pollution and their restoration will require measures beyond the development and implementation of a Total Maximum Daily Loads (TMDL) plan. The TMDL plan is essentially a “pollution budget” designed to restore the health of the impaired waterbody. The Federal Clean Water Act requires that states must develop a TMDL plan for each waterbody identified as being impaired. Components of a TMDL plan include

identifying the source(s) of the pollutant from direct discharges (point pollution sources) and indirect discharges (non-point pollution sources), determining the maximum amount of the pollutant that can be discharged into a specific waterbody to meet water quality standards and developing a plan to meet that goal.

While the State has yet to prepare a TMDL plan for Lake Lashaway, the EOE and DEP have recently issued a draft TMDL plan for Quaboag Pond and Quacumquasit (South) Pond. The report entitled, Draft Total Maximum Daily Loads of Total Phosphorus for Quaboag Pond & Quacumquasit Pond – May 2005, recommends four strategies for improving the water quality of these two waterbodies:

- Implement upgrades to the Spencer wastewater treatment plant.
- Control non-point source pollution targeting Phase II stormwater controls by the Town of Spencer and MassHighway for Routes 9, 31 & 49 by requiring roadway sweeping and catch-basin inspection/cleaning twice a year.
- Modification to increase South Pond flood control gate height by adding 18 inches to height.
- Modification to Quaboag Pond macrophyte management plan to target specific recreational zones such as boat channels and swimming areas.

The draft report further states that non-point pollution sources are responsible for the majority of the phosphorus found in these two waterbodies. In most cases, the authority to regulate non-point pollution sources lies with the local governmental entities and often requires the assistance of lake and watershed associations. East Brookfield is fortunate to have two long-standing lake associations that have been working to monitor water quality standards and address pollution sources: the Quaboag/Quacumquasit Lake Association Inc., and the Lake Lashaway Association Inc. Both of these non-profit organizations are composed solely of volunteers and have been around for over thirty years. Both organizations have over 100 members each and their activities include water quality monitoring, public education, and pollution mitigation projects. East Brookfield would do well to encourage and support the shared mission of these two organizations. The Lake Lashaway Association provided the following report regarding its water resource protection efforts (author: Peter Barstow):

#### Open Space Management Article about Lake Lashaway, East Brookfield, MA

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Lake Lashaway, formed in 1827 by damming the Five Mile River in East Brookfield, MA, has the good fortune to have its own Open Space Management Plan, under the auspices of the Lake Lashaway Association (200 homeowners on the Lake) and the two towns of North and East Brookfield. Since 1965, when incorporated, the Association has been active in water quality testing and environmental projects to preserve and protect the watershed.

In 1979, it initiated the plans and funding for a draw down facility at the lake's outlet dam. Combined funding from the EPA, DEP the towns and the Association constructed a 48" culvert under Route 9 and a worm gear controlled gate to lower the Lake's waters each winter by 8 feet. Under an approved order of conditions from the East Brookfield Conservation Commission, the town gatekeepers lower the lake beginning November 1 each fall and maintain the 8-foot drawdown, weather permitting, until ice is off the Lake in March or April. Draw-downs began in 1985, restoring a eutrophic weed infested lake within 2-3 years by killing the shoreline weed population, while preserving enough aqueous vegetation to allow the fish population to grow and flourish. The immediate result precluded the towns from having to set aside funds for weed harvesting, chemical treatments and restored a tax base because of improved recreational and land values. Until 1991, the State Division of Water Pollution

Control monitored the lake, submitting reports to the EPA, the DEP and the towns. The EPA issued a report praising this project as one of 12 best in the country in which federal funds were used.

Since 1991, the Lake Lashaway Association has actively maintained water quality monitoring programs. Included in the database are measurements for Phosphorus, Nitrates, Oxygen, Coliform Bacteria and PH (acidity-alkalai) levels. Annual weed surveys are taken in 15 locations. An education program regarding care of lake side septic systems and a special discounted pumping program is set up for home owners. It sponsors a summer police patrol and boating certificate programs. A watershed management program is currently underway for the Five Mile River above the lake in cooperation with the “Friends” of the Five Mile. The Mass. Bass Fisherman’s Association has Lashaway on its regular tournament schedule, naming the lake one of the best Bass fishing lakes in the region. The key to this activity is an active Association of like-minded home owners around the lake, who meet regularly and put aside funds for non-point source pollution projects, maintenance of the Draw Down gate facility, a newly built and installed Weir gate at the north end of the lake, designed to maintain water levels upstream during the draw down, dredging of silt from historic run-off upstream and actively seeking a wastewater sewage program with North Brookfield.

Just as an Open Space Management Plan is designed to provide clean, green space in growing residential areas, a lake’s open space requires careful planning and implementation of positive environmental efforts to keep the waters of Lake Lashaway clean, providing greater recreational activities and improving residential land and home values.

It should be noted that East Brookfield and North Brookfield have been working together in an effort to address the water quality issues affecting Lake Lashaway and have formed a joint committee for this purpose. The 2005 spring Town Meeting season saw North Brookfield appropriate \$175,000 for the preparation of a comprehensive wastewater management plan that will look two decades into the future. Unfortunately, East Brookfield voters rejected a similar funding proposal at the spring 2005 Town Meeting. It is likely that this proposal will be resurrected at a later date. If and when such a study is fully funded, it will result in an inter-municipal strategy for dealing with Lake Lashaway’s identified water quality problems.

G-2. Identified Polluted Sites in Town

The Massachusetts Department of Environmental Protection currently five 21E sites (also known as “brownfields”) in East Brookfield:

Release Tracking Number	Release Address	Site Name/Location Aid	Reporting Category	Notification Date	Compliance Status	Chemical Type
2-0015549	ADAMS RD	MASS ELECTRIC CO	TWO HR	01/05/2005	RAO	
2-0010513	MAIN ST	CITGO STATION	72 HR	10/13/1994	RAO	Oil
2-0015641	126 MECHANIC ST	SAUCONY INC	120 DY	03/28/2005	UNCLASSIFIED	Hazardous Material
2-0013243	735 PODUNK RD	TECHMAN INTL	72 HR	04/14/2000	RAO	Oil
2-0012716	280 WEST STURBRIDGE RD	HARDWICK KNITTED FABRICS	TWO HR	03/18/1999	RAO	Oil

East Brookfield does not operate a landfill facility. The Town's Solid Waste Department uses a portion of the Highway Barn property to store its recycling bins for its successful recycling program. The recycling center at the Highway Barn is open every Wednesday and Saturday and accepts the following materials: bulky wastes, clean metal, white goods, tires, brush and composting material, fluorescent light bulbs, batteries, automotive oils and filters and anti-freeze. The site also contains a building material "take it or leave it" center. Other recycling items such as paper goods, plastic bottles, metal and aluminum cans, glass containers, milk cartons and cardboard are collected curbside along with regular residential trash. The Town's average weekly amount of solid waste collected curbside was roughly 11.2 tons for 2005. The Solid Waste Department contracts with Allied Trash Disposal (formerly BFI) for weekly household trash pick up and disposal. Thus, other than recycling, the Town's solid waste disposal needs are contracted out. The Department also joins with neighboring North Brookfield to sponsor twice a year (April and October) household hazardous waste collection days.

### G-3. Erosion, Chronic Flooding & Sedimentation

The East Brookfield Conservation Commission, Highway Superintendent, Building Inspector and Health Officer were interviewed regarding the issues of erosion, chronic flooding and sedimentation in Town. No such problems were identified at this time.

## SECTION 5: Inventory of Lands of Conservation & Recreation Interest

### A. Land Protection Summary

Article 97 of the State Constitution provides permanent protection for certain lands acquired for natural resources purposes, meaning “conservation, development and utilization of the agricultural, mineral, forest, water, air and other natural resources.” Lands of this nature are often owned by the municipal conservation commission, recreation commission, water department, or by a state or federal conservation agency (i.e., the EOEA or the Division of Fish & Wildlife). Private, public and non-profit conservation and recreation lands are also protected under Article 97. Removing the permanent protection status of such lands is extremely difficult, as is evidenced by the following required steps:

- The municipal conservation commission or recreation commission must vote that the land in question is surplus to its needs;
- The removal of permanent protection status must be approved at a Town Meeting/City Council vote and pass by a 2/3 vote;
- The municipality must file an Environmental Notification Form with the EOEA’s Massachusetts Environmental Policy Act (MEPA);
- The removal of permanent protection status must be approved by the State Legislature and pass by a 2/3 vote; and
- In the case of land either acquired or developed with grant assistance from the EOEA’s Division of Conservation Services), the converted land must be replaced with land of equal monetary value and recreational or conservation utility.

In other words, it is intentionally difficult to remove a property’s permanent protection status so that it may be developed. Private lands can also be protected in perpetuity through deed restrictions or conservation easements. Municipal lands under active use (schools, town halls, highway department facilities, police/fire facilities, etc.) are *not* considered permanently protected, nor are private lands that are within the State’s special taxation programs (Chapter 61).

