

A Plan For Open Space and Recreation

WESTFIELD, MASSACHUSETTS

2004

Prepared by:
The Westfield Open Space Committee
(Subcommittee of the Westfield Conservation Commission)
The Westfield Department of Community Development

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SECTION I - PLAN SUMMARY

The Westfield Conservation Commission and its Open Space Committee are pleased to present to the citizens of Westfield this updated 2004 *Plan for Open Space and Recreation in Westfield* (hereinafter referred to as, the Plan). Every municipality in the Commonwealth of Massachusetts is required by the Executive Office of Environmental Affairs to create a current open space plan in order to be eligible for state funds for open space or recreational needs. In addition, this plan will also assist the city in prioritizing needs to ensure that we are on track with open space and recreation projects, and enable us to improve communication between city departments and boards.

The Plan gives the general public an opportunity to have input on the future of the city and could be entitled “A Plan for Quality of Life in Westfield.” The Open Space Committee realized during the Plan’s updating process since it addresses much of what is necessary for a good and healthy life in Westfield.

Westfield’s natural and recreational resources can benefit the city in numerous ways and are integrally connected to other factors such as economic development and community character. The municipality has an opportunity to capitalize on more outdoor recreation, river protection and appreciation, preservation of its aquifer, and downtown revitalization. As just one example, the prominent Westfield River is a natural, recreational, and aesthetic resource. It also acts as a greenway connector for several recreational facilities and links open areas to the downtown. This connection of resources, if improved, could enhance the atmosphere and attractiveness of the downtown, ultimately leading to an increase in business and visitors.

In order to reap the benefits of Westfield’s fine resources, the public must be involved and encourage the city to plan for specific actions. Many comments and ideas for the five-year action plan for the city’s natural and recreational resources were gathered during a public survey and forum in 2003.

This updated Plan provides a five-year systematic approach to reach the following goals, stated as priorities by those residents who provided input:

- Conserve, preserve and restore more open land and natural areas
- Control industrial and residential growth
- Strengthen zoning and development restrictions on wetlands and floodplains
- Create trails and greenways for hiking, river access and river protection
- Develop paved bicycle trails and on-road bicycle routes
- Identify priority open space lands and sensitive natural resource areas
- Create open space areas for places in the city that currently do not have them
- Improve equipment at existing recreational facilities
- Utilize recreation and open space areas for environmental education
- Downtown beautification, including improved links to the Westfield River
- Develop recreational facilities for different ages and abilities including handicap accessible areas

SECTION II – INTRODUCTION

A. Statement of Purpose

The City of Westfield, like so much of the Pioneer Valley, has been undergoing a transformation from villages surrounded by farms and forests, to mostly suburban and urban areas interspersed with islands of agricultural and natural areas. Over the years, the city has lost many of its natural resources due to a lack of planning and deliberate action.

This Plan was initiated with the intent to protect the remaining farmlands, aquifer recharge areas, and sensitive habitats. It aims to promote awareness and appreciation of the rivers and recreational areas. It has evolved into much more – a plan that addresses the quality of life in Westfield by utilizing a variety of efforts to protect, revitalize and connect existing resources.

A major objective is to coordinate the efforts of city departments, private organizations and landowners. It aims to increase public awareness and involvement in the development of available resources in ways that further the overall goals of the community.

B. Planning Process and Public Participation

The components in the process of developing this Open Space and Recreation Plan of 2004 are described below:

1. Data gathering and analysis included use of 2000 census data, land use data (from 1985, with some updating where possible), building permit information, subdivision records, soil records, farmland records and data collected by The Open Space Committee members on special landscape features and potential threats to open and recreational areas. Westfield State College Interns Adam Cote, Amanda Perron, Gary Krasinski, George Durante and Kristel Allen accomplished much of the data collection, with assistance from Richard Hartwell, Coordinator for the Westfield Conservation Commission.
2. An inventory of all protected open and recreational lands, both public and private, was undertaken. All other unprotected, potentially significant open land or recreation areas were also inventoried. Kristel Allen, Adam Cote, George Durante, Lisa Haynes, Gary Krasinski and Amanda Perron primarily completed this task, with guidance and oversight by the Parks and Recreation Department, and Mark Noonan from The Winding River Land Conservancy.
3. A public forum (described in Section VI) was held to solicit input from a variety of citizens throughout the city, on March 10, 2004 in the Council Chambers at City Hall. Attendees were broken up into small groups, where the top ten open space and recreation goals were prioritized. In addition, a survey of Westfield's open space and recreation resources was distributed to multiple locations throughout the city, as well as being

available online. Its purpose was to get a broader set of views from people who may not have attended the forum. The public comments and concerns from both sources have been integrated into this Plan.

4. Extensive discussions at a series of Open Space Committee meetings were critical to the evolution of this Plan and its Five-Year Action Plan.
5. Additional guidance and input were solicited from several city departments. The Water Department provided up-to-date information of the Barnes Aquifer and other water supply facts. The Community Development and Planning Departments provided data and development information. The Engineering Department created the base maps for data representation. The Parks and Recreation Department provided funding, input and review of this document.
6. Overall coordination and compilation of the information and ideas that went into this plan was a managed effort between Mark Noonan from The Winding River Land Conservancy, and Westfield State College Interns Adam Cote, Amanda Perron, Gary Krasinski, George Durante and Kristel Allen. Once all of the different entities described above had provided information and input, this team organized the materials, created maps and produced this document.

SECTION III - COMMUNITY SETTING

A. Regional Context

The city of Westfield encompasses about 47 square miles in the southern Pioneer Valley and is located at the foothills of the Berkshire mountain range, just west of the city of Springfield. Seven communities border it: West Springfield and Holyoke to the east, Southampton to the north, Montgomery to the northwest, Russell to the west, Granville to the southwest and Southwick to the south. Westfield itself is as diverse as its neighboring communities, containing a mix of urban, suburban and rural areas.

The Westfield and Little Rivers are prominent features, shared with many of the neighboring communities. Fed by reservoirs and streams flowing down from the Berkshires, the rivers have been a focal point of many concerns of nearby towns and residents. The most pressing concerns have been those of non-point source pollution, increased development in and near riparian zones, and a need for greenways along the rivers.

The Westfield River and its watershed, supply the area with drinking water, provide habitat to many species (several of which are endangered), and affords diverse recreational opportunities, such as some of the best kayaking and whitewater in the Northeast. Its corridor is one of the largest tracts of wilderness devoid of roads in the state, and the local communities want to protect these features. As an indication of this, 43.3 miles of the upper reaches of the Westfield River were designated as a National Wild and Scenic River in 1993. Some property owners in neighboring towns have placed development restrictions on land abutting the Westfield River, yet threats remain for future development in places not yet protected. Now that salmon habitat restoration has begun on the waterway, there is an even greater concern to protect the river.

Major regional features in Westfield include the Barnes Municipal Airport, which encompasses 1103 acres in the northeast quadrant of the city and occupies a large portion of the recharge area of another regionally significant feature – the Barnes Aquifer. Considered one of the most important groundwater supplies in the state, the aquifer is a primary source of drinking water for the municipality as well as for Holyoke, Easthampton and Southampton.

The Barnes Aquifer Protection Advisory Committee (BAPAC) was established in 1988, to help the city develop and implement a water supply protection strategy for the region. Made up of representatives from Easthampton, Holyoke, Southampton, Westfield and the Pioneer Valley Planning Commission (PVPC), BAPAC acts as advisors to municipalities, businesses and citizen groups to provide education on the Barnes aquifer recharge area and groundwater protection. They created an Aquifer Protection Bylaw and in 2001, received a grant from the Massachusetts Department of Environmental Protection for educational and outreach programs in Easthampton. There is still a need for Westfield and these neighboring communities to further protect the aquifer, which could be achieved through land acquisition and other activities discussed later in this Plan.

Due to the large an area encompassed by Westfield, commuters from surrounding communities often must travel through the city on one of its many transportation corridors. The main east–west corridor is Interstate Route 90 (the Massachusetts Turnpike), which intersects with State Routes 10 and 202 at its Exit 3 interchange. State Route 20 similarly serves as a major commuting route through Westfield. The road travels through Westfield’s central business district and major retail sections, which serve Westfield and its neighboring hill towns to the west. Interstate Route 91 is also nearby, traveling north and south through West Springfield and Holyoke.