In terms of permanently protected land, the Town of East Brookfield owns very little conservation land on its own (two parcels); however, the State of Massachusetts owns 372 acres of conservation land in Town (primarily the Quaboag Wildlife Management Area in the vicinity of Allen Swamp), a significant amount of land is protected for the purpose of safeguarding public drinking water supplies, and a non-profit organization (the YMCA) has a large landholding in the south of Town.

Table 9 on the following page presents a breakdown of East Brookfield’s protected lands, their ownership, level of protection and acreage. Table 10 provides a matrix of all permanently protected open space in Town including such details as parcel ownership, management entity, current use, condition, recreation potential, grant used to purchase the property (if applicable), public access, and zoning category.

A graphic depiction of East Brookfield’s protected lands can be found on Map 5 (Open Space Inventory Map).

**Table 9**  
**East Brookfield Land Protection Summary**

<u>Description and Status</u>	<u># of Parcels</u>	<u>Acres</u>
Town-Owned Limited Protection (municipal buildings, schools, parks, etc.)	23	141.0
Town-Owned Permanent Protection (conservation land)	2	7.6
Town-Owned Permanent Protection (recreation)	4	10.5
East Brookfield-Owned Well Fields	2	56.5
Brookfield-Owned Well Fields	4	33.0
State-Owned Permanent Protection	12	372.0
Non-Profit Limited Protection (churches, Newton YMCA, and animal shelter)	7	58.0
Privately-Owned Limited Protection (Chapter 61A & Chapter 61B properties)	38	1,037.0
<b>Total Amount of Land Permanently Protected:</b>	<b>18</b>	<b>430.0</b>
<b>Total Amount of Land Under Limited Protection:</b>	<b>68</b>	<b>1,236.0</b>

Source: CMRPC GIS Center and East Brookfield Assessor Data.

The vast majority of privately owned parcels that have “limited protection” status (34 of 38 such parcels) fall under the Chapter 61 taxation program that offers a lower tax rate to property owners who keep their land in its natural forested state. Just about all of the Chapter 61 forest properties are located south of Route 9 and coincide with the State-designated “Core Habitat” areas. There are only four “limited protection” properties that fall within the Chapter 61A taxation program for agricultural lands, all located south of Route 9. East Brookfield has 480 acres of land under permanent protection (or 6.7% of the Town’s total land area), and 1,236 acres of land having limited protection status (or 18.6% of the Town’s total land area). All told, East Brookfield has 1,716 acres of land (or roughly one quarter of the Town’s total land area) having some degree of protection.

It should be noted that the Town recently utilized its right-of-first-refusal under the Chapter 61 tax program to purchase the 115-acre property off Howe Road. This was the first time in decades that East Brookfield was able to follow through on its right-of-first refusal under the Chapter program by having its voters approve local funds for the purchase of this property. The Town envisions using a portion of this property for an affordable senior housing development.

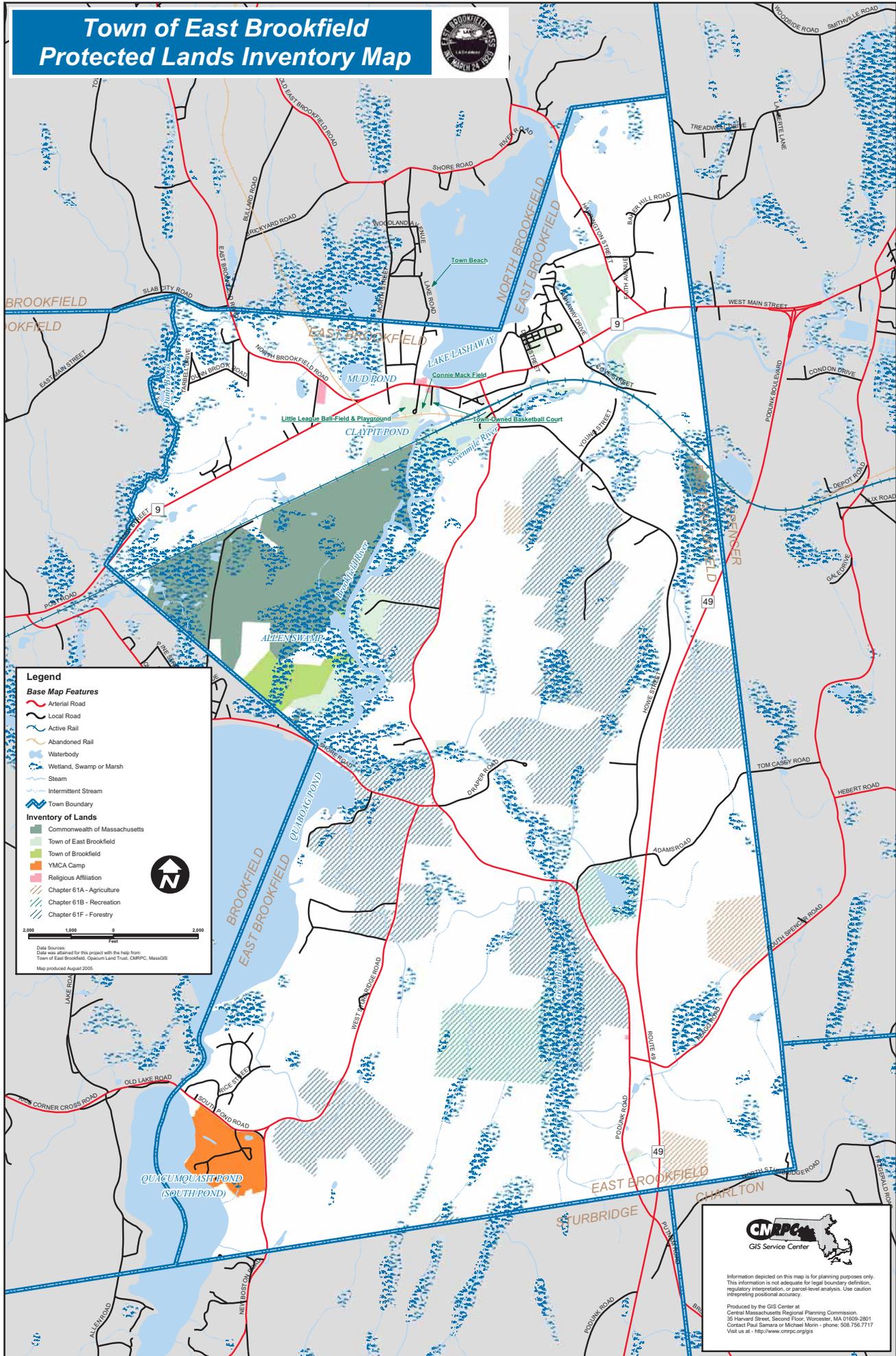
**B. Town-Owned Recreation Facilities**

The Town of East Brookfield has a Recreation Committee that is responsible for recreation planning and programming. The Board of Selectmen appoints this three-person committee (currently only two members in place) and it usually meets once a month. The Committee does not have any paid staff, but it does hire students to perform facility maintenance during the summer months. There are three active recreation facilities in Town and a fourth facility (Town Beach) that East Brookfield shares with North Brookfield. A description of these facilities is presented on the following page.

**Table 10  
Permanently Protected Land in East Brookfield**

Parcel Number	Owner/Manager	Use	Funds Used	Condition	Recreation Potential	Public Access	Acres	Zoning	Protection
Map 7-Block 189 Lot 30	EB Conservation Commission	Conservation land	Town	Good	Low	Free	3.6 acres	Res-Ag.	Article 97
Map 10-Block 189 Lot 48	EB Conservation Commission	Conservation Land	Town	Good	Low	Free	4 acres	Res-Ag.	Article 97
Map 10-Block 189 Lot 39	EB Water Dept.	Wellhead	Town	Excellent	Low	Prohibited	22.5 acres	Res-Ag.	Perpetuity
Map 10-Block 208 Lot 32	EB Water Dept.	Wellhead	Town	Excellent	Low	Prohibited	34 acres	Res-Ag.	Perpetuity
Map 9-Block 208 Lot 40	Brookfield Water Dept.	Wellhead	Town	Excellent	Low	Prohibited	21.5 acres	Res-Ag.	Perpetuity
Map 9-Block 208 Lot 40.1	Brookfield Water Dept.	Wellhead	Town	Excellent	Low	Prohibited	8 acres	Res-Ag.	Perpetuity
Map 9-Block 208 Lot 46.1	Brookfield Water Dept.	Wellhead	Town	Fair	Low	Prohibited	4 acres	Res-Ag.	Perpetuity
Map 9-Block 208 Lot 50	Brookfield Water Dept.	Wellhead	Town	Good	Low	Prohibited	17 acres	Res-Ag.	Perpetuity
Map 4.3-Block 115 Lot 7	EB Recreation Dept.	Baseball field	Town	Good	High	Free	1.3 acres	Res-Ag.	Perpetuity
Map 4.3-Block 202 Lot 2	EB Recreation Dept.	Basketball court	Town	Good	High	Free	0.8 acres	Res-Ag.	Perpetuity
Map 4.3-Block 115 Lot 10	EB Elementary School	Little League field	Town	Good	High	Free	4.2 acres	Res-Ag.	Perpetuity
Map 5.4-Block 130 Lot 80	EB Elementary School	Playground	Town	Good	High	Free	4.2 acres	Res-Ag.	Perpetuity
Map6/BI-118/Lot3	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	7.4 acres	Com/Res-Ag.	Perpetuity
Map6/BI-118/Lot19	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	21 acres	Com/Res-Ag.	Perpetuity
Map6/BI-118/Lot23	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	38 acres	Com/Res-Ag.	Perpetuity
Map6/BI-118/Lot27	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	17.4 acres	Com/Res-Ag.	Perpetuity
Map7/BI-118/Lot31	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	103 acres	Com/Res-Ag.	Perpetuity
Map8/BI-150/Lot38	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	13.5 acres	Com/Res-Ag.	Perpetuity
Map9/BI-1118/Lot2	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	40 acres	Com/Res-Ag.	Perpetuity
Map9/BI-118/Lot10	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	1.7 acres	Com/Res-Ag.	Perpetuity
Map9/BI-118/Lot11	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	109 acres	Com/Res-Ag.	Perpetuity
Map9/BI-208/Lot24	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	1.1 acres	Com/Res-Ag.	Perpetuity
Mp14/BI-1802/Lot101	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	13.6 acres	Com/Res-Ag.	Perpetuity
Mp14/BI-1802/Lot102	State – DFWELE	Quaboag WMA	DFWELE	Excellent	Medium	Free	6 acres	Com/Res-Ag.	Perpetuity

# Town of East Brookfield Protected Lands Inventory Map



**Legend**

**Base Map Features**

- Arterial Road
- Local Road
- Active Rail
- Abandoned Rail
- Waterbody
- Wetland, Swamp or Marsh
- Stream
- Intermittent Stream
- Town Boundary

**Inventory of Lands**

- Commonwealth of Massachusetts
- Town of East Brookfield
- Town of Brookfield
- YMCA Camp
- Religious Affiliation
- Chapter 61A - Agriculture
- Chapter 61B - Recreation
- Chapter 61F - Forestry

Scale: 0 to 2,000 Feet

Data Sources:  
Data was obtained for this project with the help from:  
Town of East Brookfield, Opicum Land Trust, CMRPC, MassGIS  
Map produced August 2008.

Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution interpreting positional accuracy.

Produced by the GIS Center at  
Central Massachusetts Regional Planning Commission,  
35 Harvard Street, Second Floor, Worcester, MA 01609-2801  
Contact Paul Samara or Michael Moran - phone: 508.750.7717  
Visit us at - <http://www.cmrpc.org/gis>

- Connie Mack Field: Located off of Connie Mack Road (south of Route 9), this facility consists of one regulation baseball field (fenced in) with three sets of bleachers and two water bubblers. There are no bathroom facilities on site but the Recreation Committee does rent a few portopotties for the summer months. The Committee hires area students to perform field maintenance during the summer months.



- Little League Ball-Field and Playground: Located behind Memorial School at the end of School Street, this facility consists of a little league baseball field (fenced in with benches on either side) and a playground containing slides, swing-sets, monkey bars, and a climbing dome. The school parking lot is used for both the ball-field and the playground. The Committee hires area students to perform facility maintenance during the summer months.



- Town Beach: Although located along the Lake Lashaway shoreline in North Brookfield, this facility is actually owned by East Brookfield. The two towns share the cost of maintaining this facility although it is the East Brookfield Recreation Commission who is responsible for hiring lifeguards and students to perform facility maintenance during the summer months. The beach opens in late June and closes for the year after Labor Day. In terms of amenities, this facility contains a few wharfs in the water, six picnic tables, a gravel parking lot, a small playground with a slide, and a brick bathroom/changing building with a women's room and a men's room.



- Town-Owned Basketball Court: Located at the end of School Street, the Recreation Commission owns and maintains a basketball court that contains lights for nighttime hours. The Committee hires area students to perform court maintenance during the summer months.



It should be noted that the East Brookfield Elementary School maintains several recreation facilities on its grounds that are open to the public – a softball field with bleachers, a soccer field, basketball court and a tennis court.

Town-Sponsored Recreation Programs: The Town's Recreation Committee runs a summer recreation program. For this effort, the Committee hires two staff members (one male, one female) to oversee the program. Activities in the program include:

- Baseball
- Softball
- Volleyball (using the Town's basketball court)
- Swim Program at Town Beach (grades one through eight)

The Recreation Committee also sponsors a women's softball team that competes in the women's regional league. During the winter months, a privately run community basketball uses the gym and basketball court at the East Brookfield Elementary School.

## **SECTION 6: Community Goals**

In its 85 years of existence, East Brookfield has never prepared a community Master Plan or a Comprehensive Plan, nor did the Town prepare a Community Development Plan under Executive Order-418. Thus, the Town has never articulated its community goals through a formal planning process. **This Open Space & Recreation Plan is intended to be a component of an eventual larger master planning process and it is anticipated that a set of community goals will be developed through this effort.** The Town's master planning effort got underway with a public forum held on December 4<sup>th</sup>, 2003. At this forum the East Brookfield Master Plan Committee presented a set of community goals, or a "vision" for the citizens to consider. The goals outlined at this forum are presented below.

### **Protect Ponds, Rivers & Wetlands**

1. Expand the current State protection of ponds and wetlands, e.g., expand buffer zones and exclude building in buffer zones. Include protection of brooks and other wetlands that feed the primary rivers and ponds in order to protect water quality and wildlife.
2. Eliminate existing commercial zones surrounding two ponds; eliminate commercial zones near other rivers, brooks and wetlands.
3. Implement bylaws for the prevention of residential/commercial storm run-off into vernal pools, wetlands, ponds, rivers, streams or onto roads; mandate usage of storm basins for new development.
4. Mandate inspections on septic systems near water bodies.
5. Implement bylaws on the taking of upland soils near wetlands, ponds, rivers and brooks.
6. Work with state, North Brookfield, Brookfield and Sturbridge governments to implement bylaws on boat propeller cleaning and inspections for invasive plants.

### **Create and Protect Open Space**

1. Focus growth in village that has an existing infrastructure, e.g. water, roads.
2. Coordinate zoning and land/easement purchases with state scientists.
3. Focus protection on the following areas:
  - East Brookfield, Seven Mile and Five Mile River watersheds including brooks feeding the rivers, e.g., Great Brook
  - Uplands surrounding Quaboag, Quacumquasit and Lashaway
  - Lands with wildlife populations and large unbroken forest areas
4. Encourage conservation easement donations or sales to private land conservation organizations, from large landowners.
5. Develop an Open Space plan to encourage the above and to obtain state, federal & private funds for preservation.
6. Reduce size of current commercial zone (see impact from state Regional Planning Build-Out analysis).

### **Improve Village**

1. Create zoning that encourages traditional village development and buildings (see example Village Development bylaw).
2. Maintain mixed-use zones, i.e., residential/retail zoning for village. Example: retail shop with apartments above.
3. Create village residential zone that will allow traditional higher density village residences, i.e. homes not required to have ¾ acre lot and 150' road frontage.

4. Encourage retail shops and mixed use, via zoning, in Depot Square and along Main Street.
5. Implement bylaws to encourage traditional and historical village architectural styles. Implement historical building preservation bylaws.
6. Expand buffer zone along Five Mile and Seven Mile rivers, to especially protect them near village.
7. Coordinate with North Brookfield to implement bylaws that allow pedestrian & bicycle usage of railroad right of way.

### **Residential Zoning**

1. Utilize open space residential development zoning (see example bylaw from other MA towns) to increase open space.
2. Expand minimum lot and road frontage sizes for non-village residential zones; implement appropriate height restrictions for zones, e.g., residential height no greater than three stories.
3. Implement Scenic Road zoning. Provide tree buffer zone between roads and residential developments.
4. Implement Common Driveway bylaw. Eliminate overuse of curb cuts, waste of land and dangerous traffic situations.

### **Quality of Life**

1. Implement residential and commercial lighting regulations.
2. Improve town sign regulations.
3. Implement noise regulations on land and water bodies, e.g., noise curfews.
4. Implement Route 9 and 49 curb cut bylaws.

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**The above vision represents the Master Plan Committee's first attempt at articulating community goals. It is anticipated that these goals will be modified and amended as the master planning process unfolds.**

## SECTION 7: Analysis of Needs

### A. Summary of Resource Protection Needs

East Brookfield's resource protection needs are primarily two-fold: finding a way to remedy the water quality problems plaguing its three major waterbodies (Lake Lashaway, Quaboag Pond and South Pond), and finding a way to protect as much land as possible within the large contiguous Core Habitat areas that cover the majority of the Town's land south of Route 9. With limited funding available and rising real estate prices, there is no way the Town could ever afford to protect the entirety of the State-identified Core Habitat areas. In an effort to address this situation, the Master Plan Committee has endeavored to prioritize the properties included in its land protection strategy as presented in Section 9 of this document (Five-Year Action Plan).