The proximity of these major highways and crossroads, combined with the availability of land, makes Westfield a prime location for new residences, distribution warehouses and businesses. During this Plan update, residents voiced their concerns about such new development in Westfield, stressing a desire for more open space conservation dedicated to passive recreation opportunities such as nature and bicycle trails.

B. History of the Community

Westfield’s history is one that evolved through its importance as a transportation corridor and manufacturing center. As western expansion occurred, routes were established to connect Boston to Albany, New York. Because of Westfield’s strategic location between these cities and its available water resources, growth and development flourished. Canals were created for transportation of goods and materials from north and south, remnants of which can still be seen today.

The city’s development patterns began with a compact industrial, commercial and residential core surrounded by fertile farm fields. People settled along the Westfield River, where farming and manufacturing blended to form traditional neighborhoods. Small villages, like Wyben and Mundale, which still exist today, were established at crossroads.

Residents in these areas played a historic role in the community’s development. Monuments and gravestones in Westfield date back to the 1600’s, some indicating participation in the Revolutionary and Civil Wars.

Rail lines were developed through Westfield, both north-south and east-west. This strengthened the city’s importance as a transportation hub, and encouraged manufacturing. Although much of the early manufacturing has now left, the names and goods produced in the city leave a rich legacy. Some well known industries still remain, such as Columbia Bicycles, which owns a collection of bicycles worthy of a museum.

As manufacturing declined over the years, retail and distribution has increased, showing a continued reliance on Westfield’s transportation corridors. Rail service has gradually been giving way to road service, thus giving Westfield the opportunity to determine future

uses for abandoned rail lines. In 1997, federal highway funding was secured to design and construct Westfield's first recreational rail trail on an abandoned Pioneer Valley Rail Line.

C. Population Characteristics

Over the years, as Westfield's population and developed land areas have increased, the amount of protected open space and recreational opportunities have not grown proportionally. As this plan was written, the Open Space Committee took into account the needs of city areas in terms of population density. Demographic trends parallel development trends and the population is dispersing into the rural reaches of the north, south and western sections of Westfield. At the same time, households are getting smaller, and homes are being built larger than in previous years – all of which has a tremendous effect on the remaining resources of the city.

The population of Westfield has steadily increased over the past three decades. Looking at the figures shown on the next page, it is apparent that the population is primarily within the 20 to 44 year old range, followed by a younger population. While there were 20,100 households in 1990, that figure shrank to 14,797 by the 2000 census - a 14% decrease in ten years. The shocking statistic is that Westfield's population has grown by 80% since 1950, demonstrating a significant amount of immigration, but not emigration.

The most populated parts of the city are the 812902 and 812500 census tracts, which make up the central urban core. The remaining areas of Westfield are similar to each other in population, but have varying densities due to the size of each census tract. In general, the tracts outside the central core of the city reflect the suburban or rural nature of these areas.

Due to the increasing congestion and development of the city, residents are seeking more open space and passive recreational opportunities, such as nature trails and river access. They want fresh, clean air to breathe and the relaxation of time spent outdoors. With an average family of three, living on the median income of \$45,240.00, affordable recreation is of paramount importance.

Population Figures:

Census Tract	1970	1980	1990	2000
8125 (NE)	4,866	6,681	6,706	7,372
8126 (SE)	4,744	6,431	6,610	6,702
8127.01(Central)	9,400	4,566	4,181	4,028
8127.02		4,072	5,000	5,341
8128 (NW)	4,523	5,816	6,200	6,501
8129.11 (SW)	7,900	8,899	6,434	3,209
8129.12			3,241	4,958
8129.03				1,961
% Black	0.2		0.8	1.2
% Hispanic	2.6		4.1	5.0
% Other			1.1	2.6
% White			93.9	95.8
Total	31,433	36,465	38,372	40,072

Age Distribution (2000 Census):

0 - 19	11,377
20 - 44	14,442
45 - 64	8,779
65 - 84	4,736
85 & Over	5,313

Income Distribution (2000 Census):

Less than \$10,000	1,457
\$10,000 - 14,999	905
\$15,000 - 24,999	1,714
\$25,000 - 34,999	1,512
\$35,000 - 49,999	2,536
\$50,000 - 74,999	3,387
\$75,000 - 99,999	1,840
\$100,000 or more	1,447

Major Employers:

C&S
Jen-Coat
Old Colony Envelopes
Mestek
Westfield State College

The large number of major employers located in Westfield allows many residents to work within the city. Currently, approximately 50% of Westfield's residents are employed here.

Sources for this section: US Census, Pioneer Valley Planning Commission, State Data Center - MISER, Mass. Office of Housing and Community Development

D. Growth and Development Patterns

1. Patterns and Trends

Westfield historically grew around its industrial manufacturing center, and along parts of the Westfield River. Many older industries left the city because they could no longer use the compact spaces they once occupied. As a result, the center of Westfield was abandoned. New development has been occurring either in the more expansive lands once occupied by farms and forest, or situated over the aquifer.

Throughout the years, Westfield's development patterns have been affected by some natural features - particularly, the floodplains of the Westfield and Little Rivers. Many older neighborhoods were established to support the downtown area. As land in the downtown vicinity was built-out, developers sought new areas for homes and businesses. The new areas are generally detached from the older neighborhoods by the floodplains.

2. Infrastructure

Transportation: The city of Westfield is conveniently located at the junction of several major transportation routes, such as I-90, Routes 10 & 202 and Route 20; it is also a short distance to I-91. The city hosts a regional airport, the Barnes Airport, and two railways, The Boston and Albany, which follow along the Westfield River.

Water Supply and Sewage Systems: The Water Department provides city water to approximately 9,800 residences and businesses. There are an estimated 2,000 private wells in the city and the Health Department recently adopted new regulations to monitor and manage all privately owned wells.

The Barnes Aquifer is the primary source of public drinking water for the city. Westfield must protect its own wells in addition to private ones, to ensure a quality water supply in the future. Some of the city's wells are located adjacent to the airport, which maintains many acres of buffer land between the runway and its neighbors. The Water Department and Airport Commission work together to maintain the land for watershed protection. In addition, the Westfield Water Department is currently trying to form an advisory committee for the Great Brook Aquifer in Southwick, which also supplies water to the city.

The city provides sewage services to 7,084 residences and businesses, and there are approximately 4,600 private septic systems. Westfield's wastewater treatment plant is nearing completion of its expansion, which could possibly provide an impetus for new development. The town of Southwick also now uses the enlarged treatment plant, which could encourage more development in that area as well.

Potential Effects of the City's Infrastructure on Development: Increased infrastructure into current rural areas could mean more subdivisions being developed on prime agricultural lands, and a resultant decrease of both open space and farmland. The

northwest section of Westfield is not supplied by municipal water or sewer, which helps to minimize residential expansion. However, if those services were to be offered there, it would virtually ensure more development. It is critical to consider these possibilities while creating an open space plan and Five-Year strategy, to make certain there is a process for identifying the areas that are a priority for protection. The categorization of such lands can be coordinated with the city's open space subdivision ordinance so that their undeveloped open spaces are of the quality and value that is important to both Westfield and the ecosystem.

3. Long-Term Development Patterns

Current and Foreseeable Development Patterns: Westfield is growing with residential subdivisions, large warehousing operations, industrial, and retail developments setting the pace. Currently, 5% of Westfield's land base is industrial or commercial. By seeking industrial development, the city hopes to improve its tax base, while balancing the rise in service costs that are due to the boom in residential construction. Westfield's population is increasing at a rapid rate because of its proximity to nearby employment, both locally and regionally. City planners would like to curb the growing trend of using valuable aquifer recharge areas and farmlands for residential and other developments, by proposing methods to protect these critical natural resources. One means of obtaining that goal was the city's adoption of the Community Preservation Act in November 2003. Furthermore, there is a need for recreational facilities to be planned for areas that are now expanding, since not all residents have ample access to recreational opportunities.

Local Zoning: Westfield currently has zoning in place for aquifer protection, open space development, flood hazard districts, and a wetlands ordinance. In addition, there is a transfer of development rights and a flexible development ordinance. While these zoning mechanisms are in place, there is still an inability to prevent harmful development from occurring on the aquifer, or to create effective and attractive residential subdivisions with open space. The aquifer protection zoning only prohibits certain hazardous uses, but still allows large-scale development, such as residential subdivisions and extensive impervious surfaces. Improvements need to be made to enhance project outcomes. The city also needs to examine its current zoning districts for possible restructuring, in order to better guide growth, given the build-out analysis results described at the end of this section.