### B. Summary of Community Needs

East Brookfield's Master Plan Committee utilized two methods to obtain public input into the open space and recreation process: a citizen survey and a public forum. In early 2005 the Master Plan Committee developed a one-page citizen survey and sent it out to every household in East Brookfield. Out of roughly 820 households in Town, 353 took the time to respond to the survey. This represents a response rate of 43%, which is well above the norm for a community survey effort where the typical response rate ranges from 15% to 25%. The high response rate is indicative of a citizenry that expects to be involved in local policy-making decisions. Although the survey effort was intended to cover a variety of topics pertinent to the Master Plan project, there were several recreation-related questions and a summary of the responses is presented below. The Committee further verified the preferences of the townspeople by sponsoring a public forum on open space and recreation (held on the evening of March 23, 2005) where the public feedback was very much consistent with the preferences expressed in the citizen survey.

A complete description of the survey and its results can be found in Appendix C of this document (please note that Master Plan Survey Question #1 did not involve recreation and was therefore omitted from the summary below).

- **Master Plan Survey Question #2:** Rate the Following Town Services.

Parks & Recreation: Roughly 45% of survey respondents rated this service as excellent or good while 55% rated it as fair to poor. This was one of only two municipal services where more respondents rated it fair/poor than excellent/good. It was mentioned at the public forum that East Brookfield has a healthy amount of recreation facilities and is not in dire need of new ones. This poor rating for East Brookfield's parks and recreation indicates that the quality of its recreation resources is not very high and is in need of improvement.

- **Master Plan Survey Question #3:** Rate the following Town Assets & Resources.

Parks and Playing Fields: Roughly 47% of survey respondents rated this asset as excellent or good while 53% rated it as fair to poor. Apparently, more survey respondents than not believe the Town's parks and playing fields are not what they could be and are in need of improvement.

- **Master Plan Survey Question #4:** Indicate whether or not you agree or disagree with the following statements:

The Town should support the development of new recreation trails for walking and bicycling: Roughly 74% of survey respondents strongly agreed or somewhat agreed with this action item, while 15% strongly disagreed or somewhat disagreed, indicating strong support for such recreation resources.

In addition to the Master Plan survey results described above, East Brookfield planners can utilize the survey results from the document, Massachusetts Outdoors 2004! the Statewide Comprehensive Outdoor Recreation Plan (SCORP) prepared by the EOEAD Division of Conservation Resources (DCR) in 2000. As part of the SCORP, the DCR conducted a statewide recreation user survey and the results were further broken down by region. The 2004 SCORP survey identified the following recreation needs for Central Massachusetts:

- **Field-Based Activities:** The survey identified playgrounds to be the most needed field-based recreation resource, followed by golfing.
- **Passive Recreational Activities:** The survey identified picnicking facilities to be the most needed passive recreation resource, followed by wildlife and nature study areas.
- **Trail-Based Activities:** The survey identified places for walking to be the most needed trail-based recreation resource, followed by places for biking (both mountain and road).
- **Water-Based Activities:** The survey identified places for swimming to be the most needed water-based recreation resource, followed by boating (both motorized and non-motorized) and canoeing.
- **Wilderness Activities:** The survey identified places for to hike to be the most needed wilderness resource.

In regards to the recreation needs of special populations, East Brookfield built a new Elementary School in 2002. This relatively new facility offers school-aged children a variety of recreation facilities including a gym, a softball field with bleachers, a soccer field, basketball court and a tennis court. In terms of recreation activities for seniors, the Town envisions using a portion of the 115-acre Pelletier property (new acquired by the Town through its right-of-first-refusal under the Chapter 61 program) for affordable senior housing. As part of the senior housing project, senior-specific recreation amenities will be considered. The Town is also in the process of retaining a consultant to prepare an ADA transition plan. This plan will cover all town-owned recreation facilities and will address the needs identified in the Section 504/ADA Self-Evaluation, found in Appendix B of this document.

### **C. Management Needs, Potential Change of Use**

The Town of East Brookfield has limited financial resources and the current fiscal situation of our State is likely to result in fewer resources for the purposes of open space protection and recreation. Identification of funding and staffing resources will be key elements of the Town's strategy for open space acquisition and upgrading recreation facilities. Towards that end, a partial listing of funding mechanisms and programs can be found in Appendix A of this document. In regard to potential changes of use, several of the properties identified for protection on the Action Plan Map (Map 6) are currently in the State's Chapter Lands program and their permanent protection would technically constitute a change of use.

## **SECTION 8: Goals and Objectives**

**Goal #1:** Maintain the Town's rural, small town nature.

### **Objectives**

1. Modify zoning and regulations to encourage open space subdivisions so as to preserve more open space.
2. Modify zoning and regulations to encourage new housing development and, in certain areas, to set aside required open space.

**Goal #2:** Preserve existing open lands and wildlife habitat.

### **Objectives**

1. The Town should raise funds and obtain grants to protect open lands and wildlife habitat. The Town should obtain consensus as to the best manner to obtain funds, via grants, the town raising its own funds, or both.
2. Focus the priority of open space land purchases or preservation in state defined "core habitat" areas.
3. Exercise the Town's right of first refusal on Chapter lands.

**Goal #3:** Promote opportunities for the linkage of East Brookfield's open space.

### **Objective**

1. Work to link local open spaces to each other.

**Goal #4:** Promote the efficient management and maintenance of the open space and recreation areas of East Brookfield.

### **Objective**

1. Work with the state and other private land conservation agencies to develop a plan for the maintenance and management of open space and recreation areas in East Brookfield.

**Goal#5:** Improve the town's existing parks and playing fields as well as develop new recreation trails.

### **Objectives**

1. Utilize existing right of ways for recreation trails for walking and bicycling.
2. Determine improvement needs required for existing Town parks, playing fields and other recreational areas.
3. Implement improvements needed for existing Town parks, playing fields and other recreational areas.
4. Improve handicap accessibility to East Brookfield recreational facilities.

**Goal #6:** Improve quality of ponds and protect the Town's water aquifer.

**Objectives**

1. Purchase open watershed lands with water tributaries into Quaboag Pond, Quacumquasit Pond and Lake Lashaway via grants or the town raising funds.
2. Coordinate and support private lake association efforts in protecting pond water quality.
3. Preserve the lands adjoining rivers and streams.
4. Protect the Town's water aquifer.
5. Enhance the administrative capacity of Town officers to inspect septic systems and enforcing existing regulations.

## SECTION 9: Five-Year Action Plan

\* Important Note: Successful implementation and completion of any or all of these strategies is contingent upon sufficient availability of funding and staffing levels in the appropriate department, board or commission assumed to be responsible for each individual strategy. Likewise, projected timeframes may need to change depending upon the availability of funding and staffing. A graphic depiction of the Town’s Five-Year Action Plan can be seen on the map that follows the matrix below (Map 6: Action Plan Map).

### A. Goal - Maintain the Town’s rural, small town nature

Objective	Year	Responsible Party
1. Modify zoning and regulations to encourage the clustering of houses in exchange for preserving more open space.	3-4	Bylaw Review Comm.
a. Create open space residential development zoning with smaller lots and open space subject to approval by Conservation Commission and Planning Board site reviews.	1	Bylaw Review Comm.
b. Create a manual for developers, surveyors, and engineers to guide them to better planning. This should be readily available at the Town Clerk’s office included with the zoning by-law book. Let developers and their engineers know what we’re looking for and encourage developers of any kind to create better developments. Ensure specifications are coordinated with the Planning Board, Conservation Commission & Board of Health.	4	Planning Board
c. Create an up-to-date Open Space map of East Brookfield showing all existing open land including wetland and uplands to use as a guide by planners (Planning Board, Conservation Commission) and developers to facilitate the planning process by engineers and developers for creation of open space land, recreation areas and wildlife corridors connecting to adjacent wetland and uplands. (Note: this is not a zoning map).	1	Master Plan Comm.
d. Create new Open Space zoning.	2-3	Bylaw Review Comm.
e. Create incentives for developers who voluntarily create any one of the following: recreation areas, open land and wildlife connecting corridors as part of their development plans. Incentives could be waiving fees and a speedier permit process. Work with engineers and developers early on in the process to get the best possible results.	4	Bylaw Review Comm.

## B. Goal - Preserve existing open lands and wildlife habitat

Objective	Year	Responsible Party
1. The Town should raise funds and obtain grants to protect open lands and wildlife habitat. The Town should obtain consensus as to the best manner to obtain funds, via grants, the Town raising its own funds, tax credits or any combination of the above.	Ongoing	Master Plan Comm., Conservation Comm., Finance Comm.
a. Determine available funding tools, i.e., grants, Town fees/taxes, Town credits for the purchase/preservation of open space.	Ongoing	Master Plan Comm., Conservation Comm., Finance Comm.
b. Work with Selectmen, Finance and Conservation committees, and the Planning Board in determining appropriate funding tools.	Ongoing	Master Plan Comm.
c. Have Town establish grant writing program; apply for grants.	1	Selectmen
d. Investigate and promote the adoption of the Community Preservation Act (CPA) bylaw within town in order to raise funds.	1	Master Plan Comm.
e. Investigate other agencies, e.g., land trusts, conservation groups, in order to obtain funding.	Ongoing	Master Plan Comm.
f. Approach Selectmen to set up special open space account for donations, grants, tax-surcharge (if any) to be used to purchase lands.	1	Finance Comm.
g. Focus the priority of open space land purchases or preservation in state defined “core habitat” & “supporting habitat” areas.	1	Conservation Comm.
h. Establish land purchase priorities and create map.	1	Master Plan Comm.
i. Notify land owners in these areas of tax incentives, potential for conservation easement purchases, etc.	1	Conservation Comm.
2. Exercise the Town’s right of first refusal on Chapter lands.	Ongoing	Selectmen
a. Inventory Chapter lands.	1	Master Plan Comm.
b. Educate Selectmen, Conservation Commission of Chapter 61 right of first refusal.	1	Master Plan Comm.
c. Establish procedures for tax assessor to notify Selectmen and Conservation Committee of lands available for purchase.	1	Tax Assessor
d. Set up relationships with land agencies to purchase, preserve or assign Chapter 61 lands.	Ongoing	Master Plan Comm., Selectmen, Conservation Comm.
3. Work to link local open spaces to each other.	Ongoing	Conservation Comm.
a. Create a map that includes all of East Brookfield and the adjacent peripheral land of adjoining towns to assist in locating best areas for connecting open space, trail systems and wildlife corridors.	1	Master Plan Comm.

**C. Goal - Promote the efficient management and maintenance of the open space and recreation areas of East Brookfield**

<b>Objective</b>	<b>Year</b>	<b>Responsible Party</b>
1. Work with the state and other private land conservation agencies to develop a plan for the maintenance and management of open space and recreation areas in East Brookfield.	2	Master Plan Comm., Selectmen, Conservation Comm.
a. Identify potential agencies with whom to work.	1	Master Plan Comm., Selectmen, Conservation Comm.
b. Contact agencies to coordinate goals and objectives.	1	Master Plan Comm., Selectmen, Conservation Comm.
c. Determine priorities of potential joint land preservation or purchases.	2	Master Plan Comm., Selectmen, Conservation Comm.
2. Coordinate with adjoining towns, the bylaws and regulations affecting adjoining open space and recreation areas.	4-5	Master Plan Comm.
a. Create a map that includes all of East Brookfield and the adjacent peripheral land of adjoining towns to assist in locating best areas for connecting open space, trail systems and wildlife corridors.	1	Master Plan Comm.
b. Contact adjoining towns to coordinate.	4-5	Master Plan Comm.
3. Appoint a Conservation Agent, paid by the town, to inspect sites at proposed predevelopment stage, and when mitigation measures are in place, and issue certificate or letter of compliance on mitigation measures effectively allowing development to begin. Agent to inspect the site at random during construction for compliance. Agent to make recommendations on mitigating measures to Conservation Commission as each site is different.	2	Selectmen, Conservation Comm.
a. Explore sharing the Agent of an adjoining town.	2	Selectmen, Conservation Comm.

**D. Goal - Improve the Town’s existing parks and playing fields as well as develop new recreation trails**

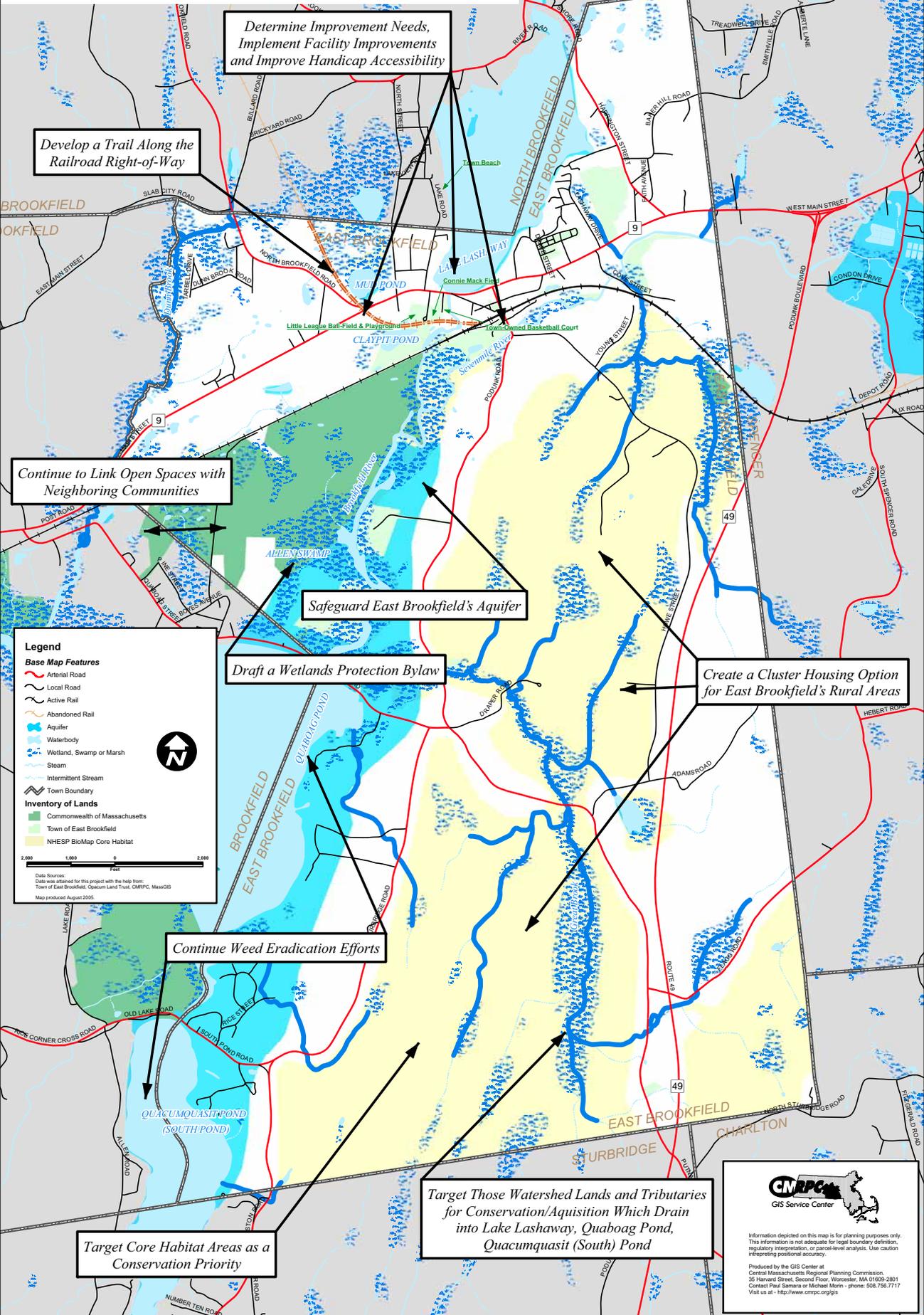
<b>Objective</b>	<b>Year</b>	<b>Responsible Party</b>
1. Utilize existing right of ways and roads for recreation trails for walking, bicycling and water uses.	4-5	Recreation Comm., Highway Dept.
a. Establish likely areas for new recreation trails via Town survey.	4	Recreation Comm., Highway Dept.
b. Incorporate roadside trail and bike path along railroad right of way.	5	Recreation Comm., Highway Dept.
c. Seek funding through Town appropriated funds, grants, and donations for developing hiking and biking trails along existing rural Town roads, outside of traffic lane, on shoulders, within the road right of way or purchase easements from private landowners who have frontage along said roads.	5	Recreation Comm., Highway Dept.
2. Determine improvement needs required for existing Town parks, playing fields and other recreational areas.	4	Recreation Dept.
a. Develop town survey to determine improvement needs.	4	Recreation Dept.
3. Implement improvements needed for existing Town parks, playing fields and other recreational areas.	5	Recreation Dept.
a. Incorporate these determined needs in Town budget for capital improvements.	5	Recreation Dept., Selectmen, Finance Comm.
b. Obtain Town budget and/or grants.	5	Recreation Dept., Selectmen, Finance Comm.
4. Improve handicap accessibility to East Brookfield recreational facilities.		ADA Coordinator
a. Determine handicap needs for access.	1	ADA Coordinator
b. Incorporate these determined needs in Town budget for capital improvements.		ADA Coordinator, Selectmen, Finance Comm.
c. Obtain Town budget and/or grants.		ADA Coordinator, Selectmen, Finance Comm.

**E. Goal - Improve the quality of the town ponds and protect the Town’s water aquifer**

<b>Objective</b>	<b>Year</b>	<b>Responsible Party</b>
1. Purchase or preserve open watershed lands with water tributaries into Quaboag Pond, Quacumquasit Pond and Lake Lashaway via grants, the Town raising funds or tax credits.	Ongoing	Conservation Comm.
a. Determine likely land areas and landowners and incorporate into overall open space land purchase/preservation priority list.	1	Master Plan Comm., Conservation Comm.
b. Determine other available funding tools, i.e., grants, Town fees/taxes, Town credits for the purchase/preservation of open space.	Ongoing	Master Plan Comm., Conservation Comm., Finance Comm.
c. Have Town establish grant writing program; apply for grants.	1	Selectmen
d. Approach Selectmen to set up special open space account for donations, grants, etc., to be used to purchase lands.	1	Finance Comm.
2. Coordinate and support private lake association efforts in protecting pond water quality.	Ongoing	Conservation Comm., Master Plan Comm., Board of Health
a. Work with the QQLA on the recently awarded state grant to identify existing non-point sources of pollution affecting streams, rivers, lakes and wetlands and work with or hire consultants to provide a mitigation and corrective action plan.	1	Conservation Comm., Master Plan Comm., Board of Health
i. Assist in investigation and prioritization of non-point source pollution in the pond watersheds.		
ii. Assist in the evaluation and implement management strategies to manage nuisance vegetation.		
iii. Assist in the identification and development of mitigation designs for two priority sites.		
iv. Assist in the outreach and education for watershed residents.		
3. Preserve the lands adjoining rivers and streams.	4	Conservation Comm.
a. Develop wetlands protection bylaw based on the QQLA and state study of non-point sources of pollution mentioned above.	4	Conservation Comm., Bylaw Review Comm.
b. Write a presentation for wetlands protection.	4	Conservation Comm., Bylaw Review Comm.
c. Assemble Wetlands By-law.	4	Conservation Comm., Bylaw Review Comm.
d. Educate public and hold hearings on lands protection.	4	Conservation Comm., Bylaw Review Comm.