Subdivisions: The open space development ordinance requires the submittal of a full-scale subdivision plan, and allows an optional open space design in exchange for a density bonus. The original concept behind this zoning was to allow for single-family residential development, where houses are clustered together on the lot, yet are separated from each other and adjacent properties by permanently protected open space. The purpose of this type of development is to allow for greater flexibility and creativity in the design of a residential subdivision. It encourages permanent preservation of open space and a less sprawling form of development, therefore consuming less open land while still maintaining traditional New England character. However, the subdivisions created under this ordinance have not fulfilled the expectations of the city planners, and are not preserving either open space, or recreation areas, in a strategic or useful manner.

Therefore, the Five-Year Action Plan calls for prioritizing open lands for either natural or recreational use, and for improvements to the zoning ordinance that will achieve the goals of open space protection.

Development of subdivisions is made more feasible by the existence of municipal infrastructure, however this also increases costs to the city. Extensions to infrastructure are currently being made into the northwest quadrant of Westfield to provide for the proposed Berkshire Power Plant that may be developed there. This expansion is precariously close to an area that is prime for development, due to its rich agricultural land and rural residential zoning. Without the proper planning and zoning controls, regions such as this will surely be developed.

According to the city Community Development Department, there were a total of 556 new single family homes built in at least a dozen new subdivisions between 1990 and 1996. The following are scheduled, or proposed subdivisions in the city:

<u>Name</u>	<u>Acres</u>	<u>Lots</u>	<u>Acres of Open Space</u>
Montgomery Road Estates	7	6	
Mountain Road Estates	12.82	8	0
Woodbine Estates			
Sylvan Drive Extension	5.6	8	0
TOTAL	25.42	22	0

Build Out Analysis: A Community Development intern from Westfield State College conducted a build out analysis, to determine what the city would look like if zoning was not revised to better plan and guide development for open space and recreation areas. The analysis showed that about 30% of the city is developed, with almost a third left for development, and the remaining third having too many constraints for expansion. The land open for development is zoned primarily residential (“RA” or “RR”), meaning that the area could potentially double its number of residential subdivisions or ANR lots (approval not required).

Build out would have a tremendous impact on city services, traffic congestion, air and water quality, vegetation and wildlife habitat. Unless guided more strategically, future growth would likely have a cumulative negative effect on the sensitive land areas and species throughout the city. It would also amount to a total elimination of farmlands, except for the small amount in the Agricultural Preservation Restriction program (APR). Another downside of build out is aesthetic – the spectacular views of rolling hills and open areas that so greatly enhance the quality of life in many parts of Westfield, could easily be replaced by one of buildings. In short, the amount and quality of open space currently set aside is simply not adequate.

SECTION IV – ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Geology, Soils and Topography

1. Description

Topography: Westfield, at 30,000 acres, is the second largest city in Massachusetts. The west and southeastern areas of the city are characterized by mountain ridges that range from 1,111 feet along Ball Mountain, down to 100 feet where the Westfield River meets Agawam. The Westfield River bisects these ridges and flows in an easterly direction. The Little River enters the city in the southwest, and meets the Westfield River in the southeastern section of town. The two rivers form one of the largest flood plains in the Connecticut River system and are the source of the fertile farm soils. This is an asset for farming and recreation, but has potential for great flood damage. Dikes have been built across the rivers to prevent flood damage, and are often used informally for walking, jogging and nature viewing.

Numerous small streams flow through the city also, providing a variety of recreation spots, and potential future recreational opportunities. The series of glacial kettle holes in the north-central part of Westfield are some of the city's most unique features, as well as a wildlife habitat area.

Soils: The soils in Westfield have an influence on the types of development, and other land use activities. For instance, the flood plain soils led numerous farmers to the area to take advantage of the deep, fertile, and stone-free qualities. The steep slopes and wetlands provide soils and other resources that attract wildlife and certain types of plant species, while the soils above the aquifer are sandy.

The following is a list of the general soil types found in Westfield. It will be important in both the present and the future to analyze the specific soil conditions before development takes place, and to identify important resources such as prime agricultural land.

General soil types found in Westfield:

(Source: *Soils and Their Interpretations for Various Land Uses*, City of Westfield, and the US Natural Resources Conservation Service – formerly Soils Conservation Service)

<u>Type</u>	<u>Acres</u>	<u>Percent of Total Area</u>
Cheshire-Charlton-Watchaug	3,650	12%
Hadley-Suncook-Podunk	2,738	9%
Hinckley-Windsor-Merrimac	13,360	44%
Ridgebury-Walpole-Rumney	1,825	6%
Woodbridge-Hollis-Wethersfield	<u>3,346</u>	<u>11%</u>
Total for survey area	24,919	82%
Area excluded	<u>5,500</u>	<u>18%</u>
Total	30,149	100%

2. Effects of These Features on Development

Cheshire-Charlton-Watchaug: Located in almost a circle at the edges of the city, these soils create moderate limitations for residential development; while commercial and industrial development would be severely constricted due to the poor yield in wells. For woodland and recreational use, these soils produce only slight limitations

Hadley-Suncook-Podunk: Commonly in large tracts in the southern portion of the city, these soils have formed in sediments left by floods. They tend to be extremely fertile and are best suited for farming and open space. Because these soils are usually in flood hazard areas, they indicate a severe limitation on residential, commercial and industrial development.

Hinckley-Windsor-Merrimac: Found in vast areas throughout the city, these soils occupy the largest category found in Westfield. They are well drained and suitable for most types of development, but the permeability can cause difficulty in the maintenance of plants and shrubs. Deep wells in these areas would yield large volumes of water.

Ridgebury-Walpole-Rumney: Mostly located in spots near wetlands and flood plains in various areas around the city, these soils are generally saturated with water for about eight to ten months of the year. They are suitable for wetland wildlife habitat, but severely limit any type of development due to the extreme wetness.

Woodbridge-Hollis-Wethersfield: Primarily in the western portion of the city, these soils tend to be extremely rocky with only a shallow depth until reaching bedrock. Such characteristics pose limitations on many types of land uses. Wells in these areas may only yield enough volume for individual water use. Only slight limitations exist for woodland, wildlife and recreational uses.

As mentioned above, these are general descriptions of the city's soil resources. A more detailed soil survey has been prepared for Westfield by the USDA Natural Resource Conservation Service (NRCS). The descriptions above have been utilized in this study for the identification of wetlands, prime agricultural lands, and depth-to-water table information. However, they are most relative in identifying the locations and circumstances for which land should be considered open space or farmland.

Highly developable Hinckley soils are the most prominent type within Westfield, but they mostly occur in areas that are already built upon. Most of the land remaining open contains a mixture of soil types that would not likely limit development. These areas have some slope restrictions or use constraints, but are mostly agricultural, aquifer and open land with forest. Westfield's growth will not be slowed significantly by soil constraints.

B. Landscape Character

As stated in the city's 1991 Open Space Plan, "When lost people think of Westfield, they think of an urban area with suburban surroundings; fortunately this is not the entire picture..." There are mountains to the east and west, many rolling hills, valleys, rivers and streams, and interesting geological features such as the kettle holes. The city is also blessed with many scenic vistas, due in part, to the farming that has occurred here for generations.

Out of its 30,000 acres, Westfield now has approximately 2,316.77 acres of agricultural land. Current production varies from such crops as tobacco and vegetables, to pasture and woodlands. More and more of the farmlands are being taken out of production each year to allow for subdivisions and other developments. The city is interested in protecting its remaining farmlands through several techniques including the APR program and the assistance of a new conservation land trust.

C. Water Resources

1. Surface Water

Hampton Ponds – Kettle Holes: The Hampton Ponds state park area is used extensively for recreation including swimming, motor boating, sailing and fishing. Eutrophication (the premature aging and filling in of a body of water, due to human impact) is occurring in some of the ponds. To address this, the city has funded grinder pumps and weed clearance through state grants, to remedy the problem. The kettle holes are located in the Barnes Aquifer recharge area.