4. Protect the Town’s water aquifer.	Ongoing	Conservation Comm., Board of Health
a. Identify potential point and non-point water pollution sources.	3	Conservation Comm., Board of Health
b. Mitigate potential pollution through regulatory measures, land preservation or zoning.	4	Conservation Comm., Board of Health
c. Appoint a Conservation Agent, paid by the Town, to inspect sites at proposed predevelopment stage, and when mitigation measures are in place, and issue certificate or letter of compliance on mitigation measures effectively allowing development to begin. Agent to inspect the site at random during construction for compliance. Agent to make recommendations on mitigating measures to Conservation Commission as each site is different.	2	Conservation Comm., Selectmen
5. Enhance the administrative capacity of Town officers to inspect septic systems and enforcing existing regulations.	2	Selectmen, Board of Health
a. Appoint a Conservation Agent, paid by the Town, to inspect sites at proposed predevelopment stage, and when mitigation measures are in place, and issue certificate or letter of compliance on mitigation measures effectively allowing development to begin. Agent to inspect the site at random during construction for compliance. Agent to make recommendations on mitigating measures to Conservation Commission as each site is different.	2	Conservation Comm., Selectmen
6. Work with state and adjoining towns towards eradicating invasive weed problems within the ponds.	1	Conservation Comm.
a. Work with the QQLA on the recently awarded state grant to identify weed mitigation solutions and work with or hire consultants to provide a mitigation and corrective action plan.	1	Conservation Comm., Master Plan Comm., Board of Health
v. Assist in investigation and prioritization of non-point source pollution in the pond watersheds.		
vi. Assist in the evaluation and implement management strategies to manage nuisance vegetation.		
vii. Assist in the identification and development of mitigation designs for two priority sites.		
viii. Assist in the outreach and education for watershed residents.		
b. Determine available funding tools, i.e., grants, Town fees/taxes, town credits for the weed mitigation.	2	Master Plan Comm., Finance Comm., Conservation Comm.
c. Have Town establish grant writing program; apply for grants to implement the above mitigation strategies and designs.	1-2	Selectmen
d. Approach Selectmen to set up special open space account for donations, grants, etc., to be used for weed mitigation.	1	Finance Comm.
e. Coordinate with the adjoining towns.	2-3	Conservation Comm.

# Town of East Brookfield Open Space & Recreation Action Plan Map



Determine Improvement Needs, Implement Facility Improvements and Improve Handicap Accessibility

Develop a Trail Along the Railroad Right-of-Way

Continue to Link Open Spaces with Neighboring Communities

Safeguard East Brookfield's Aquifer

Draft a Wetlands Protection Bylaw

Create a Cluster Housing Option for East Brookfield's Rural Areas

Continue Weed Eradication Efforts

Target Those Watershed Lands and Tributaries for Conservation/Aquisition Which Drain into Lake Lashaway, Quaboag Pond, Quacumquasit (South Pond)

Target Core Habitat Areas as a Conservation Priority

**Legend**

**Base Map Features**

- Arterial Road
- Local Road
- Active Rail
- Abandoned Rail
- Aquifer
- Waterbody
- Wetland, Swamp or Marsh
- Stream
- Intermittent Stream
- Town Boundary

**Inventory of Lands**

- Commonwealth of Massachusetts
- Town of East Brookfield
- NHESP BioMap Core Habitat

Scale: 0 to 2,000 Feet

Data Sources:  
Data was obtained for this project with the help from:  
Town of East Brookfield, Openum Land Trust, CMRPC, MassGIS  
Map produced August 2005.

**CMRPC**  
GIS Service Center

Information depicted on this map is for planning purposes only. This information is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. Use caution interpreting positional accuracy.

Produced by the GIS Center at  
Central Massachusetts Regional Planning Commission,  
35 Harvard Street, Second Floor, Worcester, MA 01609-2801  
Contact: Paul Samara or Michael Moran - phone: 508.759.7717  
Visit us at - <http://www.cmrpc.org/gis>

## **SECTION 10: Public Comments**

Please see the letters of review on the following pages.

## Section 11: References

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Charles J. Fausold and Robert J. Lillieholm, The Economic Value of Open Space: A Review and Synthesis, a Lincoln Institute of Land Policy Research Paper [Cambridge, MA], 1996.

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USDA Natural Resource Conservation Service (NRCS), Soil Survey of Worcester County, Massachusetts – Southern Part, 1992.

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Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP), A TMDL Alternative Regulatory Pathway Proposal for the Management of Selected Mercury-Impaired Waters, 2004.

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The Trust for Public Lands, Community Choices: Thinking through Land Conservation, Development, and Property Taxes in Massachusetts, 1998.

Central Massachusetts Regional Planning Commission, Buildout Analysis for East Brookfield, 2001.

Central Massachusetts Regional Planning Commission, Intercommunity Trail Connection Feasibility Study – CMRPC West Subregion, 2004.

The Open Space Planner's Workbook, EOEA Division of Conservation Services, 2001.

Massachusetts Statewide Comprehensive Outdoor Recreation Plan, EOEA Division of Conservation Services. 2004.

State of Massachusetts Departmental Websites: EOEA, DCR, DEM, DEP, DFWLE and DFA.

# Appendix A

## Funding Mechanisms and Programs

### Property Acquisition

1) Program/Method:	<b>Municipal purchase</b>
Sponsoring Agency:	Town of East Brookfield.
Approximate Funding Maximum:	Dependent on Town Meeting.
Program Description:	This tool is probably the most direct and effective way for a town to achieve the acquisition objectives of its open space plan. Towns may either issue bonds to cover purchases or in some cases include a purchase item in the general budget. Bond issues are quite common and provide communities with the flexibility to negotiate with property owners, knowing that money has already been authorized to complete the acquisition. In practice, towns generally ask for authorization to float a bond to cover open space acquisition, and then once a deal has been negotiated return to town meeting for the actual appropriation.
Priority for pursuing:	High.
Chances of success:	Moderate. Will depend on a vigorous public outreach campaign prior to town meeting and the general referendum.
2) Program/Method:	<b>Massachusetts Self-Help Program</b>
Sponsoring Agency:	Massachusetts Office of Environmental Affairs, Division of Conservation Services (DCS).
Approximate Funding Maximum:	\$250,000.
Program Description:	The Program provides a percentage (typically over 50%) of reimbursement for the purchase of land for conservation and passive recreation purposes. This program can provide funding for “regional” projects, whereby several communities can combine their funding to cover a larger land purchase.

Priority for pursuing: High.  
Chances of success: Moderate. Will depend on quality of town's application and level of competition.

3) Program/Method: **Massachusetts Highway Department (MHD) Open Space Program**

Sponsoring Agency: Massachusetts Executive Office of Transportation and Construction (EOTC).

Approximate Funding Maximum: None, but program receives only \$1M/year to be spread around the State.

Program Description: This program acquires scenic areas adjacent to roadways. Funds are not available for recreation projects, though MHD has worked cooperatively with other state agencies and municipalities to assist in adjoining recreation projects. Scenic views and environmental protection are the two areas of program focus.

Priority for pursuing: Low.

Chances of success: Low, unless a great scenic resource is involved.

4) Program/Method: **Federal Land and Water Conservation Fund**

Sponsoring Agency: National Park Service.

Approximate Funding Maximum: Not known as the Program has just recently been reactivated.

Program Description: The first iteration of this Program provided up to 50% reimbursement towards the cost of acquisition or improvement of recreation land, including the development of active recreation facilities.

Priority for pursuing: Moderate.

Chances of success: Moderate depending on the funds to be made available upon the Program's new startup.

Studies and Construction/Maintenance

1) Program/Method: **Lake and Pond Grants**

Sponsoring Agency: Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum: \$10,000.

Program Description: This program is the successor program to DEP's Clean Lakes Program (Chapter 628). Eligible activities include, lake management analysis and planning, public education, and watershed and in-lake management techniques. The program requires a 50% cash match. Applications are due in November of each year.

Priority for pursuing: Moderate.

Chances of success: Moderate.

2) Program/Method: **The National Recreational Trails Act (NRTA)**

Sponsoring Agency: Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum: \$30,000.