Westfield River: The Westfield River is a major waterway that runs through the city from west to east and provides a fish ladder for salmon restoration. There are several areas of access for boating and fishing, but no corridor for hiking or river appreciation exists. The river is at risk from non-point source pollution due to the proximity of roads, parking areas, and impervious catchments. Areas along the river could be protected and connected to form a buffer or greenway. In the downtown center, the river is hardly noticeable aside from when crossing the Green Bridge. The river could be a showpiece for the city if a concentrated effort was made to accentuate it.

Little River: A smaller waterway, which also runs west to east through the city, it merges with the Westfield River in the southeastern quadrant. It flows through some steep ravines, which provide animal habitats, and hinders development. It is accessible for informal hiking, and could benefit from a greenway as well. There is a short boardwalk along the Little River in Stanley Park.

Other rivers and brooks in Westfield include: Manhan River, Powdermill Brook, Sandy Mill Brook, Great Brook, Jack's Brook, Munn Brook, Barry Brook, Cooley Brook, and Ashley Brook. These water resources mostly allow for passive recreation and scenic qualities throughout the city.

2. Flood Hazard Areas

Flood hazard areas are located extensively throughout the city due to the many rivers and streams. In particular, the Westfield and Little Rivers have expansive flood plains, which considerably limit the amount of developable land in Westfield. (Please refer to the map in Appendix).

3. Wetlands

Westfield has a substantial amount of wetlands, which are shown on the map in Appendix A. The city's local wetlands ordinance promotes protection of these areas by specifically restricting development activities within 100 feet of any such zone.

4. Aquifer Recharge Areas

The Barnes Aquifer recharge area (as shown on the map in Appendix A), lies beneath a major portion of the northeast quadrant of the city and generates a high water table. Located directly above the aquifer, are the airport and an industrial zone. As mentioned previously, the Barnes Aquifer is the primary source of drinking water for Westfield and has a capacity for withdrawal of more than 21 million gallons per day. Industrial development continues to occur at a rapid rate here, despite the aquifer protection zoning ordinance, which restricts many land uses and in some cases, requires protective measures. The Five-Year Action Plan suggests additional ways to improve protection of the aquifer recharge area.

Many threats of contamination exist and monitoring wells are situated at strategic locations, information from them will be shared with the Westfield Water Department. The Barnes Air National Guard Base (ANG) at the airport had lingering pollutants from old operations and is currently in the final phase of cleanup. They created a citizens advisory committee that provides oversight of the process. The ANG has also installed a state of the art fuel farm, consisting of above ground fuel storage, having removed the last of its underground tanks in January 1998.

The Barnes Aquifer Protection Advisory Committee (BAPAC) is a regional committee established by Easthampton, Holyoke, Southamptton, Westfield, and the Pioneer Valley Planning Commission. They work to promote awareness about the aquifer, the protection of it, and monitor developments having regional impact. The BAPAC has a world wide web site, which provides important data about the aquifer, as well as local regulations for aquifer protection. Visit their site at: <http://www.pvpc.org/bapac/index.html>.

D. Vegetation

Lush and diverse vegetation is critical to the quality of life in Westfield. It provides aesthetic relief, clean air and barriers between different land uses within the city. There are numerous significant trees and forests throughout the city, as well as habitat areas for

unique, threatened or endangered species. Urban forestry grants are presently being used to improve the health and number of trees in the city.

1. Forest Land

Westfield is a city with an abundance of trees and forests that are prominent even in the downtown and industrial areas. According to the most current land use data from 1985, almost half of Westfield is forested (approximately 15,000 acres). The amount of development since then has reduced the extent of woodland, but it is not known by how much. Most of the wooded sections are not managed as forest, and there are no known old growth tracts due to the accessibility of most of the region to logging equipment. Selective harvesting of timber products could improve some locations for wildlife habitat, as well as provide additional income to the city.

2. General Inventory

The forests of Westfield are generally a mixture of hardwoods and softwoods, with straight hardwoods accounting for approximately 25% of the city's trees, and conifers for approximately 6%. The most common species include: beech, white birch, yellow birch, black birch, red oak, white oak, hemlock, white pine and pitch pine.

In January of 1998, the Office of Community Development and the Northeast Center for Urban and Community Forestry of the University of Massachusetts at Amherst, conducted a statistical analysis of the condition, species and management needs for the street trees in Westfield. A random sample survey was performed and the findings indicated that there are approximately 16,000 trees growing along the public roads of the city. This equals 74 trees per square mile of roadway, or .42 trees per Westfield resident. The following 14 different genus types were found: Acer (57%), Quercus (10%), Pinus (9%), Gleditsia (5%), Malus (5%), Tsuga (5%), Betula (2%), Carpinus (1%), Picea (1%), Platanus (1%), Pseudotsuga (1%), Tilia (1%), Ulmus (1%) and Fraxinus (<1%).

The overall condition of the street trees was broadly categorized as 34% being good, 49% fair, 16% poor, 1% dead and <1% hazards. More specifically, 43% of them exhibited weak forks, 42% had overhead wires, 41% contained significant deadwood, and 13% of the trees showed a cavity or trunk injury. The team also conducted a management needs assessment and found that 59% of the trees require a crown cleaning, 19% a crown raising, and 5% a crown reduction. This information has provided a baseline for the development of a more complete and comprehensive inventory of all the trees growing along the streets of Westfield.

3. Rare, Threatened and Endangered Species of Flora

According to the Massachusetts Natural Heritage Program listing, the following 12 vascular plant species are endangered or threatened in Westfield. Purple cliff brake is named on the unofficial watch list and two other noted natural communities are "New England pitch pine / scrub oak barrens" and "southern New England level bog."

Threatened

Bristly buttercup
Climbing fumitory
Purple needle grass
Smooth rock cress

Endangered

Giant St. John's Wort
Hairy wild rye
Houghton's flatsedge
Long leaf bluet
Low bindweed
Variable sedge

Special Concern

New England blazing star
Purple clematis

E. Fisheries and Wildlife**1. Inventory**

There are not many wildlife habitat areas currently being protected in Westfield. Some open lands and parks have ponds or streams, but they are not necessarily set-aside as habitat. There are however, several locations known to be more habitable for deer, moose, bear, smaller mammals, salamanders, snakes, turtles and birds. Bear have been sighted in rural western regions as well as in some urban, but remote spots at the airport.

2. Vernal Pools

There are currently five certified vernal pools within the city of Westfield.

3. Corridors

The ridgelines to the east and west of the city are known passageways for animal travel and habitat. The Little and Westfield Rivers, as well as other brooks and streams in the city provide potential wildlife corridors. A fish ladder to aide with salmon restoration has been built in the Westfield River, and the US Fish and Wildlife Service have reportedly investigated the area for its potential role in the formation of the Conte wildlife refuge that would encompass the entire Connecticut River watershed.

4. Rare, Threatened and Endangered Species of Fauna

A list of known rare, threatened, endangered and unique species in Westfield is provided in Appendix .

F. Scenic Resources and Unique Environments

(Information contributed by Alfred Rios, Hugh Lamb, Ted Bishop, John Tucker, Ralph Cortis, Angelo Fiori and Attilio Pighetti.)

The following table is a list of the known scenic resources and unique environments found in the city (the columns on the right indicate whether the feature has scenic, geologic, cultural or environmental significance).

<u>Area</u>	<u>Significance</u>	<u>Scenic</u>	<u>Geol.</u>	<u>Cult.</u>	<u>Env.</u>
Cave on Honey Pot Road	Used to store gun powder during Revolutionary War, and possibly moonshine during Prohibition	Yes	Yes	Yes	
Salamanders on Honey Pot Road and Caitlin's Way	Known endangered species seen in vicinity - should be protected				Yes
Northwest Road near Little River	Site of marble cutting mill, some which was used in the Lincoln Memorial, Washington, DC			Yes	
Off General Knox Road	Atwater Marble Quarry	Yes	Yes	Yes	
Old Cemetery off Granville Road in Mundale	Gravestones from 1811 to 1881 - should be preserved and maintained	Yes		Yes	
Original Tekoa golf course	In area of Stanley Park athletic fields, near swan ponds (Gillette's Pond) – probably the first formal course in Westfield; photos at Tekoa Country Club	Yes		Yes	Yes
Crane's Pond and Wolf Pit Meadows area off Crane Road	Wetlands and endangered species habitat (birds and turtles) - should be protected	Yes			Yes
Russolillo property from Granville Road to Crane Road	Good open space; abuts Highland School that is city owned	Yes			Yes
Allen Park and Grandmother's Garden	Encourage more public use - should be maintained and protected	Yes		Yes	Yes
Tuller's Swamp off Linden Avenue	Wetland swamp area that should be protected				Yes
Ponders Hollow Road	Possibly the oldest road in Westfield – potential bicycle path	Yes		Yes	Yes
Tin Bridge / sand bank area	Potential recreation area and bicycle path	Yes	Yes	Yes	Yes
Old burying ground on Mechanic Street	Historic cemetery from 1648 – is well documented			Yes	
Old Gas House on Sacket Street and Sibley Avenue	Historic site			Yes	
Woman's Temperance Union fountain	Across from Half Mile Falls Park – city owned	Yes		Yes	
Western Massachusetts Hospital on East Mountain Road	Historic site - tuberculosis sanitarium including its own farm with fresh produce	Yes		Yes	Yes
Area of old canal swimming pond – Union Street, Papermill Road and Springdale Road	Historic canal once supplied water to the mill – a popular swimming hole for several generations	Yes		Yes	Yes
Steven's Farm on Pochassic Road	Tree farm	Yes	Yes	Yes	Yes
Westfield Sportsman's Club area	Rifle range – a recreation property that needs protection for development	Yes			Yes
Falley's Forge on Reservoir Avenue	Historic mill site where muskets were made for the Revolutionary War – now a cellar hole and stone foundation; should be protected	Yes		Yes	
Old Lead Mines in Wyben on Montgomery Road		Yes		Yes	
Old brickyard on Root and North Roads	Historic remains of two kilns – Westfield Brick Company and then Westfield Clay Products	Yes		Yes	Yes
Bogs and kettle holes at Hampton Ponds	Interesting geologic formations within Barnes Aquifer recharge area	Yes		Yes	Yes

Metacomet-Monadnock Trail	West of East Mountain in Westfield along its eastern border – a hiking trail over East Mountain leads to Provin Mountain	Yes	Yes	Yes	Yes
Old whip manufacturing site along Westfield River at Great Bridge, downtown	An old manufacturing site close to Whitney Park and accessible to the river, downtown and proposed rail trail			Yes	
HB Smith Company site	Adjacent to proposed rail trail			Yes	
Village of Wyben	Mostly 19 th century homes, a very picturesque area with open lands for farming and wildlife	Yes		Yes	Yes
Mundale Village section of Westfield	Similar to Wyben in historical value and beauty	Yes		Yes	Yes
Glacial potholes off Granville Road, across from the Springfield filter beds	Glacial river formations	Yes		Yes	Yes

G. Environmental Challenges

The following are problems as noted by members of The Open Space Committee and other city boards or departments:

1. Hazardous Waste Sites

There are several hazardous waste sites in Westfield. The type and extent of contamination is largely unknown for many of the areas. They pose a major problem for the city, both environmentally and economically, due to the lack of rehabilitation and reuse of the properties. Pollutants may not necessarily be contained, and the abandonment of the property affects the municipal tax base. Over the past few decades, developers have been choosing to build on “greenfields” (agricultural and aquifer recharge lands) located outside the center of Westfield, instead of redeveloping older, contaminated sites within the city center, termed “brownfields.” (Please see the state’s list of known hazardous waste sites in Appendix .)

2. Landfills

Westfield closed its main landfill in April 1997, and has since been using it as a transfer station. The trash is then hauled to a landfill in New York. The former landfill will not be developable due to the potential damage to the plastic used to cap it. The property will be enclosed with a fence.

3. Erosion

There are several areas in Westfield that have known erosion problems. One is located behind the former Caldor store on Route 20, east of the center of the city. Runoff from the site is causing erosion along the Westfield River bank for about 100 feet. Abrasion of the riverbank is significant at the “Frog Hole” along the Westfield River. The region around the Massachusetts Turnpike interchange drainage outfall pipes has also been

wearing away. The Barnes Airport runway drainage north of Owen District Road is causing erosion and another area of concern is at the Massachusetts Highway lot near the Little River.

4. Development Impact

The impacts of development are often unclear until many years have passed. However, it is evident from the number of subdivisions and other major developments in Westfield, that much open land is being filled in with impervious surfaces, ultimately creating potential sources of non-point pollution. Those types of surfaces over the aquifer recharge area will prevent that ground water supply from receiving the direct infiltration of rainfall, and introduce polluted runoff into the aquifer. The continued residential build out in the remaining open lands in Westfield will tax the city's ability to provide adequate public services, remove active farmlands from production and ultimately alter the character of the city forever.

5. Ground and Surface Water Pollution

Extensive development is taking place within the Barnes Aquifer recharge area, which could degrade the quality of the aquifer over time. Although currently in remediation, contamination at the Barnes ANG base could potentially have entered into the aquifer. Several auto body and salvage establishments along the Westfield River could be releasing contaminants into the surface water. Golf courses that use fertilizers and pesticides could be releasing those substances into surface water (near Westfield River, Little River and Great Brook), or groundwater (near city wells). Salt storage facilities, one privately owned and the other state operated, could be the source of salt runoff into the Westfield River. Trap rock quarry silica dust drains into the Westfield River after every rainfall. (Please see Appendix for maps and locations.)

SECTION V – INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

Open space is a vital component of every community, providing multiple benefits and having far reaching effects. It generally consists of undeveloped areas and includes conservation, recreation and agricultural lands, as well as greenways along roadsides.

Protected properties may be public or semi-public lands that have been permanently preserved for conservation purposes. Without the protection of such valuable resources, residents could expect a reduced quality of life and a loss of necessary natural resources. Vegetation not only improves air quality, but also helps to reduce summer temperatures especially in congested, urban areas.

Two areas in Westfield that are often mentioned by residents and city officials as key for protection are the Wyben and Mundale villages. These regions host historic features, open lands, wildlife habitat, farmlands, and exhibit vestiges of the old city. This is what many residents refer to when they express the desire to protect rural character. The Five-Year Action Plan takes these places into account. Other areas to be considered by the city as priority for future protection are farmlands, aquifer recharge areas and riverfront areas.

Westfield's Ward 5 currently has no playgrounds. The development of a playground there would provide both needed open space and a recreational opportunity to local residents. Chapman and Municipal Playgrounds recently had new playground modules installed, which greatly enhanced the quality of the parks.

The proposed rail trail is a popular and much needed recreational facility for the city. The route would adjoin several potentially re-developable locations, as well as the Westfield River and downtown. This is an excellent opportunity to link many of the city's objectives in one major recreational development and would likely provide the impetus for other trails, an increase river appreciation, and the likelihood of economic development in the downtown area.

The following inventories include private and public or non-profit lands, noting their level of protection.

A. Private Parcels

B. Public and Nonprofit Parcels

SECTION VI - COMMUNITY VISION

A. Description of Process

The Westfield Open Space Committee held numerous meetings of its own, as well as several neighborhood meetings, sponsored a public forum, and conducted a random form survey of about 330 households to solicit opinions and comments for this plan.

Public Forum

About 30 people, none of whom had been surveyed, attended the public forum. The meeting provided several ways for attendees to provide opinions and comments through open discussion and a prioritization of goals process (nominal group process). Each attendee filled out a card with their top five priority goals, then split up into small groups to discuss their objectives and develop subgroup priorities. Each group presented their most important goals, and then everyone voted on which should be in the top ten. The top ten were then ranked by number of votes received and are listed below.

List of Top Ten Goals for Open Space Plan from 2003 Public Survey:

1. Conservation, preservation and restoration of open land
2. Improved maintenance of existing open space and recreational facilities
3. Controlling growth (i.e. – commercial, industrial and residential development)
4. Skate park
5. Trails for hiking and river access
6. Paved bicycle trails and on-road bicycle routes
7. Identification and acquisition of key open space areas
8. Recreation and open space areas for places in the city that don't currently have them
9. Improved equipment at recreational facilities
10. Educational use of recreation and open spaces

Public Survey

In the spring of 1997, the Open Space Committee contacted the Westfield State College (WSC) Department of Geography and Regional Planning, to create and administer an open space and recreation survey. The purpose was to obtain information from the community at large, about what they see as needs for recreation and open space. Professors Bennett and Bristow modified a survey instrument prepared by Professor Kelly for a previous plan, and Essek Petrie, an intern from WSC, also worked on the survey, as well as organizing the assessment process.