Program Description: Part of the federal Intermodal Surface Transportation Act, NRTA provides funds for trail projects. Eligible projects include: trail construction, land/easement acquisition, handicapped accessibility, interpretative areas/facilities, and education. Trails must be recreational, e.g. intra-city, on-road bikeways would probably not be eligible. There is no limit on grant funds, but a 50% local match is required (matching funds can be "non-cash"). Motorized and non-motorized trail use must be included in the grant with at least thirty percent of funds going to each activity. Applications are due in October of each year.

Priority for pursuing: Moderate.

Chances of success: High with a good proposal.

3) Program/Method: **Greenways and Trails Demonstration Grant Program**

Sponsoring Agency: Massachusetts Department of Environmental Management (DEM).

Approximate Funding Maximum: \$5,000.

Program Description: Greenways and trail projects are at the center of this program. Funding categories include: planning, research, mapping, public education and community outreach, ecological assessment, and trail construction, maintenance and expansion. In recent years focus has been placed on projects that either educate the public or work on river greenways. However, all greenway/trail projects are eligible with the exception of those confined to a single parcel of land. Applications are due in January/February every year and no local match is required.

Priority for pursuing: Moderate.

Chances of success: High with a good proposal.

4) Program/Method: **Inter-Modal Surface Transportation Efficiency Act (ISTEA), Regional Transportation Improvement Program**

Sponsoring Agency: Massachusetts Highway Department, Central Massachusetts Metropolitan Planning Organization. (MPO).

Approximate Funding Maximum: No maximum.

Program Description: Funds are available for transportation related open space improvements. A bike path that connects dense areas of housing with employment or shopping centers would clearly fit the criteria. However, the state and the MPO have been relatively flexible about definitions and projects that are slightly less directly related to transportation may be eligible e.g., an open space parcel adjacent to a road programmed for repairs; the parcel provides a roadway rest area and access to walking trails.

Priority for pursuing: Moderate with an appropriate project.

Chances of success: Low.

5) Program/Method: **Inter-Modal Surface Transportation Efficiency Act (ISTEA), Enhancement Program**

Sponsoring Agency: Massachusetts Highway Department (MHD), Central Massachusetts Metropolitan Planning Organization.

Approximate Funding Maximum: None, but a \$100,000 minimum is requested by MHD.

Program Description: Money is provided to a variety of transportation “enhancement” projects. Among those eligible are bikeways, walking paths and rail trails. This is a special dedicated fund that amounts to 10% of statewide spending from ISTEA monies.

Priority for pursuing: Moderate.

Chances of success: Low.

Non-acquisition programs

1) Program/Method: **Conservation Restrictions (CRs)**

Sponsoring Agency: Massachusetts Office of Environmental Affairs, Division of Conservation Services (DCS).

Approximate Funding Maximum: Only technical support available.

Program Description: Conservation restrictions (CR’s) are legal, enforceable agreements, authorized by the state, which are made between a landowner and a charitable organization, or a town. They are used primarily to keep land in a "natural or scenic open condition". Restrictions can be written so that certain uses are permitted and others prohibited, e.g. the current owner may continue to occupy an existing house on the land, but may restrict the construction of any additional houses. Grantors of restrictions may also be able to benefit by reductions in various taxes including property, estate and income.

Priority for pursuing: High.

Chances of success: Depends on property owner.

2) Program/Method: **Assessment Act (M.G.L. Chapters 61, 61A and 61B)**

Sponsoring Agency: Massachusetts Department of Environmental Management, Department of Food and Agriculture, and Department of Revenue (respectively).

Approximate Funding Maximum: No public funds available.

Program Description: These programs work by making available special property tax assessments to owners who agree to restrict their land to a particular use. Chapter 61 applies to lands actively devoted to forestry use, 61A applies to active agricultural lands, and 61B applies to public recreational lands like wildlife sanctuaries and golf courses. Generally properties are assessed at their current use value rather than their highest use. This usually translates into a substantial property tax savings for owners. The program also requires a right-of-first-refusal option to the town when property owners look to sell their land.

Priority for pursuing: Moderate.

Chances of success: Depends on property owner.

3) Program/Method:

**Agricultural Preservation Restrictions**

Sponsoring Agency: Massachusetts Department of Food and Agriculture.

Approximate Funding Maximum: No public funds available.

Program Description: This program insures that active farms stay in agricultural production. The state purchases a farmer's development rights. The price paid is the difference between the full market value of the property and its appraised agricultural value. A permanent restriction is then put in place prohibiting all non-agricultural uses on the parcel. The farmer is taxed at the agricultural value rather than the highest use value.

Priority for pursuing: High.

Chances of success: Depends on property owner.

## Appendix B

### Americans With Disabilities Act (ADA) Section- 504 Self-Evaluation

# Appendix C

## Citizen Survey Results

MEMO TO: East Brookfield Master Plan Committee  
FROM: Stephen Wallace, CMRPC  
DATE: May 17, 2005  
SUBJECT: Analysis of citizen survey results

I've taken some time to analyze the tabulated survey numbers and provide some interpretation as to what they might possibly tell us. The good news is that the survey results and the comments heard at the 3/23 public forum are very much in line with each other.

**Question #1:** How would you rate East Brookfield as.....

...a place to live.

For the first three blocks of questions, I've subtracted all blank responses and those indicating no opinion, so that what we are left with are the people who wanted to respond to the questions. In terms of rating East Brookfield as a place to live, 90% rated the Town as excellent or good, while only 10% rated the Town as fair to poor. This tells us that nine out of ten survey respondents like living in East Brookfield (no surprise).

...a place to raise children.

This question saw 87% of respondents rating the Town as an excellent or good place to raise children, while 13% rated the Town as a fair to poor place to raise children; again, no surprises here.

....a place to do business.

This question saw only 41% of respondents rating the Town as an excellent or good place to do business, while 59% rated the Town as a fair to poor place to do business. This should raise a red flag that business environment in East Brookfield is weak and needs improvement. This is not surprising when one considers that East Brookfield will derive 92% of its tax base from residential property taxes and only 6.4% from business and industry property taxes (the remaining 1.6% is made up from personal property taxes). Towns that derive more than 90% of its tax base from residential property taxes is indicative of being a bedroom community. Clearly, the Master Plan's Economic Development chapter will need to include some strategies for improving East Brookfield's business climate.

...as a place to retire.

This question saw 64% of respondents rating the Town as an excellent or good place to retire, while 36% rated the Town as a fair to poor place to retire. This was surprising as I thought the percentage of excellent-to-good responses would be higher. What would make 36% of respondents rate the Town as fair-to-poor in this regard? Is it the property tax burden, high cost of housing, lack of municipal services? I'm not sure I have enough information to make an interpretation here.

**Question #2:** Rate the Following Town Services.

Library

Roughly 60% of survey respondents rated the library as excellent or good while 40% rated it as fair to poor. This is surprising as libraries usually fair very well when rated as part of Master Plan surveys. What would account for this? Is it the facility itself, its location, or limited hours? Feel free to hazard a guess here.

Planning & Zoning

Roughly 67% of survey respondents rated this service as excellent or good while 33% rated it as fair to poor. This is within the typical range for planning when rated as part of Master Plan surveys. As a Board that occasionally has to say “no”, it would be surprising if it received a higher rating.

**Public Health**

Roughly 69% of survey respondents rated this service as excellent or good while 31% rated it as fair to poor, a typical response rate for this service.

**Protection of Water Resources**

Roughly 77% of survey respondents rated this service as excellent or good while 23% rated it as fair to poor. The high excellent/good response rate is surprising when one considers that some of East Brookfield’s ponds and rivers have significant and long-standing water quality issues.

**Parks & Recreation**

Roughly 45% of survey respondents rated this service as excellent or good while 55% rated it as fair to poor. This was one of only two municipal services where more respondents rated it fair/poor than excellent/good. It was mentioned at the public forum that East Brookfield has a healthy amount of recreation facilities and is not in dire need of new ones. This poor rating for East Brookfield’s parks and recreation indicates that the quality of its recreation resources is not very high and is in need of improvement.

**Police Protection**

Roughly 87% of survey respondents rated this service as excellent or good while 13% rated it as fair to poor. This is a typical Master Plan survey response rate. I would be surprised if the Police Department did not score as high as it did.

**Street Maintenance**

Roughly 81% of survey respondents rated this service as excellent or good while 19% rated it as fair to poor. This is a surprise as highway maintenance usually scores much lower when rated as part of

Master Plan citizen surveys. This is indicative of a very effective Public Works Department, at least in terms of highway maintenance.

## **Fire Protection**

Roughly 91% of survey respondents rated this service as excellent or good while 9% rated it as fair to poor. This is a typical Master Plan survey response rate. I would be surprised if the Fire Department did not score as high as it did.

## **Ambulance & EMT Service**

Roughly 88% of survey respondents rated this service as excellent or good while 12% rated it as fair to poor. This is a typical Master Plan survey response rate for such services.

## **Trash & Recycling**

Roughly 79% of survey respondents rated this service as excellent or good while 21% rated it as fair to poor. This is a very good response rate for this service and reflects well on the Town's current trash disposal system.

## **Education**

Roughly 85% of survey respondents rated this service as excellent or good while 15% rated it as fair to poor. This is a typical Master Plan survey response rate for education.