Westfield State College interns reviewed the returned surveys and tallied the responses, using them to determine some of the goals for the five-year action plan. The results are summarized in the next section as well as in Appendix .

B. Statement of Open Space and Recreation Goals

Westfield is a large town by Massachusetts's standards and is comprised of many different environments. It contains major rivers, streams, brooks, forests, farm fields, uplands, lowlands, wetlands, aquifer areas, abandoned railways, rural and urban areas, ponds, scenic vistas, historic sites and environmentally sensitive species. The city has existing recreational areas, but needs more diverse types of opportunities that make use of the resources that are available. Westfield is growing, and development is encroaching into sensitive areas that help to maintain the balance between the natural and cultural landscapes. It is important to set aside regions that will continue to provide habitat and scenic relief in this rapidly expanding area. It is also essential to establish linkages between vital resources such as the Westfield River and its neighborhoods including downtown, in order to provide further enhancement.

The community seeks to preserve its heritage as both an industrial and agricultural center. The residents have expressed the need to slow growth and make sure that sensitive areas get protected. Citizens and city officials want to work together to provide better opportunities for recreation in areas that are lacking it, as well as for portions of the population such as teens and the disabled.

The Open Space Committee would like to establish a set of actions for the city that will not only enhance the open space and recreational assets of the area, but also make sure that all public and private parties are able to work together towards a joint goal. Above all however, the committee seeks to improve the quality of life in Westfield and ensure that it is a livable and prospering place.

SECTION VII - ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

Water Resources: Of primary importance at this time is the limitation of impervious surfaces over the aquifers in order to facilitate their adequate recharge cycling. Improving storm drain water quality would similarly help the municipal water supplies. Westfield hosts a complex interconnection of water resources. Each individual stream, river, wetland area, floodplain and aquifer recharge area is part of a greater system that cannot be separated by political boundaries or land ownership. The city contains portions of a larger watershed and its sun watersheds. It is important for Westfield to look at its whole network of water resources and act to protect them in a systematic way.

Agricultural Resources: Studies and observations have shown that farmland is rapidly disappearing as Westfield grows. The city should work to protect its remaining agricultural resources.

Restoration and Protection of Key Areas: Westfield needs a thorough inventory of critical resources and special places. This record will be a major project in the next five years. Once an inventory is completed, the city should work on a strategy to restore and protect key areas, including greenways, trails, places of significance such as Mundale and Wyben villages, and city lands that are currently unprotected.

Public Opinion and Open Space and Restoration Needs According to the City-wide Survey:

- Almost half of those responding support protection of conservation land and recreation land.
- Nearly half of the respondents would be willing to pay more to protect open space.
- More than half of the respondents support increased use of land as open space and recreation, and two-thirds favor growth in the business sector with less industrial or residential growth.
- The appearance of parks and playgrounds, as well as fire and police protection, were seen as in good condition by more than half of the respondents, however, that same number also found street conditions, housing costs and shopping facilities to be from fair to poor.
- Survey respondents visit Stanley Park the most often, then Westfield State College recreational facilities, country clubs, Boys and Girls Clubs, Grandmother's Garden, Hampton Ponds Recreation Area, Little River Playground and finally, Chapman Playground.
- Two-thirds of the respondents felt a skateboard park is needed in Westfield; bicycle trails were the second most needed facility, then nature and walking trails, improved river access and a teen center. Deemed less important were improvements to playgrounds, picnic areas, soccer, tennis and basketball facilities.

The respondents were mostly lifelong residents of Westfield, between the ages of 18 to 44, and 33% had children between ages 5 to 17.

For a full report of the survey results see Appendix .

The public forum and subsequent public meetings provided the following suggestions:

Conservation, preservation and restoration of open land
Improved maintenance of existing open space and recreational facilities
Controlling growth (i.e. – commercial, industrial and residential development)
Skate park
Trails for hiking and river access
Paved bicycle trails and on-road bicycle routes
Identification and acquisition of key open space areas
Recreation and open space areas for places in the city that do not have them
Improved equipment at recreational facilities
Educational use of recreation and open space areas
Aquifer protection
Riverfront recreation
Re-use of old Caldor building for skate / rollerblading park
Bicycle path
Golf course
Preservation of Wyben area
Sports complex
Farmland preservation
Protect land behind Wal-Mart
Airport property should be used for recreation, not housing
More recreational field space
Open Air Theater
Center for performing arts
Cluster residential development with protected open space
More passive recreation lands
Rail trail
Land bank
Linkage of trails to create greenway
Environmental awareness program
Teen activity center
Retain scenic view by increasing set-back requirement

B. Summary of Community's Needs

Many members of the community have stated in surveys and meetings that there is a clear need for more conservation of land, including protection of the Barnes Aquifer recharge area, Wyben and Mundale villages, farmlands, urban open spaces, rivers and their associated floodplains. People are also concerned about the rapid residential growth occurring in Westfield and the apparent lack of development control that exists.

Residents have additionally expressed a need for better maintenance of existing recreational facilities and a desire to make the river more accessible.

There has been a strong message from city officials and residents that there needs to be more awareness about the value of and need to protect natural resources in Westfield. Increased responsibility needs to be taken by the general public to protect the city's aquifer recharge areas, riverfronts, wetlands and farmlands.

Some of the development regulations in Westfield need improvements or refinement. The wetlands ordinance was once bolstered by local regulations and now is not. The open space subdivision decree needs to be adjusted so that undeveloped lands are permanently protected, rather than just for thirty years. This ordinance should also be aligned with priority areas for conservation that are part of an overall master plan of places most valuable to maintain. A riverfront protection zoning law may also help to safeguard the rivers as well as encourage awareness about them.

C. Management Needs, Potential Change of Use

There is an overall need for city boards and departments to make sure that they are communicating with each other, yet it is important that one's department goals not interfere with another's mission. For example, the Water Department and Conservation Commission are striving to protect the Barnes Aquifer, while the Community Development Department is seeking economic activity, which includes large-scale developments in the aquifer recharge areas.

The creation of a land trust for the city would enable a coordinated effort for many of the goals of this plan. A land bank would make it possible to have a continuous flow of funds to the land trust.

It is also important for Westfield to maintain communications with the public about its needs for protection of resources and recreation. The development of a city newsletter or an open space and recreation web site would contribute to better public understanding, and could additionally be used for public participation and education.

SECTION VIII - GOALS AND OBJECTIVES

All of Westfield's goals "filter" through some broader community objectives, such as encouragement of public/private partnerships, and coordination with regional projects and resources, such as the US Fish and Wildlife Service Conte Refuge. The overall goal for the city is to improve quality of life for all living things in Westfield while making connections between resources.

1. Conservation, preservation and restoration of open land

- a. Review of city owned properties
- b. Encourage farmland preservation
- c. Inventory of potentially significant areas
- d. Historic preservation
- e. Create mechanism to fund land conservation
- f. Preserve wildlife habitat
- g. Identify and acquire key open space areas
- h. Recreation and open space areas for places in the city that currently do not have them

2. Improve existing open space and recreational facilities

- a. Playground and equipment improvements
- b. Family recreation areas
- c. Camping facilities
- d. Special facilities for different age groups and levels of ability
- e. Maintenance and use management

3. Control growth (i.e. – commercial, industrial and residential development)

- a. Create new ordinance and incentives to slow and direct growth
- b. Establish new non-regulatory mechanisms to slow growth
- c. Develop a city master plan

4. Develop a city-wide trails master plan

- a. Identify the types of users
- b. Create accesses and trails along rivers and waterways
- c. Make paved bicycle trails and on-road bicycle paths
- d. Establish interpretive trails
- e. Identify and use utility corridors for recreation
- f. Trail awareness and education
- g. Increase network of trails
- h. Designate trails for different users (i.e.- ATV's, snowmobiles, bicycles, skateboards, in-line skates & pedestrians)
- i. Bicycle rack on PVRTA buses in Westfield

5. Environmental education

- a. Develop a map of city recreation and open space resources for distribution
- b. Establish a curriculum for schools that uses open space areas
- c. Create and fund internships to inventory unprotected open space

6. River awareness, protection and access

- a. Develop greenways
- b. Identify sources of point and non-point pollution
- c. Revisit proposed local river protection ordinance
- d. Improve access points
- e. Initiate more river cleanups
- f. Promote river related activities and businesses
- g. Encourage businesses to showcase river front