## **Drinking Water Quality**

Roughly 89% of survey respondents rated this service as excellent or good while 11% rated it as fair to poor. This is a very good rating and reflects well on the Town's Public Works Department.

## **Senior Services**

Roughly 52% of survey respondents rated this service as excellent or good while 48% rated it as fair to poor. This is a lower than average rating for senior services and should raise a red flag for East Brookfield planners. Is it the lack of senior services, the condition of the senior center, the hours of operation? This may necessitate a more in depth discussion with the Town's senior community to get at the root of the problem.

## **Affordable Housing**

Roughly 38% of survey respondents rated this service as excellent or good while 62% rated it as fair to poor. This is only the second municipal service where more respondents rated it fair/poor than excellent/good. Is this a rating on the municipality's effort to provide more affordable housing or a rating of the Town's housing affordability in general? I would say probably the latter.

## **Traffic – Speed Control**

Roughly 63% of survey respondents rated this service as excellent or good while 37% rated it as fair to poor, nothing out of the ordinary here.

## **Street Lighting**

Roughly 62% of survey respondents rated this service as excellent or good while 38% rated it as fair to poor; again, nothing out of the ordinary here.

**Question #3:** Rate the following Town Assets & Resources.

## **Town Center & Parking**

Only 33% of survey respondents rated this asset as excellent or good while 67% rated it as fair to poor. Clearly, the town center and its parking are items that will need attention in either the Master Plan's Economic Development chapter or its Land Use & Zoning chapter.

## **School Buildings**

Roughly 81% of survey respondents rated this asset as excellent or good while 19% rated it as fair to poor. The high excellent/good response rate was expected, considering the fairly new Elementary School.

## **Town Hall**

The Town Hall received by far the lowest rating of all Town assets. Only 26% of survey respondents rated this asset as excellent or good while 74% rated it as fair to poor. Clearly, citizens think the Town Hall has outlived its usefulness and a new facility is needed. I imagine the municipal departments in the Town Hall will tell you the same thing.

## **Fire Station**

Roughly 65% of survey respondents rated this asset as excellent or good while 35% rated it as fair to poor.

## **Senior Center Building**

Roughly 49% of survey respondents rated this asset as excellent or good while 51% rated it as fair to poor. The condition of the senior center may be a big part of the respondent's discontent with the Town's overall provision of senior services.

## **Highway Department Building**

Roughly 40% of survey respondents rated this asset as excellent or good while 60% rated it as fair to poor. This appears to be another municipal facility that needs replacement and should probably be addressed in the Master Plan's Municipal Facilities & Services chapter.

## **Parks and Playing Fields**

Roughly 47% of survey respondents rated this asset as excellent or good while 53% rated it as fair to poor. Apparently, more survey respondents than not believe the Town's parks and playing fields are not what they could be and are in need of improvement.

## **Rural Character – Small Town Living**

Roughly 76% of survey respondents rated this asset as excellent or good while 24% rated it as fair to poor. This response rate should be expected of a rural community like East Brookfield.

## **Open Lands & Wildlife Habitat**

Roughly 72% of survey respondents rated this asset as excellent or good while 28% rated it as fair to poor. Again, this response rate should be expected of a rural community with an abundance of open lands and wildlife habitat like East Brookfield.

## **Lake Lashaway**

Roughly 61% of survey respondents rated this asset as excellent or good while 39% rated it as fair to poor. Usually ponds and lakes score quite high as community assets in Master Plan citizen surveys. The fact that close to forty percent of respondents rated the Lake as fair/poor indicates that citizens have some concerns for the Lake, whether they be water quality issues, use of the Lake, or the amount of development around the Lake.

## **Quaboag Pond**

Roughly 46% of survey respondents rated this asset as excellent or good while 54% rated it as fair to poor. Again, the survey respondents clearly have some concerns about the Pond. The Committee should discuss the nature of these concerns.

## **Quacumquasit (south) Pond**

Roughly 70% of survey respondents rated this asset as excellent or good while 30% rated it as fair to poor. This water resource received the highest excellent/good rating of the three water resources rated. Committee members: why do you think this is?

**Question #4:** Indicate whether or not you agree or disagree with the following statements:

We should create bylaws that encourage traditional village development and buildings.

Roughly 61% of survey respondents strongly agreed or somewhat agreed with this action item, while only 13% strongly disagreed or somewhat disagreed. This indicates strong support for traditional village development.

We should create zoning to encourage mixed use, primarily downtown.

Roughly 72% of survey respondents strongly agreed or somewhat agreed with this action item, while only 9% strongly disagreed or somewhat disagreed. This indicates strong support for mixed-use zoning and development in the town center area. This will have implications for infrastructure improvements in this area.

We should utilize cluster housing development so as to preserve more open space.

Roughly 67% of survey respondents strongly agreed or somewhat agreed with this action item, while only 16% strongly disagreed or somewhat disagreed. It appears that survey respondents are favorably inclined towards cluster housing. This should provide the Planning Board with the necessary momentum to start working on a cluster housing (or open space subdivision) bylaw.

The Town should support senior housing.

Roughly 81% of survey respondents strongly agreed or somewhat agreed with this action item, while only 7% strongly disagreed or somewhat disagreed. Clearly, the respondents recognize the need for more senior housing in East Brookfield.

Property tax breaks should be provided to seniors.

Roughly 81% of survey respondents strongly agreed or somewhat agreed with this action item, while only 7% strongly disagreed or somewhat disagreed, a strong indication of support for senior citizen property tax breaks.

The Town should support moderate and low-income housing.

Roughly 50% of survey respondents strongly agreed or somewhat agreed with this action item, while 24% strongly disagreed or somewhat disagreed. Without a clear majority supporting the need for low and moderate-income housing, local planners will need to educate the public on the need for affordable housing and what constitutes affordable housing should the Housing Chapter identify this as a pressing community need.

The Town should allow multi-family housing.

Only 37% of survey respondents strongly agreed or somewhat agreed with this action item, while 33% strongly disagreed or somewhat disagreed and 30% were neutral. This indicates a reluctance to allow multi-family housing. However, multi-family housing may be appropriate as part of the mixed-use concept for the Town center area, where there exists the municipal infrastructure necessary to service this type of development.

New housing development in certain areas should be required to set aside open space.

Roughly 58% of survey respondents strongly agreed or somewhat agreed with this action item, while only 12% strongly disagreed or somewhat disagreed. The response rate to this question as well as the response rate to the cluster housing question indicate strong support for setting aside open space as part of new development.

The Town should raise funds and obtain grants to protect open space.

Roughly 69% of survey respondents strongly agreed or somewhat agreed with this action item, while only 8% strongly disagreed or somewhat disagreed. This was essentially a “motherhood and apple pie” question, as who would be against protecting open space and obtaining grants for this purpose. It would have been interesting to see how the response rate would change if the raising of funds and obtaining grants for open space were split into two questions. It might have made a difference to survey respondents whether or not it was their money used for this purpose or grant money.

The Town should allow common driveways.

Roughly 47% of survey respondents strongly agreed or somewhat agreed with this action item, while 21% strongly disagreed or somewhat disagreed. Without a clear majority supporting this idea, local planners would do well to pursue this item cautiously.

The Town should expand protection of ponds, wetlands, rivers and streams.

Roughly 40% of survey respondents strongly agreed or somewhat agreed with this action item, while 36% strongly disagreed or somewhat disagreed. Without a clear majority supporting this idea, local planners would do well to pursue this item cautiously.

The Town should expand protection of wildlife and open forests.

Roughly 45% of survey respondents strongly agreed or somewhat agreed with this action item, while 24% strongly disagreed or somewhat disagreed. Without a clear majority supporting this idea, local planners would do well to pursue this item cautiously.

The Town should mandate inspections of septic systems adjacent to lakes, rivers and streams.

Roughly 58% of survey respondents strongly agreed or somewhat agreed with this action item, while 12% strongly disagreed or somewhat disagreed. The response rate indicates strong support for mandating inspections of septic systems near water resources. Can your Inspection Department handle this increased demand for inspections? You’ll need to answer this question when you get to the Municipal Facilities & Services chapter.

The Town should support the development of new recreation trails for walking and bicycling.

Roughly 74% of survey respondents strongly agreed or somewhat agreed with this action item, while 15% strongly disagreed or somewhat disagreed. There is strong support for this idea and it should probably be included as an objective within your Open Space & Recreation Plan and included in the Plan’s Five Year Action Plan.

The Town should work with adjoining towns to implement boat propeller cleaning bylaws so as to avoid the continued introduction of invasive plants into ponds.

Roughly 81% of survey respondents strongly agreed or somewhat agreed with this action item, while only 2% strongly disagreed or somewhat disagreed. There is strong support for this idea and it should probably be included as an objective within your Open Space & Recreation Plan and included in the Plan's Five Year Action Plan.

The Town should eliminate commercial zoning near ponds, wetlands, rivers and streams.

Roughly 49% of survey respondents strongly agreed or somewhat agreed with this action item, while 14% strongly disagreed or somewhat disagreed. Without a clear majority supporting this idea, local planners would do well to pursue this item cautiously. You will be able to delve into this issue in more detail when you get to the Land Use chapter of the Master Plan.