7. Aquifer awareness and protection

- a. Purchase aquifer recharge land
- b. Establish “Area of Critical Environmental Concern” (ACEC) status for aquifer recharge area
- c. Conduct a wells inventory and adopt well ordinance
- d. Establish an open space industrial park ordinance
- e. Create more public information for different media types

8. Urban beautification

- a. Complete a downtown beautification plan
- b. Develop pocket parks
- c. Establish a tree planting program
- d. Encourage and support more river-focused, recreation-oriented and accessible businesses
- e. Showcase the Westfield River

SECTION IX - FIVE-YEAR ACTION PLAN

SECTION X - PUBLIC COMMENTS

Ideas for Open Space Goals and Objectives

1. Aquifer protection through education and awareness
2. Riverfront access and recreation – kayaks and canoe put-in
3. Skate Park
4. Bicycle trail
5. Preservation and protection of natural resources
6. Farmland preservation
7. Open Air Theater
8. More recreation fields including: ball fields, tennis courts, soccer fields and playgrounds
9. Airport property used for recreation, not housing
10. Scenic walking trail
11. Strengthen zoning regulations to protect open space
12. Development of rail trail
13. Involvement of youth in community development
14. Retaining scenic views by increasing set back requirements
15. Linkage of existing trails to create greenways
16. Bicycle lanes on streets
17. Access and awareness of historical sites
18. Environmental Awareness programs – Youth programs
19. Planning Board more accessible to the public
20. Land banking – buying land to curb marginal development
21. Control growth through planning
22. Camping areas
23. Teen Activity Center
24. Cluster residential development
25. Revise Open Space Ordinance
26. Change taxation of open space lands
27. Set up a community Web page
28. Start a community newsletter
29. More open passive recreation lands

SECTION XI - REFERENCES

Application to the Massachusetts Highway Department for Intermodal Surface Transportation Efficiency Act (ISTEA) funding for a Westfield Rail Trail, FY1997.

Community Profile, Massachusetts Department of Housing and Community Development, 1997.

Hampton Ponds Community: A Study for Visual, Physical and Recreational Enhancement, Conway School of Landscape Design, 1978.

Massachusetts Outdoors! Volumes 1 and 2, Massachusetts Executive Office on Environmental Affairs.

Open Space Planners Workbook, Executive Office of Environmental Affairs, 1990.

Preserving Westfield's Farms, Robin Gorgone (Westfield State College), 1997.

Westfield Open Space Committee Members and Associates, 1997 – 1998.

A Plan for Open Space and Recreation for Westfield, Massachusetts, 1978.

A Plan for Open Space and Recreation for Westfield, Massachusetts, 1991.

A Plan for Open Space and Recreation for Westfield, Massachusetts, 1998.

Westfield River Greenway Plan, Pioneer Valley Planning Commission, 1993.

APPENDIX A

Maps:

- 1) Zoning Map
- 2) Soils and Geologic Features
- 3) Unique Features & Scenic Resources
- 4) Water Resources
 - Watersheds
 - Surface Water Supplies to Water Supply Areas
 - Flood hazard zones
 - Wetlands
- 5) Inventory of Lands of Conservation and Recreation Interest
- 6) Five-Year Action Plan

APPENDIX B

Public Survey Results Summary

WESTFIELD RECREATION AND OPEN SPACE CITIZEN INPUT SURVEY

Name (optional) _____

Date _____

Ward/Street _____

1. HOW LONG HAVE YOU LIVED IN WESTFIELD? _____ years
2. HOW MANY PEOPLE LIVE IN YOUR HOUSEHOLD? _____
3. WHAT ARE THEIR AGES? (INCLUDING YOURSELF)
 - a. _____ (0-4 years)
 - b. _____ (5-17 years)
 - c. _____ (18-44 years)
 - d. _____ (45-64 years)
 - e. _____ (65+ years)
4. HOW IMPORTANT IS IT THAT WE ADDRESS THE FOLLOWING ITEMS? PLEASE RANK THE FOLLOWING 1-4. 1 BEING THE MOST IMPORTANT.
 - a. _____ conservation, natural and open areas
 - b. _____ farmland preservation
 - c. _____ preserve rural character
 - d. _____ recreation areas
 - e. _____ places of historic value
5. TO PRESERVE OPEN SPACES IN WESTFIELD WOULD YOU: (1 = yes / 2 = no)
 - a. _____ sell or donate land to the town?
 - b. _____ donate money to buy land?
 - c. _____ vote for city supported land acquisition?
 - d. _____ vote for strengthening zoning / development restrictions on wetlands and floodplains?
 - e. _____ support a tax increase for open space preservation?
6. WHAT GROWTH, IF ANY, DO YOU FAVOR FOR THE CITY? (check all that apply)
 - a. _____ residential growth
 - b. _____ business growth
 - c. _____ industrial growth
 - d. _____ conservation & open space acquisition
 - e. _____ no growth
7. PLEASE RATE THE FOLLOWING IN WESTFIELD? (1 = poor, 2 = fair, 3 = good, 4 = don't know)

a. _____ housing cost	f. _____ police service
b. _____ housing condition	g. _____ public schools
c. _____ condition of streets	h. _____ shopping facilities
d. _____ fire protection	i. _____ park and recreation programs
e. _____ appearance of parks and playgrounds	j. _____ conservation areas
8. HOW DO YOU FEEL WESTFIELD'S CONSERVATION LANDS SHOULD BE USED?
(choose one)
 - a. _____ keep in natural state
 - b. _____ develop as passive recreational facilities (parks, nature trails, gardens, picnic areas, etc.)
 - c. _____ develop as active recreational facilities (playgrounds, ball fields, tennis courts, etc.)
 - d. _____ other _____

9. OVER THE PAST YEAR, WHAT PUBLIC OR PRIVATE RECREATIONAL FACILITIES IN WESTFIELD HAVE YOU OR YOUR FAMILY VISITED? (circle all that apply)

- | | | |
|------------------------------|----------------------------------|----------------------------|
| a. Chapman Playground | h. Public Schools | o. Amelia Park |
| b. Grandmother's Garden | i. Westfield State College | p. Westfield River Walk |
| c. Hampton Pond's State Park | j. Stanley Park | l. Cross Street Playground |
| d. Little River Playground | k. Westfield Veteran's Pool | r. Skate Park |
| e. Whitney Playground | l. Country Clubs or Golf Courses | s. Sadie Knox Playground |
| f. Municipal Playground | m. YMCA Camp Shepard | t. other |
| g. Woronoco Soccer Complex | n. Westfield Boys and Girls Club | |

10. HAVE YOU USED ANY RECREATIONAL FACILITIES IN NEIGHBORING COMMUNITIES?

_____ No (go on to the next question)

_____ Yes, NAME _____ LOCATION _____

11. IF YOU HAVE NOT USED RECREATIONAL FACILITIES IN WESTFIELD, WHY NOT? (check all that apply)

- a. _____ accessibility
- b. _____ time constraints
- c. _____ no interest
- d. _____ no children
- e. _____ safety reasons
- f. _____ lack of awareness of resources
- g. _____ other _____

12. WHAT RECREATIONAL FACILITIES DO YOU FEEL THAT WESTFIELD NEEDS TO EXPAND OR DEVELOP? (please circle each item of interest)

- | | | |
|----------------------|--------------------|---|
| a. basketball courts | h. softball fields | o. nature trails |
| b. baseball fields | i. playgrounds | p. senior facilities |
| c. boat ramps | j. picnic areas | q. multi-use recreation/ athletic complex |
| d. parks | k. teen center | r. other |
| e. bike trails | l. camping areas | |
| f. golf courses | m. soccer fields | |
| g. tennis courts | n. water sports | |

13. DO YOU HAVE ANY OTHER COMMENTS OR SUGGESTIONS ABOUT RECREATIONAL OPPORTUNITIES IN WESTFIELD, OR ABOUT THIS SURVEY?

THANK YOU FOR YOUR TIME!

Take this survey online at: <http://gis.cityofwestfield.org/survey.html>

PLEASE MAIL OR RETURN TO:
The Planning Department at City Hall
59 Court St., Westfield, Ma 01085

OR ANY OF THE FOLLOWING DROP OFF LOCATIONS:
Westfield Athenaeum
YMCA
Council on Aging

Westfield Open Space Survey

In January 2004, five interns from Westfield State College Department of Geography and Regional Planning agreed to update the Open Space Plan for the city of Westfield. This entailed updating and administering a recreation and open space survey to the city's residents. The 2004 Westfield Open Space Survey was adapted from the one given in 1998, after Lawrence Smith, Principle Planner, Richard Hartwell, Conservation Coordinator, and Anne Marie Heiser, Director of Parks and Recreation made revisions.

The survey was administered on the city's website at <http://www.cityofwestfield.org>, and was also available at three local drop-box locations: the YMCA, Athenæum, and the Senior Center. Additionally, 3,700 copies were distributed with the Parks and Recreation booklets throughout the Westfield Public Schools. The variety of distribution methods served as a way to illustrate an accurate representation of the population. The collection period concluded on April 19, 2004, with a total of 338 responses. A copy can be found in Appendix B.

The survey examined the residents' conception of open space in the city of Westfield, and consisted of thirteen questions in the following categories: Importance of Land Use Preservation, Methods to Protect Open Space, Land Use Growth, Rate Westfield, Recreation Site Visitation Patterns, Preference for Conservation Lands and Recreation Facilities, Limitations to Use, and Household Information. The responses for each of the eight categories are described below.

Importance of Land Use Preservation

The respondents were asked to rank the importance of preserving various types of land. A majority of the Westfield residents (61%) favored the preservation of Conservation, Natural and Open Area Lands. Rural Character (37%), Recreational Lands (36%), Farmland (32%), and Historic Lands (30%) followed.

Methods to Protect Open Space

Most of the questionnaires indicated strong support for the protection of open space through Land Acquisition (81%) and Zoning (80%), with a Tax Increase ranking third at 60%. The remaining options were less popular: to Donate Money (44%), and to Donate or Sell Land (23%).

Land Use Growth

This section of the survey illustrated the favored land use growth among residents of Westfield. A clear majority favored Conservation and Open Space Acquisition (74%). The second most popular answer was Business growth (61%). Less desirable land use growth patterns were Industrial (36%), No Growth (20%), and Residential Growth (19%).

Rate Westfield

Here the survey was designed to solicit feedback regarding the “State of Health” of Westfield and included the categories of: Housing Costs, Housing Conditions, Conditions of Streets, Fire Protection, Appearance of Parks and Playgrounds, Police Service, Public Schools, Shopping Facilities, Parks and Recreation Programs, and Conservation Areas. The respondents were asked to rate the services or conditions on a 1 to 3 scale, with 1 being Good, 2 being Fair, and 3 being Poor. The Fair and Good answers were combined to better isolate the services that received the most “Poor” responses. Fire Protection, Police Services, and Public Schools ranked the highest, each coming in at 83% Fair and Good. The Appearance of Parks and Playgrounds (68%), Housing Costs (65%), Parks and Recreation Programs (65%), and Shopping Facilities (64%) all were above median. The Condition of the Streets (63%) and Conservation Areas (28%) received the greatest number of Poor responses.

Recreation Site Visitation Patterns

In order to determine the average visitation patterns of residents to the various parks and recreational facilities throughout the city, people were asked to note all those they had been to in the past year. By a large margin, Stanley Park (89%) was utilized the most. In descending order of visitation are Amelia Park (60%), Public Schools (56%), Westfield State College (38%), Boys and Girls Club (27%), Country Clubs and Golf Courses (25%), Cross Street Playground (17%), Chapman (16%), Hampton Ponds (16%), River Walk (16%), Municipal Playground (13%), Skate Park (12%), Whitney Playground (11%), Woronoco Soccer Complex (11%), Little River (7%), Veterans Pool (6%), YMCA (6%), and Grandmother’s Garden which none of the respondents had been to.

Preference for Conservation Lands and Recreation Facilities

Here public opinion was sought on preferences of use for Westfield’s Conservation Lands and Recreation Lands. Most of the respondents wanted passive recreation facilities (46%), while Keeping lands in a Natural State was the next most popular answer (27%). Active Recreation received a poor response (13%), and 5% of respondents desired some other land use.

To get a feel for activity preferences, the survey requested information on what opportunities needed to be expanded upon. The five most identified shortages were Bike Trails (67%) and Nature Trails (63%). The remainder of responses were rated as follows: Picnic Areas, Teen Center, and Senior Center (29%), Parks (28%), Multi-use Recreation/Athletic Complex (25%), Playgrounds (24%), Basketball (15%), Baseball (14%), Water Sports (13%), Camping (11%), Soccer Fields (10%), Boat Ramps and Tennis Courts (9%), Softball Fields (7%) and Golf Courses (6%).

Limitations to Use

This question inquired about the reasons why residents have not used some of the available recreational lands and facilities in Westfield. The percentages were calculated from the total number of people that responded to this question, since there were a number of incomplete surveys. The three most popular limitations to use were: Lack of Awareness (28%), No Children (27%), and Time Constraints (26%). The remaining issues were: Safety (7%), Lack of Interest (6%), and Accessibility (6%).

Household Information

Because of the inconsistency of the responses, socio-economic and demographic responses were not calculated. Many of the surveys were incomplete or incorrectly fill out in the section concerning the following: Ward of Street, Number of Years Residing in Westfield, Number of People in the Household, and Ages of People Residing in each Household.

APPENDIX C

Open Space Committee Meeting Minutes

APPENDIX D

State List of Hazardous Waste Sites In Massachusetts

APPENDIX E

State List of Rare, Endangered and Species of Special Concern In Westfield

Scientific Name	Common Name	Taxonomic
<i>Adlumia fungosa</i>	Climbing Fumitory	Vascular Plant
<i>Alasmidonta heterodon</i>	Dwarf Wedgemussel	Mussel
<i>Alasmidonta undulata</i>	Triangle Floater (Swollen Wedgemussel)	Mussel
<i>Alasmidonta varicosa</i>	Brook Floater	Mussel
<i>Ambystoma jeffersonianum</i>	Jefferson Salamander	Amphibian
<i>Ambystoma opacum</i>	Marbled Salamander	Amphibian
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	Bird
<i>Apodrepanulatrix liberaria</i>	New Jersey Tea Inchworm	Butterfly/Moth
<i>Arabis laevigata</i>	Smooth Rock-Cress	Vascular plant
<i>Aristida purpurascens</i>	Purple Needlegrass	Vascular plant
<i>Bartramia longicauda</i>	Upland Sandpiper	Bird
<i>Calystegia spithamea</i>	Low Bindweed	Vascular plant
<i>Carex polymorpha</i>	Variable Sedge	Vascular plant
<i>Clematis occidentalis</i>	Purple Clematis	Vascular plant
<i>Clemmys guttata</i>	Spotted Turtle	Reptile
<i>Clemmys insculpta</i>	Wood Turtle	Reptile
<i>Cyperus houghtonii</i>	Houghton's Flatsedge	Vascular Plant
<i>Desmocerus palliatus</i>	Elderberry Long-Horned Beetle	Beetle
<i>Elymus villosus</i>	Hairy Wild Rye	Vascular Plant
<i>Eulimnadia agassizii</i>	Agassiz's Clam Shrimp	Crustacean
<i>Hemidactylium scutatum</i>	Four-Toed Salamander	Amphibian
<i>Houstonia longifolia</i>	Long-Leaved Bluet	Vascular Plant
<i>Hypericum ascyron</i>	Giant St. John's Wort	Vascular Plant
<i>Itame sp 1 nr inextricata</i>	Pine Barrens Itame	Butterfly/Moth

<i>Liatrix borealis</i>	New England Blazing Star	Vascular plant
<i>Limnadia lenticularis</i>	American Clam Shrimp	Crustacean
<i>Notropis bifrenatus</i>	Bridle Shiner	Fish
<i>Ranunculus pennsylvanicus</i>	Bristly Buttercup	Vascular plant
<i>Scaphiopus holbrookii</i>	Eastern Spadefoot	Amphibian
<i>Strophitus undulatus</i>	Creeper	Mussel
<i>Terrapene carolina</i>	Eastern Box Turtle	Reptile
<i>Vermivora chrysoptera</i>	Golden-Winged Warbler	Bird
<i>Zanclognatha Martha</i>	Pine Barrens Zanclognatha	Butterfly/Moth

APPENDIX F

Letters of Support